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# THE AGRICULTURIST

## AND CANADIAN JOURNAL.

Devoted to Agriculture, Literature, Education, Useful Improvements, Science, and General News.

Wm. McDougall,

EDITOR AND PROPRIETOR.

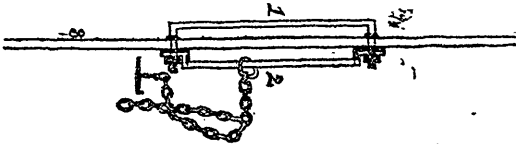
VOL. I.

TORONTO, SEPTEMBER 15, 1848.

NO. 13.

### CATTLE TIE.

Among the drawings sent us by Mr. Patton, some of which we presented in our last number, was one of a mode of fastening cattle in their stalls, adopted and recommended by him.—We promised to give a cut of it in this number, and here it is. The description which follows is that furnished by himself, and renders any additional remarks from us unnecessary. The cut, as the reader will perceive, is here placed horizontally for convenience of space.



This Fig. shows a plan of the Tie on an enlarged scale.

3 An upright standing stud forming the division between two stalls.

1 Is an iron rod with a knee at both ends, long enough to pass through the division screwed at both ends.

2. Another round iron bolt with two knees at both ends, with a hole at each to go on to the ends of No. 1, so that one nut at each end holds both fastenings. They are about two inches from the division. Upon these rods there is an iron ring which slides easily up and down as the cows move their heads.

### CANADA THISTLE.

We have tried various ways of destroying the Canada thistle, and the cheapest and most effectual mode is to put the land in grass and mow it. They generally disappear the second year.

The last volume of the Transactions of the New York Ag. Society, contains a very elaborate and able prize essay by A. Stevens, on the Canada thistle, giving its history, description, habits, and various modes of destruction, and an account of numerous experiments for destroying it, and their results, showing that both success and failure have at different times and places, attended every means used for its destruction.—The author draws the following deductions:—

“From a collation of what others have done, and from the experiments above detailed, the following conclusions may be deduced.

“Whatever will effectually exclude the plant from the light and air will destroy it. This may be done by ploughing, in some soils, and in others by a close grass sod—Ploughing, if repeated frequently in soils, where the root does not descend beyond the reach of the ploughing, will, in dry seasons, always destroy the thistle, and often in moist ones. In soils which are light, deep, rich, friable, and of course permeable to the air, and are in some measure always moist, ploughing will always fail.

“Wherever a dense sod can be formed, the thistle may be destroyed by seeding. The grasses wherever they are adapted to the purpose, will be found the easiest means of destruction; although not so rapid as ploughing, hoeing, salting, or burning, where these latter are available,

“In all uplands, where the soil is of a depth admitting the root to be reached and affected in its whole extent by the plough, hoe, fire or salt, the thistle may be destroyed by these means, and they will be found the most rapid ones.

“In all bottom lands, where the root descends deep and the soil permits of access of air, neither the plough, hoe, fire nor salt will destroy the thistle; here the grasses should be applied and will be found the best destroyers.

“Whatever limits the thorough application of the means of destruction, will proportionally diminish success. Hence it will be found difficult in very stony grounds, ever to eradicate the thistle; the plough cannot effectually reach its roots, and such ground is rarely a good grass bearer. Salt and sheep, with the scythe, will be found best for stony grounds. In grounds filled with stumps, where the soil is rich, and will grow a dense sod, the grasses will be best, and in such the plough should not be used, as it will not effectually reach all the roots. Fences that obstruct the application of the plough or hoe should be removed.

“If it be desirable to destroy the thistle by the grasses, it will be found best to make the land rich by manure. This will force the grass, and enable it more readily by vigorous growth to kill the plant. And in the application of all remedies, care should be taken to reduce the soil by proper cultivation, to a fine tilth, that all the seeds of the thistle in the ground may germinate, and not lie dormant. The seed is very hardy, and escapes all the ordinary means of reaching the plant, except fire.

“*Precautionary advice.*—In regions infested with the Canada thistle, when new lands are to be cleared, let the under brush and rubbish be cleared out and the ground sown to grass. When the grass has well taken root, and a sod is formed, the trees may be cleared off and the thistle will not appear.

When the thistle first appears, attack it at once; it may then be easily destroyed.—If neglected it will become a formidable enemy, and time and patience and much labor will be required to subdue it.

“*Conclusion.*—If this essay shall induce even one farmer to attempt the eradication of the thistle, some good will be done by it; if it direct attention to the subject and stimulate to action, the object of the writer will be attained.”

Do NOT MIX YOUR POTATOES.—Perhaps it may not be known to every person who raises potatoes to sell, that, in the New York markets, there is one half difference in the price. This is not always owing to the superiority of one variety over another, but the fancy or preference of the buyer of his favorite kind. Some are partial to the pink eyes—some to the kidneys, while others prefer the Carter, the black, Diceman’s seedlings, blue noses, lady’s fingers, &c., all of which have their excellences, and when brought to market by themselves, will always be sure to find a ready sale; but when mixed one with the other, many house keepers will not buy them at all. We had many orders last spring for particular kinds of seed potatoes; and, in many instances had much trouble; in one or two cases, we were obliged to sort out the kinds wanted, in the hold of a vessel. We cannot too earnestly enjoin upon all growers of this inestimable vegetable to cultivate each variety on a separate piece of ground, or to sort them at the time of digging, which will be attended with a very little additional expense, but will well compensate them for their trouble.—*Albany Cultivator.*

## Agriculturist and Canadian Journal.

TORONTO, SEPTEMBER 15, 1848.

Several subscribers appear not to have observed our statement, that the *Agriculturist* is now published but *once* a month. There was no paper issued for July, the interest of Mr. Edmondson therein being then in the hands of the Sheriff. The reader will know by the numbers, whether any paper is wanting, this being the 13th number published. All paid subscribers will get a portion of the next volume to make up the deficiency in this.

### NEW ARRANGEMENT.

We are happy in being able to announce to our friends and subscribers, and to the friends of agriculture generally, that we have succeeded in making arrangements by which the *Agriculturist* for 1849, (referred to by mistake in the last number as 1850,) will be published regularly, *once a month*, on superior paper, and with *new* type, each number containing 32 pages. The size will be as large, and the general appearance, as good as the *American Agriculturist*, or *Genesee Farmer*, and the quality and interest of the matter will be equal, if not in some respects superior, to that of any other paper of a similar kind on this continent.

Mr. G. Buckland, of whom mention has been several times made in our columns, and who has also contributed two or three articles to the present volume, has agreed to take a share in the paper, commencing with the volume for 1849, and to assume the duties of chief editor of the Agricultural Department. This is precisely what was needed, (and what we have long desired,) to make the *Agriculturist* worthy of the support of every farmer in Canada. Mr. Buckland, though not long resident in the country, has, during the last year, visited nearly every part of it, as well as some of the best agricultural districts in the United States, with the view of making himself acquainted with the nature of the soil, modes of cultivation, and generally with the agricultural features and capabilities of this new country. This gentleman's high standing in England, as a practical and scientific agriculturist, is a sufficient guarantee that he has the knowledge and the ability to impart instruction which may prove of the utmost value to us. The want of a longer and better acquaintance with the country, and with the peculiarities of its soil, climate, and *people*, we shall *ourselves* endeavor to supply.

There will be a Horticultural, Scientific, and Ladies' Department, in the new volume. It is not intended to preserve a distinct department for Literary matter, or news. Market prices, and such topics as are of general interest to farmers as a class, will be noticed. We shall publish a Prospectus in our next number, which will more fully explain the objects we aim at, and the means we possess to accomplish them. We make these statements thus early, in consequence of having been written to by the Secretaries of two or three Agricultural Societies, as to our terms and prospects for the next volume, in order to determine at their fall meetings, whether they can take the paper, and what number of copies. We have conferred with Mr. Buckland, and although from the difficulties into which the publication has got by bad management, and the necessity of sending to all *paid* subscribers a portion of the next volume, to make up for the deficiency of the present, a pecuniary loss will be entailed upon us, (unless a very large circulation is obtained,) we have determined to have but two prices for the forthcoming volume, and to fix them as low as can possibly be afforded. Single subscriptions, will in all cases, be *one dollar*, which must be paid at the time of subscribing. One cause of the difficulty this year, has been the allowing agents to give and take *credit*. Societies and Clubs taking 12 copies and upwards, will be charged *three shillings and nine pence* per copy.

As the cost of the work will be considerably increased, for the reason among others, that we shall be obliged to print it on *two* sheets instead of one, (making double press work,) there being no press in the city large enough to print it on one sheet, we shall expect the support of all true friends of improvement and of Agricultural Societies generally. The publication is freed from one great obstruction, and is now in the hands of parties who have the will, and we believe the means to make it all that can reasonably be expected or desired in this country. All that is now wanted, is the substantial support of the agricultural public.

### ON THE CULTURE OF WHEAT.

Before the present number reaches our subscribers, the important operation of sowing wheat, in most parts of the Provinces, will have made considerable advancement. We shall therefore content ourselves with a few hints and observations, bearing on this interesting department of farm practice.

It is a fact, confirmed by every year's experience, that the wheat crop in this country is very uncertain, and its precariousness of late would appear to be increasing. Forming as wheat does our staple produce, and the chief source of monetary income, it behooves all cultivators of Canadian soil to make themselves acquainted with the nature of the casualties to which this valuable crop is subject. There cannot be a doubt in the minds of all intelligent persons, that the causes which produce these injuries are, or may be by patient investigation, understood, and the evils produced thereby, either mitigated or controlled.

There is but one way, and that so plain as to be apparent to the most superficial observer, to avoid smut, cockle, chess, rye, and indeed every kind of weed injurious to wheat,—thorough cultivation of the land, and a careful selection and preparation of the seed. While the latter should be *pure*, the former must be *clean*, or the crop will be sure to be deteriorated. What then is required of the cultivator, but simply a practical obedience to this great natural law. The steeping of the seed in a strong solution of salt and sulphate of copper, and afterwards drying it by the application of quick lime, has been extensively practised for many years, and proved successful as a preventative of smut.

The questions of the fly, rust, &c., are far more complicated and difficult. In their practical solution are involved some of the most difficult investigations of the naturalist. The period of sowing, the composition and preparation of the soil, the state and influence of the weather, and probably some other conditions as yet very imperfectly understood, have to be taken as the elements of consideration, before we shall be permitted to grapple successfully with these destructive enemies. It would be folly to attempt to fix limits to scientific investigation, and give up questions of this nature as being altogether beyond our power of solving. The multifarious discoveries which now adorn and bless society, have, in most instances, resulted from a long and patient interrogation of nature. And thus it is with the husbandman, by correct observation and persevering investigation, he has been enabled to advance progressively his most valuable art, and to control, or mitigate many evils once regarded as inevitable.

What is particularly needed in the present imperfect state of our knowledge in relation to these and other agricultural inquiries, is a careful collation of a sufficient number of well conducted experiments. In reference to wheat, suppose a number of the most intelligent farmers in each district would carefully note down the time of sowing, the variety and quantity of seed, whether sown broadcast or in rows, the state and nature of the soil, with subsequent observations on the character of the weather and appearance of the crop, up to the time of harvest. What an interesting light would thus be thrown on many doubtful points of practice, and by giving publicity to the results, the agriculture of the country must necessarily be improved.

