

Technical and Bibliographic Notes/Notes techniques et bibliographiques

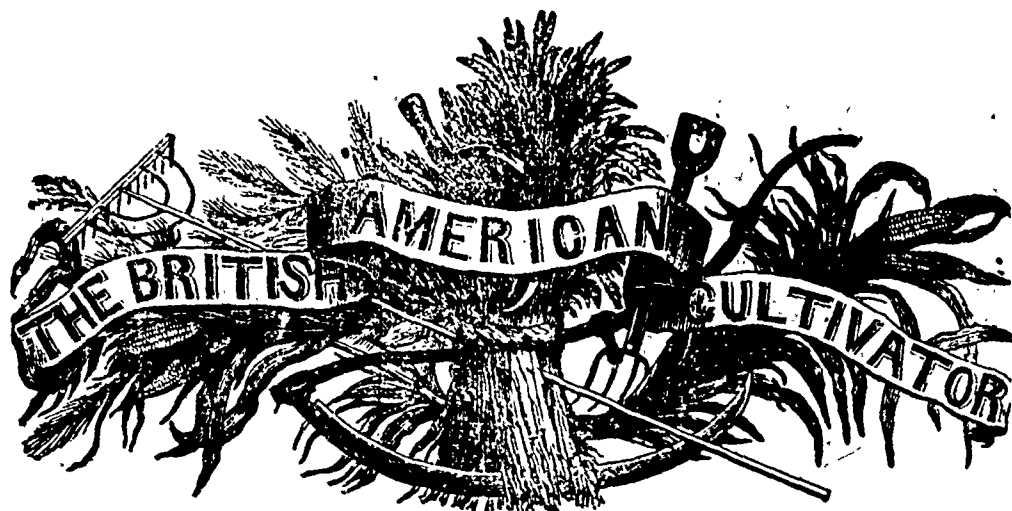
The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Coloured covers/
Couverture de couleur | <input type="checkbox"/> Coloured pages/
Pages de couleur |
| <input type="checkbox"/> Covers damaged/
Couverture endommagée | <input type="checkbox"/> Pages damaged/
Pages endommagées |
| <input type="checkbox"/> Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> Pages restored and/or laminated/
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> Cover title missing/
Le titre de couverture manque | <input type="checkbox"/> Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> Coloured maps/
Cartes géographiques en couleur | <input type="checkbox"/> Pages detached/
Pages détachées |
| <input type="checkbox"/> Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire) | <input type="checkbox"/> Showthrough/
Transparence |
| <input type="checkbox"/> Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur | <input type="checkbox"/> Quality of print varies/
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> Bound with other material/
Relié avec d'autres documents | <input type="checkbox"/> Includes supplementary material/
Comprend du matériel supplémentaire |
| <input type="checkbox"/> Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure | <input type="checkbox"/> Only edition available/
Seule édition disponible |
| <input type="checkbox"/> Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées. | <input type="checkbox"/> Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image/
Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible. |
| <input checked="" type="checkbox"/> Additional comments: /
Commentaires supplémentaires: Continuous pagination. There are some creases in the middle of pages. | |

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X



"Agriculture not only gives Riches to a Nation, but the only Riches she can call her own."

New Series.

TORONTO, JUNE, 1847.

Vol. III. No. 6.

HINTS IN SEASON.

This is truly a pleasant season of the year, and one in which the practical agriculturist can take much delight, in watching the daily progress of his crops. In many respects it is a farmer's holiday; and although every careful man will find an abundance of profitable employment on his farm, still, from the period that the seeds are sown, up to haying, there is not that necessity for exceedingly laborious duties that are required during seed time and harvest; and the farmer may, if he plans his business rightly, slacken his pace a little, without at all affecting the products, or in any way lessening the profits of his farm. It may not be unprofitable to continue our practical hints, which may in some cases be found useful and interesting to our readers.

Summer Fallows.—In many portions of Canada it is still fashionable to make naked summer-fallows, and doubtless in very many instances the practice is a good one. In summer-fallowing land, the great benefit to be derived from that practice is, that of thoroughly eradicating every species of wild grasses and weeds, &c.; and unless this be properly done, it would be better for the land if it had been put under a smothering

crop, such as peas, buckwheat, or clover.—The most difficult grass to extirpate is couch or spear-grass, which, upon the rich soil in Canada, will, in wet seasons, defy the most skilful cultivator, unless very great pains be taken, and the warmest and driest days be selected for the operation. The course we have practiced with much success to destroy the roots of spear-grass, is the following:—We broke up the fallow about the middle of June, with a four-by-nine-inch furrow, and during the succeeding six weeks we frequently harrowed the land, and, in the month of July, employed a three-horse scarifier, and by two operations with this implement, we have thoroughly succeeded in destroying all the couch and other grasses on land that, previously to the operation, was in a wretched state of cultivation. It should always be remembered, that the first ploughing cannot be done too lightly. The only things necessary to be observed in the performance, are, to get below the roots of the grasses, and to turn up a light, neat and well proportioned furrow. By thoroughly separating the roots from their hold of the soil, and exposing them to the powerful rays of the sun, during the months of June and July, the principle of life is destroyed, and

the second ploughing should be performed the latter part of July, and if the soil is of proper depth to bear it, the best course to be pursued is, to plough with three horses abreast, to the depth of ten or twelve inches. This system cannot be practiced on all soils, but on strong clay loams it would greatly increase the average yield of wheat, and especially where this crop is very subject to rust, it would add greatly to the product.— If we were asked what system of managing summer fallows is best adapted to this country, we would unquestionably include these three particulars, viz: if the land be foul, and full of couch-grass, that the fallow should be ploughed in autumn, and, if possible, the system of rafter-farrowing should be done with an exceedingly deep furrow; and lastly, if barn-yard manure be applied, it should have been previously well mixed in the yard, or manure-heap, and have passed through its first stages of fermentation,—the last particular is more particularly applicable to soils subject to rust or noxious weeds. Those who cultivate lands that have very recently been cleared from the forests, if they practice the plan of sowing entirely clean grain of all kinds,—that is, in which there are no noxious seeds,—and if they are careful to eradicate the first appearance of the weeds, which are so very injurious to the crops when allowed to spread and multiply—we distinctly wish to be understood to say, that if due attention and care are observed by the bush farmer, when he commences to chop and clear his farm, he may, with a very little trouble, prevent all or every description of noxious weeds getting possession of his land. This is not so easily managed on land that has been long under a state of cultivation, and we know scores of careful cultivators who find it a very difficult task to rid their farms of injurious weeds. This is the proper season to attend to this important matter, and no farmer should hesitate to extirpate weeds from his crops, even although a few valuable plants should be destroyed in the attempt. An undisturbed weed may be the parent of

a thousand plants next year. It is somewhat difficult to give directions that would apply in a majority of cases; but if a public journalist acted on the rule of giving only such advice as all or a large proportion of his readers could practice with profit, but very few suggestions would be advanced, and consequently, improvements would be slow; we therefore must not be accused of meddling in business which, properly speaking, belongs to others,—our object is to give advice,—and those of our readers to whom it is applicable, if they study their own interests, will put it in practice.

To return to the subject of weeds, no effort should be spared to keep them down at this season of the year; and this branch of business should be particularly attended to among the drilled crops. In cultivating all kinds of drilled crops, the horse-hoe is found a most useful, nay, an almost indispensable implement; and by frequently employing it in connection with either the shovel or double-mould plough, the foulest land may be made tolerably clean.

Farmers have now also a little leisure to do odd jobs about the farm, such as repairing fences, outbuildings, &c., and among the other odds and ends that they will find convenient to execute, is that of carefully calculating the costs of allowing the various kinds of weeds to grow upon the farm,—of course, rent of land, ploughing, harrowing, and partial loss of grain crop, must all be brought into the account, and the balance sheet must be carefully prepared. If this calculation be honestly made, no sensible and judicious farmer will long continue to sow and cultivate noxious and worthless weeds among his grain, but will prefer to sow clean seed, though it cost him extra expense, and will also employ the best means of keeping the soil under a clean and thorough state of culture. It is in advance of the age in Canada, to recommend drill-husbandry and horse-hoeing grain crops generally;—but on old cleared land this system may be practiced with very great success, and on a majority of soils, it would alone add 30 per

cent to the average product. Horse-hoes for cultivating and cleaning all kinds of grain crops, have been for many years very extensively employed in England, and we see no good reason why similar appliances could not be used for a similar purpose in this country, especially in the oldest settled localities.

Root Crops will now require much attention, and after the plants have been thoroughly cleaned from foul weeds, some stimulating manure should be applied to them.—Gypsum is far the cheapest and most efficient manure for this purpose, and its effects on potatoes, turnips, Indian corn, and most other vegetables, especially in dry seasons, will quite exceed the expectations of those who have never used it upon their root crops,—next to gypsum, in point of cheapness, is wood ashes, and the next in order is salt. A few shillings expended in the purchase of the above manures, with a view of applying them to the root crops, about the latter part of this month, will amply repay the expenditure, and will in many instances push forward a healthy growth of plants, which will give them such a start as to enable them to withstand the hot, parching, sunny days of July and August, and will add very largely to the product.

If the barn-yard manure is not now applied to the soil, it should be turned and thrown up into large heaps to ferment, by which the vitality of all noxious seeds will become thoroughly destroyed, and besides, the manure will become decomposed, and made in a fit state to apply to the land in the autumn, for the pea crop. On very much of the land in Canada this system of manuring will be found to answer an excellent purpose, especially where it is done with a view of following the pea crop with winter wheat, and where the latter crop is subject to rust.

Sheep-Shearing at Woodstock.

We have a Report from Mr. Hatch, our Agent in the Brock and London Districts, of a spirited match which lately came off at

Woodstock, Brock District, at the farm of Mr. T. Bickell, who was the active Agent in, or rather Originator of the whole affair, and who deserves great credit for the manner in which it was managed. Such a mode of operations as that adopted by Mr. Bickell is certainly, as Mr. Hatch justly remarks, “a new thing in this part of Canada,” and Sheep-shearing is a matter “which should have more attention paid to it” than it generally meets with. In this case five very liberal prizes were given by Mr. Bickell, and under his auspices every thing went off to perfection. We recommend such a friendly and excellent plan of encouraging good workmanship, in ploughing, reaping and other farming operations, as well as in sheep-shearing, to the attention of our readers. In the proper season we shall make some remarks on the cultivation and mode of managing *Wool*. Meantime, we say to holders, see that all impurities are removed from the fleece, that each be neatly tied up, and that the whole be carefully packed away, in a place that is neither too hot nor too cold, if to be kept over winter. All this ought to have been done at the time of shearing, but if then neglected, can yet be attended to,—and we assert, that were our wool more carefully cleaned, and more tidily packed, it would bring a much higher price in the market than it now does.

Remedy for Cramp.—A writer in the *Medical Times*, asserts that he has discovered in the following simple process an effectual remedy for this distressing and frequent complaint, to which he had himself been for many years, a martyr. His plan is to sleep upon an inclined plane, which is effected by taking care that the bed or mattress should incline at least twelve inches from the upper to the lower portions of the bed; and for this purpose either the lower feet may be cut down to the requisite inclination, or the inclined plane may be made by an arrangement of mattresses, or by removing the feathers from the lower end of the bed. The writer was led to adopt this plan, by observing that while sleeping in a chair, with the lower limbs nearly touching the floor, he never, in that position, was disturbed by cramp.

Horticulture--Kitchen Gardening.

There are no vegetables more useful than Peas and Beans, Cabbages, Broccoli and Cauliflower, Turnips and Leeks; and these are fitted for nearly the very smallest garden. Our previous remark, that no spot of ground in a garden should be allowed to lie unoccupied, cannot be too often recalled to memory, and we would recommend that all vacant spots should now be filled up with one or other of the above vegetables, except Leeks, which are soon enough planted in July, and for them a little plot should be kept vacant, and be thoroughly manured, and well worked and cultivated by deep digging. We proceed to give a few hints on the cultivation of each vegetable.

1st. Of Peas.—These may be sown all summer. There are a great many varieties. The Early Frame, the Blue Prussian or Imperial, the Marrowfat, Knights and Bishops Dwarf, and the Early Charlton, are generally recommended and well known. The *Genessee Farmer* says "the *Prince Albert* is the best early pea. It is a week earlier than the best old varieties, is excellent, and yields good crops." I have before recommended a variety called the *Scymeter*, from its shape. It is early, hardy, and productive, and very tender and delicious. Such parties as have well sized gardens I would advise to sow peas of two kinds every twelve days. Of course rows are best adapted for peas. For the tall growers my plan is, 1st, to sow in double rows, with about ten inches between,—by which means the rows can be thoroughly cleaned, and earthen up, and staked together,—and in this way the peas grow much stronger than in single rows, as they are a kind of protection to each other. In single rows they are more easily hurt by wind, and generally have a pining, thin appearance. The stakes ought to be six feet in height, and have plenty of branches—they should be pointed, and fixed firmly in the ground. 2d Between these two rows and the next two, a space of about four feet occurs, (in this a row or two of spinage may be sown.) This is useful for proper ventilation, and you have proper access to pull the peas carefully, without breaking down the straw. By the bye, this matter of pulling with care, is an object worthy of more particular attention than it generally meets with. For if the plant be torn up by the root, or partially broken, of course all the pods that are in a state of progression, advance no far-

ther, and are lost. Persons who are of a very careful and tidy disposition, frequently use a pair of scissors to cut the individual pod they want, and they are rewarded for their pains by the whole produce coming to perfection.

Dwarf Peas take up little space, and I think the best mode of sowing them is, in single rows of two feet wide, in which plenty of seed is inserted.

It is a good plan, particularly in dry weather, to soak the seed for about an hour or more, in a solution of saltpetre and water, previous to sowing. This is not only a good test of the quality of the seed, as all the bad ones either swim on the top or split, but is also the best way of causing the sound ones to germinate freely and speedily. If saltpetre is not at hand, salt or a little of the dung of pigeons or fowls, well mixed in water, is an excellent soak—and devoid of all these, good spring water is of itself perhaps not the worst.—Some people advise hot water, but I do not. A little awns of barley, or prickles of gorze, put among the seed, prevent mice troubling it, and the awns scattered on the ground above, are good traps for snails—they hold them fast, and you can kill them.

If you wish to preserve any plants for seed, I would recommend you to try a plan which is a profitable one, and is besides a source of interest and amusement—which most of the operations in the garden ought to be rendered and considered. Choose out the strongest and finest plants, and have them particularly staked up or otherwise well supported,—on these allow merely five or six of the first pods to come to maturity,—all the others and blossoms, cut nicely off, without damaging the stalk or root—and you will have seed of a large size. In this way the improved varieties have been introduced.

