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# THE AGRICULTURIST

## AND CANADIAN JOURNAL.

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

WM. McDougall, Editor.

WM. McDougall & Co., Proprietors.

VOL. I.

TORONTO, MAY 1, 1848.

NO. 8.

**HOT LYE A REMEDY FOR THE PEACH BORER.**—Mr. J. S., of Stockholm, N. J., writes us that he heard of a well authenticated case, in which a woman, laboring under the maddening influence of jealousy, deliberately took an axe, and levelled to the ground, a fine young orchard she had helped to plant; and being intent, also, upon the destruction of some favourite peach trees, then beginning to decay, she prepared a strong lye and poured it, while hot, about their roots. But what was her surprise, when she found that the trees put forth, flourished, and bore more fruit that year than they were ever known to do before.—*Am. Ag.*

**GRAFTING CURRANTS.**—The *Gardeners' Chronicle* recommends for the pretty appearance presented, as well as for improved flavor, to graft currants of different colors, as the red, black and white, variously intermixed, on stocks trimmed up to a single stem three or four feet high. The tops may be headed down to a compact head, or trained as espaliers in the horizontal or fan method, the two latter modes of training, by the free exposure to the sun and air, much improving the quality of the fruit. The importance of trimming the bushes up to single stems to improve the fruit and facilitate clean culture, instead of suffering two hundred and fifty suckers to shoot up all round in a dense brush heap, is very obvious to those who have tried both.

**STEEPING SEEDS.**—In March last, some Pink-seeds were steeped in a solution of sulphate of ammonia, another parcel in nitrate of soda, and a third in a mixture of lime, salt, and hen's dung. A quantity of Pink-seed was sown at the same time, in the usual way. The seeds in sulphate of ammonia grew very quickly, and are now the largest plants of this year's sowing. Those in nitrate did no good, three only surviving; and those in the mixture failed altogether.—*Gard. Chron.*

**YOUNG TREES.**—An excellent mode for preventing young fruit trees from becoming hide bound and mossy, and for promoting their health and growth, is to take a bucket of soft soap, and apply it with a brush or old cloth to the trunks from top to bottom; this cleaves the bark and destroys the worms or the eggs of insects, and the soap becoming dissolved by rains, descends to the roots and causes the trees to grow vigorously.

**MANURE FOR MELONS.**—The best is pigeon dung, and from the use of this, it is said the Persian fruit derives its superiority. Hen dung is probably next in value, and after this, guano, which is the manure of sea fowls.—*Am. Ag.*

**TURNIP FLY.**—L. B. Parsons, says the *New Genesee Farmer*, soaks his ruta baga seed in tanner's oil; and then rolls it in plaster. The odor keeps away the insects. A small quantity of oil answers the purpose.

**WORMS AND GRUBS.**—A mixture of salt and saltpetre (nitre) in the proportion of eight parts of the former to one of the latter, applied about the roots, will, it is said, destroy the worms, and greatly promote the health and thrift of the tree.

**SALT APPLIED TO ASPARAGUS.**—Salt should not be applied to asparagus at the time of making the beds; but when the plants are growing frequently, and in small doses. Water no saltier than that of the ocean is what is recommended.—*Lon. Ag. Gaz.*

Facts and not theories, or opinions, are the things most wanted for the improvement of agriculture.

**RAISE MORE ROOTS THIS YEAR.**—We are sorry to record the fact, that the farmers of Maine do not raise so many roots of late as they used to,—say ten years ago. We will excuse them as it regards the potato, because they are not able to counteract the insidious rot that cuts off that particular crop. But they ought to pay more attention to the other varieties. Ten years ago, when the potato could be raised successfully, and was raised easily and abundantly, thrice as many flat turnips, ruta baga, carrots, and sugar beets, were raised as are now. We cannot account for the almost total disuse of the ruta baga among us. It certainly is a valuable root—can be raised as easily as ever—is as grateful to cattle and sheep as it ever was, and since the failure of the potato crop, is much more needed. Why should it not be as much cultivated as formerly? The ruta baga and flat turnip can be raised cheaper than any other root, the potato excepted. The carrot, however, is more valuable, because more nutritive—it is more expensive to raise, but is nevertheless a very profitable crop, and should be cultivated on every farm. Nothing mixes in so well with poor hay, or hay of inferior quality, as a good supply of roots, for cattle and sheep; and nothing prepares animals so well in the spring for the transition from hay to grass, as a good supply of roots. We hope that during the coming season there will be a general return to this kind of culture, and that an abundant harvest will make the farmers' hearts and their cattle's stomachs glad.—*Maine Farmer.*

**THINNING PLANTS.**—The thinning of seeding crops is a very necessary thing to be done in time, before the young plants have drawn up so much as to become weak. All plants grow stronger, and ripen better, when the air circulates freely around them, and the sun is not prevented from an immediate influence. In thinning close crops, as onions, carrots, turnips, &c., be sure they are not left too near, for instead of reaping a greater produce, it would assuredly be less. When they stand too close, they will make large tops but smaller roots.

**LIME.**—One farmer saved his clover from destruction by the slug or small snail, on land bearing a wheat crop, by slight dressing of powdered lime, scattered through a clover seed machine late in the evening, when the insects were busy at work. Lime would be frequently useful if applied in this manner. Sown in moderate quantity on light land, it will bring in white clover; it is said also that it will destroy the fungus which causes the rot in potatoes.—*Am. Ag.*

**BENEFIT OF SALT IN THE FOOD OF SHEEP.**—From some experiments made at the Agricultural Institute, at St. Germain, in France, it appears that the sheep, which gained in weight  $3\frac{1}{2}$  lbs. a month, increased double that amount in the same length of time, when about one tenth of an ounce of salt was added to the food of each per day.

**WHAT CONSTITUTES GOOD FARMING.**—About 2,000 years ago, when the old Roman, Columella, was asked what constituted good farming, he answered "first, good plowing." On again being asked what came next, he replied, "good plowing;" thus strongly impressing the occasion for good tillage over every other consideration.

**AMOUNT PAID FOR DUTCH BUTTER BY ENGLAND.**—England pays to Holland, Belgium, and Holstein about £3,500,000 per annum for butter.

# Agriculturist and Canadian Journal.

TORONTO, MAY 1, 1848.

## PLASTER OR GYPSUM.

A subscriber met us the other day, and desired to know our opinion of the nature and benefit of plaster. He said some of his neighbors who had used it were in favor of it, and others thought it injured the land. He wanted to know what scientific men had said of its mode of action and effect upon the soil. We promised to publish for his benefit, as well as for that of our readers generally, such information as we could collect on the subject.

Great difference of opinion exists even among scientific men, as to the *manner* in which plaster produces its effects upon plants. But that it *does* produce effects, which is the most important part of the question, we believe is not denied by those who have given it a sufficient trial. Chaptal, a distinguished French chemist, thought its power was owing to its stimulating agency produced by its action when dissolved in water. Sir H. Davy was of opinion that it acted as a direct food for the plant, being found to some extent in those plants on which it exerts most power. Leibig ascribes its value to its giving a fixed condition to the nitrogen of ammonia which is brought into the soil, and which is indispensable for the nutrition of plants. Dana, attributed its effect to the action of the lime and acid of which the plaster is composed, on the organic matter and silicates of the soil. Later discoveries and more experience would lead us to the conclusion, that neither of these opinions is quite correct, or will account in full for the action of plaster. If its action were due to the ammonia which it fixes in the soil, then it ought to be equally efficient at all times and in all places, which we know it is not. And if it acted directly as a nutriment, we should expect its action to be as constant as that of farm-yard manure, which those who have tried it well know is not the case. But leaving to the scientific experimenter the complete solution of this question, which, with the advance already made, will no doubt soon be attained, we have arrived at certain facts in the history of this substance, the knowledge of which is of great service to the practical farmer. We subjoin a few of these facts:—Plaster does little or no good on *heavy wet soils*. It produces no sensible effect unless used in *large quantities*, on *strong clay land*. *Light, sandy, or loamy soils* are those on which plaster is used to the best advantage. Clover, lucerne, and other broad leaf grasses; potatoes, cabbages, and the leguminous plants, such as peas, vetches, &c. are the vegetables on which it exerts the most powerful influence. The narrow leaf grasses, barley, oats, and even wheat are not much benefited by it. When applied to wheat its action is not to be depended on; its effect upon the *clover* and other grass seeds usually sown with this grain, is more marked and certain, though in some soils deficient probably in lime, it is found to promote the growth of wheat. Its effect is much more striking when applied with *manure*. From *one to two bushels* per acre is considered enough for one application. It should be sown in the spring when vegetation is somewhat advanced, say in the month of May. Heavy rains injure the effect. In some parts of France they prefer to sow plaster after the *first cutting*, to avoid the heavy rains in the spring. It should be sown in calm weather in the evening or morning, upon the dew, or before or after a slight rain. Its effects last through *two seasons* and frequently longer. It is a stimulant as well as a manure, and has a tendency to exhaust the humus or geine already in the soil, which renders it necessary to add manures when the crops are carried off the ground.

Many persons say they are afraid to use plaster, because they believe it will injure the land. There is no doubt but it will injure the land to this extent:—It has the effect of greatly increasing, often doubling the yield of the crop; as it cannot act solely as direct food, it must enable the plants to extract a much larger proportion than they would otherwise do, of the ingredients in the soil necessary to their growth; consequently unless new supplies be added, the soil will become exhausted sooner than if the plaster had not been used and the large crops had not been raised. There is no process known at present, and we never expect to see one discovered, by which the soil can be made to yield up its riches without becoming poor, if we refuse to give back, in the shape of manure, what we have taken from it in our crops. An abundant crop merely proves that the soil contained a large supply of the proper food, and that a greater quantity of this food has been used than in the production of a poor crop. It will be seen then that plastering should not be often repeated on the same soil, unless alternated with good doses of manure.

## GARDEN CULTURE.

To the Editors of the *Agriculturist*.

GENTLEMEN,—

As the season for planting potatoes is approaching, and as the crop has failed with us to a great extent during the two last years, I beg, through the medium of your useful journal, to make a few observations that may prove of some use to the public. I think it necessary to find some substitute for the potato. Many things have been mentioned for that purpose, such as beans, peas, Indian corn, carrots, turnips, onions, and some other kinds of greens and roots. Now, I would beg to recommend, that each farmer who has been in the habit of growing large fields of potatoes, should select one acre of good land, and put on it about twice the usual quantity of old manure, free from the seeds of weeds, then give twice the ordinary quantity of plowing, and thrice the amount of harrowing. Then plant about six times the amount usually planted in the ordinary gardens.—This acre thus cultivated, would do something to supply the loss of the potato crop. Many of these seeds might be planted at a greater distance asunder between the rows, to admit of a man passing through the centre with a hoe, until they would no longer require hoeing.—This course, if carried out, would convince farmers in general, that if they ploughed but one half the land they do, and put on twice the ordinary amount of manure, and twice the ordinary amount of labor, and generally twice the amount of seed, that they will find a much better return for their labor than they do at present. The general opinion as to the mode of planting potatoes to escape rot, is to plant them on dry, sandy, or gravelly, or clay ground, with but little manure, as early as possible, and dig them before the fall rains. This has been found to be the best course in this section of country.

CHAS. P. TREADWELL.

Ottawa District, April 4, 1848.

## THE MALDEN AND ANDERDON AGRICULTURAL SOCIETY.

To the Editors of the *Agriculturist*.