We are strongly of opinion, that the employment of the drill in sowing fall wheat would be highly advantageous. The seed being deposited at a uniform depth is more certain to vegetate, and the plant not so liable to be thrown out by alternate freezing and thawing in spring. Beside, the plants being in rows can easily be kept free from weeds, while light and air had a more ready access, thereby diminishing the chances of rust

and other diseases. We saw a large field of wheat last June, in Livingston County, New York, uniform in soil and treatment,—one portion having been sown broadcast, and the other drilled in rows, twelve inches apart. The whole field was sown in three days the beginning of September. The part broadcasted had suffered severely from winter-killing, while the drilled portion had upon the whole sufficiency of plant, equally distributed, although less seed by a peck per acre had been used. We have heard of several similar results in different districts of Canada. It would appear, therefore, that one means whereby the wheat crop of this country may be made less precarious, is the use of the drill on all such soils as are unencumbered with stumps.

In drawing these remarks to a close, we would impress on the minds of our agricultural readers the necessity of efficient surface drainage on their fall wheat lands. Indeed this is necessary upon all portions of the farm, particularly on retentive subsoils; but for winter wheat it is absolutely indispensable. It is now too late in the season to *under-drain* for fall wheat; but deep furrowing, aided when necessary by the spade, may be done at a cost almost as nothing, when compared to the magnitude of the benefit. The prevention of stagnant water among cultivated crops, must form the first step in the way of improving Canadian agriculture. When one looks at the wide spread mischief every where observable on arable land periodically swamped with water; the simple remedy of surface draining must suggest itself as a cheap, and in many instances, efficient remedy, that ought to be applied from one end of the province to the other. Of *under-draining* we shall have something to say hereafter. We now urge upon the attention of our readers the vast importance of seeing that their fields, before stern winter sets in, have a ready outlet for all superabundant water, particularly winter wheat; the benefit of observing this timely precaution, will no doubt be sufficiently apparent next harvest.

SAVING CLOVER SEED.

A correspondent of the *American Farmer* gives the following method for saving clover seed, and account of the "stripper," a machine used in some districts for that purpose:

My plan is when it is fully ripe, to take a common grain cradle and lower the first finger as close to the scythe as can be at the point, and then take a linen cloth and stitch to the two lower fingers, and then you will cradle two swarths together; by this plan you will cut the tops, or more if you wish, and by keeping your scythe in order you can cut it very clean; any hand that can mow grass can also cut clover seed. After it is cut, you will let it lay one or two weeks to season; in dry weather it may lay a long time; and when it is well seasoned, you will gather it in small heaps with a common hand rake in the morning, when the dew is on, otherwise it will shell; then it can be removed in the after part of the day, or may remain for some time in dry weather—you will then haul it to the barn or stack-yard, if you wish to stack it—my plan is to stack it 25 by 12 feet in length and breadth, and about 10 feet high—I then take long straw, and lay it with top ends out to project half its length over, and then build on and batte in to close the stack—every load a course of straw, and so on gradually with straw and seed, till you bring it to a point—the gable end I generally build perpendicular, then cover the top well with straw and heavy poles, and by the first rain, beat down the straw with your rake, and you will have a complete stack that will stand the storm till you have time to thrash it. You may thrash it on a common spike machine, by having a good shaker to it, but I generally thrash with a flail in the winter—shake off the straw with hand forks, and rake in clean with hand rake; the better it is raked the easier it will clean on a common spike machine. I have cleaned as high as 18 bushels of seed per day with six horses, in the short days of winter.

I will now conclude by telling you about the clover seed "stripper," as it is termed by us, to which your correspondent refers, as being "shaped like a comb, and dragged by a horse."

We have several kinds in our country—some run on sled runners, and others on wheels—They are not made by any particular manufacturer, but generally by farmers themselves, according to their own plan—but in my opinion, they are not calculated for large farmers, or for getting seed for market at these low prices; for they are too laborious in stripping, and then it requires a large barn floor for drying it before you can store it away, otherwise it will heat and must, and injure the seed, and cannot be thrashed clear; and therefore I will submit the above to your consideration, as also the result of the trial of my neighbour Debiel.—Some years ago D. and I went some miles and borrowed a clover stripper, with the intention, if it answered the purpose, to get one made in company. Mr. D. stripped four acres and sent for me to see it work—I mounted the machine, and took the chair, when he gave me the scraper to scrape off the clover heads, and told his boy to move on slowly; but I tell you it soon raised me off my seat, and it took all my power to clean, and made the sweat roll in streams, for my neighbour was determined to make me go one round for trial—but that round put me out of the notion of going into a co-partnership for any more stripping of clover seed."

LONG AND SHORT MANURE.—The committee on Farm Management for the N. Y. State Agricultural Society, in their report for 1847, speak of the different modes adopted by the competitors for premiums on farms, and observe—"All the competitors, with the exception of Mr. DeLafield, prefer to use manure in its long or unrotted state, while the latter prefers to use it after its well rotted; a careful examination of the answers, however, reconciles these conflicting opinions. We think that both theory and practice most clearly indicate that a cord of long manure will produce a greater amount of vegetable growth than the same cord would do if allowed to rot, exposed to the action of the sun and rain; because, during the process, a very great proportion of the ammonia will evaporate, and a smaller proportion of the saline matters will be leached away; but this loss will be avoided by the covering of muck, earth and plaster by which the heaps of Mr. DeLafield are protected, and which absorb and combine with these valuable adjuncts to fertility. By Mr. DeLafield's method, therefore, a greater amount of fertilizing matter is restored to the soil than existed in its unrotted state; but it also has the additional advantage of being presented to the growing crops in a form better fitted for assimilation."—*Alb. Cult.*

ADVANTAGE OF WATER IN BARN YARDS.—By reading the able communications that have from time to time appeared in the *Cultivator*, I had formed a favorable opinion of the advantage of having running water in my cattle and sheep yards. Although I had a supply of water within ten or fifteen rods of my barn, I determined to fetch a spring that was situated nearly half a mile off; and I will now say, that after a trial of several months, it has more than realised my highest expectations. I am satisfied that I shall save at least one cart load of manure from every ox or cow that I feed in my yard, more than I did when they had to go to the river to drink. Then they would seldom go but once in a day, and in stormy or bad weather, not so often; consequently, when they did go, they would drink so much as to render them uncomfortable for several hours.

Now they will drink on an average about five times a day. I am satisfied that they will keep in better condition on less feed than formerly. I think that in the item of manure, it will pay the expense, to say nothing of the comfort of not being obliged to go ten or fifteen rods in cold and stormy weather to water horses; and it is often difficult when the ground is slippery, to get cattle to go a few rods to get their water. There are very many situations, where, with a trifling expense, persons could have water in their yards at all times; and I am satisfied, that if they once knew the advantage of this, and of having running water at their dwelling houses also, they would not do without it again for twice the cost. A small stream of good soft water will answer for a large family, and will save many a step and many a hard pull to draw it from a well.—*Correspondent.*—*Alb. Cult.*

MEDICATED MILK.—We learn from the last number of the *Gazette Medicale*, of June 27th, that a new institution for the medication of milk, has been lately established at Montrouge, near Paris. The physicians who superintend it propose to treat certain classes of patients with the milk of goats and cows, after having placed these animals on a system of medical treatment adapted to develop in the milk those therapeutic qualities which may be requisite for the treatment of particular diseases!

## ANNIVERSARY OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

The yearly meeting of this important and long established society, which has done so much for the advancement of agriculture, both as a science and an art, took place this year in Edinburgh during the first week of August. From the reports which have reached us it would appear that the late Exhibition, both as regards implements and stock was quite equal, and in some respects superior to any former anniversary. The entries of implements amounted to 310, a few only of which were from England and Ireland. Mr. Clayton's patent tile machine, which obtained the first prize at the late meeting of the Royal Agricultural Society of Ireland, attracted universal attention, as did also another, the invention of Mr. James Smith, of Deanston, for making draining pipes from peat-moss, and its practicability and uses were tested by repeated experiments. Several other machines for manufacturing draining materials were exhibited, showing how fast this important department of agricultural improvement is progressing in Scotland.

The number of short-horns was large, and comprised many very superior animals. For the premiums for bulls of this breed, there were not less than twenty-eight entries, beside seventeen for yearling bulls. Twenty-one cows and six heifers of this breed were exhibited. The first prize for cows went to England, and the second and third to East Lothian. For the Ayrshire breed there were upwards of a hundred entries, which would seem to indicate the increasing value that is attached to them for their superior milking qualities. The Galloways appear to have been rather inferior both in number and quality, to what might have been expected in such an exhibition. The polled Angus and Aberdeenshire breeds were also somewhat inferior—a circumstance rather remarkable, considering the high estimation in which they are generally held for fattening. The Highland breed appears to have been both as to number and quality very superior. Only twelve entries were made for the Fyfe breed, and all from its native district, a circumstance that would seem to indicate a decline in its favor. Of draught horses the show was numerous and excellent. The sheep, upon the whole, were splendid: of Leicesters, upwards of three hundred were exhibited: the Cheviots were equally good; Black-faced were only moderate; in South Downs, the show was but middling; and the Duke of Richmond carried off all the prizes but one. The value of this breed for the purpose of cropping, especially with Leicesters, was strikingly exemplified in the stock exhibited by Mr. Atcheson, which received the highest commendation. The swine was excellent in almost all the sections. As a proof of the general high character of the show, nothing more is necessary than the mere statement of the fact, that several animals which had obtained prizes at the recent agricultural meeting in Ireland, and at other important exhibitions, were left behind on this occasion.

The dinner was attended by a large number of members.—His Grace the Duke of Montrose, President of the Society, occupied the chair, supported by many of the nobility and leading agriculturists of the country. It appears that the Society for promoting agricultural chemistry, under the able superintendence of Professor Johnston, and which has already done so much in advancing that important art, is about to be merged into the Highland and Agricultural Society, under whose auspices there is every reason to hope, judging from the past, that the science of agriculture will not fail to receive that amount of attention and encouragement which its paramount importance so justly demands.