Two pints will sow about 180 feet of row.—Continue to sow till late in the season—and if you get a return from your latest crop only equal to the seed, you have a fresh vegetable.

2nd Of Beans.—Of the large kinds, the Windsor, Turkey, and Mazagan, are good varieties. These ought to be sown or planted in rows or drills about three feet wide. Clay and good loamy soil answers best for them, and it ought to be trench-dug or sub-soiled, and well manured "When beans arrive at full bloom, (says the *Kitchen Gardener's Instructor*), and the lower pods begin to set, the tops may be broken off;

this will promote the swelling of the pods, as well as their early maturity." A quart of seed will answer for 60 feet of drill. Beans are frequently observed to thrive well for a time, till they are in bloom, and then fade quite away, and the blossoms drop off without producing any pod. You may depend upon it, when this occurs, *that your soil is not of sufficient depth for beans.* This plant has a very long root, and if it be stopped from penetrating to a sufficient depth, on account of the subsoil being hard, or what is commonly called pan, the plant derives no farther nourishment, and *naturally* pines, withers and eventually dies, or, what is the same thing in effect, produces no return. Deep or trench digging, and subsoiling, with a thorough under supply of manure, is *the only sure and effectual remedy.*

Of Kidney Dwarfs.—A regular succession ought to be kept up all summer, and these require to be earthed up like peas. One quart of seed will sow 250 feet of drill. The seed of all kinds of beans also, ought to be well steeped before being put into the ground.

3rd. Of Cabbages.—If you neglected to sow a little seed at the proper season, procure some *fresh* and healthy plants; your ground being previously well prepared and manured, lay it off into cross rows varying in width, as under noted, according to the kind you mean to cultivate. The Early York, the Dutch, and the Sugar-loaf are good small early varieties, and require about two feet between each plant, while the late York, the Drum-head, and other large varieties must have three,—and rather give them more, than less room. It is a good plan to plant them in a diamond shape, so that each plant in one row, shall not be opposite that in the next, but zigzag ways. The mode of planting, is, by making a deep wide hole with a dibble, into which the root can be introduced, so as to go down to the bottom without being squeezed or broken; you insert the plant into the hole by one hand, (at the same time holding up the leaves by the fingers of that hand,) and then with the dibble held in the other, at first gently, and afterwards firmly, press the fine mould into the hole, and around the plant, till you find that on pretty strongly pulling one of the leaves between the forefinger and thumb, the plant is not drawn up. The heart must on no account be choked or smothered; nor the roots twisted or broken. By and bye, when they have taken with the ground,

the plants ought to be hoed, and afterwards earthed up. Many of our readers may think these directions are too trivial and simple, and already well known; but we write for all, and we distinctly assert, that careful and correct planting is well deserving of being pointed out and strongly inculcated, as on it the success of the crop depends much more than is generally imagined.

4th. Of Broccoli.—*Varieties.*—Early white, early dwarf purple; early green, dwarf brown, large late purple, large purple cape, white cape, or cauliflower, sulphur-colored cape, branching purple, large late green.

The several varieties of broccoli and cauliflower may be justly ranked among the greatest luxuries of the garden. They need only be known in order to be esteemed. The broccoli produces heads, consisting of a lump of rich, seedy pulp like the cauliflower, only that some are of a green color, some purple, some brown, &c., and the white kinds so exactly resemble the true cauliflower, as to be scarcely distinguishable, either in color or taste.

Broccoli is quite plentiful throughout England the greater part of the year, and it is raised with as little trouble as cabbages are here. The mode of raising the purple cape broccoli is now generally understood in this part of America; but the cultivation of the other kinds has been nearly abandoned, on account of the ill success attending former attempts to bring them to perfection.

The proper time for sowing the seed of purple cape broccoli, is from the tenth to the twenty-fourth of May.

It has been proved by repeated experiments, that the purple cape broccoli succeeds better in our climate than any other variety; and, also, that if broccoli or cauliflower plants be retarded in growth by extreme heat, they seldom arrive at full perfection. It is, therefore, important that the time of sowing the seed of cape broccoli be so regulated as to allow, say six weeks of the summer, for the plants to grow in, previous to their being transplanted, and about seven or eight weeks between that and the commencement of cool autumn weather, which is essential to mature them.

If seed be sown much before the middle of May, or so early that the plants arrive at full growth in the heat of summer, and thereby become stunted, they generally button, instead of

forming perfect heads of flowers, and are consequently of no use but for cattle.

In order to insure good stout plants, let the seed at this season be sown in a moderately shaded border. It is best to sow it in shallow drills, drawn three or four inches apart, in which case, one ounce of seed will occupy a border of about four feet in width by twelve in length, and produce about four thousand strong plants.

In the beginning of July, or when the plants are of sufficient size, they should be transplanted into extraordinarily rich ground, which should be previously brought into good condition. This being done, plant them in rows two feet and a half apart, and two feet distant in the rows. As soon as they have taken root, give the ground a deep hoeing, and repeat this two or three times in the course of their growth, drawing some earth around their stems.

These plants if attended to as directed, will come to perfection early in September and in October; the other kinds will produce their heads in regular succession throughout the winter and spring months.

5th. Of Cauliflower.—*Varieties.*—Early white, late white, hardy red, or purple cauliflower.

This is a first rate vegetable, to obtain which, great pains must be taken in every stage of its growth, the extremes of heat and cold being very much against it: which circumstance accounts for good Cauliflowers being scarcely attainable in unpropitious seasons, and which the novice falsely attributes to defectiveness of the seed.

To produce early Cauliflower, the seed should be sown between the sixteenth and twenty-fourth of September, in a bed of clean, rich earth.

In the early part of May, Cauliflower seed may be sown in the open border, in drills, as recommended for Broccoli, and one ounce of seed will produce about four thousand plants. These plants should be picked out in June, and transplanted into good ground early in July, to flower in Autumn.

Cauliflower, and also Broccoli, should be gathered while the pulp is close and perfect. After having trimmed off some of the outside leaves, let them be boiled in plenty of water seasoned with salt, taking care to skim it, and also to raise the cover of the pot so as not to confine the steam. Take them up as soon as the fork will enter the stems easily, which will be in from ten to twenty minutes, according to their size and age; drain

them so as to make them susceptible of absorbing a due proportion of gravy, melted butter, &c. This renders them a palatable and dainty dish.

Haymaking.

On former occasions our views on hay-making have been fully given, and the process recommended mainly consisted of the following particulars: 1st, To put the newly mown grass, as soon as it will admit of it into small cocks, in which state it will cure, in periods of from three to four days, by being turned out once or twice to the sun, for a few hours in the middle of the day; to mix layers of straw with the hay, in its half cured state; and to use about half a bushel of salt to a ton of half cured hay, when it is being put into the stack or mow. These methods have been severally tested by ourselves, and they are well adapted to secure the natural colour and flavour to the hay crop, but neither of them are equal to the following method: As soon as the grass is mown, it should be spread evenly over the ground to dry, or cure, as is the term usually employed, and about the close of each evening, by using a horse-rake of the most approved description, the whole should be put into cocks averaging about one cwt. of cured hay each. The following morning, if the weather be fine, the cocks should be opened out, and after being exposed a few hours to the sun, it will be in a fit state to put into stack. This is the common practice of the best farmers, and, in our judgment, it is the cheapest and best method of curing hay.

The British American Cultivator, published in Toronto, is one of those excellent public tions that confer benefit on all by whom they are read. The editor, Mr. Edmundson, himself a practical agriculturist, is deserving, and no doubt receiving, the thanks of hundreds who derive much pleasure as well as profit from his valuable publication. It is worthy an extensive patronage.—*Far. & Mech.*

The Ohio Cultivator observes, "all the finer kind of plums are cut off by the *Curculio*. We have never known these and other insects so numerous as this year."

The Weather and the Crops.

Weather.—In this part of Canada, very variable weather has for sometime prevailed,—and strangers, who have heard much of the great heat that usually occurs, observe, with an expression of wonderment, “Is *this* the hot summer of Canada?” Sunday and Monday, the 30th and 31st of May, were particularly cold, wet, and stormy. During about two weeks in the beginning of June, summer partially returned; but the 14th, 15th, and 16th, have been more like days and nights early in spring or late in autumn, than midsummer. On the first of these days particularly, fires or stoves in rooms, were pretty generally lighted up in Toronto, and upper garments were in requisition, and in some parts of the Province snow is said to have fallen!

Crops.—The reports of the wheat crop, a great breadth of which, we believe, was this year sown in Canada, are very various. In the neighbourhood of this city, and many other localities, the wheat, both winter and spring crop, is luxuriant, and free from disease. While in others, much of the fall crop was thrown out by the frosts, during and after our open winter, and the fields so damaged, or rather destroyed, have been ploughed up and resown, much to the cost of the farmer. The Grub (we believe of the *Hessian Fly*) is in some places very general and destructive. In fact, the reports from one part of the Province are quite the reverse of those we receive from another,—so that a report that would answer for all the Province cannot be furnished.

We had calculated ere this on receiving authentic information both on the weather and state of the grain and fruit crops, as well as on many other points, from all our agents in the different districts, but have been disappointed in some cases. By next number we trust this defect will be remedied; as to which we shall make a point of again corresponding with these agents. In that way we contemplate being able to issue in each number a well digested report for Canada generally, which will prove both useful and entertaining.

Wheat, our staple crop, has, during its progress, to pass through many trials and to encounter the attacks of many enemies,—the next, and usually most destructive when it prevails, is that generally known as “*the wheat fly*,” upon which some remarks from a correspondent appear in this number. We sincerely trust that a kind Provi-

dence will, however, this season, graciously permit the wheat crop to come to early maturity, unskathed by the ravages of that little insect, or any other cause!

Since writing the foregoing, there is a very general outcry in this part of the Province, as to the damage done to the wheat crop, and we have satisfied ourselves, by personal observation, that this has been caused by the *Hessian Fly* and the Grub consequent on it, and that they have been very prevalent this season. Fields, which a short time ago, looked most verdant, are now becoming of a sickly, yellow hue, and dying away.—The damage is now irremediably accomplished, and no attempt can be of any use *to save the crop*. The stage of the active-living insect which did the mischief, is past, a few weeks ago; but the dormant larva, or *flax-seed* insect, can now be discovered in great abundance *under the sheath*, particularly at the first point of the stalk, next the root, or in some instances will be found fallen to the ground! The stalk of the damaged plant will be found broken over just above the root, or so shrunk up or shrivelled at the same part, by the extraction of the sap, by these grubs, of which we observed from seven to thirty on each diseased stalk, that consequently no sustenance could be conveyed up the stalk, and thus the shoot and the leaves withered and decayed. We recommend a reperusal by Farmers, of the communication in last number, on the *Hessian Fly*, from which, combined with personal observation, it will be found that Dr. Fitch’s remarks are minutely correct, and that for his little publication and the investigation on which it is founded, he deserves the greatest credit.

Such fields on which there is no chance of a crop being reaped with benefit, ought speedily to be ploughed up, to prevent weeds getting too much ahead; in fact, nothing else can now be done with them; but there are many Farmers who will trust to their yet recovering, and they will find out, when too late, that their dispositions have been too sanguine!

Domestic Medicine.—The *Albany Argus* says, three or four strawberry leaves, eaten green, are an immediate remedy for dysentery, summer complaint, &c:

[This has often been found in the old country to be correct.]—COR.

Culture and use of Asparagus.

Why is it that this wholesome and delicious early vegetable is not more generally cultivated? It cannot be owing to the expense or trouble, for a dime's worth of seed will produce plants sufficient for any one garden, and a few hours' labour is all that is required to prepare the ground, sow the seeds, and afterwards plant the roots. The difficulty, then, must be, a want of knowledge on the subject.— and to remedy this, in part at least, we copy the following directions, which are the best we have seen, from Landreth's Rural Register for 1847 :

The Asparagus is a perennial plant, indigenous to Europe, found in stony or gravelly situations near the sea. It is generally admired, and has been long extensively cultivated, on account of its early maturity; being fit for the table very early in the spring, at which season very few vegetables are to be had. It may be propagated from the roots, but raising from seed is decidedly preferable; which may be sown either late in the autumn, or early in the spring; the latter is perhaps the best.

The mode of sowing:—Prepare a rich, deeply dug piece of ground of the desired size, on which draw straight lines an inch deep, and twelve inches apart. Place the seeds about an inch apart in the lines or rows, and cover them even with the surface. Should the seeds vegetate freely, they will be rather close in the rows, and may be thinned to two or three inches apart, which will permit the roots to get strong. Our practice is to pour scalding water on the seeds twenty-four hours before we intend planting them, in which they remain until put in the ground—the hard coating is thereby softened, and the seeds grow more readily.

During the season of vegetation they should be carefully weeded, and the alleys between the rows frequently hoed and kept loose. The second year (or when one year old if they do well) they will be fit for transplanting into the beds in which they are to remain. Such beds should be formed on ground not too wet; the earth having previously been very deeply dug, and plenty of well-rotted manure incorporated with it, to the depth of a foot or more; as it is found that the sweetness and tenderness of the shoots depend very much on the rapidity of the growth, and this is promoted by the richness of the soil. Digging and turning of the ground during the autumn preceding the spring in which it is intended to plant the roots would have a good effect; or it would be well in the autumn to throw the ground in ridges, that it may be exposed to the action of the frost.

The method of transplanting is thus—Lay out the ground into beds four feet wide, with paths or alleys between the beds of two feet width divide the bed into three rows equidistant, allowing eight inches space on either side, then proceed to stretch or strain a line lengthwise the bed, down one of the rows, and with a spade cut out a trench so deep that when the plants to be set therein are

covered, they will be three inches below the surface; the breadth of the trench sufficient to admit of the roots laying horizontally. Place them therein at intervals of nine inches, covering them with fine loose earth; and thus continue to plant the second and third rows, and finish by straightening the edges of the bed, which should be done with line and spade; having previously raked the surface to remove clods and stones. In gardens, the soil of which is wet and heavy, the beds should be elevated a few inches above the general level. In sandy or dry soils the roots do not require it.

As the season progresses they will need weeding and hoeing, suffering the stalks to run up to seed. In the autumn place a good covering of manure over the entire bed, which will prevent the frost from drawing them out, besides enriching the soil, and causing them to grow more vigorously the ensuing season.