GENTLEMEN,—

Agreeably to a resolution passed at a recent meeting of the above society, I proceed to perform my *task*, and that is, as an officer of the society to write something for the purpose of, I suppose, filling up the columns of the *Agriculturist*, and edifying its readers. Now in the first place gentlemen, I disagree with the resolution altogether, and I am sorry I was not able to attend the meeting when it passed, and oppose it, and had not my friend Mr. Douglass made it public in his communication published in the *Agriculturist* on the 15th of March last, that there was such a resolution on the books of the society, I should not have mentioned it here, for I do consider it a sort of reproach, reflecting something not very creditable on the members of the society, to be compelled to write, as if those that were able and knew any thing that would benefit their fellow labourers in the good cause of agricultural improvement, would not do it, that they really would "hide their light under a bushel," but for that resolution. I think better of our members, and do not like it; it puts me in mind of a passage in one of Sir Walter Scott's Novels, something like this, there was a fight between two Clans, and a famous blacksmith was hired to fight on one side, he soon fought his way through, cleaving all opposed to him in the rank, and then resting himself on his claymore, stood looking at the fight, his chief calls on him, but he answers, "no, I was hired to fight, and I have performed my engagement and done my part, had you asked me to fight upon honor, it would have been a different thing." Now it is to be hoped that our worthy friend the

President. Mr. Dougall, will not be like the blacksmith, and think his task over for the year, though he tells you plainly you need not thank him for his last communication, and that it was written on compulsion, but that his name will very often appear in the *Agriculturist*; and I can assure you gentlemen, that his beautiful place, and the manner in which he cultivates it, furnishes him with highly beneficial and interesting information, (particularly on the subject of Horticulture which appears to be his hobby,) and it is to be hoped he will promulgate it upon honor.

In the next place I am not a practical farmer, therefore, what can I write that will edify that class? but the resolution says I must—so sans excuse.

Well then, gentlemen, it is my opinion that this portion of the Western District is much the best adapted for the dairy farmer. Observation has taught me that wheat hereabout is but a chance crop, and unless chemical science should point out some other way of dressing the different soils, it must be ruinous to that farmer who depends upon the growth of it; the land in this township is generally very flat, and although it is abundantly rich, it does not appear to be adapted for wheat; the winters, of late years in particular, have been much against the growth of fall wheat, and indeed they generally are, we have so little snow on this western point to protect it, what with the heat of the sun at mid-day and the frost at night, it is very often found in the spring not worth encumbering the ground, and ploughed up, and again in the summer when the wheat is about ripening, it is so apt to take the rust, that whole fields of the most beautiful wheat to all appearance is gone in almost no time; now on the contrary, the land, the climate, and everything is in favor of a dairy farm, stock can be raised here much cheaper than in any other part of the province, for grazing is generally good till after Christmas, and there is every facility now for getting the produce of the dairy to market, as that superb propeller *Earl Cathcart* will ply regularly during the summer between this and Montreal, and I hope before long to see more of her class navigating the same route, and believe, it would be profitable did the emigrants but know what a beautiful fertile country the Western District is. The dairy farmer would not only find it profitable to export butter and cheese, but even eggs might be worth sending to Montreal, as our hens here that are good for anything, lay all winter, and there are many other things which he might find more beneficial to export himself, than be subject to the eternal shaving of the western merchant. Pork, for instance; how often have I seen the farmer coming from 15 to 40 miles (and last winter up to the axle of his waggon in mud) with fat hogs weighing from 150 to 350 lbs., each obliged almost to go a begging, as it were, for a purchaser, perhaps get \$3 per 100 for the smallest; and if he is lucky enough to get a couple of shavers who are a little jealous which is doing the most business, one on each side of his waggon, they might bid up to \$3.50. How much would he have saved by staying at home, rendering his lard, packing his pork, and as he lives on the Lake shore, putting it on some vessel in the spring, for the Montreal market? Most of them can afford to wait for the proceeds, and it would pay them well. What quantities of pork a dairy farmer might make here without knowing how he came by it almost. There are his whey and buttermilk for his young pigs in summer; and as corn, and all other grain, except wheat, springs up almost spontaneously to feed with, the pork would spring up in the same manner, of course. But I am afraid many of our farmers are waiting, and have been for many years, for money to spring up in the same way, from the appearance of their homesteads and farms. In fact, gentlemen, with all their advantages, they cannot or will not raise a sufficiency of beef and mutton to supply the butchers, the contractor who furnishes the troops at this post having always to get about half his supplies in Michigan. "Oh!" say our farmers,—"we cannot afford to raise and feed cattle at the price he pays."—How do the Yankees in Michigan do it? for there are few prairies there, and there is a heavy duty against them. This is it. The Yankee farmer will do something, and raise something to sell for the money. If he cannot get as much as he wants, he will sell for what he can get, and hope for a better price next time. Now there are so many thousands dollars sent up here every year to maintain this garrison. Is it not the duty, not only of the farmer, but of every producing member of this society, to keep as many of those dollars in circulation among ourselves as possible, knowing that every cent carried over to the other side never has a chance to come back again? The Yankees want nothing from us but our money, and why should they? But our farmers, I am sorry to say—many of them—instead of procuring good stock, and raising a good breed of cattle, stick to the native breed, letting such calves as they don't want to breed (which is by far the greatest number) suck the cow about six weeks, using up what ought to be five dollars worth of milk, then travel twice as many miles to town, and sell it to the butchers for about 7s. 6d. or 10s. currency, at most, or otherwise peddle the quarters about town for what they can get. I am happy to say, however, there is beginning to be many honorable exceptions to this rule; and I hope there is a change coming over the spirit of the dream of the remainder, so that, ere long, they may all be on the list of honorable exceptions.

Gentlemen, I remain yours, &c.,

G. BULLOCH, Secretary.

Amherstburgh, 6th April, 1848.

A SKETCH OF SYSTEMATIC AGRICULTURE.

Agriculture is the art of deriving from the earth the most valuable organic productions. He who exercises this art seeks to obtain profit by causing to grow, and by using, its animal and vegetable productions. The more considerable the grain derived, therefore, the better is the object accomplished. The most perfect agriculture is, evidently, that which produces by the application of labour, the largest and the most permanent profit in comparison with the means used. Systematic Agriculture ought, then, to teach us all the circumstances by means of which we may derive the most considerable profit by the practice of the art. Now there are three methods of teaching or learning the practice of Agriculture.

1. As an occupation by the manual exercise of it.
2. As an art.
3. As a science.

The skilful practice of Agriculture, as an occupation, is limited to the imitation of certain operations, and the observation of events and circumstances. It is nothing more, when thus pursued, than a simple mechanical art, for the practical farmer can only imitate and repeat the ordinary operations of Agriculture, occasionally modified by times and circumstances, and often, perhaps, without considering or ever knowing the motives by which he is governed.

The art of Agriculture is the realization of some ideal object. He who practices it has received from others, without considering the reasons on which it is founded, the idea of rule by which he proceeds. The skilful practice of an art consists, therefore, in the adoption of new ideas, in the study of new rules, and in judging the fitness of them being carried into practice. The science of Agriculture does not lay down any positive rules, but it develops the motives by which the best possible method of proceeding may be discovered and successfully pursued. In fact, the art executes some law given and received, but it is from science that law emanates.

Science alone can be of universal utility, embrace the whole extent of the subject, and enable us to derive the best execution of it under every possible circumstance. Every positive direction is applicable only to some determined case, and each case requires a special rule which science alone can supply. That system of Agriculture can only be called the most perfect which is the most reasonable—for these are synonymous terms.

The manual exercise and study of the art can never be useless to the Agriculturist who wishes to elevate it to the rank of a science, and to the mental consideration of which it is deserving. It will be advantageous to him to have the experience, the labour, and the energy which are necessary, in order that he may judge of the mechanical execution of various portions of it.

A purely practical Agriculturist is compelled to follow the rule which has been laid down for him, although it may not be wholly applicable to the particular case which presents itself. He cannot depart from it without adopting some other rule which may, perhaps, deviate entirely from the first.

This is the reason that so many Agriculturists, who have practised with success in other countries, and under other circumstances, on being removed elsewhere, have committed very deplorable blunders.

Thus, the man who has not studied the science of Agriculture, can make little use of books, or even the best of them; he knows not how to arrange the new ideas which they unfold, and he cannot follow them in their fullest extent. All that he dares to do is to read these books which have the closest relation with the circumstances in which he is placed.—*From Thaer's Agricultural Work.*

THE TURNIP.

The early flat turnip may be sown for early use in March or April—also in May or June for summer use, as those sown early become rather tough and stringy, and run up to seed in the latter part of the season. They may be sown broad-cast or in drills, fifteen or sixteen inches apart, and thinned out to three or four inches distant in the row; and if the soil is good, light and mellow, they will thrive well, and afford a healthy and nourishing variety to other summer vegetables. The Flat Field turnip is the most suitable for fall and winter use, and should not be sown till the last of July or first of August, or still later; many prefer the 10th of August. In a favorable season they will do well if sown the last of August or first of September; they have indeed been found to be much sweeter and better in the southern part of this State than those sown

earlier. But with us it is not safe to sow so late, as the cold season may set in early, and stop their growth.

Newly cleared land is found to be the best for these, as it generally produces the largest and sweetest turneps, and they are less exposed to the depredations of insects. A sandy or gravelly loam is reckoned the most favorable soil, and they will generally do well if sown on a green sward that has been turned up to a good depth the preceding spring, and yarded with cattle or sheep, with repeated harrowing during the time, in order to mix the manure with the soil. Before sowing, plow the ground again, make it smooth and level with harrowing, and at a time when the ground is sufficiently moistened with rain, sow your seed broad-cast or in drills, as you choose; but care should be taken not to sow too thick, and even then they will doubtless require a considerable thinning. If sown broad-cast, it will require more labor, to thin them out and keep them clear from weeds, though the first labor will not be so much as sowing the drills. They should be thinned to the distance of six or eight inches.

Turneps are often injured by the ravages of a small black fly, which in the quickness of its motions very much resembles a flea. Against this there are various preventives recommended. There is perhaps none better than that mentioned by *Abercrombie*, which is, to soak the seed in sulphur water, at the rate of an ounce of sulphur to a pint of water, which will be sufficient for soaking three pounds of seed.—Some recommend sowing ashes or lime over the ground after the seed has come up. This will generally have a good effect if sowed when the dew is on.—*Am. Ag.*

It is with much satisfaction that we insert communications like the following, written, as this is, by one who has practiced what he preaches. We do not agree with some of the suggestions made by our corresponden., but that circumstance will not prevent us from laying them before our readers. We hold that the true mission of an agricultural paper, is not to thrust upon the public the notions of the person who may happen to be its editor, and such others only as accord with his, but to present to the reader a variety of opinions—to become the vehicle of information from every source which promises benefit, and to leave the reader to select the wheat and reject the chaff. The editor, of course, is at liberty to make such comments, and offer such opinions as he may think suitable. We hope every farmer who possesses any knowledge that he believes would be of use to other farmers, will not hesitate to communicate that knowledge through our columns. We shall be glad to receive such communications, whether giving or asking for information, because the *Agriculturist* would thereby be made much more interesting and doubly useful. Let it be regarded as the farmers' own paper. The present number gives evidence, that our correspondents are fast increasing in number and improving in character.

We may observe, that the "liberal manuring," and the leaving "in the ground till late in autumn," recommended by the writer of the following "hints," does not appear to us to be a practice warranted by the last two years' experience of the disease:—

#### SEASONABLE HINTS.

In my last communication I promised that I would furnish you, from time to time, with a few practical hints, such as would likely be acceptable to those of your readers engaged in agricultural pursuits, and to redeem that promise, I embrace some leisure moments now at my command, in committing a few opinions to paper, which are mainly founded upon my own practical experience.