## THE GREAT FAIR AT BUFFALO, N. Y.

The Fair of the New York State Agricultural Society was held on the 6th and 7th inst. at the City of Buffalo, under most favorable circumstances. We left Toronto on Tuesday, in company with a pretty good boat-load of farmers and others, on their way to the Fair. On arriving at Queenston, hearing that every available bed in Buffalo was bespoken, we made up our mind, at the suggestion of our friend Mr. Buckland, to pick our way together on foot along the banks of the Niagara to the Falls, and there endeavor to seek lodgings for the night. Having all the afternoon before us, we journeyed leisurely, taking advantage of every opening, or projecting cliff, to view the grand and striking scenery of this noble river. We crossed several farms in our way—some showing signs of good, others of slovenly cultivation. The soil from Queenston to the Suspension Bridge, and extending back from the river about two miles, is of a very good quality—much better than we had expected to find it. We were surprised to learn from an old Farmer near the Whirlpool, that the Hessian fly had, this season, injured the wheat in that neighborhood very considerably. Learning from this person that by descending a stair at the Whirlpool and clambering over the rocks along the edge of the water for about half a mile, we should be able to gain the opposite bank by following up a deep ravine, and thus save two or three miles, we determined to try it. He endeavored to dissuade us from the attempt, saying it was a very "rough road" and difficult to be made out by strangers. We felt pretty confident that what had been done by others we could do, and trusting to our sagacity, set out to find the road. We would not recommend ladies to undertake the journey; but if the lovers of the rugged and the sublime in nature desire to enjoy the wild grandeur—the awful sublimity of the place—they must stand under the over-hanging rocks at the head of the Whirlpool. We agree with those who think the structures of civilised man, and the noise of machinery, detract from the pleasure of viewing the Falls. But at the Whirlpool, after you have crept along a rocky and dangerous path, for two or three hundred yards, at several points of which a single slip would precipitate you into the whirling waters, you gain a spot where nothing but nature is to be seen—nature in one of her most awe-inspiring aspects. Before you, in the distance, is seen the river, rushing through a narrow gorge, tossing and foaming in the wildest fury. At your feet the water sweeps past to the right on the outer edge of the Whirlpool, with a velocity you cannot appreciate unless you throw a stick upon its surface. Behind you, and on each side, is a wall of solid rock, nearly 300 feet high, enclosing a space of 30 or 40 acres, which forms the basin of the Whirlpool. This immense amphitheatre was no doubt formed by the action of the water which has been whirling here for ages, wearing away the softer rock at the bottom, and thus undermining and causing the upper strata to fall gradually by their own weight. Lyell, the geologist, expresses his opinion, that the Falls, when at the Whirlpool, were stationary for centuries. But we are forgetting the caption of this article. We must haste to the Fair. Crossing the Suspension Bridge, (of which we shall give a description in a future number,) we reached the Falls, and were fortunate in securing a bed. An hour before the time of starting, every seat in the first train of cars for Buffalo was occupied, and we were glad to put up with a fifth-rate seat at full price in a second train.

THE FAIR GROUND.—The City of Buffalo, (a busy place at all times, except in the winter,) was swarming with human, and not a few inhuman beings. Around the doors of the hotels dense masses were congregated, the sidewalks and streets were full; every thing that had wheels seemed to be in requisition, and yet thousands of unwilling pedestrians were borne not on, but with the tide that flowed towards the Fair Ground. The spot chosen for the Exhibition is about a mile from the city, on the high ground between Main Street and the Niagara River. It was well chosen and well arranged. The space enclosed comprised about 18 acres. Tents, sheds, booths, pens, &c, were erected as usual. A part of the ground was covered with trees, which formed a comfortable shade for the cattle.

MACHINERY, IMPLEMENTS, &c.—In this department the Exhibition was splendid. The first thing that attracted our attention was the Brick machine invented by Mr. Butters of this city. He has es-

Established himself at Buffalo (having secured a patent in the United States,) in order to supply readily the demand from every quarter.— This is a great improvement on previous machines, and will no doubt supersede them in a very short time. Next, are two portable threshing machines, from the warehouse of Mr. Emery, successor to Mr. Tucker of Albany. The horses stand upon an inclined plane of improved construction. The only objection we have to this sort of horse-power, is the position of the horse while at work. He is thrown too much upon his hind legs, and soon becomes lame.— These machines, in other respects, are very perfect. We observed that the cylinder was driven by bands made of the newly discovered material, Gutta Percha, which seems far superior to leather.— The price of the two-horse or double power, with thrasher and separator complete, is, we were told, \$140. There were two or three other horse powers of novel construction on the ground, but we saw nothing in them to admire. Several Drills were exhibited, apparently possessing great merit. Cultivators of every variety, harrows, hand-rollers, ploughs, straw-cutters, cheese-presses, churns, washing machines, and all the ordinary farm and domestic implements were here in great abundance, constructed on some new principle, or presenting some real or pretended improvements. It was easy to see that their ploughs possessed but few charms for the Canadian farmer who turned up his nose in contempt, as he viewed their short handled, wide heeled, cast iron ploughs, and thought of his own iron or wooden Scotch plough at home. It is very strange, that this important implement has not been improved upon a better model than what so much in vogue among our neighbours. Mr. Bell, from Toronto, had two of his excellent ploughs on the ground, which the Society might have purchased and retained as patterns with great advantage. In the cultivation of our soil there is no comparison between the two implements. Indeed, a "Yankee" plough will hardly be tolerated on clay farms, except for "cross-ploughing;" and surely the same kind of soil must be turned over on the same principles in one country as in the other. As to the corn-shellers, sausage-stuffers, bush-hooks, hay-rakes, forks, hoes, and tools of every kind that the farmer could wish for, the bare mention of their names would fill a page, how then can we attempt to describe them? Mechanics' Hall was filled with curious inventions to lighten or supersede the labor of the hand. Almost everything was patented.— There was even a *patent coffin*! Not only does this restless and indomitable spirit of invention follow us through every lane and by-path of life, but in the present age it pursues us even into the grave!

**FLORAL HALL.**—Stands next in our way. But to effect an entrance is something of a feat. The flowers were not numerous nor particularly attractive, owing probably to the season. There was a good show of fruit as to variety, but the quality did not appear to us to be what the Pomologists call "first-rate"—some of it might be. The vegetables were not extraordinary either in size or appearance. We saw some excellent peaches and pears labelled "Canada,"—grown, we believe, in the Niagara District.

**DAIRY HALL.**—Here the visitor beheld rich and tempting specimens. There was an immense quantity of cheese exhibited from different States, and though we were not allowed to taste, we felt no disposition to question its excellence. Mr. Parsons, of Guelph, displayed one of his celebrated Stilton cheeses, which excited general admiration. Of the butter, we must make the same remark, we did not taste it.

The exhibition of Ladies' handiwork was said to be very good.— As we professed ourselves not competent to judge of their skill, and as there were so many of the fair exhibitors and their fair admirers, thronging in the neighborhood, we were content to stand "afar off," and trust to report for our knowledge of the subject.

**CATTLE, HORSES, SHEEP, &c.**—Cattle of all the improved breeds were well represented. We liked the show of Devons better than that of Short Horns. A lot of Devon calves were the finest we ever saw. Many of the Durhams bred in the neighborhood showed signs of short pasture and neglect. Mr. Sotham's Her-fords were generally admired. This breed of cattle are, we believe, more suitable for all purposes, to the wants of the Canadian farmer than the Short Horns. There was quite a number of animals from Canada, nor did

they lose by comparison with their neighbors. Upon the whole, the show of Cattle was but little more than medium. The Horses made a fine display. We observed three or four from this side. The Scotch horse *Clyde*, seemed to astonish the spectators by his tremendous proportions. Mr. Davis, of Yonge Street, complained of not being well treated by the President, who wrote him that his horse *Alfred* was eligible for a premium, and yet, after entering him, he was told he could not obtain a premium, because he had taken one on a former occasion. There must have been some misunderstanding, for we cannot think that Mr. Allen would be guilty of intentional deception. The Sheep, except two or three pens of South Downs, were hardly worth notice. Swine were also quite inferior. At least we can shew far better at our Exhibitions.

We could fill several columns from the materials picked up at this Fair, but our space will not permit. It was admitted on all sides to be much superior in every respect to any previous Fair held in the State. Buffalo is admirably situated for such a meeting. It is easy of access from all points, and has probably the power of absorbing a greater number of strangers than any city of equal size in the State. In passing along the streets at night, you could not but wonder where all the busy crowds that filled every thoroughfare during the day had gone to. Pickpockets were in attendance and pursued their vocation with zeal and success. A gentleman from Hamilton was relieved of \$500, which he very foolishly carried about his person. Three scoundrels were detected in the act of picking the pockets of another man, and will, no doubt, be provided with lodgings at the expense of the State for some time to come. It is supposed there were over 100,000 strangers in Buffalo during the Fair. Fifty thousand at least were on the fair ground on Wednesday, as the sale of tickets would prove.

The Pomological Convention, the Address, and the Lecture of Professor Norton, we must leave to be noticed in a future number. We have not seen a list of the premiums, although we paid for one and ordered it to be sent on Friday last, but it has not arrived, and from the way the post-office is now managed, we suppose it will be a week longer in reaching us. The Canadian competitors carried off, we are told, a share of the prizes, much larger in proportion to the share of articles entered, than the "natives."

**KEEPING FARM ACCOUNTS.**—Let any farmer make the experiment, and he will find it interesting as it is useful, and both interesting and useful, to know from year to year the actual produce of his farm. Let everything, therefore, which can be measured and weighed, be measured and weighed; and let that which cannot be brought to an exact standard, be estimated as if he himself were about to sell or purchase it. Let him likewise, as near as possible, measure the ground which he plants, the quantity of seed which he uses, and the manure which he applies. The labor of doing this is nothing compared with the satisfaction of having done it, and the benefits which must arise from it. Conjecture, in these cases, is perfectly wild and uncertain, varying often with different individuals, almost a hundred per cent. Exactness enables a man to form conclusions, which may most essentially, and in innumerable ways, avail to his advantage. It is that alone which can give any value to his experience. It is that which will make his experience the sure basis of improvement; it will put it in his power to give safe counsel to his friends, and it is the only ground on which he can securely place confidence himself.—*Norristown Herald*.

**COLD BEDROOMS.**—A person accustomed to undress in a room without a fire, and to seek repose in a cold bed, will not experience the least inconvenience, even in the severest weather. The natural heat of his body will very speedily render him even more comfortably warm than the individual who sleeps in a heated apartment, and in a bed thus artificially warmed, and who will be extremely liable to a sensation of chilliness as soon as the artificial heat is discontinued. But this is not all—the constitution of the former will be rendered more robust, and far less susceptible to the influence of atmospheric vicissitudes than that of the latter.—*Journal of Health*.

Every dairy should have a vessel of lime-water sitting in it, say half a gallon of lime to ten or twelve of water, simply to rinse every thing in. The vessel can be filled up as often as you please. It will remove acidity or bad odor.



## PLANK ROADS.

We find the following remarks in the *Albany Cultivator*, being extracts from the copy of a Report lately furnished to the Legislature of Wisconsin. We need not argue the importance of the subject to the people of Canada. It appears we have the merit of giving the start to this improvement in America. Our enterprising neighbors, however, have not been slow in taking the hint. We may possibly learn something from their experience and improvements in the mode of construction. "This document," says our cotemporary, "furnishes a more full and complete exposition of the advantages of this description of roads, than we have before met with. The first question considered is, what kind of roads are best adapted to the present wants of the community? And though railroads are admitted to afford the greatest facilities under particular circumstances, yet it is concluded that there are many situations where a class of thorough fares less costly, "and more practical for every day use," are called for.

The advantages of plank roads, over McAdam or stone roads, are, that the former can be made in all situations, without regard to the character of the soil; that they are less liable to be affected by frost, (which is sometimes very injurious to McAdam roads); and that they can be built and maintained at much less cost. It is calculated that horses will travel with wheel vehicles, one fifth faster, and draw one fifth more weight on a plank than on a stone road. "In fine," (says the report,) "plank roads are preferable to those of McAdamized stone in cheapness, in ease of draught and in comfort to passengers; greater speed being attainable on them with less resistance to draught; and stage owners say that they are less fatiguing to horses than stone roads, at the same rate of speed."