In the spring take a dung-fork, and point or dig in the manure, observing not to go deep enough to touch the crown of the plants. Proceed in like manner for three successive seasons, when [the third season,] the plants will have become strong enough to bear cutting; after which an annual top dressing of manure and forking of the surface, will keep the plants vigorous and productive for twenty or more years. The Asparagus is easily stimulated by saline application as for instance refuse brine from salted meat or fish—or by a direct application of salt itself—some cultivators use it in the culture of this esculent, and with the most satisfactory results.

The quality of this delicious vegetable depends in a considerable degree on its state or age when cut for use; much exposed for sale in market, is cut within the hour it peeps above the earth—and that portion only, (merely the extremity of the shoot) is tender, all below is sticky and comparatively worthless—it should therefore never be cut, until the shoots have risen four or six inches, when they will be green and tender. The market gardeners in the neighborhood of Philadelphia cover their Asparagus beds with straw or litter, so soon as they cease cutting. The plan saves labour by keeping the weeds down, and protects the plants from excessive drought.—Ohio Cult.

In winter the bed ought to be covered with well made stable manure.

This delicious vegetable (asparagus) was first introduced into England in 1608. It is now extensively cultivated throughout Europe, and is one of the most desirable plants known.

The Organic Part of Soils.

That portion of the common earth usually denominated *organic*, is found by the agricultural chemist to vary much, both as respects quantity and quality, in different soils. In those of a peaty conformation of character, it exists in great abundance, and the same remark applies not unfrequently with like correctness to lands that have been long cultivated and strengthened by frequent and copious applications of invigorating manures.

Some of the most productive soils that have been chemically examined, have yielded from ten to twenty per cent. of organic matters, and under the most favorable circumstances, it has rarely amounted, in the richest, to more than one-quarter, or twenty-five per cent.

Some of the most productive wheat-fields in Great Britain, have been found to contain no more than nine or ten parts of purely organic matter in the hundred. A distinguished agricultural writer, in remarking upon this subject, says:

“Oats and Rye will grow in a soil containing only one and a half per cent.; and Barley when only two or three parts per cent. are present. In very old pasture lands, and in gardens, vegetable (organic) matter occasionally accumulates so as to be injurious, and overload the upper soil.”

This contingency, however, is one that need not be dreaded in this country, though it may sometimes happen in others where the soil is older, and better manured.—*South. Cult.*

Varieties of Soils.

Some of the most valuable improvements in modern agriculture proceed from the discovery, that all plants do not exhaust from the soil, in which they grow, the same ingredients or component parts of it; and that no two plants of a different kind abstract the same proportion of each ingredient.

Hence, beyond all question, it is established: 1st. That every kind of soil is, in its natural state, fitted for the production of some one or other of the thousand plants that cover the earth; and 2d. That the addition to it, by human labour, of those ingredients or substances of which any soil is deficient will fit it for the production of plants that require those ingredients.

Careful examination has also shown that silicious or stony matter not only constitutes a large portion of all soils, but also the largest ingredient in the composition of oats, wheat, Indian corn, rye and barley. It also demonstrates that certain other substances, of which lime is always one, are contained in these and other plants, a very large portion of it entering into the composition of clover and corn.

From these facts, it follows that the addition of lime to soils, from which it is naturally absent, must confer upon them the power to produce those useful plants, especially corn and clover, so far as unproductiveness of them was caused by its absence.

The same may be said of potash, soda, magnesia and certain acids, all of which are ingredients in most of the useful plants.

In this view of our soils, the presence of lime-stone in large quantities in any country, is second in value to that of no other mineral; not even excepting coal or iron.

For, as the productions of the farmer are indispensable to persons in every business, and as the proper application of lime to the soils which are destitute of it, will convert them into fruitful agri-

cultural districts, the value of lime-stone must be beyond that of any mineral we possess.

Nor does this good effect alone follow the addition of lime or any other single substance of which a soil happens to be deficient. The mixture of entire soils with each other often has the same result. For instance, the carting of a certain proportion of the surface of rich boggy or bottom land upon upland, or the reverse; the addition of pure sand to stiff clay fields, or the application of any other soil to one of an entirely dissimilar character, has generally the same beneficial effect.

In all these cases, the applied soil being dissimilar from that to which it is added, the chances are, even without the certainty of a scientific analysis, the productive substances have been obtained, and consequently that productiveness will be increased.

In this way there is great truth in the remark, that, in the hands of a judicious farmer, almost every farm contains, within its limits, the means of its own fertilization.—*Exchange Paper.*

To CORRESPONDENTS.—*Special.*—In our last number, we neglected to thank our correspondent, Mr Fuller of Thorold, for his two letters. He will have noticed that we inserted them, and we have now to say, (as we intended then to have done,) that we shall be happy, at all times, to be favored with communications from him, whether for insertion or otherwise.

General.—Correspondents should inform us, whether or not, they wish their names to appear. If they do not instruct us to the contrary, we shall take for granted, that the name is to be inserted.

A simple cure for Dysentery, which has never failed.—As the season in which this complaint is most prevalent, is near at hand, we insert the following, cut from the *Caledonian Mercury*, a standard Edinburgh paper, which does not publish trumpery. The plan is simple and easy enough of trial:—

“Take some butter off the churn, immediately after being churned, just as it is, without being salted or washed; clarify it over the fire like honey. Skim off all the milky particles when melted over a clear fire. Let the patient (if an adult) take two table spoonful of the clarified remainder, twice or thrice within the day. This has never failed to effect a cure, and in many cases it has been almost instantaneous. It has already succeeded in nearly one hundred trials, and to many who were supposed to have been at the point of death, it has given instant relief.”

Merino Sheep and Wool.

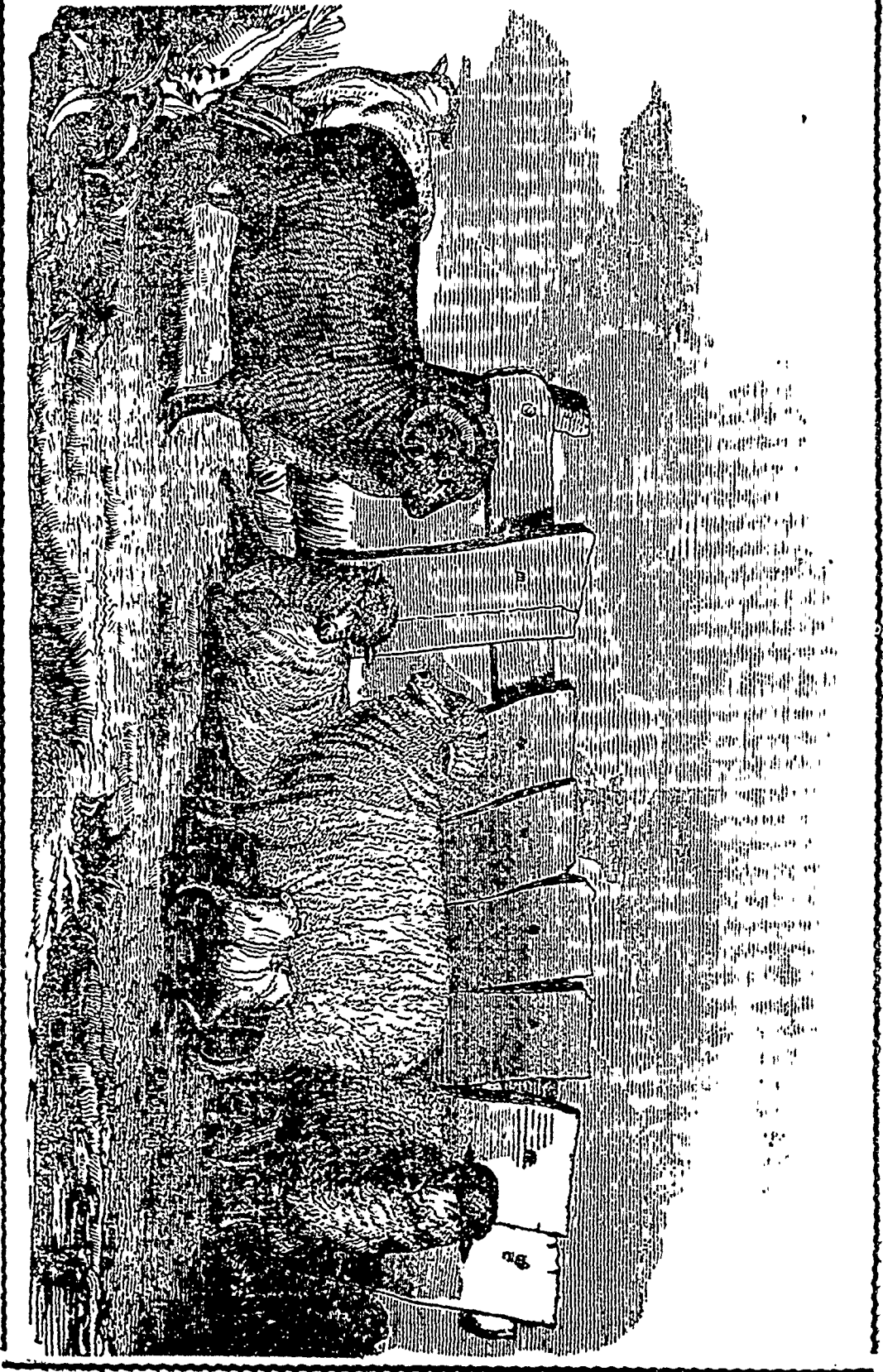
The accompanying drawing is a correct representation of three thorough-bred *Paular Merino Sheep*, owned by J. Jones, Esq., of Cornwall, Vermont, which were exhibited at a late Show of the New York State Agricultural Society, and which, in our opinion, in connection with a flock of thirty Rams owned by the same gentleman, were among the best specimens exhibited at that Fair. Canadian Farmers have been long under the impression that Merino Sheep were not hardy, and would not thrive well during our cold winters. The experience of the farmers of Vermont have sufficiently proved that this opinion is ill-founded, as the climate is more severe in that country than it is in this, and besides, sheep, like men, are animals capable of adapting themselves to nearly every climate, especially when properly managed.

Since the manufacturing of woollen goods has been in operation in Canada, and consequently a ready cash demand for fine staples of wool, some farmers have been induced to import Merino bucks from the United States; and as far as we have been able to learn, the progeny from these animals have given great satisfaction to their owners, especially when the cross was made with Leicester ewes. This experiment has been tried by ourselves, and so far it has been attended with pleasing results. The demand for fine samples of wool is at this time both certain and remunerative in Canada, but owing to the exclusive encouragement that has been given to the breeding of Leicester and other long-woolled sheep by Canadian Agricultural Societies, a supply cannot be had, unless we go to the United States. We can form no estimate of the quantity of wool that will be imported into Canada, from that quarter, in the present season, but we should judge it to be large, from what was lately told us by — MacKeelnie, Esq., the proprietor of the Cobourg Woollen Factory. We understand that this establishment alone will import, from the State of New York, no less than *Ten Thousand Dollars* worth of American Merino and Saxony Wool, during the present season. It may not be thought out of place here, to mention the fact, that the above factory turns out a great variety of beautiful fancy patterns of gentlemen's summer clothing, manufactured from American wool, which find ready sale in Toronto and other large cities and towns in Canada. These goods are got up

with such good taste, and with such a superior finish, that it would require a very good judge to distinguish the difference between them and a first-rate quality of British woollens; and the demand for them is rapidly increasing, especially by our first-rate gentlemen in the country, who are now, we are happy to say, since protection is removed from our breadstuffs in the British markets, determined to encourage Canadian manufactures and Canadian enterprise. It is wise to foster this feeling in the Province, to the greatest possible extent, as Canada will evidently be obliged to protect her own interests, which she may do with great effect, by giving a united and a hearty support to the infant manufacturing establishments, and to men of enterprise who may establish themselves among us, by which means a permanent home market for our agricultural products will be established, which, after all, must be considered the best for a new country, situated as this obviously is, on which to rely.— The annual quantity of woollen goods that might be profitably manufactured in Canada, cannot cost less than the sum of Two Hundred Thousand Pounds, and it would be a very important step towards encouraging capitalists to employ their means in the extensive manufacture of woollen goods, if our farmers would turn their attention to the growth of fine wool.

The very finest and most hardy breeds of fine woolled sheep may now be had in the neighboring States, at a very low price, when compared with what was formerly paid for specimens which were of a very inferior quality to those now generally found in the Northern and Eastern States. The Canadian farmer, when he makes up his mind to engage in the business of growing fine wool, will not be under the necessity of embarking in a speculation or of giving prices for his sheep, that the increased value of wool would not fully warrant, and this, in our opinion, is a matter of the very greatest consequence to those who are determined to import the improved breeds of fine woolled sheep. The only hindrance that now occurs, to prevent the farmers of Canada from engaging extensively in the production of fine wool is, the duty which is levied by our Government on sheep. This, in our opinion, should be speedily removed, inasmuch as manufacturers are now prepared to establish a permanent and remunerative market for fine staples of wool, and better still, the people of all classes appear to be

ambitious to be clothed in genteel and substantial garments, manufactured from an article, the product of their own land.



On the best mode of Feeding Cattle.

BY PROFESSOR JOHNSTON.