#### MANAGEMENT OF WINTER KILLED WHEAT.

In many instances, owing to the heavy falls of rain in the autumn, and the scarcity of snow upon the ground during the winter months, the winter wheat plants have suffered very severely, and those farmers who have sustained damage from the above cause, would do well to act at this particular season with judgment. If the crop be severely injured, it would be an easy matter to replough the ground, and sow it with barley, peas, spring wheat, flax, or even oats. Either of these crops, if sown in good season upon land that had been properly prepared for autumn wheat, would remunerate the farmer much bet-

ter than a crop of wheat, the average of which would not exceed 12 or 15 bushels per acre. If the land be only partially occupied with a crop, weeds will spring up and choke the plants, and the condition of the soil, after the crop is removed, will be such, that nothing short of a fallow will clean it; but if the land be resown with any of the above crops, the chance will be a full average remunerating crop, and, besides, the weeds will have no chance to grow, if a sufficient quantity of seed be sown to secure a full supply of healthy plants.

You have already, in one of your late numbers, given some directions regarding the propriety of harrowing winter-killed wheat, but, in my opinion, too much reliance must not be placed upon that mode of recruiting badly injured crops, and I should prefer harrowing very thick than thin wheat. The great object in harrowing winter wheat in the spring, is to break the crust that is formed upon the surface by the rains, and spring freezings and thawings. I have in some instances seen good, and in others very unfavorable results from spring harrowing wheat; and where it is practised, in no instance should the rolling of the land be neglected directly after the harrowing process is completed.

#### THE HESSIAN AND WHEAT FLIES.

I think that I have made myself pretty well acquainted with the habits of these insects. On the 8th ultimo, I examined a number of wheat fields, and to my astonishment I found the former species in great abundance, flying about in the air, and in some instances they were seen depositing their eggs on the plants of fall wheat. It is certainly very difficult to advise any particular course for the adoption of those farmers, who apprehend damage to their crop by the wheat flies, but one thing appears certain, that it is useless to expect a remunerating crop where they abound in great numbers. The grub of the Hessian fly does much more damage on poor land than on rich, which must be attributable to the fact that they work in the joint near the root, and strong and healthy plants, will thus have a better chance of resisting their attacks than those that are sickly, or of small growth. If the land be rich and calculated to produce a healthy and luxuriant growth of wheat, or other grains subject to the attacks of the Hessian fly, the injury sustained will not be so great as would be the case upon poor land, for another obvious reason, viz.: that the richness of the soil would encourage new succors or plants to branch off from the roots, although the main stems were destroyed by the grubs. I think therefore, that it is quite fair to infer that a thorough top dressing of well fermented barn yard manure, applied to the wheat crop, the first part of this month, or as soon as the ground is sufficiently dry to bear the horses and waggon, would have a salutary influence in checking the ravages of the Hessian fly. A top dressing of ashes, soot, salt or gypsum, would have a similar influence, and all of which together with the application of the barn yard manure might be tried by those of your agricultural readers, who apprehend damage from that insect.

#### PREPARATION OF SEED GRAIN.

For the want of a trifling expense and trouble, many farmers loose a great deal annually, by not properly cleaning and preparing their seed grain. I have no new method to recommend, but as the great mass of the farmers do not prepare their seed at all, it may not be amiss to state that I have found great advantage in steeping my seed wheat, barley, oats and Indian corn, in a strong liquid made of common salt and saltpetre. The latter as a manure has become celebrated in the old world, and from some experiments that I have made in preparing my seed grains, I have much confidence in recommending its use in this country. Indeed I would not think of sowing any of the grains above mentioned, without first giving them a thorough washing in a strong brine made of those mineral substances.

#### POTATOE DISEASE.

I have read, and heard much discussion upon the cause of the potatoe disease, and I have likewise examined with a great deal of minuteness, the progress that the disease makes upon the top of the plants, and afterwards upon the tubers. It must be admitted to be unsafe to lay down any well defined theory. I think, however, that there can be but one opinion in regard to the operation of the disease, although the true cause yet remains a mystery. It is in my opinion first communicated to the tops, and afterwards extends downwards to the tubers. The only remedy that I am prepared to prescribe, may be summed up in the following few words:—Plant early, select an early variety, manure liberally, and cultivate well, so that early maturity may be secured, and lastly, as soon as the tops become the least discoloured, carefully pull them up, observing at the same time the necessity of leaving the potatoes in the ground until late in autumn, so that the outer skin may become closely fixed to the potato. I have so much confidence in the foregoing method, that I purpose practising it myself, and all with whom I have conversed upon the subject have likewise agreed with me, that my deductions are correct. The time for planting is at hand, and to guard against spring frosts, I would recommend as soon as the potatoes are planted, that a very liberal dressing of half fermented manure be spread over the surface of the ground, which in the after cultivation of the crop may be ploughed in and mixed with the soil.

Yours, &c.,

A HOME DISTRICT FARMER.

QUERIES TO BE ANSWERED

To the Editors of the *Agriculturist*.

GENTLEMEN,—

Being nothing but a Bush-Farmer, and quite an indifferent one of even that species, I write to you, not for the purpose of imparting any valuable information (as indeed I possess no facts worth recording), but simply to ask a few questions, in the hope that some of your correspondents will supply the aforesaid information in which I am lacking. In the first place, what is the best method of keeping the Fly out of Cheese? I know of one way myself, which is nearly infallible, and a good deal practised in these "diggings," namely, to make them of double refined sky blue and tolerably tough, when no fly of any discernment will touch them; but as this is not the kind I prefer, this remedy does not suit. I have tried two other ways, both of which have failed of the desired effect; the one was rubbing them over with scalding butter every day, the other painting them with annate. Few lovers of cheese object to a few skippers, but wholesale they are a nuisance. My next question is, what is the best preventive of Rust in Bacon? My third, what is the most approved plan of maturing with lime for Wheat? and my fourth, what is the best time for pruning Apple Trees? B.

Lake Simcoe, April 7th, 1848.

We leave the inquiries of our Correspondent to be answered by some of our readers. Such "Bush Farmers" as B. are at all times welcome to the use of our columns. June and July are said to be the best time to prune fruit trees. Thomas, in his *Fruit Culturist* recommends late in autumn and winter.—All wounds more than an inch in diameter, should have a coating of tar and brick-dust. But some other person we trust will answer B to his full satisfaction.

MURRAIN.

Mr. W. A. Stephens, our Agent for the Wellington District, in one of his letters to us says:—

"A subscriber in the upper end of Chinguacousy, wishes much to know what will cure the Murrain in Cattle, to which his own are subject. I have met with the following, copied from the *Prairie Farmer*, in the *British American Cultivator* of 1845:

"Dissolve two pounds of Epsom salts in hot water, add one-fourth of a pound of tallow, giving one-third of the mixture at a dose, repeating it at an interval of some six or seven hours."

The following is recommended as a preventative. Prevention is perhaps the object most likely to be attained, and therefore the wisest course will be to look to your cattle in time, and if possible prevent this fatal disease:—Take equal parts of salt and slaked lime; mix and give two table spoonful twice a week during the prevalence of the disease.

We make no profession to any experience in this disease, and should therefore feel glad if any of our readers who have had such experience in Canada or elsewhere, would communicate its results to the public, through our columns.

TARES OR VETCHES.—Considerable attention has lately been given to these as a green crop, in the neighbourhood of Toronto and other places, where land is well cultivated. The spring tares when sown early in good soil, answer an excellent purpose for soiling horses, cattle, sheep, &c., in the summer when pastures are short. They may be cut several times during the summer. When allowed to go to seed they greatly exhaust the soil, but if ploughed in before the seeds are matured, they make a good manure. There are two varieties, the Spring and the Fall tare, the latter being much more hardy than the other. The spring tare is the best for this country, and care should be taken to get good seed, unmixed. A more luxuriant crop can be raised by drilling in the seed and applying the horse-hoe or cultivator after they are well up.

We have appropriated another page to *Agriculture*, making six pages in each number. We are obliged, in doing this, to trench on the space allotted to literature or general reading; but the necessary operations of the Farm and Garden, during the summer, require more particular attention, and we therefore give up a larger space for their consideration.

PROVINCIAL ASSOCIATION—PRESIDENT'S ADDRESS

We had intended to publish an address which we happened to observe in the *Newcastle Farmer*, purporting to be from the Hon. Adam Ferguson, President of the Provincial Association, to the Agricultural Societies of Canada West. The Directors of the Association at their last meeting, resolved to draw up a formal appeal to the Societies in the country for assistance, and appointed Mr. Thomas Page, and H. Rattan, Esq., of Cobourg, a Committee to carry out the resolution. The address alluded to, is written in the first person and appears to come from the President alone. We suppose it is the appeal intended, though it appears in the *Newcastle Farmer* without any comment. If the President had thought it desirable that his address should be seen out of the Newcastle District, he should have sent it to the *Agriculturist*.

We shall endeavour to make room for the main paragraphs in our next, with two or three remarks which the occasion seems to require.

CHEESE AND BUTTER.—By the politeness of B. P. Johnson, Esq., Secretary of the New York State Agricultural Society, we are in receipt of the Reports of the committees on cheese and butter for the last year. These reports are drawn up with apparent judgment and skill, and contain many valuable suggestions on the manufacture of these important articles. The committee on cheese, state from official returns, that the value of the cheese received at tide-water, the product of the State in 1847, was \$2,237,620, and the value of the cheese manufactured in the State during the year, exceeded \$8,000,000! The great importance of improving the quality is thus apparent, and from the experiments detailed in the report, and remarks thereon, we shall endeavour to cull something valuable for our next number. We do not make cheese enough in Canada for our own consumption. We have heard of one Grocer in this city, selling 5000 lbs. of American cheese in one week. This is a reproach to our dairy farmers. The observations of our correspondent, Mr. Bulloch, will apply to this matter also.

CULTIVATION OF THE SWEET POTATO.

The sweet potato (*Batatas edulis*), or some allied species, is a native of both Indies, and is now cultivated everywhere within the tropics, and is common to be met with in each of the temperate zones. There are numerous varieties, different from each other, in the size, shape, color, and taste of the roots, as well as in the form, hairiness, or smoothness of the leaves, and color of the flowers. In the warmer parts of Asia, Africa, inter-tropical America, as well as in some of the southern states of the Union, the red-rooted varieties are in general cultivation, which are very deservedly esteemed for their large size, sweet flavor, and nutritious qualities; while in the temperate parts of Europe and of North and South America, the white and yellow-rooted sorts are almost exclusively raised.

In warm climates, this plant is cultivated in a similar manner as the common potato is with us, but requires much more room: for the trailing roots extend four or five feet each way, often sending out forty or fifty large tubers to a plant. In the middle and northern states of the Union, the potatoes should be planted in March or April, in a hot bed, or some other warm place, where, in two or three weeks, they will throw out a number of runners or sprouts, which, as soon as they reach a height of three or four inches above the surface, are taken off, transplanted into hills four or five feet apart, on open ground, where the soil is light, rich, and properly prepared, and subsequently may be hoed, earthed up, or treated in other respects like the common potato. The tubers may be dug and eaten as soon as they are large enough for use; but those intended for winter keeping, should not be disturbed before the vines are dead. In order to keep them during winter, until spring, they should be dried in the sun until the moisture is driven off, sweated in the heap, and when dry, packed in dry sand and stored in a cool cellar, not subject to wet nor frost.