Plank roads, it is said, were first made in Russia; and their first trial in America was in Canada, where they were made by Lord Sydenham, who from a long residence in Russia, had become well acquainted with them, and was thoroughly convinced of their utility. We are informed that the Canadians are now so well satisfied of the great advantage of these roads, "that they have gone more extensively into the use of them than any kingdom or republic on the globe." These roads are chiefly in Canada West—the aggregate length of the different lines already constructed, being between 400 and 500 miles. We are not aware of the entire number of miles of plank road actually finished in the State of New-York, but this report informs us that the various lines for the construction of which companies have been organized in this State, amount in the whole to a distance of 500 miles.

As to the width of the track, or the length of the plank used, the report states that it has been shown most "conclusively, that for a single track, eight feet is preferable to a greater width," and that where a double track is wanted, it is best to make them separately of that width. The planks are laid across the bed at right angles. In regard to the necessity of more than one track, the report quotes the remarks of Mr. Geddes, in relation to the Salina road. Mr. G. observes "great speculative objection was made in the start to but one track; but we have now the entire community with us in deciding that, on all ordinary roads, one track is fully sufficient. The reason is this: the travel in wet weather is entirely on the plank, except the turning out of the light teams; but they seek the plank again as soon as they can get around the team met or overtaken, so that the turn-out track is not cut with any continuous lengthwise ruts, and perhaps the wheels of not one team in a hundred turn-outs will strike the exact curve of another; consequently, in our experience, our turn-out track being well graded, passing the water easily and rapidly from its surface, remains perfectly hard and smooth."

**Sleepers or Stringers.**—In one or two instances, roads have been made without sleepers—the plank being laid immediately on the graded earth. The planks have kept their places quite well; but it appears to be the conclusion that it is best to use sleepers or sills.—"The sills," says the report, "should be well bedded in the earth, their top surface barely in sight, and the earth in which they are embedded should be broken and pulverized, so as to leave no stones or other hard substances to obstruct their settling evenly, and thus permitting the plank to sink down firmly on the earth as its main support. Two stringers only are used on the Salina road, 4 by 4 inches in size, and none less than 13 feet in length; they should be so laid as to break joints, as in laying brick, or putting on siding, that is, the ends of the stringers on one side should not be laid opposite the ends of those on the other side. About 6 feet 8 inches is the proper width between the two lines of stringers for an 8 feet single track road, which will bring them under the wheels of most road vehicles, and thus give a continuous bearing on them. One set of sleepers of good timber and well bedded, will last as long as two or three plankings."

**Grading.**—It is directed that the road should be graded 21 feet wide, "measuring from the inside top lines of the ditches on each side." Great care should be used that the road be kept dry by means of side ditches and cross culverts. They should be made fine, firm and smooth.

In regard to lengthwise grading, it is observed that short rises are sometimes made of one foot in ten, though they are generally from

one foot in twenty to one foot in thirty. Mr. Alvord's remarks on this subject are quoted. "It is easier to go over the same elevation on a plank road than on a common dirt one; for on plank there is no cutting into the substance passed over, nor encountering of stones by the wheels; and if, as it ought to be, the plank way is covered with a slight coating of earth, the only danger suggested, the slipping of the animal is avoided. It would be a prettier sight for the eye, were we to grade our plank roads more level; but while their practical utility is not lessened in any perceptible degree by their unevenness, economy forbids the expense of levelling them for ornament."

The kind of timber used for planks is oak, hemlock or pine. Oak lasts as well as any wood, but is slippery in wet weather. The wear by abrasion is calculated at one-fourth of an inch in two years; "and as planking will not break through till one-and-a-half or two inches of the surface is worn away, it follows that the duration of the plank (if of pine or other soft timber) would be eight years." Oak would generally last, it is thought, fifty per cent longer. The cost of plank roads is estimated at from \$1500 to \$2000 per mile.

**Plank Roads preferred by Farmers.**—The opinion is advanced in the report that "railroads can never be made to take the place of teams for the transportation of grain, &c., within one day's drive of a market, because the farmer can carry the cheapest for that distance. There are reasons when work is slack with almost every farmer; yet his teams are daily consuming as much food at such time as when fully employed. Awaiting himself of these seasons, he can haul his produce to market with a very few shillings' expense, in addition to what would have been incurred had his team remained idle in their stalls." The inducements for farmers to take stock in plank roads, are summed up as follows:—"Now in view of these facts and suggestions, it must readily occur to every farmer, within a reasonable distance of the line of a plank road, that he can better afford to take stock in such a company than any other of our industrial classes, because he can more cheaply pay for his shares,—by working them out on the road. Every head of a family, with his teams, scrapers, shovels, and other implements which are always at hand in the cultivation, &c. of his farm, could during those leisure times which every one occasionally enjoys, work out from one to a dozen shares, according to his force and proximity to the road, without any serious diversion of his attention from his regular vocation or perceptible detriment to his crops. In fine, to all classes of farmers, no scheme was ever devised that afforded so rich an assurance of immediate and positive benefits to them, as the construction of plank roads in the neighborhood of their farms."

**PHOSPHATE OF LIME.**—This substance constitutes the basis or earth of bones. In some of the dairy districts of Britain, where the land has long been grazed, it is said the phosphates have been exhausted in a great degree, and that the application of bones, or phosphate of lime, as a manure has been found very useful. Plants consume or take up this element in the shape of phosphoric acid. Wheat and other grains require this kind of food. Urine contains it in considerable proportion, and this is considered one cause of the great benefit of the substance as a manure for grain crops.

Phosphate of lime is not common. It has been found in Estremadura, in Spain, in large quantities, and has been carried to England at great expense and applied to the soil as a manure, but with what precise effects we have not learned.

We learn from Dr. Emmons that two localities of phosphate of lime have been found in this State; one near Hoosick-Corners, in Rensselaers county, and the other in Warren county. The proportion of phosphoric acid combined with the lime is said to be unusually large in both instances; and the highly productive character of the soils of those localities, especially for wheat, is said first to have attracted attention.

Mr. J. C. Nesbit states in a late number of the *Mark Lane Express*, that being on a visit to a farm near Farnham, his attention was called to a kind of marl, which was said to produce remarkable fertility when applied to the soil. On analysing this marl with great care, he found it to contain from four to five per cent of bone earth.—*Alb. Cult.*

**TAN-BARK FOR MANURE.**—I have been in the habit of supplying my hog-pen liberally with tan-bark, which enables the hogs to manufacture a large quantity of manure. The bark absorbs the liquid part, and also a mechanical benefit in keeping the manure open and loose, as it naturally has a tendency to harden and bake; and if put into the corn-hill without sufficient care in planting, sometimes proves a positive injury. A day or two before using the manure I incorporate with it ashes and plaster, and by putting this mixture into a hill, I raise corn with good success.

Hartwick, Otsego, Co.

E. R.

## HORTICULTURE.

We have been requested by several subscribers in the neighborhood of this city, to add a *Horticultural* department to our paper. Had we been able to procure the services of some intelligent person, practically engaged in the business of Gardening, cultivation of Fruit, &c., to superintend such a department, we should have devoted a page or two in each number to the giving of information on Horticultural subjects, from the commencement of the volume. But failing in this, and having no pretensions to a practical acquaintance with these matters ourselves, we thought it better to select from our exchanges the facts and directions relating to them, which seemed worthy of notice, and to publish them promiscuously with other matter, without any attempt at classification. We are convinced, however, that not only will information upon the great variety of topics embraced in the term "Horticulture," be acceptable to the majority of our readers, but the collection of such information, under a proper head, so that the reader will know where to look for it, will make it more interesting, and increase its usefulness. In the arrangements which we have nearly completed for the issue of the next volume, the efficiency and value of the Horticultural department will not be lost sight of. We have already been promised very valuable aid.

The following items are from a correspondent of the *Albany Cultivator*, who evidently understands his business. He signs himself "E. C. G., Utica, N. Y." The climate in his locality, which must always be taken into account in Horticultural matters, is not very different from ours.

**THE WHITE BLACKBERRY.**—A correspondent of yours considers this a new thing among the fruits of this fruitful world. I can only say that it grew in my boyhood in Rensselaer county, and that I found it in 1842, in Chautauque county. White, black, and red, are the prevailing colors of the berries of most brambles, and of the external covering of most stone fruits. Meanwhile chemists tell us that iron is the universal pigment of nature, wherewith she beautifies her fruits and flowers. Will not some of our learned vegetable physiologists, who have leisure, taste and ability for such investigations, tell us if they can, whether these different colors in the same species of fruit as the blackberry and currant, are in consequence of the *different conditions* of the oxide of iron in the soil, or of its absence from the soil entirely; or whether it be not the result of the peculiar powers of the plant itself, by which it appropriates it to its own peculiar purposes, or rejects it altogether. We may resume, however, that it possesses the latter power, since the same flower often presents various hues, and the same well elaborated garden soil different flowers; while different colors of the same fruit grow side by side in the same soil.

**HAWTHORNS—IN THIS HOT CLIMATE.**—I fully agree with Downing and other writers on the unfitness of the Hawthorn for hedges, in this dry and hot climate. I wish to notice an interesting fact however, in regard to this thorn. I have a plat of ground of less than half an acre, surrounded by a hawthorn hedge on two sides—the west and the north,—the hedge being untrimmed, and from 14 to 18 feet high. That on the west side is thick, thrifty and verdant, while that on the north is every way inferior, with nothing in the soil or adjacent cultivation to make this difference. And yet, I think I have lately discovered the reason. The rain storms in this vicinity are, with scarcely an exception, from the east or west. The consequence is, that the hedge on the west side gathers a large amount of rain, that would fall beyond it were the hedge removed, while that on the north side receives merely as much rain as falls upon the surface of the soil at its roots. Hence the thrifty hedge is profusely watered and the other not.

**FALL PLANTING OF GOOSEBERRY CUTTINGS.**—In the autumn of 1834 I carried some gooseberry cuttings 120 miles in hot, dry weather. I planted them, without much care, in good gravelly soil, in my garden. This was about September 28th. In the spring of 1835, before vegetation, even in the gooseberry, could start, I had occasion to remove a few of these cuttings. In doing this they presented white, thread-like rootlets, some of them six inches long which must have been emitted the fall before. These cuttings made more wood during that season, three to one, than any I ever set in the spring. The reason never occurred to me until lately. If I am wrong, will not some of your learned correspondents correct me.

I reason thus. The first impression of the declining heat of autumn was the more thoroughly to ripen the wood of the cutting at the top. Meanwhile the accumulated heat of summer lingered deep in the soil long after the air above became cool with the chills of autumn. Through the influence of this bottom heat, the process of granulation, at the bottom of the cutting went on, and the rootlets were emitted. In the spring the plants started with considerable of the vigor of plants already

rooted. On the other hand, cuttings set in the spring, feel the drying influence of the sun at the top, while the bottoms are immersed in cold earth, while the work of granulation and the emission of roots cannot go on. Those acquainted with the chemistry of heat, will readily perceive that the downward progress of heat in the spring is necessarily slow. Hence cuttings set at that season are in an unphilosophical condition, heat at the top and a chill at the bottom, when conditions exactly the reverse are needed for the speedy and certain growth of a cutting. Does not this experiment, and these principles apply to all cuttings: and have we not yet much to learn on this subject?

**FRUIT TREES IN CLUSTERS.**—I have several plum trees growing in clusters of from three to seven stems each, growing from a common root. They are well trimmed up, and spread outward so as to form a round, open combined head. They have the advantage of being low, so that the fruit is readily gathered, while the tops are less exposed to the wind, both in blooms and in fruit. The trees in question are the *Bleeker*—(the Lombard plum of Downing,) and have been regularly derived from the original sprouts. This form of tree has the single disadvantage of being less readily cultivated by the plow than straight single standards.