The following is the substance of a lecture delivered at Inverness, before the Highland Society of Scotland. After a few preliminary observations, the lecturer observed:—That he appears before the meeting as the representative of the Agricultural Chemistry Association of Scotland. They had all heard of that Association, and many of them were members of it. The object of the Association in having this meeting was two-fold. Every one, acquainted with the state of agriculture in different parts of Great Britain, cannot have failed to observe certain practices in operation, in various parts, of which agriculturists in general might profitably avail themselves. By going into different counties, they found practical men unpossessed of knowledge, the diffusion of which would be of the greatest possible advantage to the general mass of the agricultural community. Now, the purpose the Agricultural Chemistry Association had in view—in connection with these general observations—was to collect all the information in their power, through their officers or organs, or through meetings such as this; and having collected that knowledge, their next object is to diffuse it in such a way as to be productive of the most beneficial results to agriculture in general. Like scattering seed through their fields, the diffusion of that knowledge would produce vegetation in spring, and fruit in autumn, and the more liberal the deposit, the more abundant the return. They were here met together, consequently, in possession of a mass of knowledge in regard to the objects of the Association, so that the agriculturist present might aid the in the diffusion of knowledge. In selecting topics for discussion at these meetings, they looked at the character of the country, and enquired of practical men in the district, what topics were best suited for the purpose of affording useful information; and as the question of use of prepared food for cattle was one of very general interest in this as well as in other parts of the country, it was to form the first subject of this morning's conversation. The second subject, on the other hand, being one rather pastoral than agricultural, had a direct bearing upon questions of great interest to the farmers of Shetlandshire, and in other districts around Inverness, and in this respect was peculiarly appropriate. In reference to the first question—the feeding of cattle—no district in the island was more interested than this. He could not tell them how much stock was shipped from Inverness last year, but he trusted Dr. Nicol, or some other gentleman, would be able to furnish them with information on the subject. He believed, however, it was to a very large amount indeed; and he had no doubt but it was increased since, by the greater facilities of communication with the London and other markets. As a cattle importing district therefore, the extension of sound information in regard to the economical use of

food, must be of the very greatest importance; that is, in what way they could grow the greatest amount of beef or mutton at the least expense. This he was prepared to show was to be effected by the use of certain mixed food, and prepared food. An individual going from one end of the country to another to observe the state of agriculture, will look not merely at the kind of stock, but he will more particularly observe the implements of husbandry in use throughout the various districts. In order therefore, to form an estimate of the degree of attention paid to this matter of prepared food in England, on his visit to Newcastle, at the great cattle-show recently held there, he turned his attention particularly to the examination of the implements exhibited, having a bearing upon this point. Amongst these he found chaff-cutters, a peculiar machine for crushing corn and other seeds, and other instruments; all showing how much regard was being paid to this subject by practical men. There was no doubt but that the subject of the quantity of food which cattle require to produce a certain weight of beef, was beginning to attract general attention; but before he entered upon the few points which he meant to notice in connection with this question, perhaps it would be necessary to explain shortly the general composition of food. In all kinds of bread there were contained three different kinds of matter. First of all there was a certain quantity of fat, which the butter they ate represented; secondly, there was a certain amount of sugar; and then there was beside, the third constituent, which was represented by the white of an egg. Now it was of the very greatest importance what description of food was used, and what proportion it contained of these three kinds of matter, as bearing upon the purpose it was intended to serve. Cattle had in their bodies different kinds of matter, also, but particularly flesh and fat; and the farmer should be sufficiently acquainted with the nature of food, to be able to distinguish what he should use when he wished to produce fat, or when he wished to produce fat and lean both together; and the food which was given would effect the one or the other of these purposes, according to its composition. The white of an egg or albumen would supply nothing or nearly so, to the animal but muscle. The fat went directly to form fat. The starch in food kept the body warm, and when fat was wanted served the purpose of making the oily matter more readily become fat in the body of the animal.

Now, in fattening cattle, as in everything else, using proper means produced the proper effects; and after the explanation which he had given, they would see at once that a mixture of food was better than the use of one kind alone. If they wanted to lay on muscle, they would feed with food containing the largest amount of gluten; and if they wanted to lay on the fat, they would give starch and oily substances, and only a small proportion of the other ingredient. Selecting food in any other way would not serve the purpose they had in view in the most economical way.

He had a table representing the different proportions of fat in the food which they were in the habit of using; but he would illustrate what he had to say by a few simple illustrations. Wheat contained two per cent. of fat, and sometimes a little more; but oats contained sometimes from four to five per cent., or about double the amount which was to be found in wheat. Oats were next to Indian corn in this respect, the latter of which they were aware contained a large amount of fat. Gluten was the matter out of which the muscle was produced, and there was more of that substance in the bean or the pea, than in the oat; but the oat was better than wheat. But there was another kind of food used for fattening cattle, namely, oil-cake, which contained a greater amount of fat than the same weight of any other kind of grain. Linseed, from which oil-cake is made, differed from other descriptions of grain, in containing a greater amount of fat, and a larger amount of gluten likewise, with the exception of the bean. Now practical men have derived great advantage from feeding their cattle on oil-seeds; that food, from the peculiarity of its composition laying on fat and muscle at the same time. Oil-cake, however, was the best food, only when the greatest amount of fat was required; and according to the purpose which they had in view, farmers would give their cattle other descriptions of food. It was a remarkable circumstance, that the bean and pea contained very little fat, and as the wheels of the animal system required to be greased, these kinds of grain would not serve for that purpose, although they contained what made muscle. Although beans and peas were good food, therefore, they were not good as the sole food of animals. Besides, they would observe, that from their different constituents, plenty of oil-seeds, and plenty of beans and peas, would be far more profitable than if they were to give either of them singly. That was the principle upon which the use of mixed food was founded—to give all the substances the animal required, and to give them at the cheapest rate; and the researches of the scientific man were directed to discovering the means by which these objects could be best accomplished. He had selected oil-seeds, but he might have taken potatoes or turnips for his illustrations. He had taken the oil seeds, however, because very great attention had been recently directed to the value of those seeds in the feeding of stock, and to the culture of flax which they knew was advancing with great rapidity in the neighboring country of Ireland, and which was even progressing in England, at a great rate. He might mention a remarkable fact connected with the improvement of the flax cultivation in Ireland, that a society which was established for the encouragement of that cultivation, and which had its seat in Belfast, had an annual revenue of between £2,000 and £3,000; while the income of the Royal Agricultural Association of Ireland was less than one-half of that sum. From the progress the cultivation of flax was making in Ireland; it was very deserving of attention by those who thought a change in the rotation of

crops would be useful in other parts of the country. The person who had most directed his attention, practically, to the effects of feeding stock with mixed food, and to feeding on linseed, was Mr. Warnes, of Framlingham, Norfolk, and he (Professor J.) would point out to them the principles on which he proceeded; and they were sound scientific principles. He commenced by boiling the linseed in water until it formed a kind of jelly; then he stirred in a quantity of cut straw and chaff, and crushed corn. The mixture was then poured into moulds, and afterwards served to the cattle warm, which they liked remarkably well. With this food the cattle thrive, and acquired beef in an extraordinary manner. By this system of feeding, Mr. Warnes said he could compete with any man, whether foreigner or not, as he could send cattle to Smithfield for 4*d.* per lb., and pay him an ample return; and in illustration of this, he gives the results of two experiments, which he would read to the meeting, and which were as follows:

Since he followed out box-feeding, he knew not a single instance where he had not realized 8*l.* for every head of cattle he had kept for six months. At the farm where he now resided, he had reared for market the following cattle, after only six months' box-feeding:

7 Durham steers, cost £8 10s. each, sold for £19 10s. each.....	£77	0	0
6 Scotch steers, cost £8 10s. each, sold for £22 10s. each.....	84	0	0
1 Cow, cost £5 5s., sold for £15,	9	5	0
4 Scotch steers, cost £10 each, sold for £20 each.....	40	0	0
	£210	15	0

The above cattle were bought in and disposed of within six months. They consumed, with the following now in herd, nineteen acres of turnips, about fourteen quarters of linseed, and a few bushels of barley-meal with several acres of pea-straw:

3 Durham heifers, estimated value above the cost price.....	£22	10	0
2 Irish steers.....	13	0	0
5 Small steers and heifers.....	30	0	0
3 Calves, and butter from two cows	11	0	0
	£76	10	0
Deduct for 14 qrs. of linseed, mostly grown upon the farm, £35, also for barley, £4.....	39	0	0
	£37	10	0

In reference to Mr. Warnes's experiments, too, it is to be observed that the value of the manure was very much increased in comparison with that derived from the ordinary method of feeding. But, besides this, there was another method of feeding of which he would speak from personal observation and which he had witnessed in the neighborhood of Northallerton. He went to that place because he had heard that Mr. Marshall was keeping double the amount of stock, with the same quantity

of turnips, that he had been in the habit of doing only two years ago; the other food used being ground oats, barley, rye, and old beans, and chopped hay, instead of straw at times; but the cattle did best with the straw. Hearing, as he had stated, that Mr. Marshall kept double the stock on the same amount of turnips, by his system of feeding, he—Professor Johnson—was very anxious to see the mode of carrying his system into operation, and went down to Yorkshire for that purpose. There he saw about 200 head of cattle feeding, a portion of which was so off every week, and their places supplied by others. What struck him as very remarkable, was the state of absolute rest in which he found the cattle. There was not a single beast upon its legs, no motion was observed, which, they were aware, was a circumstance favourable for fattening. In connection with this subject he got the following information, and in order that they might fully understand it, he would present it in a tabular form. It was as follows:

Linseed, 2 lbs., boiled for three hours in four gallons of water; cut straw, 10 lbs.; growing corn, 5 lbs.; mixed with jelly. To be given in two messes, alternately with two feeds of Swedes. Now, the mode in which the linseed was boiled, was of considerable consequence. In the first place it was boiled for three hours. The jelly was then poured upon crushed grain and cut straw, much in the same manner in which a man dares mortar, being mixed together with a shovel and allowed to stand for an hour. It was then stirred again, and after a lapse of two hours it was given to the cattle in a hot state, and the result was, that if the animals are fed regularly on this kind of food and turnips alternately, they remain in a state of extraordinary quiet. They become exceedingly fond of it, and commence bellowing whenever they hear their neighbors being served before themselves. The practice was to give them a meal of the linseed mixture at six in the morning, turnips at ten, another mess of linseed in the afternoon, and turnips again in the evening. When he saw them first in the morning, it was after they had got their mess, and he was much as wished to see them, on visiting them on the second occasion, when they were a la on the *qui vive* for their meal. Two things were to be observed in regard to this system of feeding—first, that it consisted, in addition to turnips, of a mixture of grain straw and linseed in certain quantities, given hot; and the result was double the amount of stock kept on the same amount of land. The proportion of turnips which could be grown upon a farm, usually determined the amount of stock a man might keep; and if by an improvement in the system of feeding the quantity of cattle could be doubled, by turning the money twice instead of once within a year, the farmer would obtain double the profit. But this was not the only advantage; he would double the manure which he made at the same time, which would contribute very much to the fertility of his land; he being enabled, by the use of this linseed, to return more than he took out of it. The proportion of the food had other important consequences in regard to manuring the soil. The crushing of the grain and seeds, by reducing them to the

minutest particles, made the substances of which they were composed more easily assimilated to the food of plants, and made in better manure, because of the extreme division which it had undergone. Now they would observe that, by having this large additional amount of manure, they would get larger crops, and introduce a system which would go on annually increasing the amount of their produce, and consequently the amount of their profits. This would enable them to farm higher, and by farming high, they would keep that place which, he was sure, they now occupied in the history of the world. He would likewise direct their attention to the use of linseed, and the preparation of food, as being of great value in keeping working animals in good condition; but on this point he would not detain them by giving a special detail of facts, as the same general principles applied in the one case which applied in the other. As he had occupied the attention of the meeting at considerable length, he would conclude for the present, reserving any additional remarks which he had to make, and the replies to any questions which the company might think he could usefully answer, until after the general discussion had ended.—*American Journal of Agriculture and Science.*

District and Provincial Boards of Agriculture.

In a country whose Agriculture forms the basis of its wealth and greatness, the proper means should be employed to develop its varied natural resources to the greatest possible degree. If the inhabitants of such a country simply content themselves with producing sufficient breadstuffs and other agricultural products, for the wants of its inhabitants, commerce, as a matter of course, must become shackled, and men of enterprise will not be encouraged to invest their means in operations, which will require on their part much risk, and consequently the money of the country will be completely exhausted in the purchase of many articles which could be profitably manufactured or produced at home. To remedy these evils in some measure, the collective wisdom of the nation should be brought to bear, in devising the best means of promoting improvement, and in developing the various resources of wealth with which this country may abound. On former occasions we have brought the claims which Agricultural Societies have on the attention of all classes of the Canadian population, believing that in this country the agricultural interest is decidedly the most important, and the one which the finger of nature evidently points to, as being that by which Canada may, by the properly directed exertions of her people, be raised to the highest rank among nations. We consider that these

exertions cannot be more practically and efficiently put into operation than by means of well organized and properly conducted Agricultural Boards and Societies. The manner in which these Boards should be organized, is a subject not yet sufficiently understood by the Canadian agriculturists, and we therefore have been lately urged by a number of friends to submit our views, so that it might become a prominent subject for discussion, and thus be brought directly under the notice of the Legislature during its present session. Our views have been frequently clearly expressed, in the former volumes of the *Cultivator*, as to the best mode of organizing and supporting Agricultural Associations, but the most comprehensive view we have given, was published in the December number of the second volume of our magazine, new series, 1846. We would refer all interested in this subject, to that paper, as they will there readily perceive that the groundwork of Agricultural Institutions should be that of placing the country in such a position that she could derive a large amount of benefit from the improvements of other countries. The system of organization recommended in our former article, if it were efficiently carried out, would prove a great blessing to this naturally fine country; but we very much apprehend that it would be found too cumbersome, or in other words, too difficult to manage, because the people, and especially the Agriculturists, are not sufficiently awake to their own and their country's best interests. After carefully examining the different modes of organizing Agricultural Boards, we have much confidence in stating, that the most feasible system yet proposed, is that of constituting our District Councils into Boards of Agriculture, by Act of Parliament. These Institutions are now highly approved of by all classes, and any suggestions or plans that might emanate from them, would be apt to be favorably considered by all parties interested. In our judgment the cause of Agricultural Improvement would receive a powerful stimulus, if District Councils were made Boards of Agriculture, and authority given them to appropriate as large an amount of the District revenue, for the various purposes of improving the agriculture of the country, as is given to each District, from the Provincial Revenue, for a like purpose. The Provincial Board of Agriculture might, with some propriety, be composed of the Wardens of the several District

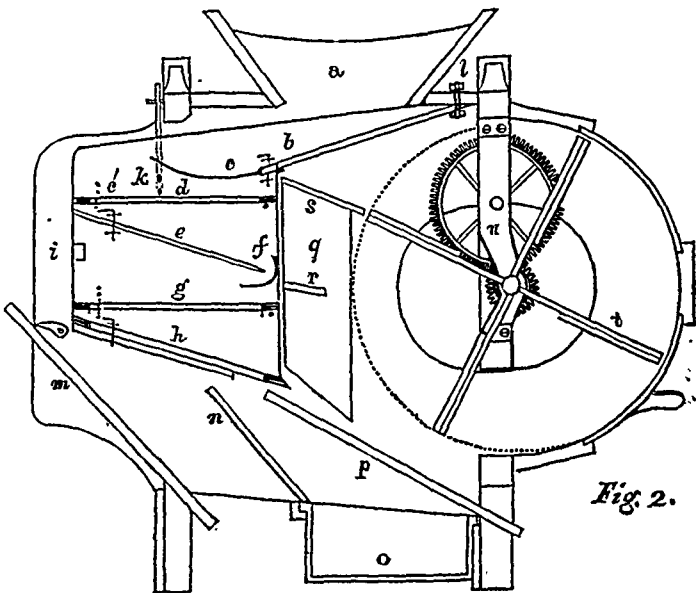
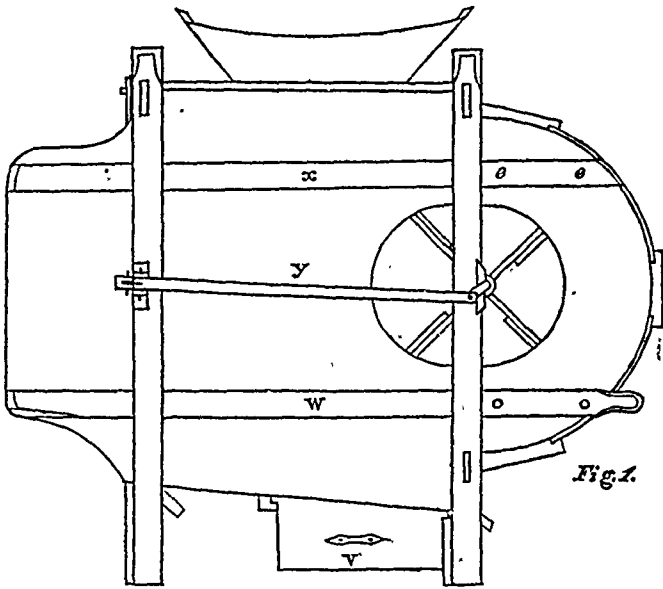
Councils, as soon as these Councils are, by Act of Parliament, constituted Boards of Agriculture. To ensure the practical and efficient operation of these Boards, the working Officers of each must be remunerated for the labor employed and time spent by them in their service. In this way we would have DISTRICT BOARDS of Agriculture in each District; and also a PROVINCIAL BOARD for Canada—or, what would be decidedly better, one for each great division of our Province. These different Boards could meet half yearly; or as otherwise arranged; and their Officers could beneficially correspond with each other,—of course all as directed by the Act of Legislature constituting them.