Sweet potatoes are considered a much lighter food than the common kind, and are equally nutritious. The young leaves and tender shoots are often boiled as pot herbs, and are esteemed as a wholesome food.—*American Agriculturist*.

## AGRICULTURAL INSTITUTIONS.

NO. III.

It will appear somewhat strange, that till recently, so little has been done in England towards establishing institutions in which the science and practice of agriculture might be systematically taught. This anomaly is not to be attributed to indifference in respect to the claims and importance of rural pursuits, but rather to the numerous facilities which a highly cultivated country like England almost every where affords for acquiring a knowledge of the most approved practices of modern agriculture. The numerous societies, which embrace every variety of investigation connected with the art of culture and the breeding and treatment of cattle, with their periodical reports and transactions, present to the young and inquiring mind the most valuable means of self instruction.

It has been the usual practice, both in England and Scotland, for a young man destined for agricultural pursuits, and who has not the fullest advantages for learning his business at home, to place himself under the superintendence of some extensive and practical farmer of good reputation, in a favorable district. Here he usually spends two or three years, assisting in the daily management of the farm, attending markets for the purpose of selling produce, purchasing seed corn, manures, live stock, &c. He seldom receives any instruction in what may now very properly be called the science of agriculture; he is taught to regard it simply as a business or a mere practical art. The usual charge for such a pupil is £100 per annum; and consequently the system is only adapted to the circumstances of the wealthier class of farmers. Although the agriculture of England has made such rapid strides during the last half century, yet a conviction of late years has been spreading, that institutions of a general educational character, combining both the science and practice of agriculture were wanting, in order to meet the demands of an inquiring and improving age. In fact the practice of farming in many parts of England has of late years undergone such great changes—varied and expensive experiments have been instituted—a heavy expenditure for manure has been incurred—that a certain degree of exact scientific knowledge has been deeply felt as absolutely necessary, not only to secure profitable success, but to avert in many cases total ruin. These considerations, connected with a daily increasing population within the limits of a small area of country, and the recent fiscal changes relating to the importation of foreign corn, have awakened up in the mind of the British farmer such a spirit of inquiry and enterprise, as cannot fail in the end of giving a higher character to his profession, of placing at his disposal the most valuable resources of science, and of benefiting in the highest degree the physical condition of mankind.

At a meeting of the Cirencester and Fairford Farmers' Club, on the 22d of April, 1844, a committee was appointed to consider the subject of an Agricultural Institution, and to sketch out a prospectus of its principles and objects. Hence arose the "Royal Agricultural College" at Cirencester, in Gloucestershire, which has been in active operation for about three years. A suitable farm of between four and five hundred acres has been taken on advantageous terms, under a long lease, of Lord Bathurst, who, I believe, gave a large sum towards the erection of the necessary buildings. A Joint Stock Company, incorporated by Royal Charter, erected a very elegant, capacious, and convenient college building, provided the Institution with professors and teachers, and stocked the farm. Pupils are nominated by proprietors, and the charge was originally paid at £30 per annum, including board and lodging and instruction. This sum has been found inadequate, and a considerably higher rate has been imposed. The course of study is comprehensive, and the means of imparting practical knowledge to the pupils, who regularly engage in the operations of the farm, are most ample.

This Institution has not escaped the difficulties which are always more or less incidental to new undertakings. Its objects are of national importance, and there appears now no doubt of its success. I am not aware of the number of pupils now in the Institution, but I understand it is regularly increasing. His Royal Highness, Prince Albert, is Patron. The Right Honorable Earl Bathurst, President of the Council, and Lord Dacie, Vice President. The Council seem anxious to connect in the system of instruction, a thorough, practical knowledge of agriculture, with its scientific principles. There are several private schools in England in which the sciences are taught in reference to agriculture; but as these institutions have no farms attached to them, the most important department, the practice of the art can receive but little attention. In several of the Diocesan schools which have been recently established in the rural districts, the science of agriculture in its relation to chemistry, geology, botany, &c. occupies a prominent place. In Hertfordshire, an agricultural training school has been in operation several years, to which a large farm is attached, and I believe its success has been considerable. From recent information received from England, I perceive, that in Bedfordshire and other counties, institutions of a similar kind are springing up. There appears likewise a growing desire evinced that the old grammar schools and endowed educational establishments generally, should so modify their course of instruction as to embrace the experimental sciences, and thus to meet the practical wants of life.

In Ireland a model farm has been established at Glasnevin, in the neighborhood of Dublin, in connection with the National Board of Education. The object of this Board being to train up young men for schoolmasters in the country, they are accordingly conducted through a suitable course of study in the Normal School, and at stated times attend at the farm for the purpose of observing the various operations of husbandry, and hearing practical lectures on the principles of agriculture. A small number of indoor pupils are admitted on low terms, who, while they work on the farm are in the habit of receiving daily instruction in those branches of knowledge which relate to their pursuits. It is gratifying to observe, that in the Normal School of Upper Canada, recently commenced in Toronto, the claims of agriculture have not been overlooked. In that important Institution systematic instruction is given in mechanics, agricultural chemistry, &c., which cannot fail to make those, who in future, will have the charge of the youth of this province, more efficient teachers.

An Agricultural School has also existed for several years at Templemoyle, in the County of Londonderry. The farm is leased of the Grocers' Company of London; and it is said that the Company have been much benefited by the improvement of their property generally, by the excellent example which the farm of Templemoyle presents to their tenantry. The cost of stocking the farm and making the necessary arrangements for an Educational Institution, amounted to £4000; which was raised in shares of £25. There are likewise annual subscribers. The payment for each pupil is only £10 a year. The following is extracted from the Irish Farmers' Magazine:—

"Upwards of two hundred young men, natives of sixteen different counties in Ireland, have passed or remain in the school. Of these, between forty and fifty have been placed in different situations, such as land stewards, agents, schoolmasters, and clerks, or employed on the Ordnance survey. Nearly one hundred are now conducting their own or their fathers' farms, in a manner very superior to that of the olden time.

"The school and farm of Templemoyle are situated about six miles from Londonderry. The house, placed on an eminence, commands an extensive and beautiful view over a rich and highly cultivated country, terminated by Lough Foyle. The base of the hill is occupied by a kitchen and ornamental garden, cultivated by the youths of the establishment, under an experienced gardener. The house and farm offices behind, contain spacious, lofty, and well ventilated school rooms, recitory, dormitories, apartments for the masters, matron, servants, &c. Each pupil occupies a separate bed; the house can accommodate seventy-six, and the number of pupils is sixty. They receive an excellent education in reading, writing, arithmetic, book-keeping, mathematics, land-surveying and geography. This department is managed by an excellent head-master, and assistant-master, both resident in the house. The pupils are so classed, that one-half are receiving their education in the house, while the remainder are engaged in the cultivation of a farm of 165 Scotch acres, in the management of which they are directed by the head-farmer, an experienced and clever man, a native of Scotland, who has a skilful ploughman under him. The pupils who are employed one part of the day on the farm, are replaced by those in the school, so that the education advances in and out of doors *pari passu*."

In Scotland, most praiseworthy efforts have of late years been made, for the diffusion of sound agricultural knowledge. The Agricultural Chemistry Association in connection with the Highland Society, supports Professor Johnston, who is engaged in Edinburgh during winter, in analyzing manures and agricultural productions; while he spends the remainder of the year in perambulating the country, calling on and lecturing to farmers on the various branches of science that have a bearing on their pursuits. The Professor drew up, a few years since, a short Catechism of Agricultural Chemistry, which has been extensively introduced into many of the parochial schools of Scotland, and into several of those of England and Ireland. Besides, Scotland can boast of a well endowed chair of agriculture in the University of Edinburgh, which has been established for many years, and which is now filled by that eminent agriculturist, Professor Low. There is also a chair of agriculture in Marischal College, Aberdeen.

Nor in England is agriculture uncared for in the higher seats of learning. In the University of Oxford, the well known Dr. Danberg, fills the important situation of Professor of Rural Economy; to whose lectures and writings, the cause of agricultural education and improvement in the British Islands, is under deep obligations. The Royal Agricultural Society of England, has recently appointed Professor Way, as its consulting chemist. And the great National Society of Ireland, has, I perceive, lately done the same towards Dr. Hodges. Several agricultural instructors have also been sent over the country, under the patronage of the Lord Lieutenant, who appear generally to have been cordially received by the farmers. A finer field for such patriotic exertions cannot, perhaps, be any where found. With agencies such as those now in active operation throughout the British Islands, for the improvement of the soil, by the diffusion of sound and useful knowledge, who can doubt, but that our parent state will continue long to occupy her proud and enviable position, among the nations of the earth?

Toronto, April 16th, 1848.

G. BUCKLAND.

## CIVIL AND SOCIAL.

## THE CURRENCY AND BANKING.

Money is the measure of value, as the foot rule is the measure of length, the gallon of liquids, or the bushel of solids. The length of the foot rule, the size of the bushel and of the gallon, are fixed by the Legislature. To alter these legal standards of measure is a fraud, punishable in the courts of justice. If every individual were allowed to alter these standards to suit his own convenience—to buy by a large measure and to sell by a small one—fraud would be legalized. If companies were privileged by special charters to bring about this result; and if they were allowed the exclusive benefit of this profitable fraud, the affair would become the more heinous from its assuming the character of a monopoly. This is precisely the case of our banks. They are allowed to increase and controul the *measure of value* to suit their own convenience. They enjoy a *monopoly* of this privilege. A man wants to purchase property: the measure of value has been made unusually and unnaturally large, by artificial means—the bankers have inflated the national currency by excessive issues of paper or counterfeit money. The superabundance of currency decreases its value; *real* money suffers degradation so long as it remains in company with the *artificial*. The currency having depreciated in value, owing to the large quantity of it being suddenly thrown into the market, a given quantity of it, representing a *nominal sum*, will purchase less property than before; and it is customary to speak of the effect as a *rise* in the value of property, when in fact it is a sinking in the value of the currency.—A person purchases property when the currency is inflated, or in other words, the measure of value is artificially enlarged. A *nominal sum* will exchange for a less amount of property than it would if the currency had not been increased by artificial means. A few months pass away, and the manufacturers of paper money change the scene. It is now their interest to *lessen the measure of value* as it was before to *increase* it. In the first instance, they were putting out their paper promises with the view of getting the public to pay interest upon them. These promises are now returned upon them for payment;—not the whole, but a portion of them;—and for these they must give the *real* money. To enable them to do this, they find it necessary to compel payment of those to whom their promises have been lent. A contraction or lessening of the amount of currency becomes necessary to the existence of the banks. They must curtail their issues, and insist upon payment of all their loans. And why? They lent *artificial* money, and it is returned to them with a demand to have them exchange it for *real* money. They must pay the real money, and they cannot pay it until they get it from the parties to whom they loaned *promises*. This is the actual working of the system. One bank may frequently be paid in the promises of another bank; and these the recipient bank will present to the debtor bank for payment. Or a bank may be paid in its own promises, which become due the moment they are issued; but they are frequently put out in the shape of loans, in exchange for the notes or promises of individuals—which notes do not become due for some time—generally three months. If the whole quantity of the notes of a bank were returned *before the promises which have been received in exchange for them become due*, the bank would not be in a position to pay them. It is the knowledge that they will not be so returned that causes the banks to issue promises much beyond their ability to discharge at any one time. There is a limit in issuing, beyond which, safety to the banks would not exist. Their sole care is to keep within this limit. In this they are actuated solely by private considerations. The public interest does not enter into their calculations. The private interest of the banks and the interest of the public, are not identical. Fluctuations in the amount of currency—alterations in the measure of value, which are equal to buying by a large measure and selling by a small one—the bankers find it their interest to produce. What the banks gain the public lose.—The public have to buy by the small measure and sell by the large one.