**CHERRY TREES SPLIT BY THE SUN.**—I have two cherry trees standing in a very hot position, which are badly split by the sun. Now I think that a board, a foot or more wide, and set in the ground close to the tree, with its top fastened to the tree by a single nail, would remedy this evil. This remedy I think, would be better than straw bound round the tree which, besides presenting an unsightly object, affords a shelter for insects. In the case of very large trees, standing in hot positions, two boards nailed together at the trees so as to form an angle might be used.

**MIXTURE OF BEETS AND CARROTS IN SEEDING.**—In the spring of 1845, I planted 3 or 4 pecks of the ordinary turnip rooted beets, of good quality, for seed. Close to them and separated only by the space between the rows. I planted about as many yellow carrots also for seed. They seeded well. I sowed this seed in the spring of 1846. Many of my carrots were red and many of my beets yellow. The seed was ruined. Now, although these two plants are of the same class and order in the Linnean system, and probably of very nearly the same vegetable principles, yet considering the difference of herbage and inflorescence, who would have suspected their mixing?—*Query.* If we assume that red was the original color of the beet, may we not suppose that its varieties of other colours, were originated by such crosses as this?

## TRANSPLANTING FRUIT TREES.

We find the following communication in the *Guelph Advertiser*. We believe Mr. Hubbard is a subscriber of ours, and now that we have opened a Horticultural department, we should be glad to number him among our correspondents also. Our friend of the *Advertiser* will not, we hope, grow jealous should Mr. Hubbard take the hint. We will allow him to copy from us, as we have done from him, and that surely will be ample solace:—

SIR,—In consequence of repeated enquiries, as to the planting and culture of Fruit Trees, I shall feel obliged for a small space in your sheet, that I may give the public the result of my experience.

In consequence of repeated failures in the cultivation of Apple Trees, a general impression is abroad that this part of the country is too cold for them; or, that it requires either a particular location or very rich soil to enable them to flourish; whilst my experience justifies me in saying that, with proper management there are few places in which the apple may not be brought to perfection. Not only in the valley and on the plain, but also on the summit of our hills it will flourish, if planted in a good soil, and the hills are generally of a superior quality, moist for the purpose. In the latter respect the plains and knolls are much more likely to be deficient than higher ground.—On sandy plains it will be necessary to form excavations from four to six feet in diameter and thirty to thirty-six inches deep, which being filled with mud from the low grounds, rich loam, or gravelly clay, and a small quantity of old manure added, there can then be no question as to the tree flourishing. Three years since I planted an orchard for John Howitt Esq., on this plan, and it answered well: the holes being prepared in the Fall and the trees being planted in the following Spring. Although this may appear rather troublesome, I consider it necessary to remove the subsoil and replace it with a loam.

On transplanting apple trees to the orchard, care should be taken as to the distance they are planted apart, which in a great measure depends upon the nature of the soil. If the land be very fertile, 40 feet, and in some cases 45 feet, may be allowed; if, however, the soil is not very rich by nature, or made so by manure, this distance would be too great, and probably 30 feet would be sufficient for land of an ordinarily good quality,—which distance would require about 75 trees for an acre.

After planting, there ought always to be a breadth of from eight to ten feet of the land well manured and planted along each row of trees, and the vegetables raised on it will amply repay the labour and expense



bestowed on the ground during the first four or five years planting. Grass and weeds are ruinous to the growth of young trees.—The pruning should always be performed between the time of the frost coming out of the ground in the spring, and the opening of the leaf. The trees ought not to be less than five feet high, or more than seven, at the time of transplanting, with branches in proportion and full three years from the graft or bud.

There are so many opinions as to the best season for planting, that I shall not do more than state my predictions and experience are in favor of preparing the holes in the fall, and planting early in the spring. Plum and forest trees may be planted in the fall, but not later than the latter end of September or commencement of October, and apple trees will do well planted at the same time, if the following winter be mild.

I am, Sir, yours,

E. HUBBARD.

Guelph Nursery, August 21st, 1848.

**STRAWBERRY RUNNERS.**—These should be treated as weeds, and kept hoed from among regular rows of strawberry plants. They have precisely the same effect upon the crop as the same quantity of weeds and cannot fail to lessen the amount, as well as to diminish the quality. A writer in the *Gardener's Chronicle* remarks, "So convinced am I of the propriety of cultivating this fruit in separate and distinct plants and of cutting the runners, that I have this season taken out a part between each of my plantations, thus making the distance between each plant four feet by three.—*Alb. Cult.*"

**PRODUCTIVE APPLE-TREE.**—Browne, in his *Trees of America*, says there is an apple-tree at Romney in Virginia, which, according to Dr. Mease, grew spontaneously from seed, is estimated to be fifty years old, and has obtained the height of 45 feet, with a trunk more than a yard in diameter. In 1835 it produced 180 bushels of large fruit, besides four or five bushels left under the tree as damaged, and several bushels taken by visitors during the course of the season—so that the whole amount, in the opinion of Dr. Mease, must have been nearly 200 bushels. The greatest quantity of fruit borne on a single tree in England in one year, grew in Littlefield, Sussex, and produced 74 bushels of fruit—the total weight of the crop being nearly two tons. Repeated instances have occurred in Western New-York, of trees of the Rhode-Island greening, with little or no cultivation, yielding single crops of more than forty bushels.—*Alb. Cult.*

**THE CURCULIO REPELLED.**—A. J. Downing, in the *Horticulturist*, states that on two nectarine trees (a fruit eminently liable to destruction by this insect,) standing near a stable yard, not a single puncture could be discovered, while others a few rods distant did not escape. This effect was attributable to the offensive fumes of the manure repelling the insect. The same journal contains a communication stating that the writer wishing to stimulate some old plum trees, left round them for a fortnight, uncovered, a heavy coating of fresh horse manure, during the period of the swelling of the fruit. These trees bore fine crops; all others were stung, and dropt all their fruit.

#### TO FARMERS.

Why is it, that the effort and enterprize of the commercial and mechanical part of our population is crowned with so much success, while, with a few exceptions, compared with the great mass, the efforts of our farmers but just enable them to live? Is it not for want of the proper direction of their energies to the object sought? We hear daily of merchant princes, of manufacturers who accumulate immense wealth, of bankers who control large amounts of our circulating medium, and these several classes, with our professional men, are those who govern the affairs and direct the legislation of our country.

Why is it, that sixty-five thousand professional, and one hundred and twenty thousand commercial men, and eight hundred thousand manufacturers and mechanics, making in the aggregate less than one million, exert so much more influence than the four millions of our agricultural population? And why are we told that the farmers constitute so small a proportion of our several legislatures, when their interests are so much greater than that of all other classes united?

The numerical and physical power in this country is largely in favor of agriculturists, and were their efforts properly directed, there is no reason why the influence they exercise should not be in proportion to this power. The number of farmers to be found in our legislatures at the present time may possibly be greater than formerly. Yet it is to be feared that they are not always the best men who could have been selected; but that in some instances they are those who by their ambition rather than their merits, have gained these places of distinction, and who, if we may form an opinion by the result of their legislation, are controlled by others, and in many cases, like some who fill our county and town offices, are men who seek after office, rather than those who are sought after. But my object is not to write a political lecture, but to enquire into the reason why so great disparity exists in the intellectual powers of the different classes of our population. Is it not for want of a system of education adapted to their various occupations. It may be said that the children of almost all our entire population enjoy in our common schools equal opportunities for

education with each other. Is there not wanting, however, in all of them an appropriateness to some of these occupations, and more particularly to those who seek an agricultural employment? True, in our schools they are taught that "two and two make four;" and that seven per cent added to the principal once in ninety days accumulates rapidly. But is not this suited to the merchant and banker rather than to the farmer? Does not this instruction give the commercial man a starting point, which leads him to make laws to promote his own interests, permitting him to purchase State Stocks paying six per cent, and on this basis giving him the privilege of issuing a representative of money upon which he may receive seven per cent once in ninety days on the same property, while the farmer, should he so prosper as to accumulate a little money to loan, is prohibited by our laws from taking seven per cent. Should not the farmer's boy be taught that where "one blade of grass now grows two may be made to grow;" and should not he be instructed how and in what way this may be accomplished? Thus giving him a starting point, which would be as certain in its ultimate favorable results as in the case just supposed.

When will our farmers awake to see the importance of so educating their children to the business of farming, that a farmer's son shall be as well informed in what relates to his occupation, as the commercial and professional man now is in what concerns his? Has not the time arrived when in all our common and higher schools of education and colleges, the science of agriculture should be taught that they may enjoy equal opportunities for education adapted to their employment, with the most favored class of our community, and that the education acquired in these schools should not be so exclusively confined to what concerns the professional man alone? Let this subject be constantly kept before the farmer through the agency of agricultural papers and other agricultural publications, and we may look with confidence to the time as not far distant when the farmer, with others, may receive the benefits of education and legislation of our common country, when his rights and privileges shall be equally protected, and when education shall make him intellectually strong as well as numerically and physically so.—*Cor. Alb. Cult.*

**THE NIAGARA SUSPENSION BRIDGE.**—This bridge spans the river at its narrowest point about one mile below the Falls, and where the embankments are highest. An eye witness of the feat of Mr. Ellet, the engineer, in driving a horse and carriage across, furnishes the following interesting account to the *Baltimore Patriot*.

The horse was rather a fractious one and blind of an eye. Mr. E. stepped into the carriage with great composure, started his horse, and rode over in triumph from the American to the Canada side and back, being enthusiastically cheered at each end by the spectators. In a few minutes afterwards, not satisfied with his first splendid achievement, he borrowed the carriage in which myself and company were riding, and drove it triumphantly across and back with two horses. The distance from the bridge to the water is 230 feet, and from the water to the bottom 230 feet or more, making 460 feet. As the horses and vehicle passed over, the bridge would gradually give way under their feet, bending and raising up again, like thin ice when venturesome boys are skating on it.

The horses, carriage and driver, as seen from the vast depths below, seemed more like Tom Thumb and his miniature equipage, being diminished by distance, than anything else I can now think of comparing them with. The scene was full of terrific excitement. So confident, however, was Mr. Ellet in the strength and security of his bridge, that he rode upon it without the slightest emotion of fear. The bridge will be used only for carriages and foot passengers. The one in contemplation to be built close by it, is designed for the crossing of railroad cars, and will cost about \$300,000. My curiosity induced me to cross the bridge myself. There were probably fifty or more men at work on it at the time. When about half way over, there is presented the most beautiful view imaginable. The river is seen below, foaming and roaring over the rocks at a distance which makes the head giddy to look down upon. The Falls are in view above, in all their sublimity, and the river in an opposite direction rushing on its wild wide chasm, until lost in the celebrated whirlpool, three quartets of a mile below. The embankments on each side appear as though they had been cut out of solid rock to the depth of 260 feet. Thus the beholder stands as if suspended in mid-air, with the blue-arched heavens above, the deep, foaming, awful abyss below, the thundering cataract on one side, the eternal whirlpool on the other, and wildness, grandeur and sublimity all around.