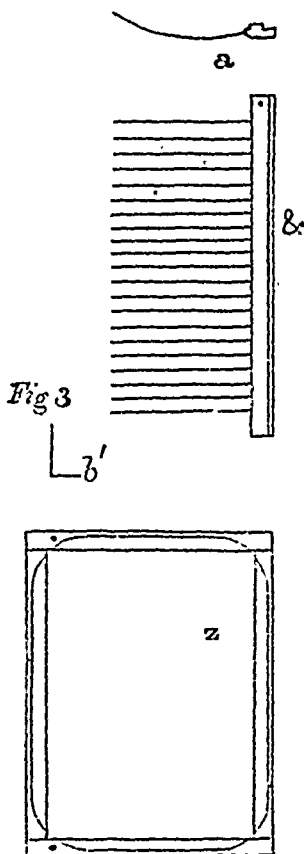
We earnestly trust that this mode of encouraging improvements in agriculture will receive favorable consideration at the hands of the people, and that they will, as soon as possible, let their approval of it, or something better, be made known to their various representatives, so that the subject may, during this session, be taken up and carried through Parliament, and the hands of Government strengthened. In conclusion, we look upon such a system as that above mentioned, as being one which would decidedly and advantageously effect the object contemplated, and from which much, very much good, would assuredly result to Canada, and that on the soundest basis, and at the most moderate cost.

Improved Fanning Mill.

A description, with drawings, of an Improved Fanning Mill, will be found in another portion of this paper, which we are of opinion is much superior to the ordinary mills in use in the country. The inventor and manufacturer, Mr. F. G. Willson, has taken the proper steps to secure the Patent Right for the Province of Canada, and we understand that the necessary means will be taken to have some of these mills ready for the market the approaching season. Although there has been much improvement in Winnowing Machines, within the past few years, still there is great room for further improvement. The great requisite in an implement of this kind is, that it should thoroughly clean the wheat and other grain from the chaff and all impurities, and make it in a fit state for the market at one operation. The inventor is of opinion that his machine possesses this requisite and rare quality, and we heartily wish, for the good of the agricultural community, that it may so turn out, and that he may reap a rich and exceedingly profitable harvest, from his important improvement.

F. G. WILLSON'S IMPROVED FANNING MILL.





To the Editor of the B. A. Cultivator.

SIR,—

Not forgetting my promise, I send you a working draft as correct as the scale will permit of my Improved Fanning Mill, for chaffing and cleaning thoroughly at once through. Fig. 1, shows the outside elevation, and fig. 2, a vertical section, as the Mill would appear divided through the centre, in which is seen the hopper, *a*; the shoe, *b*, that contains the fork, *c*; coarse sieve, *d*; board slide between the sieves, *e*; nearly semi-circular strip of sheet-iron, *f*; fine sieve, *g*; screen, *h*; cross bar, *i*; suspending rods and staple, *k*; bolt for holding up the shoe, *l*; tail slide, *m*; screen slide, *n*; screen drawer, *o*; head slide, *p*; side board to prevent the escape of wind outside of the sieves, *q*; boards for producing two strong and separate currents of air, *r* and *s*, faces *t*; cast iron plate, and wheels inside of the Mill, *u*; the screen drawer with the handle for pulling it out, appears at *v*, fig. 1; inch battens to strengthen the Mill, and form handles, *w* and *x*; shaker, *y*; sieve frame, *z*; fig. 3, fork shown separate, &c; and view of fork, *a*; hook for holding in the sieves, *b*; the frame work of the Mill is so sim-

ple and common-place, that it will be easily understood. The wheels are put inside the Mill, partly let into the wood, and covered with a cast-iron plate, as being snugger and protected from dust. As the grain falls on the shoe of the hopper, it shakes through the fork which carries off the straws and greater part of the chaff, and passes through the coarse sieve, falling on the slanting board slide, *e*, where it runs off, and is turned by the sheet-iron, *f*; on the fine sieve it then falls on the screen, *h*, and comes down the head slide fit for market; the screenings fall on the board the screen rests on, and shakes off upon the screen slide into the drawer. The sieves are made to fit snug in the shoe without any grooves, and rests on pins at the inside edge, the outside edge rests upon the hooks, *b*, fig. 3, on each side; the end, *b*, goes through the hole in the frame, *z*; the other end of the wire goes into any of the holes, dotted at *c*, and both sieves can be raised or lowered accordingly; the whole of the shoe can be raised or lowered by the holes in the top of the suspending rods, *k*. The sieve frames are $\frac{3}{8}$ of an inch in thickness, made of hard wood, and bevelled in on the top side where the wire tacks on, and requires nothing more to keep the grain from falling over the inside.

The proper size for a coarse sieve is 19 wires to the foot; lower oats sieve, 35 to the foot; for wheat, 53 to the foot; for a screen, 95 to the foot, wires of the size commonly used. The fork, and fig. 3, is made of $\frac{3}{8}$ inch wire, set 1 inch apart, and ships in a whole end at a time, and held fast by the wire and staples at *b*. The board, *r*, produces a separate current for the fine sieve, care being taken, that it be the proper width to divide the force of wind nearly equally, if made too wide, it will cut off all the wind from the upper sieve. This Mill should have seven or eight sieves, some fine enough for clover seed. The clear inside width of the Mill is 31 inches; the inside of the shoe, or breadth of sieve, is 24 inches, and 19 inches deep. This Mill will be found to answer every expectation, if properly made, and may be constructed by any mechanic, from the plan given. Should I find it convenient, I may send you a drawing of what I shall call, "the magic cast-iron gate," entirely self-acting.

I am, yours respectfully,

FRANCIS G. WILLSON.

Saltfleet, 6th April, 1847.

On the Wheat Fly.

SIR,—

In your last number are inserted some observations of mine on Dr. Asa Fitch's pamphlet, on the Hessian Fly. I then stated I would probably send you some remarks on the other insect named in the prefix, at the proper season.—As that season will have arrived by the time this number of the *Cultivator* gets into the hands of your subscribers, I cannot do better than now call their attention to the wheat fly.

I observe in your volume for 1846, page 140, you published the learned and interesting Essay, by the above well known writer, on this destructive insect; and as I believe the Dr. has therein brought before us everything that is yet known on the subject, my sole object in now addressing you is merely to recall attention to it at this season, at which many of the habits and transformations of the insect can be noticed, and in which it commits the very serious damage that it does.

In writing my last compilation—for it has little pretence to be called anything else—I stated that the Hessian Fly deposits its eggs on the *blades* of the wheat plant, and that the damage caused by the grub hatched therefrom, is at the first and second joints of the stalk, *under* the sheath of the plant. The operations of the *Wheat Fly* are entirely different, and this proves it to be distinct insect, though some would assert they are identical. It lays its eggs in the *ear* of the wheat. Previous to that time, viz. from about the middle of June, up to the middle of August, it may be observed. In Scotland it has become but too well known; and the ravages it has there, in particular districts, committed in some seasons, has been to an extent which some of your readers would scarcely credit—suffice it to say, that from one-fourth to one-third of the wheat crop has frequently been destroyed. Two Scotch writers, Mr. Gorrie of Perthshire, and Mr. P. Shireff, then of East Lothian, are both noticed with much commendation by Dr. Fitch. I know that both these gentlemen took every means, by careful and minute personal observation, to discover the origin and habits of this insect, and if possible, to devise a remedy against its depredations; but I am not aware that either they or Mr. Kirby the Naturalist, who is also quoted by Dr. F., or the worthy and pains-taking Doctor himself, have as yet been able to give us any plan by which we

may totally destroy this insect, or even partially arrest its ravages. This, of course, is the point which is chiefly interesting to farmers. I am confident that some remedy will yet be devised by which mankind may be freed from this little pest—and perhaps that remedy lies with him, as does, I firmly believe, the amelioration or prevention of every ill he originally brought upon himself, and which he continues to propagate and increase. Be that as it may, this point, as regards the wheat fly, is yet entirely open, though no little anxiety and labour have been expended by Dr. Fitch, and the writers above-mentioned and others referred to by him, among whom Dr. Harris is deserving of special mention. I believe that the Wheat Fly has, in bygone years, been but too frequent a visitor in Canada; and from what I have observed of the intelligence displayed by many of the Canadians with whom I have had personal communication, and the capacity for investigation and research, I think that such remedy has as good a chance of being found out in Canada as elsewhere. At all events there is nothing to hinder Canadian Farmers from applying themselves to the study of the subject, and communicating the result of their observations. In that way, and by comparing one account with another, the truth may yet be arrived at.

I intended, in conclusion, to have given some of the remedies mentioned by Dr. Fitch, but these are fully detailed in his pamphlet, and marked on in your article referred to in the outset, I shall refer your readers to these papers, and recommend them to peruse them with care, remarking, that the Fly can best be discovered in the evening, or early in the morning before the sun's rays have become powerful, or on a soft, warm day, in which there is little sunshine; and that during the day it generally gets down to the ground, or half way between the ground and the ear. I may farther advantageously recapitulate a few facts, which are material in observing its operations. After alighting in the ear, the fly settles on the outer glume or chaff of the kernel, inserts its ovipositor through the scale, and thus deposits its eggs, of a yellowish color, to the number of from six to ten. From each egg, in about a week after, is hatched a white grub or insect, which, when full grown is less than a tenth of an inch long, and becomes of an orange yellow color. From these char-

istics, and the sluggish wriggling motion of its body, it will readily be recognised.

Farmers! This is the little insect which does so much damage to the ear of the wheat, and by feeding on the soft kernel, destroys it either wholly or partially; you may notice that many of these kernels in one ear may be so consumed; while others, in the same ear, will remain quite sound. Now is the time to observe the fly, if it does exist, and if it does, the deposit of the eggs, and the hatching of, and destruction by, the grub closely follow. I say to all, watch and study the operations both of the fly and the grub!

I am, &c.,

Scorus.

June, 1847.

Foot Rot in Sheep.

MR. EDITOR,—Much has been said and written on this subject, one certainly of material interest to the Flockmaster, and many remedies have been proposed. There is no doubt in my mind, that the disease is caused by the ground being soft and wet, and the herbage too rank and succulent which the sheep are pastured. I have myself seen a flock which was much infected with this disease on pasture of that nature, quickly getting rid of it, when removed to high and dry ground which there was abundance of rocky and stony soil, on which they could skip and gamble. It is often, however, in the power of the owner to effectuate a cure in that way, as he has no land pasture of the kind now described. When that is the case, what must he do? Give up entirely the kind him; so beneficently thrown out by nature? No, he ought to try and imitate nature as closely as he can. The plan most effectually to be pursued is to pave or causeway with round stones a small portion of ground in his field, and frequently drive the flock thereon, and apply lime to their feet, which can easily be done by sprinkling it very thickly on the pavement. A weak solution of blue vitriol and water is also recommended for the foot rot. This may strengthen the foot and be of benefit, especially if the parts have previously been kept thoroughly clean by poulticing and bathing with hot water for a few days. As the disease is very infectious, care ought to be taken not to introduce a clean among a diseased flock, or even to put the former on pasture in

which the latter has previously been ranging, though for, however, short a period.

I am, &c.,

A.

The *Ohio Cultivator* for June, says, "the wheat crop must prove light. In addition to the injury by the winter, the fly has done much damage this spring."

Remedy for Hydrophobia—The inventor was Dr. de Monita, Physician in ordinary to the King of Poland. He directs that the wound be covered with fresh snuff, in order to imbibe the saliva of the animal, then wash it with water. When the wound is thus cleansed, he orders that half a pound of butter be mixed in four times the quantity of vinegar, and that a compress of linen be steeped in this mixture, and often applied to the wound for nine days, after which it may be discontinued.

Besides the topical application, he directs that an ounce of vinegar, mixed with a little fresh butter, be taken internally four times a day, drinking from time to time vinegar and water as a common beverage.

A rigid diet is also insisted on, as well as a total abstinence from all spirituous liquors.

This happy mode of treatment has enabled Dr. de Monita to prevent hydrophobia in more than sixty cases.

A Russian gentleman, (formerly Consul at Boston,) states, that when among the shepherds in the district where he formerly resided, any one who was bitten by a mad dog, it was the uniform practice to watch daily and carefully for the appearance of pustules under the tongue, or on each side of it, which always appeared in due time as the specific consequence of the virus communicated by the bite.