But we find that in our amplification of the working of the system, we are losing sight of the individual who purchases property at a period when the currency was highly inflated. When the bankers

find that their private interests will be subserved by a *contraction of the measure of value*, a large part of the currency is at once *withdrawn from circulation*. The currency being contracted, or in other words, money becoming scarce, a given quantity of it, representing a nominal sum, will purchase more property than when the currency was inflated, or in other words, when money was plentiful. The man who purchased at the time of the artificial inflation, must sell at a great sacrifice, and will hardly escape ruin, when the bankers produce a collapse, which, under the present system, must always come sooner or later. Thus we see, that the bankers, by inflating and contracting the national currency, or lengthening and contracting the measure of value, can, at pleasure, affect the value of all the property in the country; and as property generally has a complete controul over labour, the labour and property of a country are both at the mercy of the privileged manufacturer and issuer of paper money!

## INSPECTION OF BUTTER.

The following are the principal clauses of the Act passed last session, for the Inspection of Butter in Quebec and Montreal. The clauses containing provisions for the prevention of fraudulent marks, and punishment of dishonest practices on the part of the Inspector, we have not thought it necessary to insert. Heavy fines are inflicted on those found guilty of an infraction of the law in these points. It is to be remembered, that "inspection" is in no case compulsory. The great advantage to the butter-maker will be, that by complying with the regulations of this act, and getting the Inspector's brand on his kegs, the character of his butter will be established in the foreign market; if of the "first," "second," or other quality, it will sell accordingly:—

VI. And be it enacted, that upon, from, and after the first day of September, one thousand eight hundred and forty eight, no Inspector of Butter shall brand, mark, or certify any Butter as inspected, unless it be packed in the manner hereinafter required; but that upon, from and after the said day, any butter not so packed, which shall be submitted for inspection, shall by the Inspector to whom it was submitted, be repacked in the manner hereby required, and the Inspector shall receive the actual cost of such new packages as may be required for such repacking, and the further sum of three pence for each firkin or keg of butter so repacked, as compensation for his time and labour; and all butter branded, marked, or certified as inspected, shall be packed in firkins or kegs, made of the best seasoned white ash timber, and each bound with at least twelve wooden hoops, and being of the following sizes and dimensions, that is to say: the firkin to contain as nearly as possible fifty-six pounds of butter, the length of the staves, from croe to croe, to be fourteen inches and a half, the diameter of the head to be eleven inches and a half, the thickness of the staves to be, as nearly as may be, three quarters of an inch, and the thickness of the head, as near as may be, half an inch, the package to weigh, as nearly as possible, but in no case to exceed ten pounds when dry: the keg to contain, as nearly as possible, eighty-four pounds of butter, the length of the stave, from croe to croe, to be seventeen inches, the diameter of the head to be thirteen inches, the thickness of the staves to be, as nearly as may be, three quarters of an inch, and of the head, as nearly as may be, half an inch, and the package to weigh, as nearly as possible, but in no case to exceed thirteen pounds when dry; and the weight of each package shall be branded on the outside of the firkin or keg, at the centre of the stave or bilge, with the name of the maker thereof, under a penalty of five shillings currency per package, upon any cooper who shall contravene the requirements of this Act, as aforesaid: Provided always, that nothing herein contained shall apply to any packages other than those containing butter submitted for inspection.

VII. And be it enacted, That, in inspecting butter, the Inspector shall take out the head of each firkin or keg, and shall pass the taster through the butter, from end to end, and shall empty out and throw aside all salt or pickle which, in his judgment, shall not be necessary to the preservation of the butter; and after he shall have ascertained the quality of the butter, he shall replace so much thereof as he may have taken out, and if there shall, in his judgment, be a deficiency of loose salt, so that he shall think the preservation and condition of the butter would be promoted by an additional quantity of salt, he shall add such quantity; he shall then have the package securely headed and coopered, and shall scribe or brand on the head of the package the gross weight thereof in pounds avoirdupois, excluding fractional parts of a pound, and the tare, which shall include one pound weight for each firkin, and two pounds weight for each keg, for soakage, over and above the cooper's tare; and he shall then brand on the head his own name, the month, year, and place of in-



spection, and the quantity of the butter, as "first," "second," "third" or "fourth," or as "grease," according to the quality of the butter, and adopting the standard of quality and system of classification in use in that portion of the United Kingdom called Ireland; first removing all such marks (the distinguished mark of the owner of the butter excepted), on the package as may interfere with the brands or marks of the Inspector.

\* \* \* \* \*

IX. And be it enacted, That for all the services to be performed as aforesaid, including unheading, weighing, salting, heading, tightening hoops, marking and branding, and ten days' storage, each Inspector shall be entitled to receive sixpence currency, of this Province, for every package of butter by him inspected as aforesaid,—and if re-inspected fourpence, together with the actual cost or charge of any package by him furnished, or for extra cooerage or repairs done to packages containing butter by him inspected, and no more; the charge for which said extra cooerage and repairs shall not in any case exceed threepence per package; and in consideration of which all packages shall be delivered in good shipping order, and such charges shall be paid by the person or persons offering such butter for inspection, or his or their Agents; and each Inspector shall further be entitled to receive one penny halfpenny currency, per month, per firkin, and one penny per keg, per month, for the storage of each package of butter, which shall remain stored with him as aforesaid more than ten days after the date of the Invoice, Weigh-Note or Inspection Bill, and such storage shall be paid by the person or persons receiving or shipping the said butter, his or their agent, but in no case shall any storage be paid or required when the butter shall not have remained stored as aforesaid during ten days from the date of the Inspection Bill; and all the charges of inspection and storage shall be payable before the butter shall be re-delivered by the Inspector; and the Inspector shall furnish a bill of inspection signed by him, and specifying neatly and legibly the quantity and quality of the butter, the charges thereon, and the owner's name.

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## L I T E R A T U R E .

The following verses are sent us by a young Farmer as we suppose, for though he gives us his name we do not know him, remarking that having requested *original* contributions for our Journal, he had complied with our request in the effort below. We have taken the liberty of altering two or three lines that seemed a little out of joint. We could very easily select better poetry for our readers, but we have a great desire to encourage *native talent*, and we think the writer of these lines with study and practice may attain to something creditable. In yielding to the exigencies of rhyme, he must not forget to preserve the idea uninjured:—

### S P R I N G .

[FOR THE AGRICULTURIST.]

Come gentle Spring, and with thee bring  
Thy own Promethean fire;  
For Winter's pall, who will not call,  
His speedy death desire?

See, drest in green, a nymph is seen  
Now nearer to approach;  
O'er winter's reign and gloomy train,  
Each day she doth encroach.

In smiles and tears she oft appears—  
Then wears a frowning face,  
While lightnings flash, and thunders crash,  
To mar awhile her grace.

The flowers around her path abound,  
And in her train appear;  
The little birds, in sweet-toned words,  
Proclaim that she is near.

For evermore they fly before—  
The earliest harbingers;  
Each bush and tree resounds with glee,  
As this bright nymph appears.

The foals and lambs around their dams  
Their graceful antics play;  
Alive and brisk, with joy they frisk,  
To meet the Queen of May.

York Township, April, 1848.

J. E.

A western editor commences a long exhortation to bachelors with the following words:—"Come, you poor, miserable, lonely, desertless, vulgar fractional parts of animated nature, come up here and be talked to."

## ADVENTURE OF AN AMERICAN EDITOR.

About twenty-five years ago, when a certain western state (which we shall not name) was a territory, and with a few inhabitants, a young lawyer from one of the old states emigrated thither, and settled in the town of K—. He succeeded admirably in his profession, and rose rapidly in popular favour. He had been there nearly two years, when he induced a printer to come and print a weekly paper, of which he was editor and proprietor. Squire S. was much pleased for a while with editing a paper. He was a man of very low stature, but he used the editorial "we" as frequently as if there were a dozen of him, and each as big as Daniel Lambert, or the Kentucky giant. Strange to say, there were at that time men in office who were not a particle more honest than they should be—a thing which probably never happened before, and never will again. Squire S. felt all the patriotism of a son of '76, and poured out grape and canister against the public abuses. This soon stirred a hornet's nest about his ears; but as there was no other paper in the territory there was no reply, and he enjoyed his warlike propensities in security. At length he published an article more severe and cutting, against malfeasance in office, than any that had preceded it. In fact, though pointed at no one individual in particular, it was a "scorching." Some three or four days afterwards he was sitting alone in his editorial office, which was about a quarter of a mile from the printing establishment, his pen was busy with a paragraph, when the door was opened without much ceremony, and in stalked a man about six feet in his stockings. He asked, "Are you S., the proprietor of this paper?" Thinking he had found a new patron, the little man, with one of his blandest smiles, answered in the affirmative. The stranger deliberately drew the last number of the paper from his pocket, and, pointing to the article against rogues in office, told the affrighted editor that it was intended for "him." It was in vain that S. protested that he had never heard of him before. The wrath of the visitor rose to fever heat, and, from being so long restrained, boiled over with double fury. He gave the choice, either to publish a very humble recantation or take a flogging on the spot. Either alternative was wormwood, but what could he do? The enraged office-holder was twice his size, and at one blow would qualify him for an obituary notice. He agreed to retract; and as the visitor insisted upon writing it himself, he set down to the desk. Squire S. made an excuse to walk to the printing office, with a promise that he would be back in season to sign it as soon as it was finished. S. had hardly gone fifty yards when he encountered a man who enquired where squire S.'s office was, and if he was at home. Suspecting that he too, was on the same errand as the other suiter, he pointed to the office, and told him he would find the editor within, writing a most abusive article against office holders. This was enough. The eyes of the new comer flashing fire. He rushed into the office and assailed the stranger with the epithets, "liar—scoundrel—coward;" and told him he would teach him how to write. The gentleman supposing it was some bully sent there by the editor, sprang to his feet and a fight ensued. The table was upset and smashed into kindling wood—the contents of a large jug of ink stood in puddles on the floor—the chairs had their legs and backs broken beyond the skill of surgery to care them. This seemed only to inspire the combatants with still greater fury. Blow followed blow with the rapidity of lightning. First one was kicking on the floor—then the other—each taking it in turn pretty equally. The ink on the floor found its way to their faces, till both of them cut the most ludicrous figure imaginable. The noise and uproar was tremendous. The neighbors ran to the door and exclaimed that two negroes were fighting in Squire S.'s office. None dared separate them. At length, completely exhausted, they ceased fighting. The circumstance of the case became known; and the next day, hardly able to sit on horseback, their heads bound up, they satiated homewards, convinced that they had obtained very little satisfaction from their attempt to flog an Editor.—*Hogg's Instructor.*

RETIREMENT.—Those who are always surrounded by a crowd—whose waking moments are constantly employed—enjoy much less of life, and live less years, than the men of retirement—persons who are in humble life. If the poor and retired have but a few of the luxuries of life, they receive their blessings with a keener relish and really enjoy the days as they pass. There is a meaning in the remark of Cowper—"God made the country—man made the town"—and they alone can appreciate the idea, who have retired from the turmoil of business to spend the evening of their days upon some green and shady spot. We have always looked upon the owner of a little farm as one of the happiest of men. His wants are few and easily satisfied. He hears not the thousand reports of wrong and outrage that sicken the heart, and it is well. When man cannot alleviate sorrow, it is useless to pain his heart with a tale of distress. It is a fondly cherished thought of ours, at some future day, to be able to live beside the green hills and pleasant woods.