**CHLOROFORM APPLIED TO A PIG.**—We are not sorry to see that this new and wonderful pain-destroying agent is likely to come into use for alleviating the sufferings of the inferior animals, in their passage from the midst of life to the salting tub. The *Leeds* (Eng.) *Times* informs us that the day before Christmas, Mr. Horace Watson, druggist, of the respectable village of Lacey, near Grimsby, wishing to give "his greasiness as little uneasiness" as possible *en route* to the pork barrel, caused our friend the butcher to administer through piggy's monstrous nostrils, *quantum sufficit* of chloroform. "Grunt," naturally fond of sleep, was soon in the land of forgetfulness, when our hero (in the blue frock) very conveniently extracted the requisite portion of vital fluid from the fountain of his existence, leaving the pig after being scalded, cut up, and salted, apparently not a whit wiser for what had passed.—*Christian Citizen.*

## ACCOMPLISHMENTS OF YOUNG PEOPLE.

Young people who think something of educating themselves are frequently much taken with what are called accomplishments. Ambitious parents are very solicitous that their daughters, particularly, should be accomplished. A leading recommendation of many popular institutions of learning for young ladies, is, that many of these accomplishments are afforded there. Piano music, French or some other modern language, and various other like things, are those to which we allude under this head. There is no objection to be urged against these, in their places; but there is one other accomplishment, seldom named or thought of, much more important, to which young people of both sexes would do well to turn their attention—for it is equally well suited to both.

This accomplishment is the art of conversation, or rather we would say the power of conversing well. What is there of more importance than this? and yet how often do we meet young people of fair natural abilities and good opportunities, who are unable to keep up a conversation of ten minutes with a stranger, unless the burden of it is borne by him. Natural gifts have something to do with it; and yet it is as much a matter of education as mathematics.

The great number of dumb, or stuttering, or unintelligible young persons met with, induce us to offer one or two ideas upon the necessity and feasibility of acquisition in this respect.

Conversation depends upon two things—power of expression and ideas. The first of these depends much on the second, but may in every case be acquired by study and care, and is an object worthy the attention of every young person. The difference between a clear and pleasant expression, and a stammering, blundering, and confused one, is recognised by every one at once.—But the essential of an easy conversation depends upon having something to say as well as the ability to say it. It behoves young persons to extend the circle of their ideas in every direction—to become acquainted with the facts on all the subjects by which they are met. It is not only necessary that they read, but that they read right books. By these we mean such as deal in truth. The reading of fiction will never confer powers of conversation to any extent, because it communicates next to no truths. Sentiments is not that which most concerns the world—the truth—the facts of which the world is full—most concern the people who live in it; and it is always best to bear this in mind. Let young people enlarge the bounds of their knowledge on all useful subjects, and they will possess the best accomplishment possible.

## PORTRAIT OF A MOTHER.

My mother—and I have her image distinctly before me—was a person of very womanly and motherly presence. Tall, upright, active, and cleanly to an excess; her cheeks were fair and ruddy as apples; her dark hair was combed over a roll before and behind, and confined by a mop cap as white as bleached linen could be made; her neck was covered by a handkerchief, over which she wore a bedgown; and a clean checked apron, with black hose and shoes, completed her every-day attire. Her name was Hannah—a name I shall always love for her sake. She was the youngest daughter of Jeffrey Battersby, a master boot and shoemaker, of whom more hereafter. She had two sisters married; one to a tradesman named Healey, residing at Rochdale; and the other to a woollen draper, living at Manchester: consequently they were both comparatively doing well in the world, whilst my poor mother's dark cloud was ascending and spreading over herself, her husband, and her five children. Small and fitful was the comfort she received from her kindred; but her sister Clemmy (Clementine), at Manchester, treated her with a coolness and indifference which cut my mother to the soul. I perhaps should not have mentioned names in connection with these circumstances, had not the recollection of my mother's sufferings divested me of every wish for reserve. Oh! how immeasurably superior was my poor but noble hearted parent, to her proud, mean, sordid sister! I remember as it were but yesterday, after one of her visits to the dwelling of that "fine lady," she had divested herself of her wet bonnet, her soaked shoes, and changed her dripping outer garments, and stood leaning with her elbow on the window sill, her hand up to her cheek, her eyes looking on vacancy, and the tears trickling over her fingers. She had been all the weary way to Manchester and back,—and it was a long and weary road in those days: she had knocked at her "great" sister's door, a servant had admitted her, and, more humane than her mistress, had ventured to ask her to a seat by the kitchen fire, where her proud sister saw her in passing, and scarcely deigned to notice her. The servants, however, in whom the impulses of common humanity had not been suppressed by pride, offered her refreshment; but her heart was too full; and back through the rain, and the wind, and the stormy weather, less inclement than her misnamed relative, did she return to her young and anxiously-waiting family, to whose caresses and tender questionings her only reply was, for a while, unrestrained tears. The recollection of my heart-wounded, but noble-minded and forgiving mother, as she suffered under that trial, is still vividly before me; and never, I believe will it be obliterated from my memory, so long as consciousness remains.—*Samuel Bamford's "Early Days."*

**BATHE.**—To the young we earnestly say—bathe, and bathe frequently. The ancients knew its efficacy, and practised it thoroughly, as the wisest of the moderns do. The theory of Beau Brummel has grown into a proverb—"there is no perfume like fresh linen,—no cosmetic like pure water and plenty of it." But what boy has not felt the invigoration of a swim!—or what man fatigued, of a free ablution? Bathe if you would be healthy. But while bathing is so important to the young it is no less so to the mature. Of all "the thousand ills that flesh is heir to" none can exceed those too common curses—*sympiesia rheumatism and gout.* Though when these are once seated they are deemed unmovable, the most experienced physicians assure us they can be prevented, as their origin is clearly traceable to the stopping up of the pores of the skin.

Then if you would preserve your digestion, and enjoy the good things of life—bathe! If you would avoid rheumatism and indulge in that joyous exercise which brings health and every other comfort—bathe! And lest you be bed-ridden and tortured with gout, balne, and bathe freely.

With the best of motives we again affirm—if there be a cheap luxury in the world, it is a hot, cold, or shower bath.

**ACTION NOBLER THAN LAMENTATION.**—You are now learning by philosophic inquiry what the men *should be*, with whom you have not as yet generally entered into any near, close, and indissoluble relations. You will soon come into closer relations with them. You will find them very different in reality from what your philosophy would have them to be. The nobler and better you are yourselves, the more painfully will you feel the experience which awaits you. Be not overcome by this pain, but overcome it by action:—it does not exist without a purpose; it is a part of the pain of human improvement. To stand aloof and lament over the corruption of man, without stretching forth a hand to diminish it, is weak effeminacy; to cast reproach and bitter scorn on man, without showing him how he may become better, is unfriendly. Act! act!—it is to that end we are here. Should we fret ourselves that others are not so perfect as we are, when we ourselves are only *somewhat more* perfect than they. Is not this our greatest perfection,—the vocation which has been given to us,—that we must labour for the perfecting of others? Let us rejoice in the prospect of that widely extended field which we are called to cultivate! Let us rejoice that power is given to us, and that our task is infinite!—*Fichte's Vocation of the Scholar.*

## EDITOR'S TABLE.

## TO CORRESPONDENTS.

W. F. Smithville. Your legal query has not been sooner answered in consequence of the letter containing it being kept from the Editor's notice until a short time since. We hope the "opinion" may be of some use, even at this late period. If the lots adjoining yours, as laid out originally, reach back to where A. has placed his fence, and the words "rectangular shape" be a part of the description in the deed, and the land conveyed would not be of that shape unless you include all that A. has fenced in, then there may be good ground for contending, that under the words "more or less," 20 links (not 20 chains as you state,) must be added to the depth of the lot. The case would be still stronger in this view of it, if the quantity of land be mentioned, and the addition of 20 links be required to make that quantity. But if all these circumstances are *in fact* just the reverse, as your remarks seem to indicate, then A. has no pretence for placing his fence where it is; he must move it to the distance stated in the deed. The words "more or less," when there is no boundary, such as a creek, road, neighbor's land, or something else of a similar kind, by which the distance intended is ascertained, are mere *surplusage*, and the deed should be read as if they were not in it.

J. R. Yarmouth, N. S. Remittance came to hand.

AGENTS of the *Agriculturist* for 1848, are expected to collect and transmit the amount due us forthwith. We wish also a list from each agent of all *paid* subscribers as soon as they can prepare it, in order that we may know to whom we are to send a portion of the next volume. Subscribers who have not paid by the first of December next, will not be entitled to any more than the present volume. As we intend to act only on the cash principle next year, it is necessary to have all dues for this year settled up before the issue of the first number of 1849.

☐ The List of Prizes to be awarded at the Provincial Exhibition, in October, will be found on the second and third advertising pages. Three or four of the less important classes have been omitted for want of room.

## THE LADIES.

## THE DEPARTED WIFE.

BY MRS. SIGOURNEY.

When from the pleasant hearth is borne away  
Its sweet presiding spirit—when the voice  
That gave its melody is hushed and mute—  
When bower, and garden, with their clustering charms  
Bare plants, and tinted flowers, and trellised vines  
Implore in vain her ministry, who loved  
Nature and nature's God—what can restore  
Solace to him, who in his house and heart  
Doth find a hermit vacancy, and mourn  
In bitterness of grief?

What save the thought  
That she, who was the sunbeam of his soul  
Hath gone to be an angel, with her white hand  
Still beckoning through the cloud for him, for him  
To share the fulness of eternal joy?

Hartford, March, 1848.

## USUAL METHODS OF PRESERVING OUR ORDINARY FRUITS, ROOTS, AND VEGETABLES, WITHOUT SUGAR, FOR WINTER'S STORE.

It had long been a desideratum to preserve fruits by some cheap method, yet such as would keep them fit for the various culinary purposes, as making tarts and other similar dishes. The expense of preserving them with sugar is a serious objection; for, except the sugar is in considerable quantity, the success is very uncertain. Sugar also overpowers and destroys the sub-acid taste so desirable in many fruits; those which are preserved in this manner are chiefly intended for the dessert.

We present the following directions, selected with some trouble, from that excellent but most voluminous work, *Webster's Domestic Economy and House-keeping*, for the benefit of our female readers. We trust they will be found of considerable value to the good housewife at this season of the year:—

*In gathering fruit for winter store*, great care should be taken not to bruise it, nor to break the skin; the injured parts soon rot and spoil the sound fruit in contact with it. To prevent this, gardeners even have instruments for gathering the most valuable kinds of fruit from the trees, without touching it with the hand. Fruit intended to be stored should never be beat off the trees, or by shaking the branches till it drops, if this can be avoided. They are best gathered on a fine day, when they are most likely to be dry; or if this be done on a wet day, they should be dried in the sun, if possible; the more delicate kinds do not bear to be wiped, as this rubs off their bloom, which, when allowed to dry on some fruits, constitutes a natural varnish, closing up the pores, and preventing the evaporation of the juices.