As soon as they come to a head they are lanced, and the mouth thoroughly washed or rinsed, to prevent the virus from being taken into the system. The washing or rinsing was done with a decoction of the *yellow broom*, which was also used for several days both as a gargle and a drink. This treatment, it was alleged, was universally and confidently relied on as perfectly effectual, when carefully and faithfully observed, as a perfect preventative of the disease of hydrophobia, which never takes place till after the pustules appear.—*Ex. Paper.*

LADIES' DEPARTMENT.

ON HOUSE PLANTS.

The cultivation of Plants, such as Roses, Geraniums, (or Pelargoniums) Myrtles, &c., is often a source of great pleasure to many Ladies residing in Towns—who are not possessed of a garden, yet, having a taste for horticulture, thus gratify this very delightful propensity, tho' in a small way. Plants grown in the open air, and in an open spot of ground, are in the position nature intended them to occupy, and consequently every adjunct of health required by their formation and habits, is at hand. Of course, when such plants are removed into pots, and taken into the house, the natural arrangement is altogether laid aside, and the plants being now in a very different climate, and their roots which had formerly free scope to range, being confined to a very little spot of earth, may be said to be almost in a new and different world,—as far as temperature, light, and moisture are concerned, they are entirely so,—and the nearer we can imitate nature in supplying these properties of healthy action and life, of course the more closely will the existence and condition of the plants, in their new habitation, approach to those enjoyed and possessed by them in their old; and there will thus be a better chance of their thriving.

To such Ladies as can enjoy the study of House Plants, we recommend the following article from the *Western Farmer & Gardener*—which is written in a plain, distinct, and pleasing style, and is well worthy of an attentive perusal.—We are convinced, that if house plants were treated as there advised, their fair owners would have the pleasure of seeing them thrive much better than they frequently do:—

“Our object is, to call attention to a few important natural conditions of vegetable health, which every successful gardener must imitate.

1. It should be remembered that the roots of a plant, growing naturally, are in a medium of higher and more regular temperature, than that of atmosphere. Parlor plants, and too often those in green houses, are managed without the slightest reference to this fact. The temperature of root and leaf are the same; or, the heat of the atmosphere is allowed to be greater than that of the soil; or worse of all, there is a perpetual variation in the relative temperatures. Where a gentle bottom heat can be applied, plants more nearly approach a natural condition. Where this cannot be had, regularity of temperature should be carefully secured. In plant houses, only carelessness or ignorance can be a reason for irregularity. In

parlours it is different; since heat is introduced into them for personal comfort, and for the health of plants as a secondary consideration. In nature there is, as might be expected, a marked difference between the temperature of day and night. To often in stove-heated rooms, the night air scarcely falls a degree from the average day-temperature.

2. Plants growing in open soil have advantage in respect to light which can only be approximated in artificial culture. The amount of food taken by a plant, should depend upon its power of healthy digestion. For plants digest their food as really as do animals, although by a different process. Light and heat decompose the water, and such parts of its elements or ingredients as are retained for its use; the remainder is given off by the leaf. In nature, a healthy plant draws up moisture in proportion to its own size, and also in proportion to the activity imparted to it by greater or less intensity of solar light. This self-regulation is no longer possible to a potted, house plant; and the keeper must exercise a nice judgment in its behalf. Some persons economize time and water once for all, by deluging the plants say once a week, drowning its roots, and filling its tissues with undigested food. If in a warm atmosphere, the plant goes into a rapid growth, but from want of sufficient light to decompose the excessive moisture, the stem and leaves are formed of mere cellular substance without fibre and are carbonized. Long joints, white, watery, brittle and sluggish, effeminate leaves, all betoken vegetable dropsy. The verdict should be “death, for want of light and by intemperate use of cold water.” We describe only the extreme case of abuse. From this, there are regular degrees of bad management. Some water every day, at any rate some, every other day; some, by the state of the soil upon the surface. These are empirical rules. A truly careful gardener will not feed by any other sign, but by an attentive consideration of the whole plant; the degree of light which it has, the temperature in which it exists, by the condition of the soil, and by a careful heed to its growth. An experienced eye ought, in a very short time to detect mismanagement, from the wood and leaf of a growing plant.

3. There is one circumstance in respect to the action of light, which we do not remember to have seen urged upon the attention. It is no matter wonder that so few parlor plants are healthy, or beautiful. It is no wonder that beautiful plants purchased from skilful florists are very soon nursed or neglected to death. We recollect hearing a lady bitterly complaining of a florist to whom she had bought several pots of fine roses. “I do believe he has some way of fixing them for sale; some sort of medicine. Just as soon as any body else takes them they begin to fail. I never knew a rose from——which did well. Her plants, if they could have spoken, would have replied “Oh madam, we never see the sun until about noon, and then he breaks in fury upon us, sometimes we swim in water, and sometimes we thirst for days. Our poor roots are dry half the

ine and heated, or they are bedrenched and killed. We never were treated so before in our ves."

It will be observed that by far the greatest number of plants, growing freely, present to the sun, at one, and that the *upper surface* of their leaves. This is not an accidental position, If it be artificially reversed, the leaf, unless prevented, will speedily restore itself to its normal position. If restrained from doing this, in most cases the leaf will die. It is plain, then, that there is some reason in the structure of the leaf for presenting the upper rather than the under side to solar light.

A leaf, simple as it appears to be, is a compound organ, and not a little complex. That which appears to be a frame, viz: the spines and ribs which the eye traces, is a double system of veins; the one belonging to the upper surface of the leaf, and making its rise from the region of the pith or heart-wood, and connecting the upper surface of the leaf with the rising current of sap; the other, belonging to the under surface of the leaf, and connecting that portion of its vessel with the downward current of sap. This double system of veins is filled up, not by a mere pulp, as it seems to the eye, but by a system of cells, arranged in conformity with the distinctive functions of the superior and inferior surfaces.

The cells of the upper surface are oblong and arranged edwise, so that their "long diameter perpendicular to the surface." This presents the least possible surface of these cells to the light. The cells of the lower part of the leaf, are arranged edwise, so that numerous open spaces exist between them, and these spaces are filled with air and are in direct communication with the outward air, by means of mouths through the skin, technically called *stomates*. The lips of these mouths are formed with singular adaptation to the wants of the leaf. When moist, they contract in such a manner as to open the mouth; when dry they elongate so as to close, or nearly close the opening. The fact that these stomates are upon the under side of the leaf is not to be unnoticed. For, although the upper surface is not entirely destitute of them, their presence seems almost accidental; and they may be said to be, for the most part, in all non-aquatic leaves, whose natural position is horizontal, peculiar to the under surface.

These remarks will enable us to give a reason for certain modes of treatment necessary to house-plants, often enjoined, but not always understood by those who practice the directions.

The necessity of light.—The whole plant depends upon the leaf for its life, and the leaf depends upon light for the performance of its functions. Not only is darkness incompatible with life and health, but every degree of diminution of light from that which prevails in the open air, to which the plant is accustomed, removes the plant one degree from the most favorable circumstances for health. It must be remembered that a quantity of light may be sufficient for human eyes, and yet not enough to effect chemical

changes in the leaf. The diffused light, the tempered half-light of our parlors is far too weak to answer the purposes of vegetation. In Europe, windows are frequently made, not a little on the principle of show windows in shape, where plants are admirably furnished with direct and full light, and protected from dust and too much evaporation by a glass door on the side next to the parlor, a complete glass room being formed.

Directions of the light.—When plants are placed by the window, they are usually raised upon frames or tables to a considerable height, for several reasons;—that they may be out of harm's way, that they may make a more conspicuous figure. The result often is, that by far the largest volume of light strikes the *under side* of the leaf; and although the light is not so strong as full solar rays upon out-door plants, so neither are the leaves as hardy as those grown in open air. There is no doubt that the rapid turning of leaves to the light, does not arise simply from the attraction of light, (whatever that attraction may be,) but also from efforts of the plant to reverse its leaves and present the upper and not the lower surface. It is on this account, well nigh impossible to maintain in full health very tall plants in parlors. Their height causes the light to strike them from below, instead of from above; and smaller plants are often injured for like reasons when, for the sake of effect, they are raised high up by the window. The nearer the light can be made to fall upon the top of the plant, the better, and each degree of declination from a vertical ray, is a degree on the downward scale of benefit."

Another writer says "there is a great deal of discretion to be used in watering plants. The regular course of giving them all a regular forenoon and afternoon *dab* is the worst possible policy. The roots of a well established plant penetrate and fill the entire earth of the pot, and by the usual process of giving a little water every day only keeps the surface wet and the bottom of the roots around dry and moulded. The true course is, to let them stand till quite dry on the surface, and then to give them a thorough watering even till it percolates through the bottom, if the pot is well drained with broken earthen or oyster shells. Occasionally liquid manure, or 1 lb. of guano in 2 gallons of water, tells well in the growth and increased size and beauty of the foliage of flowers."

A solution made of a handful of saltpetre, in a gallon or more of pure spring or rain water, is a good liquid with which to water *all* plants, whether in the House or in the garden,—and when guano is not at hand, the same quantity of fresh pigeon or fowls' dung, in the same quantity of water, will also answer. We, however, recommend saltpetre above either. Try it on a little

plot of grass, such as by writing your name, or the year, or any word, (but this is merely for an amusement,) or saturate a small square, say two feet by four,—and you will speedily observe the advancement the grass on such spot or spots will make.

One detriment to the thriving of house-plants, is keeping them too long in the same pot. When a plant increases in bulk, the whole lump of earth in which it is growing, should if possible be taken out of the small pot, and after as much of it has been removed away from the roots as you can do with safety, it should with the plant be put into a much larger one, in which new rich mould should be inserted around the little quantity of old earth, which it is absolutely necessary to allow to remain. If this be performed early in spring or late in autumn, there is less risk incurred; and then nearly the whole of the old earth may safely be got rid of, much to the benefit of the plant.

ON POULTRY.

The following recommendations and hints are from the *Gardeners' Chronicle*, some of them, particularly as to the construction and lathing may appear to be a little finical, but they are not the worse for that, as every one can modify and arrange them to suit their own purposes. Taken as a whole, there is a good deal of truth in them. We had understood the remarks as to the Polanders being long layers, and never setting,—also apply to Dorkings,—and we do so yet:—

“The first requisites below ground are a warm, light fowl-house, and a dry shed, lathed in front, communicating with each other, in order that the fowls may be shut up during rainy weather, and go to lay or to roost at their own time. The most economical construction I can recommend, is, like the frame for a summer-house, 4 to 5 feet square, 10 to 12 feet high, (fowls like to roost high, out of the way of vermin and damp), with a pointed gable-top, which adds to the free circulation of air. This frame should be well weather-boarded, so as to exclude all wet or drippings, with a door that has a hole cut in it to admit of free access at proper times. This might have a hatch-door to lift up and down, to exclude cats, and prevent the fowls from getting out too early. This weather-boarding—a proportion equal to two-thirds on two of the sides—should be made moveable, and lathed, in order to exclude cats, but admit the free air during summer, otherwise the house would be oppressively hot. The experience and ingenuity of the keepers must suggest other requirements of aspect to suit extremes in winter and summer. One or two panes of glass should be placed on each side of the doorway, to give sufficient light for all purposes, as fowls are liable to injure themselves in too dark houses.

There should be a floor raised about 4 inches above the ground, to prevent damp or mildew. Upon this on one side, may be fixed a wooden case, about 4 feet high, divided into compartments for layers and setters, and a couple more sieves (market baskets with clean straw, not hay. On this case may rest one end of another floor, projecting about half way over the lower floor, on which may be placed two or three more baskets, as they like many nests again another floor, projecting two-thirds or so, to protect those in the nests from falling dirt; the third floor to be placed a little above midway of the house. This will admit of two top roosts, placed so as to clear the lower one from dropping from either. The fowls will thus be enabled to go easily from floor to floor, and reach the roosts. The shed may be any length from 15 feet, proportionate length to roof, and depth against a wall, to save back-boarding. Suppose the garden 50 feet long, and 25 feet wide; rail off a portion to admit the house and shed, but the more the better, and net the rails a sufficient height or erect laths as a fence from the garden. No fowls are equal to Dorking breeds for table, which are the true Normandy fowls of the French gourmands. For perpetual layers (nine months in the year) the gold-sprigged, muffed Poland; they never set; it will, therefore be necessary to have other breeds for setting.”

In winter it is a good plan to have the hen-house about the cow-house, of course with a tight floor between—the fowls thus derive much heat and thrive well—they continue to lay very late—and commence laying very early. Small grains of wheat—buckwheat—sunflowers—Indian corn—rice, barley, oats, Swedish turnips, cabbage leaves, are all good food for poultry—(particularly if boiled or softened)—and they destroy many insects and grubs when admitted into the garden, but if allowed to be there at all, it should merely be for a short time; and they ought not to be permitted to scrape, as if they do, they are the worst of gardeners; so I think they ought to be entirely excluded. Laying hens ought to have plenty of chalk and lime to form the egg-shells, and they all ought to have dry gravelly soil to scrape in, by which means they get rid of vermin and insects which trouble and prevent their thriving. Fowls do not like to be disturbed when choosing their nest or laying—and thrive best in dry airy courts, with a covered house and recess for night and wet weather. They look ill when pine with much wet. It is a true proverb applicable to any one who is thought sharp, “she does not sell her hens in a rainy day.”

ON BUTTER MAKING.

(Continued from last number, page 159.)

Butter is an article in the use of which most people especially in Great Britain are very choi-

and particular, unless it is evidently of the best quality; and I have frequently heard it said, "we will rather eat dry bread, than use butter that is not well tasted." Accordingly, it is only the very first class butter that brings a high price, and is used as food, or as a condiment in food by people of good taste and discernment. The inferior kind if used in food at all, such as in pastry, requires to be so compounded with other substances, as to take away its bad flavor; but it is easily known, and the most part of such butter is sold as grease, and maintains a very low standard of value.