HOUSEHOLD SERVICE OF A DOG.—"I say, stranger," said a cottage urchin to a pedlar, "don't whistle that 'ere dog away." "Why he ain't no use no how, he's too ugly." "Oh, but he saves heaps of work." "How?" Why, he licks the plates and dishes clean, so that they never want washing, and marmy says she wouldn't part with him no how, for our new dog hasn't got used to mustard yet."

## COMETS.

*The Fallacy of the Opinion that they will at some Future Period Affect the Earth.*

In the forty-third year before the Christian era, a comet was seen by day with the naked eye, and was looked upon by the Romans as the metamorphosed soul of Cæsar, who had been assassinated a short time preceding the event. In 1402 there appeared two very remarkable comets. The first so brilliant that, in March, the sight of the sun at meridian day did not prevent its being visible, as contemporary authors express it, to the extent of two fathoms. The second appeared in June, and was seen a long time before sunset. It was pretended that this comet announced the approaching death of Jean Galeas Visconti. This prince who had got his horoscope calculated in youth, was so struck with the fear incident upon this that it no doubt contributed to realize the prediction.

Cardan relates that, in 1532, a comet appeared at mid-day which greatly excited the curiosity of the inhabitants of Milan. At the time it shone (about the period of Sforza II's death,) Venus was not in a favourable position to be seen in presence of the sun. The star of Cardan was then a comet, and is the fourth mentioned by historians as visible at mid-day. The famous comet of 1577, was discovered by Tycho Brahe before sunset.

But to come to a more modern luminary, the observations upon which have been properly detailed. On the 1st of February, the comet of 1744, was according to Cheveaux, more luminous than Sirius, the brightest star in the heavens. On the 8th it equalled Jupiter; and some days after it did not yield in splendour of Venus. At the commencement of the following month, it was seen by several persons at one o'clock of the day.

According to all philosophical principles, a comet can act upon the earth only in three ways,—by attraction,—by reflecting luminous and caloric rays—and by the gaseous matter which composes its nebulousity, or its sail, which, in certain positions may happen to invade the terrestrial atmosphere.

The comet of 1811, had a brilliant tail with a maximum length of ~~four~~ <sup>one</sup> millions of leagues: but it could not possibly touch the earth, for at its nearest approach it was distant forty-seven millions leagues. At the height of its splendour it did not throw upon the earth a light equal to one-tenth part of that we receive from the full moon. The rays were concentrated to the focus of the largest lens, and acted on the blackened bulb of a thermometer, and yet no sensible effect was produced. Now, since by this mode of experimenting, an hundredth part of a degree of an ordinary thermometer would be perceptible, we must for ever abandon the idea of the caloric influence of the comets being capable of affecting the earth.

Let us now consider the attractive power of comets. The tides of the ocean are caused by the attraction of the moon, and upon the power of this attraction depends the size of the tide. Now the comet of 1811, exercised not the slightest influence over the waters of the deep; hence the action of the comet upon the earth can amount to a very trifling part of that of the moon. The attractive influence of the moon cannot fail to produce atmospheric tide, the strength of which would be ascertained by the barometer; and yet, from an immense number of observations made in different places, and with the utmost exactness, the strength of the lunar atmospheric tide was scarcely perceptible on the scale of the instrument. After this, it would be ridiculous to suppose that a comet could exercise any influence upon the earth.

**YOUNG LADIES' HANDS.**—There be certain young ladies' hands when they come in contact with yours, have all the cold lifelessness of an unheated bunch of curling irons, and who simply permit of their receiving a listless shake leaving behind with you, for the next half hour, the disagreeable impression that you might as well have shaken the handle of a pump-well, the pendulum of a clock, or the queue of an old officer. Give us the firm but gentle pressure of the warm and rosy fingers, which communicate a thrill of frank and harmless pleasure to the whole frame, and which says more expressively than words, "I entertain that friendly and benevolent feeling towards you which it is my nature to entertain for all my fellow-creatures."

**SAGACITY OF A HEIFER.**—Instances of the remarkable sagacity displayed by animals have from time to time been public, to which we may add the following:—A two-year old heifer, belonging to Mr. Robert Arconer of Pigburn, has acquired the habit of going to the turnip-cutter, when allowed to do so, and of working the machine to supply herself with food. This she will do at any hour of the day, but, of course, most eagerly at the regular feeding time. It works the machine by placing its head under the handle to raise it, and over the handle to lower it; it invariably looks into the machine, to see if there are any turnips to cut before commencing the process, and if very hungry it will cut a considerable quantity before it begins to eat any, but, if not very hungry, it will only cut one or two turnips at a time. It is supposed that the heifer has acquired its habits from playing with the machine when young.

"The times are out of joint," as the fellow said when the butcher refused any longer credit.

## EDITOR'S TABLE.

## TO CORRESPONDENTS.

The following letters have been received:—J. McQ., Fergus; R. F., Seneca; J. F. H., Burford. (We have not received your name or subscription. Mr. W., the P. M., should have sent to us direct.—If he paid to an Agent, will he in his next tell us his name? In the meantime you shall get the paper.)

A. D. F., Elora. We are much obliged for your attention. We have struck the names from our list. If these parties subscribed to our Agent, Mr. Stephens, which we infer from his sending us their names, we should like to know upon what ground they *refuse* to take the paper. We direct our Agents not to misrepresent our paper, but tell exactly what it is; to *force* it upon no one, and then when they send us names, we hold them responsible for the subscription. We advise them to act upon the cash *in advance* system, and much difficulty both to us and them will be avoided.

J. C., Warwick, received. You shall have the paper. We can't find that Mr. B. was a subscriber to the *Farmer*, but we send the paper at a venture, as upon further investigation, it may be as he says.

H. R. B., Crowland. We will write you as soon as we can. Local Agents are not, nor are any others, authorised to sell the *Agriculturist* for 3s. 9d. None but Societies get it at a reduced price, and we annual the agency of any person offering it less than *one dollar*.

R. C. Miller, Dundas, and Henry Billiard and Benjamin Smith, Ancaster, say they subscribed to Mr. N. M. Harris, and paid him, but have not yet received their papers. This is very annoying to us as well as to the subscribers—injurious to the interests of the paper and the agent. We hope Mr. Harris will be more careful. We should like to hear from him. The names are now upon our list.

TO AGENTS AND SUBSCRIBERS.—We wish our Agents to bear in mind, that we have two or three thousand copies of the *Agriculturist* from the commencement of the year still on hand, and that it is therefore desirable that all subscriptions should commence with No. 1. At the close of the Volume an Index will be furnished to all the matters published during the year, which will be of little use to persons who have not taken the whole volume. Where persons cannot be persuaded of the advantage of taking a complete set, and refuse to commence with the first number for the year 1848, they may commence with No. 8. We cannot allow subscribers to begin with any number they choose, as such a practice would introduce inextricable confusion into our books. One or two agents have sent some names to begin on the 1st of April, and a few at other periods. All these will be entered in our books as commencing their subscription with number eight. The next period of commencement will be No. 16.

We hope our Agents will get as much *cash* as possible, and forward what is due us without delay. Our expenses are very heavy. We can't go on without money. A considerable sum is due us for subscriptions to the *Canada Farmer*. We hope those indebted will enclose us the amount or pay it to the Post Master, who will, we have no doubt, in every case take the trouble of remitting us whatever may be paid him on our account.

AMERICAN EXCHANGES.—The other day we received the back numbers for this year, of the *American Agriculturist*, all at one time.—They were either not sent at the proper time from the publisher, or they have been detained at the Lewiston Post Office. If the latter, we don't understand how they came to be liberated so suddenly. We wrote to the Editor of the *Scientific Mechanic*, N. Y., complaining of not receiving his paper regularly, especially as we had entitled ourselves to a duplicate copy, according to his offer, by inserting his prospectus. Shortly after this, five or six back numbers came in one wrapper, but none have made their appearance since. Where does the fault lie? There is negligence at the publishing office, or the postal communication between the two countries is in a wretched state. Neither the March nor April numbers of the *Farmers' Library and Monthly Journal* have been received. Will the publisher please to send them?

## THE LADIES.

## THE VACANT SEAT.

Ye gather round the dear old hearth, this pleasant Christmas eve,  
Awhile, as e'er times gone by, earth's worldliness to leave,  
That once again in love and truth united ye might stand,  
A group of kindred spirits, and a happy household band.

Ye enter one by one, and take each old accustomed place,  
And now once more I look upon each loved familiar face—  
But why thus downcast is each eye, and measured too each tread,  
And sad and faltering your tones! Meet ye in grief or dread?

Mother, kind mother, you are here; I welcome that fond gaze;  
Father and brothers, side by side, as in the olden days;  
Sisters, sweet sisters, gladly now your graceful steps I greet—  
But stay—ah! can it be? *It is—there is a vacant seat!*

A vacant seat! I miss a voice—an eye so blue and meek—  
I miss a youthful, fairy form—I miss a glowing cheek;  
And *she*—the gayest of you all—ye surely must be lone!  
Sweet sisters speak, and tell me whither hath that bright one gone?

Her place is vacant, sad and low now came that answering strain,  
Her place is vacant, list we e'er for those sweet tones in vain,  
And vainly watch we for the sound of those light tripping feet,  
And for the glance of that soft eye our own was wont to meet.

Death has been here—his summons came to her, the dearest, best,  
That she should flee far, far away, and be for aye at rest:  
We saw her blooming cheek grow pale and paler, day by day,  
Till in her early loveliness, from earth she passed away.

We deck'd for her the grave, and then, for her, the lov'd of years,  
We softly sang a requiem, and wept the mourner's tears,  
Then gently laid her deep within a quiet moss-grown bed,  
Where she calmly, sweetly slumbers with the still, the silent dead.

So gather we a mournful group, around the hearth to-night,  
Sadness in hearts, that e'er upon this eve thrill'd with delight;  
Yet, though a star has fallen from out our heaven of love,  
An angel bright awaits us in the glorious land above.

## GARDENING.

As the season for gardening has come, we have given in this number a few pieces of information on the subject. The mode of preparing the soil for garden purposes generally, most people know well enough. We have extracted the two following paragraphs from a work which we were surprised to learn from a distinguished American farmer is regarded by them as the best authority they have on gardening, viz.: "Cobbett's American Gardener." We insert them here because the farmers' wives and daughters in this country must attend to the garden, or it will be neglected:—

## THE CUCUMBER.

To give minute rules for the propagation and cultivation of this plant, in a country like this, would be waste of time. However, if you wish to have them a *month earlier* than the natural ground will bring them, do this. Make a hole, and put into it a little hot dung; let the hole be under a warm fence. Put six inches deep of fine rich earth on the dung. Sow a parcel of seeds in this earth; and cover at night with a bit of carpet, or sail cloth, having first fixed some hoops over this little bed.—Before the plants show the *rough leaf*, plant two into a little flower pot,\* and fill as many pots in this way as you please.—Have a larger bed ready to put the pots into, and covered with earth so that the pots may be plunged in the earth up to their tops. Cover this bed like the last.—When the plants have got two rough leaves out, they will begin to make a *shoot* in the middle. Pinch that short off.—Let them stand in this bed, till your cucumbers *sown in the natural ground come up*; then make some little holes in good rich land, and taking a pot at a time, turn out the *ball* and fix it in the hole. These plants will bear a *month sooner* than those sown in the natural ground; and a *square yard* will contain 36 pots, and will of course, furnish plants for 36 hills of cucumbers, which, if well managed, will keep on bearing till September.—Those who have *hot-bed frames* or *hand-lights*, will do this matter very easily.—The cucumber plant is very tender and juicy; and, therefore, when the seedlings are put into the pots, they should be *watered*, and *shaded* for a day or two; when the balls are turned into the ground; they should be *watered*, and *shaded* with a bough for one day. That will be enough. I have one observation to make upon the cultivation of cucumbers, melons of all sorts, and that of all the pumpkins and squash tribe; and that is, that

\* Where turnips are at hand, the *scooped-out rind* will answer for this purpose far better than "pots." In turning out "the ball" as Cobbett directs, you need not disturb the roots of the plant, for by cutting away the bottom of the turnip, the remainder, plant and all may be deposited in the new bed.—Ed. Ac.

it is a great error to sow them *too thick*. One plant in a hill is enough; and I would put *two into a pot*, merely as a bar against accident. One will bring more weight of fruit than two (if standing near each other,) two more than three, and so on, till you come to fifty in a square foot; and then you will have no fruit at all! Let any one make the experiment, and he will find this observation mathematically true. When cucumbers are left eight or ten plants in a hill, they never shoot *strongly*. Their vines are poor and weak, the leaves become yellow, and, if they bear at all, it is poor tasteless fruit that they produce. Their bearing is over in a few weeks. Whereas, a single plant, in the same space, will send its fine green vines all around it to a great distance, and, if no fruit be left to *ripen*, will keep bearing till the white frosts come in the fall.