*The usual mode with apples and pears* has been to lay them first in heaps for a fortnight or more, covered with mats or straw, to sweat, as it is called; that is, by a very slight fermentation to discharge some of their juice, after which the skin contracts in a slight degree; but this is now generally disapproved of, and it is thought best to carry them at once to the fruit room, where they are laid upon shelves covered with paper, after wiping gently each fruit. The fruit room should be dry and well aired, but should not admit the sun. The finer and larger kinds should not be allowed to touch each other, but should be kept separate; for this purpose, a number of shallow trays should be provided, supported above each other on racks or stands. There should be the means of warming the room in very cold, frosty weather. Some kinds of apples and pears are gathered before they are quite ripe, and the ripening is completed after they are gathered; this is termed the *maturation* of the fruit, and it appears to be a curious and interesting natural process. This subject has been well examined by M. Couvèrche in a paper inserted in the "Annales de Chimie." He conceived that the acid and mucilaginous matters of fruit nearly ripe are converted into sugar by a process which is perhaps chemical, and which has been called the saccharine fermentation. Had such fruit remained on the tree until it was quite ripe, this fermentation would soon have passed into the putrefactive stage, and then the fruit could not be preserved without extraordinary means, such as extreme cold, sugar, &c. In general, the apples and pears of autumn should be gathered eight days before they are ripe, and matured in this way, in fact, there are some fruits that are never fit for eating except they are treated in this manner. The principle of life remains in vegetables very differently from what it does in animals; for a branch cut from a tree does not die immediately, but will grow on being planted, into a new tree. Flowers that have been cut off when only buds blow on being placed in water, and the head of a carrot cut off a little below the top of the root, if placed in a shallow

basin of water, will put out leaves, and become a handsome ornament. Mr. Knight is of opinion that, in the case of the maturation of fruit, it still continues to be in a living state though taken from the tree, and that the saccharine matter is formed in the same manner as it would if growing. Pears kept for maturation may be packed carefully with dry moss, bran, or sand dried in an oven, in baskets lined with stout paper; straw is apt to communicate a mouldy taste. They will keep in this way through the winter.

*Choice apples and pears* are sometimes wrapped singly in paper, and put into glazed jars with covers. When there is no fruit room, a cold cellar may be used, or they may be kept in baskets packed in dry straw, and kept in a dry, cool room.

*Oranges and lemons* may be preserved a long time wrapped up singly in paper, packed in dry sand or jars, and kept in an equal temperature.

*The undried grapes imported from Spain and Portugal* furnish us with a fine example of a simple mode of preserving fruit. They come in large jars, having sawdust poured in among the fruit to fill up the jars, and the lids are cemented on to prevent access of air.

*It is sometimes safer to take up certain vegetables before hard frosts set in*, where the cold is severe, as they may be preserved by artificial means, even by laying on a floor inaccessible to the frost; whereas if left in the ground they would have been frozen and lost. This, in some situations, is the case with cabbages, lettuce, greens, endive, leeks, cauliflowers, &c. They should be carefully removed in dry weather, without injuring the roots too much. Vegetables only a little touched by the frost may be recovered by soaking in cold water.

*Carrots and turnips* may be preserved through the winter by taking them up and keeping them in pits, or in a dry cellar in sand, secure from frost. The heads and roots should not be cut off.

*Onions*, when pulled up, should be laid thinly on a gravel walk, and turned every day to dry. When thoroughly dried, they are usually strung together by the tails and hung up in a dry, well-aired place, till wanted for use.

*Cabbages* are in some places preserved all winter by burying them in the ground, out of the reach of the frost.

*Walnuts, filberts, and chestnuts* are preserved by drying them; then packing them in jars, boxes, or casks, with fine clean sand that has been well dried before the fire, or they may be buried in a pit in the ground, lined with straw.

*Scalding fruit* has been employed with success to render their keeping more certain, and is therefore very useful in preparing them for house or sea store.

Some fruits may be preserved in a succulent state by being kept in water without boiling. This is practised with regard to the cranberry; it also succeeds with the smaller kinds of apples.

*The method adopted by a Frenchman, M. Appert, of preserving the following Vegetables, is highly approved.—Asparagus.*—They are first plunged into boiling water, and then into cold water, to take away their peculiar sharpness. The stalks are placed in the jars with great care, the heads downwards; the jars put into the water-bath until the water boils.

*Windsor beans* are gathered when small, and put into bottles immediately as the skins turn brown by keeping; one hour in the water-bath. They may also be stripped of their skins if that is preferred.

*French Beans.*—The pods put into bottles; if very large, cut in pieces; an hour and a half in the water-bath.

*Artichokes.*—The stools and very few leaves first plunged into boiling, and then into cold water; after draining, they are half dressed by being placed over the fire in a sauce-pan with butter and seasoning herbs. When cold, they are bottled, and placed in the water-bath half an hour.

*Carrots, Cabbages, turnips, parsnips, onions, potatoes, celery, cardoons, red beet,* and generally all vegetables, may be preserved, either simply scalded or parboiled, put into bottles, and then into the water-bath for an hour.

**FINE PICKLED CABBAGE.**—An exchange paper gives the following directions for making this excellent and wholesome relish:—"Shred red and white cabbage, spread it in layers in a stone jar, with salt over each layer. Put two spoonfuls of whole black pepper, and the same quantity of allspice, cloves, and cinnamon, in a bag, and scald them in two quarts of vinegar, and pour the vinegar over the cabbage, and cover it tight. Use it two days after."

**RECIPE FOR MAKING YEAST.**—To two middling sized potatoes add a pint of boiling water, and two table spoonfuls of brown sugar. One pint of hot water should be applied to every half pint of the compound. Hot water is better in warm weather. The yeast being made without flour, will keep longer in hot weather, and is said to be much better than any in previous use. Try it.—*Maine Farmer.*

**AN EXCELLENT DISH.**—Take of green corn twelve ears, and grate them; to this, add a quart of sweet milk, a quarter of a pound of fresh butter, four eggs, well beaten, pepper and salt, as much as sufficient, stir all well together, and bake four hours in a buttered dish. Some add to the ingredients a quarter of a pound of sugar and eat the pudding with sauce. It is good cold or warm, with meat or sauce, and is one of the most exquisite taste prefer it, we believe, hot, and with the first service.

## SCIENCE AND MECHANICS.

## ATMOSPHERIC CHURN—GREAT INVENTION.

This churn, which was the invention of Mr. Bishop, of Derry, England, and which has been slightly noticed in some of our journals, differs from all others in the method of making butter, which is accomplished by forcing a full current of atmospheric air through the cream, by means of a forcing pump. The churn is made of tin, very simple in its construction, portable and light, and requires but little expense to keep it in perfect order for working. A writer in the *Farmer's Magazine*, (Eng.) describes it as fitting into a tin cylinder provided with a stop-cock and funnel, so as to heat the cream to the necessary temperature. The air passes through a glass tube connected with the air-pump, descending nearly to the bottom of the churn. The pump is worked by means of a winch, which is not so laborious as the common churn. Independently of the happy application of science to this important department of domestic economy, in a practical point of view it is extremely valuable. The milk is not moved by a dasher, as in the common churn; but the oxygen of the atmosphere is brought into close contact with the cream, so as to effect a full combination of the butyraceous part, and convert it all into butter. On one occasion the churning was carried on for the space of one hundred and forty-five minutes, and eleven gallons of cream produced twenty-six pounds of butter. Churns constructed on the above principle would be rather a novelty in this country.

The foregoing is from the *Maine Farmer* of the 3d. instant. We have seen similar notices in a number of our exchange papers during the past two years, but until quite recently we have seen no mention that these churns have been made or used in this country. The following is from a late number of the *N. Y. Evening Mirror*:

*Impromptu Butter.*—We yesterday morning saw wet milk converted into butter in four minutes, probably a dash of cold water would have brought the butter in less time. This wonderful effect was produced by one of the most simple churning machines that we have ever seen. It consists of a square box, having a hollow perpendicular shaft with two hollow arms or tubes at the lower end. The shaft rests on a pivot and is turned by a small crank and cog-wheel, the motion causes the air to rush down the tube into the milk and produces a commotion like boiling water. The butter began to come immediately, and after it was made the milk was as sweet as new. By this process, good churn butter may be made for breakfast by any family, after the milkman has come in the morning, and the luxury of pure fresh butter enjoyed all the year round. When the cakes are baking or the muffins toasting, the head of the family may be amusing himself by churning the butter to eat with them.

The following is from the *N. Y. Spirit of the Times* of July 29—by which it appears that some Yankee has claimed the invention as original (!), or, perhaps the patent is granted for an improvement on the English churn mentioned above:—

*Atmospheric churn.*—Our country readers will be pleased to find that a very simple machine has been invented and patented by Messrs. Lewis and Johnson, for making butter with a great economy of time and labor. Declining to guarantee its merits on the printed testimonials of others, we saw it ourselves in operation on Wednesday last, at the New-England Hotel. From fresh milk it made butter in ten minutes, and from cream in four. To this fact we need only add, that its cost is very slight; and that it is so simple and so easily worked that a child of six years old might manage it.

Without vouching for the truth of all that is above said, we doubt not that this churn will prove a valuable labor saving invention; and we hope it may be speedily introduced throughout the country. We have heard it stated that one of the churns was on exhibition at Cincinnati, but we have seen no notice of it in the papers of that city.

Will not some body invent a machine to milk the cows? We shall then! be able to grow our own butter.—*Ohio Cult.*

## INDURATING BUILDING MATERIALS.

Among the extraordinary discoveries of the present day, by which materials of the most humble pretensions in works of art are rendered of the utmost utility the most refractory substances made to bend to the power of scientific research, and many productions, which have for ages been thrown away as useless, brought into most extensive usefulness—we know of none by which a more extraordinary note to say magical metamorphosis is effected, than the operation patented by Mr. William Hutchinson, by which plaster of Paris, Bath, Caen, and other soft stone, chalk, wood, pasteboard, and, in fact, any other material, is rendered hard as metal, receiving the most brilliant polish, and made absolutely impishable from atmospheric action, vermin, &c. The purposes to which this patent can be applied are innumerable. The first idea of the patentee was the induration of the softer and more common, and almost useless, stones for the purpose of paving; but so ample was his success, that he soon took a loftier view; and has rendered the operation, not only applicable to all common purposes for which stones and slates are used in building, such as paving, both internal and external, window-sills, fittings of dairies, &c.—but now ap-

plies the higher works of art. Plaster of Paris casts, of the most elaborate designs, in busts, reliefs, architectural ornaments, fountains, and ornamental flooring for churches, trellis work for balconies, ornamental iron-stands, &c., are rendered imperishable by the operation of the elements, and hard and tough as metal. Sculptors who may so choose, may work in Bath or Caen Stone, or even chalk, and the production will be rendered superior to marble, and in all these operations the finest edges of the cuttings are preserved, and not a chisel mark is lost.