A very large quantity of butter is consumed in England, much more than can there be prepared; consequently other countries are looked to for a supply. The Dutch have hitherto been the chief exporters of the commodity, but it is now understood they are unable to supply the demand, and that there is ample room for others (such as ourselves) to step in profitably, and fill up the vacancy. To encourage our ladies who are fond of, and skilled in the dairy business, to persevere in their well directed efforts, and to persuade those who are not so, to acquire the knowledge and attempt the procuring a name for themselves and their dairy, and generally to qualify Canadian butter, to take its proper place in the market, and become a staple and profitable article of export, we address the following short remarks, which are adapted for perusal, both by our dairy women and merchants:—

In preparing butter for export, care ought to be taken to pack it thoroughly and properly,—casks are better adapted to undergo the roughness of the voyage than jars; these casks ought to be made of the best seasoned white oak, and it would be of much importance to its sale in England, that they were of a neat uniform size, and stamped with the quantity they contain. The flour sent from this continent is contained in casks which are much admired in Britain, on account of their neatness and tightness. And why may not the same thing be said of those for butter? which ought certainly to be treated at least in an equally (but we think more) careful manner as flour. These casks ought to be made quite air tight, to accomplish which, it is a good plan to soak them in brine (of pure salt and water) both before and after the butter is put into them. At present, butter is very badly packed in this country, it is frequently done in town by the mer-

chants, at separate times, packing one large cask from several smaller ones, and the result is, that a line or streak is easily discovered between the different packings. The best plan to remedy this defect, would be for our merchants who purchase for export, to supply the casks, and then each could be packed on the farm with the same kind of butter, and each salting could be firmly pressed down, so that the butter in each cask might present as much uniformity in every respect as possible. Let all interested, consider merely for one moment, how much better the article really appears, when put up in a careful, neat, clean and tidy manner, than when shewing various colors and consistencies, and thrust into a cask of any shape or size, and farther think of the care and attention *they themselves* would pay to these qualifications if purchasing such an article from a foreign country, and they will readily understand the nicety of our brethren at home, and admit the correctness of the above remarks, as to *uniformity* in all respects, i. e. of the casks—of the packing—and of the kind and quality of the butter.

If proper attention be paid to having the right kind of cow—to giving her the most nutritious food—to tidiness and cleanliness in all the (even minute) operations of the cow-house and dairy—to the using only the best and purest salt, nicely pounded and carefully incorporated with the butter, in the proper quantity, and to the properly and sufficiently packing and sending it home in neat, well made air-tight casks; we do assert with the utmost confidence, that butter, the produce of the rich Canadian pastures, will meet with a ready market in Great Britain, under its true and appropriate name, and not under the appropriate and disgraceful denomination of "GREASE." We say to our ladies who delight in dairy occupations, now is your time to exert your skill, for you may be assured if you do not *now* establish a name for "Canadian butter," which it really deserves, but which it has not yet acquired in Britain, it will not be so easily to do so in future years, when other countries will have gone far ahead in the race, and established themselves in the trade.

The following remarks on preserving butter by *boiling*, are from the *Southern Planter*. We cannot say we approve much of the plan for general adoption, though it may be useful in some cases, such as long sea voyages.

"In all that has been written on preserving butter in this country we have seen no recommendation to melt and strain it. Yet there can be no doubt that this process proves effectual. We have often told our readers that thorough working is necessary, to exclude the buttermilk, and leave the butter pure. We have told them that it has been kept sweet for years without a particle of salt by separating entirely the impurities that are found on churning the cream. But this is not always an easy matter. Washing with pure water is the best method that we have practiced, or known to be practiced in this country.

"We have often asked the question why we should not boil the butter that we propose to keep as we boil the fat of the hog for lard, and the fat of cattle and sheep for tallow?

"It is well known that lard and tallow will keep sweet for a year without salt. And who can doubt that butter may be kept as long? On examining a recent publication, which we notice in one of the late numbers of the *Ploughman*. 'On the Food of Animals, by Robert D. Thomson, of Glasgow,' we find the following remarks:—

"*Mode of Preserving Butter Fresh.*—The cause of the tainting of fresh butter depends upon the presence of a small quantity of curd and water. To render butter capable of being kept for any length of time in fresh condition, that is, as a pure solid oil, all that is necessary is to boil it in a pan till the water is removed, which is marked by the cessation of violent ebullition. By allowing the liquid oil to stand for a little, the curd subsides, and the oil may then be poured off, or it may be strained through calico or muslin into a bottle, and corked up. When it is to be used it may be gently heated and poured out of the bottle, or cut out by means of a knife or cheese gouge. This is the usual method of preserving butter in Indian, (ghee,) and also on the continent, and it is rather remarkable that it is not in general use in this country. Bottled butter will thus keep for any length of time, and is the best form of this substance to use for saucers."

In last number we gave some advice as to the feeding and management of cows, and we may farther remark, that it is a matter of importance, that the cow should have her food *regularly*, and that she be treated with great gentleness, and much kindness, combined with firmness. Indeed all animals, including man himself, do best with such management. It is of consequence, that the

same person should always milk the same cows, so as to get well acquainted with the habits, dispositions, and temperaments. It is astonishing how soon a cow, when used as above directed, becomes fond of, and *familiar with* the milker. She shows her affection in various ways, and her tongue, though silent, often comes into play, in the same way as she would have done her calf, if permitted to do so. On the contrary, when a stranger feeds, tends and milks her, her docility vanishes, and she exhibits a very different disposition, and it is for this reason, that a cow just purchased, is frequently difficult to manage in her new home.

ON CHEESE-MAKING.

In the *Cultivator* for March, (page 32, *et. seq.*) we laid before our readers a very important essay on the mode of making the famed Cheshire Cheese, from the Royal Agricultural Society's Journal, and seeing we are in the middle of the season, we proceed to give from the *Albany Cultivator*, a report on cheese-making, published under the direction of the Central Board of Agriculture of New York—so that our readers may compare and contrast the modes adopted in the two countries, and choose for themselves the points of each:—

"Having had considerable experience in doing business, we have found that there are so many things to be taken into consideration, that the rules for their management must be more or less general; and no directions however minutely framed can compensate for experience. In large dairies cheese are made at both morning and night; in smaller ones, the night's milk is set, and the cheese made in the morning; in still smaller ones the milk of two or three days is required to make a cheese, and of course different methods must be adopted in each case. We shall suppose the quantity of milk given at two milkings, to make a cheese of some 30 or 40 lbs weight, a medium sized one, for the farmer's use. In making the rennet, the dried stomach of a calf should be cut in small pieces, and soaked in water or sweet whey with salt enough to keep it sweet; and at the pleasure of the maker, sage, summer savory or other aromatic herbs. If the rennet is properly made, a gill will be sufficient for a cheese of 20 pounds, but its strength can only be ascertained by experiment. If too much is used, the cheese will be puffy and strong; if not enough, the curd will not be formed, and a waste of milk will ensue. In cold weather it will be found necessary to reduce the temperature of the milk drawn at night to 50 or 55 deg. of the thermometer, which is best done by placing the pans in cold water. In the morning the cream must be carefully skimmed off and put in a pan. As the milk when set should be of the temperature of the room, it is best to have the

ture of 90 to 95 deg., the quantity of milk to be warmed, will depend on the external air, as in a cold day the milk of the morning will be lower than in a warm day, and a too low temperature must be guarded against. Into this milk while forming, the cream taken off must be put, and cooled to such a temperature that when it is added to the tub with the remainder, and with the morning's milk, the temperature of the whole must be about 90 deg. Sometimes it is necessary to warm the whole night's milk; but this is only in very cold weather; while when the weather is warm, the cream may be put in the strainer and cooled by pouring the warm morning's milk over it.

The thermometer in these cases must however be the guide; and the operations of the dairy cannot well be conducted without this instrument. When the proper warmth has been given to the mass, add the cream fully incorporated, the rennet must be added and thoroughly stirred into the mass. The time allowed for coagulation will depend on the strength of the rennet; and if good, an hour will be about the proper time; during which moreness of the cream will naturally rise to the surface. When properly coagulated, the curd will rise to the surface under a slight pressure on its surface without breaking; but experience here is much the best guide. To prevent the escape of what cream may rise to the whey, it should be carefully skimmed to the side of the tub, and covered with some of the coagulated milk laid upon it with a skimmer. The whole is then carefully broken up with a long wooden knife. Much is depending on their operation, as if not well done, the fat of the cream which gives character and excellence to the cheese will be carried off by the whey and lost. A coarse flannel cloth should be thrown over the curd, as the whey rises through it, it should be changed off as long as it can be. The curd is then broken up, and the whey more completely pressed off than before.

The whey of the first whey is to be heated as soon as it is pressed off, for the purpose of scalding the curd. Great care must be taken not to scald the curd much.—Two pailsful at 130 deg., will scald a curd of 20 lbs.; but the weather and the quantity of curd must be consulted to determine correctly. When the hot whey is poured on, the curd should be broken up and mixed by hand, so that all parts may be equally treated, and made as fine as it can be broken. It is now removed to a strainer and basket, and when the curd is pressed, it is returned to the tub for scalding. An ounce of salt to a pound of cheese will be a good rule, but the taste of the dairy woman is perhaps as good a regulator of this matter as any, for all milk is not always equally salt. It must be thoroughly mixed with the curd, or it will not ripen equally, and the unsalted parts will be a bad flavor. The pressure required for this depends on the size. The curd is put into the hoop or vat in a strainer, and remains in the press about two hours. It is then removed to a dry cloth, and returned to the press. It should not remain in the press without turn-

ing, longer than five or six hours at a time, and from 24 to 36 hours will be necessary to complete the operation.—A power of from 80 to 100 pounds for every 15 pounds of cheese will be a sufficient pressure. Where large cheeses are made, it has become a common practice to pass a bandage made of thin cotton cloth, of the same width as the thickness of the cheese around them, and secure it by stitching it together at the extremities. This will prevent the spreading of the cheese and the danger of cracking from that source. We have found such strips of cotton of the greatest use; and the larger and richer the cheese, the greater their value to the dairy man. Milk may be tinged so as to give a richer hue to the cheese: but if the cream is all added, and the cheese well made, coloring matter is unnecessary. Annatto is the best coloring material, as it is harmless, which cannot be said of all the ingredients sometimes used for this purpose. There should be a free ventilation to the cheese room, but they should not be exposed to strong currents of air, as it makes them liable to cracking. Cheese should be turned on shelves daily, and rubbed with melted butter at each turning."

And a recipe by a lady, is added, for making "*Cream Cheese*.—Take one quart of very rich cream, a little soured, put it in a linen cloth, and tie it as close to the cream as you can. Then hang it up to drain for two days—take it down, and carefully turn it into a clean cloth, and hang it up for two more days—then take it down, and having put a piece of linen on a deep soup plate, turn your cheese upon it. Cover it over with your linen; keep turning it every day on to a clean plate and clean cloth until it is ripe; which will be in about ten days or a fortnight, or may be longer, as it depends on the heat of the weather.—Sprinkle a little salt on the outside when you turn them. If it is wanted to ripen quick, keep it covered with mint, or nettle leaves. The size made from a quart of cream is most convenient, but if wished larger they can be made so."

Churned milk is sometimes added to the Cheese-milk, which to some tastes or fancies improves its flavor and quality and prevents its rising after being made.

To shew the importance of this article for export, we may state, that in the year ending January, 1844, there were imported into Great Britain 185,289 cwt. of foreign cheese, of which there were

From various countries in Europe,	136,398
From the United States,	48,312
And from British Colonies, only	29!

185,289 cwt.

ON REARING CALVES.

Calves may be reared, (though not fattened,) without milk, after a few days from their birth. Linseed porridge, made by boiling a quart of seed in eight or ten gallons of water, thickened by three or four pints of buckwheat or of oatmeal, but flour made of the large broad bean, or even the common field bean, or barley, will do. This should be given new-milk warm.

We consider oatmeal or Indian corn flour the best mixture with the linseed; and the compound, assisted by a very little milk, will even fatten the calf.

Curculio or Plum-Weevil.

(*Rhyncharus Nonyphar.*)

a. Curculio in the perfect state, magnified; the usual length being about one fifth of an inch.

1. Curculio in the perfect or beetle state.
2. Its assumed form when shaken from the tree.
3. Larva, or worm as found in the fruit when it falls.
4. Pupa, or form in which it lives in the ground.

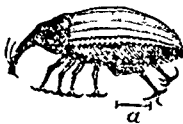


Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.

The colour of this insect is a dark brown, variegated with spots of white, yellow and black. When at rest or when it falls from the tree, on jarring the tree, the snout is bent under its breast. These insects are very destructive to smooth skinned fruits, particularly to plums, apricots and nectarines. They occasionally, but seldom attack cherries and apples, and peaches are too rough for their convenience.

They appear from the first of April, until accordingly to the season, and state of vegetation. Soon after the plums set, they puncture them with

their proboscis, making a small mark in a semi-circular form. In this wound they deposit an egg. The gum oozes out. The egg hatches and the worm eats his way towards the centre of the fruit, and the fruit falls, frequently before one quarter grown. Any person of common observation, can witness their destructive efficacy. They are so numerous and industrious, that where there are so many trees having thousands of plums they will frequently destroy every one. According to some authors they remain in the earth about three weeks and then emerge from the earth a perfect insect, in the beetle form; others say that they continue in the ground until the next spring. The subject is not settled as to their habits.

Remedies.—One of the best preventives, and one that may be easily attended to in some situations is a moist, compact soil, as it affords the curculio but poor quarters in the ground, and such a soil is favourable to the plum tree. We have published many articles showing the good effects of salt applied to the plum tree, very late in fall, or very early in spring, both in destroying the curculio, either by effecting this insect in the ground, or imparting an unpleasant taste to the fruit, and giving the tree vigour and increasing its productiveness. When properly attended to in season; it seems almost infallible.

All the affected fruit should be picked up as soon as possible after it has fallen, and disposed of so as to destroy the worms that are in it. By jarring or briskly shaking the tree where these insects are operating on the fruit, at morning or evening, they will contract their legs and fall, and as they will not immediately try to fly or crawl they may be caught on a cloth and destroyed. We are indebted to Dr. Harris for many of the above facts, which we have taken from his very able work on entomology.—*Bost. Cult.*

We copy the following from the *Ohio Cultivator*:—

“A New Remedy, and one that to our mind affords promise of more utility than any other within our knowledge, was made known to me recently by our friend Gen. J. T. Worthington, who informed us that it had been practised with much success by one or more fruit growers in Chillicothe. Take a number (one for each tree) of tubs, or boxes, that will hold an inch or two of water in the bottom; whitewash the inside and place them under the trees—if elevated on a barrel or by other means, as to bring it near to

er branches, all the better; then pour in the water so as to cover the bottom an inch or more in depth, and in the dusk of the evening when the Curculios begin to appear, set a lighted candle or lamp in the middle of the tub or box, letting them remain for two or three hours or longer, each evening, during the period the insects are flying, which is found to be but for a very few days.