The roots of a cucumber will go ten feet, in fine earth, in every direction. Judge, then, how ten plants, standing close to one another, must produce mutual starvation!—If you save a cucumber for seed, let it be the *first* fine fruit that appears on the plant. The plant will cease to bear much after this fruit becomes *yellowish*.—I have said enough, under the head of *Saving Seeds*, (Paragraphs, 139 to 145) to make you take care, that nothing of the melon, pumpkin or squash kind grow near a seed-bearing cucumber plant; and that all cucumbers of a different sort from that bearing the seed be kept at a great distance.—There are many sorts of cucumbers: the *Long Prickly*, the *Short Prickly*, the *Cluster*, and many others; but, the propagation and cultivation of all the sorts are the same.

## MELON.

There are, all the world knows, two distinct tribes: the *Musk*, and the *Water*. Of the former the sorts are endless, and, indeed, of the latter also. Some of both tribes are *globular* and others *oblong*; and, in both tribes there are different colours, as well with regard to flesh as to rind.—In this fine country, where they all come to perfection in the natural ground, no distinction is made as to *earliness* or *lateness* in sorts; and, in other respects, some like one sort best and some another. Amongst the Musk melons, the *Citron* is, according to my taste, the finest by far; and the finest Water melons that I have ever tasted were raised that came out of melons grown in Georgia.—As to the manner of propagating, cultivating, and sowing the seed of melons, see *Cucumber*, and only observe, that all that is there said applies to melons as well as to cucumbers. To have melons a *month earlier* than the natural ground sowings will produce them is an object of much greater importance than to have cucumbers so much earlier; and, to accomplish that object, you have only to use the same means, in every respect, that I have described for the getting of early cucumbers. The soil should be *rich* for melons; but it ought not to be *freshly dunged*; for that is apt to *rot* the plants, especially in a wet year. They like a light and rather sandy soil, and, any where near the sea, wood ashes, or sopers' ashes, is, probably, the best manner, and especially in dry-bottomed land; for ashes *attract* and *retain* the moisture of the atmosphere. It is a great mistake to suppose, that ashes are of a *burning* quality. They always produce the most and best effect in *dry bottomed* land.—Melons should be *cultivated* well. You should leave but *one plant in a hill*; and should till the ground between the plants, while they are growing, until it be covered by the vines. If the plants stand too close, the vines will be weak, and fruit small, thick-rinded, and poor as to flavour.

VEGETABLES.—*Asparagus beds* should be dressed as soon as the ground is thawed, by forking in the manure spread over them last fall. This loosens and enriches the beds. When this is done, they should be carefully raked off.

EARLY PEAS, LETTUCE, &c., may be sowed as early as the ground is open, in a warm border. Raise cabbage, cauliflower, celery, tomato, cucumber and melon plants in hot-beds, for transplanting.

THE WASTED FLOWERS.—On the velvet banks of the rivulet sat a rosy child. Her 'paw was filled with flowers, and a garland of rosbuds was twined round her neck. Her face was as radiant as the sunshine that fell upon it; and her voice was as clear as that of the birds which warbled at her side. The little stream went *glinging*, and with every gush of its music the child lifted up the flowers in its dimpled hand, and with a merry laugh, threw it into its surface. In her glee, she forgot that her treasures were growing less, and with the swift motion of childhood, she flung them into the sparkling tide, until every bud and blossom had disappeared. Then seeing her loss, she sprang upon her feet, and bursting into tears, called aloud to the stream, 'bring back my flowers!' But the stream danced along regardless of her tears, and as it bore the blooming burden away, her words came back in a taunting echo along its reedy margin. And, long after, amid the wailing of the breeze, and the fitful bursts of childish grief, was heard the child's cry of 'bring back my flowers!' Merry maiden! who art idly wasting the precious moments so bountifully bestowed upon thee, see in the thoughtless impulsive child, an emblem of thyself. Each moment is a perfumed flower. Let its fragrance be dispensed in blessings on all around thee, and ascend as sweet incense to its beneficent giver. Else, when thou has sent them receding on the swift water of time, thou wilt cry in tones more sorrowful than those of the child, 'bring back my flowers!' and the only answer will be an echo from the showy past, 'bring back my flowers!'

## SCIENCE AND MECHANICS.

**TO WRITE IN VARIOUS COLORS WITH THE SAME PEN, INK AND PAPER.**—Take a sheet of paper and wet some parts of it with a solution of sub-carbonate of potash, which must be diluted with water so as not to appear on the paper when dry. Wet some other parts with diluted muriatic acid or with juice of lemon.—Some other parts may be wet with a diluted solution of alum; and others with an infusion of nut-galls (water in which bruized or pulverized nut-galls have been steeped.) None of these preparations must be so strong as to color the paper.—When these are dry, take some finely powdered sulphate of iron, and rub it lightly on some parts of the paper, that have been wet with the sub-carbonate of potash and infusions of galls. Then with the juice of violets, or of the leaves of red cabbage, write on the paper as usual with a pen. The ink is of itself a faint purple; where the paper was wet with acid, the writing will be bright red; on the sub-carbonate of potash, it will take a beautiful green; on the alum it will be brown; on the sub-carbonate of potash that was rubbed with powdered sulphate of iron, it will be deep yellow; and on the infusion of galls that was rubbed with powdered sulphate of iron, it will be deep yellow; and on the infusion of galls that was rubbed with powder, it will be black. The juice of violets will take a brilliant yellow on the alkali if it be very strong. The juice of violets or red cabbage may be kept a long time by means of the addition of a few drops of alcohol; or the leaves may be dried by the fire, and thus may be kept ready for use; and it is only requisite to steep them in hot water, in order to prepare the ink at any time.—*Sci. Mech.*

**TO WASH IRON OR STEEL WITH GOLD.**—Mix together in a phial, one part of nitric acid, with two parts of muriatic acid, and add as much fine gold as the acid will dissolve. For this purpose gold leaf is the most convenient, as it will be the most readily dissolved. (This solution is called the nitro-muriate of gold.)—Pour over this solution, cautiously, about half as much sulphuric ether;—shake the mixture; and then allow it to settle. The ether will take the gold from the acid, and will separate itself from it also, and from an upper stratum in the phial. Carefully pour off this auriferous ether into another phial, and cork it close. Wash any piece of steel or iron with this ether, and immediately plunge it in cold water, and it will have acquired a coat of pure gold. With this also, any flowers or letters may be drawn or written, even with a pen, and will appear perfectly gilt. The steel or iron should afterwards be heated as much as it will bear without changing colors, and if the steel be previously polished, the beauty of the gilding may be much increased by burnishing with a cornelian or blood-stone.—*Sci. Mech.*

**PNEUMATIC HORSE POWER.**—One of the most novel inventions, and arrangements of machinery that has come under our inspection, is a horse-power engine invented by that well known scientific genius, Jesse Fitzgerald, of this city. In this machine two large double-acting air pumps do not compress air, but merely work against the atmosphere, producing a vacuum and consequent rush of air through two branches of a long pipe to supply the exhausted cylinders. This current of air, in its course to the pumps, is made to work a small cylindrical engine by the force of atmospheric pressure: and this engine, constructed in all respects like a steam engine, is made to operate whatever machinery is required to be driven by the horse power. The advantage of this arrangement is the ready increase of speed from the moderate motion of the horse to a rapid velocity, without the use of speeding gear. The air pipe may be extended to any required distance from the horse-circle to operate machinery in other apartments or buildings; and if the machinery is nicely made, the loss of power by friction, &c., will be less than by the wheels and pinions of ordinary horse gear.—*Sci. Mech.*

**TO WASH COPPER OR BRASS WITH SILVER.**—To half an ounce of nitric acid in a phial, add one ounce of water, and one-fourth of an ounce of good silver. It will soon be dissolved and if the acid and metal are both pure, the solution (which is called nitrate of silver) will be transparent and colorless. Add to this a solution of nearly two drachms of muriate of soda, in any quantity of water; this will precipitate the silver in a white opaque mass. Pour off the water with the acid, and add to the silver an equal quantity of super-tartrate of potash, thus forming a soft paste; dip a piece of soft leather in this paste, and rub it on the metal to be silvered; continue rubbing it till it is nearly dry; then wash it with water, and polish by rubbing it hard with a piece of dry leather.—Another method is, to add sub-carbonate of potash to the nitrate of silver, as long as ebullition ensues; then the acid is poured off, and the precipitate (which is white at first, but becomes green when dry) is mixed with double its quantity of muriate of soda, and super-tartrate of potash. With this composition, being moistened, the metal is rubbed over, &c.

**ELECTRICAL LIGHT.**—Mr. Stalle is lecturing in England, and exhibiting his mode of producing light from electricity. The light, which was of astonishing brilliance and beauty, was placed under an air-tight glass vase. When the gas was turned down it sufficiently lighted the spacious building, and bore the closest resemblance to the great orb of day of any light ever witnessed. So says a spectator: but it may take a long time to introduce this light to practical utility.

**LOOKING-GLASSES FOR BIRDS.**—The following plan which I discovered by accident, is, I think, perfectly efficient for scaring birds from fruit and other produce. One of my servants having by chance broken a looking-glass, it occurred to me that the broken pieces, suspended by a string, so as to turn freely in every direction, would give the appearance of something moving about, which would alarm the birds. I accordingly tried the plan, and find that no bird, not even the most fool hardy of them, dare come near. They had attacked my peas. On suspending a few bits of the looking-glass amongst them the marauders left the place. The tomatoes attacked by the same means, to which they seemed very partial; a bit of looking-glass suspended in front of the tree put a stop to the mischief. My grapes were next much damaged, before they were ripe, by thrushes and starlings; a piece of looking-glass drove them away, and not a grape was touched afterwards. I have before tried many plans, but never found any so effectual as the above.—*Gardeners' Chronicle.*

**TO DYE SILK A BRILLIANT GOLD COLOR.**—Take any quantity of nitro-muriate of gold, and evaporate by exposing it to a gentle heat, in a glass tumbler or phial; the gold will form itself in crystals on the bottom and sides of the vessel; collect these crystals and dissolve them in ten times their weight of pure water. Then put a gill of water into a common flask, and add one ounce of granulated zinc, and one fourth of an ounce of sulphuric acid. Hydrogen gas will be evolved, and rise through the neck of the flask, which must not be stopped. Immerse a piece of white silk in the above mentioned aqueous solution of gold, and expose it, while wet, to the current of gas as it rises from the flask; the gold will soon be revived, and the silk will become beautifully and permanently gilt. Any letters or flowers may be drawn on the silk with a camel-hair pencil dipped in the solution, and on being exposed to the action of the gas, will be revived and shine with metallic brilliancy. The silk must be kept moist with water till the gold is dissolved.—*Scientific Mechanic.*

**TO CUT GLASS WITH A PIECE OF IRON.**—Draw with a pencil on paper, any pattern to which you would have the glass conform; place the pattern under the glass, holding both together in the left hand, (for the glass must not rest on any plane surface;) then take a common spike or some similar piece of iron, heat the point of it to redness, and apply it to the edge of the glass; draw the iron slowly forward, and the edge of the glass will immediately crack; continue moving the iron slowly over the glass, tracing the pattern, and the chink in the glass will follow at the distance of about half an inch, in every direction according to the motion of the iron. In many instances it may be found requisite; however especially in forming corners, to apply a wet finger to the opposite side of the glass.—Tumblers and other glasses may be cut or divided very fancifully by similar means. The iron must be reheated as often as the crevice in the glass ceases to follow.