In inspecting specimens of Mr. H's work, we were shown a slab of soft sandstone, from Tonbridge Wells—so soft, that it might be rubbed into powder by the hand—rendered hard as granite, and rung like a bell; numerous plaster of Paris ornaments and busts, metamorphosed into bronze, granite, and parti-colored marbles—drain, water and gas pipes, made from Bath stone, chalk, or paper, hard as granite, and polished internally like marble; in fact, the results of the operations are most extraordinary. The water-pipes, and prepared sheets for roofing, will be found most economical, both in first cost and wear and tear; in fact they can be rendered at a cost which comes far below any other description of material which has yet been introduced for these purposes; the sheets would also be highly applicable for railways, and many other public engineering uses.—*London Mining Journal.*

*LUNG PROTECTOR.*—An invention has lately appeared in Louisville, Kentucky, named as above, and described as follows: It consists of a small air cylinder, with a valve at each end, one working inward, when the air is inhaled, and the other outward, when the air is exhaled, the inhaling valve being surrounded by a woollen net work, through which the air is filtered.—In case of injurious gasses, a flexible tube runs from the inhaling valve along the leg to near the floor, by which the worker inhales only the lower part of the column of air and avoids the smoke and gasses. It is for the purpose of protecting the health of operatives who may be engaged in labor which exposes them to the gas of charcoal. There is no use of the inhaling valve. A silk handkerchief tied loosely over the mouth and nostrils and kept a little moist will answer the purpose without a valve. In connection with noticing this contrivance we would call the attention of those persons who live in situations prolific with billious diseases, and state that diseases may be often prevented if care was taken to cover the mouth and nose with a thin silk handkerchief whenever they go abroad in the morning before the dew has taken flight, or in the evening when the sun has set and the dew is falling.—*Ohio Cult.*

*IMPROVED PLANTING MACHINE.*—Mr. Robert Crisswell, residing at Buena Vista, Franklin Co., Pa., has invented a new and ingenious machine, combining a plough and planting machine, and answering alike for corn, potatoes, &c. It is so constructed as to score out two rows at a time, for either corn or potatoes, to drop and cover them as it passes along, dropping at any required distance apart, and covering to any required depth, and by a peculiar arrangement, the rows are at once kept straight and parallel.—As the hoppers drop opposite and at the same time, corn can be planted so that it can be farmed both ways, without the necessity of scoring the ground out in the opposite direction previous to planting. By this means one man and team can plant from 12 to 15 acres per day, whereas, it would require four men and teams to score that number of acres both ways, and eight or ten persons to plant and cover them in the ordinary way. After planting, the hoppers, wheels, &c., can be taken off, and the plough remains with which double the amount of labor can be performed, that a common plough will do.—*Ohio Cult.*

*KILLING MADE EASY.*—A cannon has been exhibited, says the *New York Express*, in Wall street, constructed on an entirely new plan. Its maker is Mr. J. Fitzgerald of this city. The canon is composed of between four and five hundred thin plates of wrought iron riveted together in sections of seven plates each, and these sections again screwed together on 8 by 12 inch and a half bolts, six of which are visible at the muzzle, and the other six are counter sunk. It is estimated to endure a force of sixty thousand pounds to the square inch, or that it is capable of throwing a leaden ball of seventeen pounds weight twelve miles in perpendicular height. And the aggregate force which it is capable of sustaining is supposed to be about one million two hundred thousand pounds. The length of this new peace making invention, for which a patent has been secured in Europe, as well as in this country, is seven and a half feet. Diameter of bore, four five-eighths inches. It is soon to be tested at the Navy Yard, Philadelphia, unless orders should be received to take it to West Point.

*IMPROVED HORSE COLLAR.*—The *Providence Journal* describes a horse collar which has been invented in England, which must be regarded as a very great improvement. It consists of a tube of India rubber or other suitable substance, inflated with air like a life-preserver. Its advantage is that it fits the horse exactly, easily, without undue pressure upon any part, and leaves the breast and joints of the fore legs free from galling and sudden pressure, to which the common collar subjects them. "The merciful man is merciful to his beast," and we hope that this improvement will be generally adopted.—*N. Y. Merc.*

**MARKETS.**—Since the arrival of the news by the *Niagara*, and still later by the *Hibernia*, prices have risen rapidly. Wheat has sold for 5s. 10d. per bushel in this market. It has been brought forward pretty freely, considering that the farmers have been engaged in seeding. Montreal prices have advanced to 6s. 1d. for wheat, best quality. Flour, 29s. See table. We would say to all and sundry, you can't be wrong in selling for a good price

**FOREIGN NEWS.**—We shall hereafter take but little note of mere political news and occurrences not interesting to farmers as such.—We would state, however, for the satisfaction of those who may not see other papers, that the last arrivals from Europe inform us of the complete prostration of the rebellion party in Ireland. Nearly all their leaders, including Smith O'Brien, have been arrested, and some of them put upon their trial. As there has been no serious fighting, and the leaders were not taken in arms, it is not probable that the Government will hang them. For the present, therefore, Ireland is quiet. But a more fearful calamity, if possible, than civil war, daily threatens them, viz. Famine. The potato-crop, it seems, will be a total failure. We give below a few statements in regard to this painful subject:—

**RAPID PROGRESS OF THE POTATO DISEASE.**—Returns from potato growers in various parts of England are printed in the *Gardeners' Gazette* of Saturday, which report the rapid progress of the potato disease during the past week. In some places, fields which appear in luxuriance and health one day are found suffering under the mysterious scourge. Correspondents in Hampshire, Sussex, Surrey, Kent, Herts, Beds, Berks, Gloucestershire, Cambridgeshire, Herefordshire, Notts, Lancashire, Durham, and Yorkshire, describe the presence of the disease in a manner that shows its spread is rapid and destructive. The accounts from Devonshire and Cornwall are perhaps the worst; and the climate of those counties being so much like that of Ireland, furnish the worst augury. Accounts, however, from Ireland, place the rumour of the disastrous malady past speculation.

From Bandon we learn that the grounds of Lord Carbery and others have been attacked; the haulm sent us presented the true character of the disease. "For three nights a dark and heavy fog rested on the ground until about eight, a.m.; on the third day it cleared up, when the disease appeared in an incipient state, but spread rapidly." About Bantry, or rather on the road to Castletown Berehaven, scarcely a field could be found (July 13) without signs of disease, and some gardens were completely blasted, "the stalks withered, and the potatoes, where formed, gone. At the same time the stench was so great as to be quite oppressive." The disease is reported to the same extent in the Kenmare Union. "You can scarcely breathe in the neighbourhood of these tainted fields." It is also reported, that fields near Glengariff, which on the 13th seemed free from disease, presented on the 16th (only three days later) "most alarming appearances." In Kilcatherine the crop is declared to be gone. In other places, previously reported safe, we find that alarming appearances are now beginning to manifest themselves. In fact, whole fields in the south have been suddenly attacked. "On the morning of the 13th," writes a correspondent at Kenmare, "to the astonishment of every one, the potato fields that had on the preceding evening presented an appearance that was calculated to gladden the heart of the most indifferent, appeared blasted, withered, blackened, and, as it were sprinkled with vitriol, and the whole country, has in consequence been thrown into dismay and confusion."

Accounts from the north of Ireland are more favourable. Our correspondent had seen no trace of the disease in a journey from Dublin to Belfast. Fortunately, other crops are universally reported to promise abundance. From Wales the reports concur in stating, that the disease has made, during the last few days, very rapid strides. The stems emit a strong odour; the tubers, however, with few exceptions, still remain sound.—*Nonconformist*.

We regret to learn that the disease is reported to prevail extensively in many parts of this Continent.

**THE CROPS IN GREAT BRITAIN.**—The information we have received leads us to believe that there will be an average crop of grain; but the potatoes are failing extensively. With regard to Ireland, a correspondent of the *Nonconformist* says: "Far more than disaffection, the position of the harvest is calculated to inspire painful apprehensions for the state of things in this country during the ensuing year. A failure, for the fourth time, in the potato crop, and a period of incessant rain, which has almost destroyed the wheat, present to the country the prospect of another famine, with greatly diminished means to meet it. The accounts with reference to the potato vary widely, according as they relate to the extent of the disease over the country, or in the portions where it has appeared, the amount of injury done to the tuber, and further, as they assume the probability of its progressing. From the mass of conflicting state-

ments, it is difficult to arrive at any probable estimate; but the loss sustained, up to the present time, in yield and waste, would seem to be about one-fifth of the entire crop. This is in a great measure compensated by the vast quantity sown, and the diminished demand consequent upon the destruction of the cottier system of tenancy. As the entire hope of the country was staked this year upon the crop, nothing can be imagined more awful than the state of the population in the event of the failure becoming general—broken, hopeless, prostrate, and destitute of all chance as of all expectation of relief."

**RULES AND REGULATIONS OF THE PROVINCIAL SHOW.**

The following are the rules which are to be observed by those who intend to compete at the Provincial Exhibition:—

1st. The payment of 5s. constitutes a person a Member of the Provincial Agricultural Association for one year, and Two Pounds Ten Shillings for Life.

2nd. No one but a Member will be allowed to compete for Prizes. 3rd. All Stock and Articles intended for Exhibition, must be entered in the Secretary's Books, at Cobourg, on or before 10 o'clock, on Tuesday Evening the 3rd October. If by letter, post paid, the person entering must remit 5s. for Membership, and 7½d for each article above four.

4th. Members exhibiting more than four articles for competition, to pay 7½d extra on each.

5th. Suitable Badges will be furnished Members, which admit them free of expense, to every department of the Exhibition during the week.

6th. Tickets for admission to those who are not Members, 7½d each time of admission. Carriages, including Driver, 2s 6d.; passengers to pay 7½d each.

7th. Every article exhibited for competition must be the growth, produce, or manufacture of Canada, except Agricultural Live Stock for breeding, which must be owned in the Province.

8th. A Ploughing Match will take place in the neighbourhood of Cobourg, on Friday, to commence at 9 o'clock in the morning, precisely.

9th. Discretionary Premiums will be awarded for such articles as may be considered worthy by the Judges, and the Executive Committee will determine the amount of premium.

10th. The Secretary of each District or County Society, is requested to furnish the names of three persons competent to act as Judges.

11th. On the evening of Thursday the 5th, a Dinner will be provided for the Members of the Association and the friends of Agriculture generally.

12th. The Public will not be admitted on the first and second days, on which days only the Officers of the Society, Competitors and Judges, will attend; but on Thursday morning the public will be admitted.

13th. No articles or Stock exhibited, will be allowed to be removed from the grounds till the awards are made, under the penalty of loss of the Premiums.

14th. Arrangements have been made with the Proprietors of Steamers that Passengers going to and returning from the Exhibition, together with Articles and Stock, will be conveyed at half price, as formerly.

15th. Arrangements have been made with the Hotel-Keepers of Cobourg to entertain at their usual charges.

16th. All communications upon the subject of the Provincial Exhibition, are to be directed to H. Jones Rutan, Esquire, Cobourg, C. W., Secretary to the Executive Committee of the Agricultural Association.

ADAM FERGUSSON, President.

Cobourg, August, 1846.

**HOME MARKETS.**

The following table gives the highest average prices at each of the three places:—

	Toronto Sept. 14.	Hamilton Sept. 14.	Montreal Sept. 12.
Flour, per barrel .....	£1 5 0	£1 2 6	£1 9 0
Wheat, per bushel ...	0 5 6	0 5 1	0 6 1
Barley, per 48 lbs. ...	0 2 7	0 2 6	0 4 6
Rye, per 56 lbs. ....	0 3 0	0 3 0	0 3 9
Oats, per 34 lbs. ....	0 1 6	0 1 3	0 1 8
Peas, per 60 lbs. ....	0 2 9	0 2 0	0 2 9
Oatmeal, per barrel ...	1 2 6	0 13 9	1 10 0
Potatoes, per bushel...	0 2 4	0 3 0	0 2 6
Hay, per ton .....	2 10 0	2 5 0	2 10 0
Beef, per 100 lbs.....	1 2 6	0 17 6	1 5 0
Pork, per 100 lbs.....	1 0 0	0 17 6	1 10 0
Lard, per lb.....	0 0 4	0 0 5	0 0 7
Butter (fresh) per lb..	0 0 7	0 0 8	0 1 0