**ACIDS.**—Paint any figures or flowers on a piece of marble with common oil paint; dip the figured surface in diluted muriatic acid, and in a short time the acid will be found to have taken off the surface of the marble, between the painted figures, leaving them raised in relief. The paint may be removed and the figures will remain.

Add a little carbonate of Soda, (saleraus) to very dilute muriatic acid; the carbonic gas will be expelled so rapidly as to produce a violent ebullition.

Spread over the surface of a piece of glass a little melted beeswax, and with the point of a needle draw any letters or flowers by scraping off the wax; then pour over the wax a little fluoric acid, and in a little time the figures will have been fairly etched in the glass, and will remain permanent when the wax is removed.

**VIVID COMBUSTION OF THREE METALS.**—Mix a grain or two of potassium with a like quantity of sodium. This mixture will take place quietly; but if the alloy of these two bodies be brought into contact with the globule of quicksilver, the compound, when agitated, instantly takes fire, and burns vividly.—*Sci. Mech.*

**GOLD.**—If a grain of gold be melted with a pound of silver, and a single grain of the mass be dissolved in nitric acid, the gold, which is only the 5,761st part of a grain, will fall to the bottom and be plainly visible.

**INDIAN INK.**—Ink equal to China or Indian Ink may be made by dissolving six parts of isinglass in twelve of water, one part of Spanish liquorice in two of water, mixing them when warm and incorporating gradually with them one part of the best ivory black, stirring well. When the mixture is complete it is to be heated in a water bath until so much of the water is evaporated as to leave a paste which may be moulded into any required form.

**TWISTED WIRES IN TELEGRAPHING.**—The London Railway Gazette lays it down as a well-founded axiom in electric science, that the current is rapid in proportion to the thickness and uninterrupted position of the wires; and that through a coil of (only) 3,500 yards (less than a mile and a half) of the finest copper wire made, (No. 35,) insulated and tightly wound in a coil, the electric fluid has the same difficulty, and takes the same time in passing, as over 100 miles of wire, perhaps one-eighth of an inch diameter and 100 miles in length not coiled, but perfectly unobstructed.

Melt together in a crucible, three parts of copper with one of zinc and the alloy will be found to be the common brass.

MARKETS—The changes are trifling—see table of prices.

CANADA FLOUR, going through the United States in bond to England, is regarded as *Foreign* produce. It is stated that a cargo arrived at Liverpool, with papers properly authenticated to show its origin, but had to be entered as foreign, because it came from a foreign country. Thus the advantage the Canadian Farmer expected to derive from the Americans allowing our flour to go through their territory, on a *cheaper* route to Britain, is rendered nugatory.

HOME DISTRICT AGRICULTURAL SOCIETY.—The Spring Fair and Cattle Show of this Society will take place in the open space in front of the Jail in this city, on the 10th May next.

A meeting was recently held in the village of Sharon, to promote the construction of a Railroad from Toronto to Lake Huron, when resolutions were passed instructing the District Councillors to bring the matter before the Council at its June Session.

The Steamer *Dawn*, the first of a new class of steamers intended to run regularly between the head of the Lake and Montreal, entered our port last week on the route eastward. She is of a good model, has a powerful engine, and will carry about 2500 bbls flour. She is admirably adapted for deck passengers having a covering from stem to stern, and we are told sails well. The agents at Hamilton are the Messrs. Browne.—*Examiner*.

Dr. Telfer, who held the situation of First Physician in the Lunatic Asylum, has been removed by the Government. We believe that there were good and sufficient reasons for taking this step.

In the heavy gale of last week, a large Schooner, formed out of the Hull of the old Great Britain Steamer, in attempting to run into Burlington Canal, struck the pier, broke right in two, and sunk. No lives lost.

NEWS FROM EUROPE.

The news by the *Acadia* from Liverpool, April 8th, is of such intense interest to the people of Canada, especially to those who have come from, or have relatives and friends in Great Britain, that we have made room for all the details that we possibly could. That Europe is on the eve, if not now actually engaged in a devastating war, no one doubts; and that our own mother country is about to be the scene of bloody events, is equally probable. We repeat what we said on a former occasion—let the farmers of Canada work—let every acre that can be made to grow human food, be cultivated—for we shall have no difficulty in finding a market.

APPEARANCES OF REVOLUTION.—In England and Ireland the greatest excitement exists, Lord John Russell reported in the House of Commons on Monday last, his previous declaration that the whole weight of the Government should be applied to the maintenance of order and to put down disaffection and rebellion. At the same time his Lordship expressed the sincere desire of both his colleagues, and Lord Clarendon especially, to listen to complaints and to apply a remedy or alleviate any distresses or evils which exist.

The accounts from Ireland are more menacing than ever. The students in Trinity College are arming in defence of the government, and the members of the Royal Dublin Society are following their example. Additional troops have arrived from England. The Repealers in the city are equally energetic, and are being warmly supported throughout the provinces. At a meeting held in Kilkenny, four delegates had been appointed to the Council of Three Hundred, admittedly in defiance of the law. The Mayor and three Magistrates are the delegates chosen. It was recommended at this meeting that the Council should assemble at Liverpool, in order so as to keep within the limits prescribed by the Convention Act.

It is expected that Dublin will be placed under the operation of the recent Arms Act, and that the vast quantities of pikes and arms, which are being so extensively purchased, will be required to be given up.

The provinces, especially in the south of Ireland, appear to emulate Dublin in the violence of the threats and intimidation used by the Repeal party and the press; and indeed it is openly declared by many of the journals that a Repeal of the Union will no longer suffice to satisfy their alleged grievances; but that the erection of a Republic can now alone remedy the evils under which the country groans. It will be seen by the judicious reply of M. Lamartine, to the Deputation of the Irish Confederation, that the leader of the French Republic is not disposed to run the risk of a rupture with Great Britain.

THE CHARTIST MEETING PREVENTED.—The demonstration of the the Chartists, which was to come off in London on the 10th inst., has been forbidden by the English Government. All the arrangements for the procession were going on very satisfactorily—the route laid down, the carriage for conveying the petition built, and the banners, ensigns, &c. decided on, when Sir G. Grey, the Home Secretary, announced to Parliament on the 6th inst., the determination of the Go-

vernment not to allow either the assemblage or the procession to take place. A proclamation appeared a few hours after the statement, forbidding all persons to attend the meeting. The course pursued by the Government has not only increased the former general excitement, but called forth the remonstrances of that section of the press hostile to Chartism. The effect produced on the Chartists themselves has been as might have been expected, a determination to carry out their object with more ardor than before. At the first meeting of the Convention, held after the issuing of the Proclamation, a unanimous resolution was passed, that the meeting and procession *should take place* despite the threats of the Government.

Every delegate at the meeting, formally and coolly declared his determination to risk his life in the contemplated demonstration, and a general belief was expressed that their constituents would emulate the example thus set them by holding simultaneous meetings in their several localities.

(On the same day resolutions calling these meetings, and for the issuing of a counter proclamation were at once agreed to. The members in the procession are not to carry arms. Mr. O'Connor made a suggestion to the meeting, which possesses some significance at the present time. It was that they should recommend to their constituents the withdrawal of all moneys from the Savings' Banks, in order as much as possible to damage the financial operations of the Government, as the gross sum deposited in these institutions, amounts to 23,000,000 sterling, and belongs almost entirely to the middle and lower classes, of whom a large proportion are Chartists.

There is little doubt, to use Mr. O'Connor's own words, that if the people would withdraw their savings from these banks, they would more effectually attack the Government than if they made a direct attack upon the Horse Guards. The Government has seemingly determined on bringing matters to an issue, and large bodies of cavalry, infantry and artillery have been drafted into the Metropolis, so that it is computed the force in the city is at present more than 10,000 men.

*Wilmer & Smith's Times* says, it is not possible to conjecture how this may terminate, but our earnest hope is that the people may have prudence enough to keep out of evil, and the Ministry sufficient good sense to concede to the people all reforms which may be compatible with the onward march of the times and with the spirit of the British Constitution.

The general commotion of the Continent has gone on increasing. The intelligence respecting the insurrection in Lombardy has been confirmed, with the further important feature that the King of Sardinia, at the head of an army of 80,000 troops, had crossed from the Piedmontese territory into Lombardy, issuing as he passed the frontiers, a formal declaration of war against Austria, and marched direct to Milan. The Austrians, defeated at every point, fled as he approached, and having successively been driven from Parma, Brescia, and Des Senzane, have endeavoured to establish themselves on the line of the Mincio.

The Italian Duchies have burst into open insurrection. Modena and Parma are revolutionized, and Venice, which has been dying daily since the fatal 18th of Jan., 1798, now just half a century, when the Austrians took possession of that city, in virtue of the treaty of Campo Formio, again shows signs of life.

In Austria proper, every thing seems disorganized, and amid the chaotic confusion which prevails, it is quite impossible to fix the hourly changing scene.

It is said that a disposable force will be shortly at the command of Charles Albert of not less than 250,000. With such an army not only will all Lombardy be liberated, but Austria may be threatened even at the gates of Vienna.

Savoy has declared herself a Republic. In Switzerland, a strict neutrality seems to be aimed at, and the levying of troops is discontinued by the Vorort. All the countries on the right bank of the Rhine have been violently convulsed.

At Baden, Wurtemberg, and Saxony, liberal governments have been conceded to the people.

In Hanover the triumph of popular feeling has been completed.

HOME MARKETS.

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

	Toronto, Apr. 29.	Hamilton, Apr. 29.	Montreal, Apr. 28.
Flour, per barrel	£1 1 3	£1 1 3	£1 4 0
Wheat, per bushel	0 4 6	0 4 1	0 5 6
Barley, per 48 lbs.	0 2 7	0 2 4	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 2 0
Peas, per 60 lbs.	0 2 6	0 2 0	0 3 0
Oatmeal, per barrel	1 0 0	0 18 0	1 10 0
Potatoes, per bushel	0 4 6	0 3 9	0 3 0
Hay, per ton	2 10 0	1 15 0	2 10 0
Beef, per 100 lbs.	1 7 6	0 17 6	1 5 0
Pork, per 100 lbs.	1 2 6	0 17 6	1 10 0
Lard, per lb.	0 0 4	0 0 5	0 0 7
Butter (fresh) per lb.	0 0 10	0 0 8	0 0 8