The light and reflection from the whitewashed trees, attract the insects into the tub, and falling into the water they are unable to crawl out. Hundreds have been caught in this way, in a single night, in one night, during the time of their thickest flight. The remedy would probably be more effectual, if the trees were to be shook or suddenly roused, occasionally, during the evenings when the insects are most numerous.

We hope that a number of our fruit growing readers will try this method the present season, and let us know the result. The trouble and expense are very trifling compared with the value of a crop of fine plums, and the satisfaction of thinking off these hateful marauders."

Another Remedy—The following, which we find in the *Cleveland Herald*, is worthy of trial, though we have not much faith in its efficacy:—A lady has for several years past practised hanging one or more bottles filled with sweetened water, like the like, among the branches of her plum trees, and the result has been an abundant supply of both curculios and plums. The Curculios are caught in the bottle and the plums left to ripen without suffering from the Curculios' usual deprivations. When the bottles get filled, of course they must be emptied and filled afresh.

The gentleman states that this course has been very successful: resulting in abundant crops from trees so managed, while others around had their fruit entirely destroyed.

The following letter appeared in the last *Ohio Cultivator*, from Mr Dille: "Your last suggestion for the destruction of the Curculio, in bottles of sweetened water, I have not tried, but have experimented upon the suggestion of Gen. Worthington, and found it is a failure. I put a candle, fixed in a large potatoe, in a tub painted white on the inside, with just sufficient water to cover the potatoe, and placed this under a plum tree, I shook the tree several times, and it was not long until I discovered I had five curculios in the water. Whether they fell from the tree when shaken, or were attracted by the light, I am unable to say; tho' I

can say I saw no beetles flying. But the result was that those five were slow swimmers; four at length reached the potato, went down to it and traversed it in every direction up and down, and were under the water a full half hour as little incommoded by that element as in air. I doubt whether drowning them in water is possible. The fifth, after a long while, reached the side of the tub, and he ascended it as rapidly as a sailor would a rope. Fresh white wash might have prevented the ascent, but I am satisfied that fish are as easily drowned as curculios, at least in clear water."

We have heard of bottles of sweetened water, (not quite full) being used in the old country for the destruction of *wasps*, also great enemies to fruit.

Beetles, Cockroaches, &c.

Our attention has been directed by two highly esteemed and much respected ladies, to these annoying insects, which greatly predominate in Canada, in spring, summer, and autumn, and are very troublesome and noxious on account of their intrusion into dwelling houses; and we have been requested to give some remedy in the *Cultivator*, by which they may be eradicated.—We are at all times desirous to stand well in the estimation of our lady friends in particular, and would be much delighted were a simple and efficacious remedy in our possession, to lay it before them, especially as the subject is, we believe, one of pretty general interest; but as we have never ourselves been annoyed by the visits of these insects, (for which we are grateful, and trust long to have cause to be so,) we are unable to do more than hint, that scalding hot water is said to be a killing remedy, if well applied to the chinks from which the insects come forth; but this can only be effectually applied on ground floors,—as if done up stairs it would damage the ceilings,—we may farther say, that we understand that sulphur has been found of benefit, but how applied we know not.

Plaster of Paris mixed in oatmeal or flour is also said to be a remedy, if put in the chinks from which they issue, or sprinkled on the floor; and sassafras roots no insect can endure.

We shall feel greatly obliged to any of our readers who can furnish us in time for our July number, with a plain, simple, and not dangerous method, of thoroughly getting rid of the above troublesome visitors to our dwelling houses.

DEPARTMENT FOR YOUNG PEOPLE.

MR. EDITOR,—

In some children, the knowledge of right and wrong, i. e., of whether they are acting properly or not, is shown at a very early age, and I am aware that matters spoken of before them, (even at a period of life, when it might have been supposed they could not at all understand the meaning of the subject of the conversation or observation, or were paying any attention to it,) especially if the little creatures have any personal interest in them, are frequently distinctly remembered when they grow up. As the human race has a tendency to fall still lower than what it has done, unless the good propensities are early cultivated, and the evil ones checked in the bud, Parents cannot be too cautious, not only how they act, but also how they speak before their children. Young people are very apt to imitate others, but in general, they think that they are themselves always in the right, and it is a very difficult matter to persuade them to believe, and to act on the belief, that they are frequently in the wrong; and that the parent or other party who addresses or warns them, can, or does know better, because they have had more experience. In addressing a few observations to young people, I shall keep these ideas in remembrance, and shall therefore commence with two principles, the correctness of which, if at all instilled into them, most, if not all children readily admit, viz. truth and honesty.

Dear Boys and Girls, I will suppose that you are all aware of your duty to love and serve God, and to honor and obey your parents, and that you try to do so. There are also other parties besides, to whom you ought to act properly, and these are your neighbours, viz. other little boys and girls with whom you keep company; you know who told us all to love our neighbors. There are two things I shall point out to you, in which, if you act wrong, as regards them, you neither love nor serve God, honor your parents, nor do your duty to others, and farther, you hurt your own character before every body. These two things are therefore very naughty, and I hope you never do, or that if you do or have done them, you will now give them over entirely. The first is telling lies; and the second, being dishonest, or in any way cheating or robbing another. In last number of the *Cultivator*, page 155, I inserted a nice little story about the honest and dishonest boy, which I hope you have read, or that your parents have

read for you, and from it you will see that is true, "that honesty is ever the best policy."

I have now to tell you also, that "Truth ever best, and stands longest." As to not telling the truth, but as it is called, telling lies, I think it one of the very worst crimes which boys and girls can commit. For if you once get into a habit or way of telling lies, you will very soon find that no body will believe you, even when you tell the truth, and that lying generally leads to every thing bad,—such as being dishonest, taking what is not your own,—in short, stealing. You may think, when you tell your first lie, that you will never rob or steal, and I am sure you do not intend ever to do so; but if you go on, (as evil doing is always powerful to increase,) you will find, that to hide some of your lies, you will not scruple to tell another, perhaps greater, or to steal, or to do something very bad indeed. You know who is the *Father of Lies*, and who has power over liars. Is it not the Devil? I am sure you do not like or wish to be called one of His CHILDREN. In what way did he first shew himself to be a liar? Was it not by telling the great falsehood he did to Eve, in the Garden of Eden? About this true tale, you can read, or get opportunity to read for you in the Bible. Adam and Eve then knew no evil,—knew nothing of lies,—and were very innocently believed all he told them. But when he began to lie, they disobeyed God, and were punished, though they had never been warned against him. And do you think Boys and Girls who are well cautioned, as you are, against the wickedness of telling lies,—and yet do lie,—are not to be punished also? Though your parents and friends may not know you do so, there is one who sees and knows all things, and that is God, and he will punish.

"A lie may be acted, (says a learned writer, Dr. Paley,) as when a traveller asks the way, and you point with your finger in the wrong direction." In short, deceiving another in any way is telling a lie.

But, even in this world, lies are generally found out and punished; and the longer they are of being found out, so much the worse for the poor foolish Boys or Girls who tell them; because they think as the lie they have told is not found out, it will never be so, and they go on and tell more, and become bad in every way. And 2d, Because, as long as it is undiscovered they live in great fear, lest it be found out,

not look like good innocent children at all.— They know themselves that they are liars, and do not look their Parents, or good Boys and Girls, in the face. When Boys and Girls are found to be liars, nobody believes another word they say, and they are despised by all good people, and no one will be seen in their company; not one of us can stand being called a liar. I might say a great deal more, but this letter is already, perhaps, too long. I shall, however, add a little tale, which has often been told, but which may be new to you. You know that a wolf is a wild beast, which lives in some countries, and devours poultry, sheep and lambs, and even horses and cows, if they are not well protected. They will even attack men, and if Boys or Girls come in their way, they would soon eat them up.— In a country where there were plenty of such savage beasts in the woods, there lived a young Boy, who herded a flock of sheep. This Boy had got into the habit of telling lies, perhaps without intending or supposing he did so. Perhaps he might have been a good boy, if he had been told, as you now are, that it is bad to lie.— His parents and friends at first did not know that he was a liar, but after he had two or three times called out "wolf, wolf;" to make them suppose there was a wolf near, and that he or the sheep were in danger, and saw, on running to his help, there was no wolf there, they found out that he was telling a falsehood—that he was a liar.— What happened next? They did not believe him, even when he told the truth. So, one day a wolf really came, and the boy cried out, but his parents thought he was deceiving them again, and would not go to his assistance; and then, alas! The wolf destroyed all his sheep, and ate him up. Dear young friends, "Always tell the truth."

I am, your sincere wellwisher,
1847.

VERUS.

Young Lads—Diligence.—There are many young lads about our streets who have given up their schools, but who are in no particular distress. Some of them, to be sure, are sons of wealthy parents, who can afford to keep them in idleness, but it may prove the ruin of the boys. There are others, however, (whose parents find it difficult to make both ends meet,) who seem to be doing nothing from Monday morning till Saturday night. Why is it? They are too proud to enter a trade, or go into a shop and work; so

they are waiting for opportunities to present themselves, where they can get a good salary, and do nothing but a little writing. Such opportunities are rare, and these boys may wait till they are one and twenty, and yet do nothing. Idleness is the ruin of boys from the ages of fourteen to twenty-one. While unemployed, you find them at the corners of our streets, in low grog-shops, or where soda, cakes and pies are sold, living on the generosity of their more wealthy companions. We know several such. We see them daily getting what they can from others, while their poor fathers, or widowed mothers are obliged to support them.

Our advice to such young lads, is, go to work at something. Do not be afraid of a trade. Some of our best and most talented men once sat on a shoemaker's bench, worked at something. You can all find employment, if you will work. You had better dig, than thus waste your precious time, contracting habits that will be a source of trouble to you as long as you live.

BY D. C. COLESWORTHY.

—*Far. & Mech.*

The Importance of Resolution.

"Resolution," says a writer is "omnipotent" And if we will solemnly determine to make the most and the best of all our powers and capacities; and if to this end, with Wilberforce, we will but "seize and improve even the shortest intervals of possible action and effort," we shall find that there is no limit to our advancement. Without this resolute and earnest purpose, the best aids and means are of little worth; but with it even the weakest are mighty. Without it we shall accomplish nothing—with it, every thing. A man who is deeply in earnest acts upon the motto of the pickaxe on the old seal: 'Either I will find a way, or I will make one.' He has somewhat the spirit of Bonaparte, who when told on the eve of the battle, circumstances were against him, replied, 'Circumstances! I either make or control circumstances, and don't bow to them.' In self-cultivation, as in every thing else, to think we are able, is almost to be so; to resolve to attain, is often attainment. Every where are the means of progress, if we have but the spirit, the fixed purpose to use them. And if like the old philosopher, we will but take as our motto: 'Higher—for higher!' we may rise by them all. He that resolves upon any great end, by that very resolution has scaled the chief barrier to it; and he who seized

the grand idea of self-cultivation, and solemnly resolves upon it, he will find that idea, that resolution, burning like living fire within him, and ever putting him upon his own improvement. He will find it removing difficulties, searching out or making means, giving courage for despondency, and strength for weakness; and like the star in the east to the wise men of old, guiding him nearer and still nearer to the sun of all perfection. If we have but a fixed and resolute bent on self-improvement, we shall find means enough to it on every side, and every moment; and even obstacles and opposition will but make us like the fabled 'spectre ships which sail the fastest in the very teeth of the wind.'—*Self Culture, by Rev. Tyron Edwards.*

On our Prospects of Improved Agricultural Education.

Ere this, Mr. Buckland and his family are embarked on "the wide world of waters," under the guidance of Him whom "the winds and waves obey," and to whom they have in all humility, very properly commended themselves. With favoring gales and prosperous breezes, we may therefore confidently expect very soon to enjoy the pleasure of seeing them cast their lot amongst us, we trust, with profit and pleasure to all. From his high standard of character, Christian as well as Professional,—we are certain that Mr. Buckland is most eminently qualified to fill the chair of the Agricultural Professorship in King's College; and for these and many other weighty reasons and considerations, we make no doubt of his speedy election. Be the latter point as it may, he has decidedly made up his mind, after long, serious and deliberate consideration, to establish an Agricultural College and Experimental Farm in the vicinity of Toronto. We are delighted to mention that Mr. Buckland is the very individual we want and require amongst us, for he goes heart and hand into the subject, and is determined to become a thorough-going Canadian, in reality, as well as in name, though ever looking back to Britain with respect and veneration, as a moral son would to a pious and beloved mother. His plans and appliances having been the subjects of many days and nights' anxious thought and serious reflection, are well matured; and when he comes amongst us, he has merely to alter, or modify, or extend his views, if he finds them not quite suited to the character, disposition, or genius of the Canadian people, or to the position and state of progression of the

country—and this we believe will be easily accomplished. The whole subject, however, certainly embraces a great and arduous,—a mighty undertaking, and as it is one whose benefits are of the most extensive kind, and yet of the most exact and direct application TO THE WELFARE OF COMMUNITY, we feel pretty certain, under the highly patriotic Governor General, Lord Elgin (who himself, by his establishment of the Horticultural Society in Jamaica, and other measures for Agricultural Improvement there, shews that he is well aware of the great advantage of agricultural knowledge to the morals and happiness of a people, so well exemplified in "his own, his country, and his land,")—that such a scheme will not long be allowed to depend for support on one, or even a class of individuals, but that the fostering and patronage of a paternal Government, and liberal pecuniary assistance from an intelligent Legislature, will promptly be extended to it. This part of the subject, we shall more fully discuss in a future number,—meantime we throw these hints for the notice of our Legislators. We may be allowed, now, strenuously, to call the attention of our Agricultural Associations to this matter; for assuredly, no subject more important or proper to be taken up at early meetings, and all of them, does or can exist. We most thoroughly of opinion, gainsay it when we say that to these Associations, such an Institution combining, as it would do, practice and precept, would form the most potent and appropriate auxiliary, as in it every subject and suggestion of an interesting and not chimerical nature—but whose benefits and merits can not be sufficiently explained or instructed by discussion, however aptly may be the reasoning, or brilliant the language,—could be readily and efficiently investigated and tested by scientific analysis; and at the same time, be brought home to the student by elaborate, yet plain expositions. In short, for every practical purpose, this Institution would prove to these Associations their nucleus and rallying or centre point. On the many other grounds, of which we shall not merely particularise the benefits thence derived to the general community, (for which very few of these Associations themselves profess to be qualified,) and to our young men in particular, we entertain a strong conviction, that our Agricultural Associations will see their own interest, and heartily and earnestly give an impetus to the

Institution, by recommending it to their members, and making its advantages known to surround them.

Young men, especially young farmers, between ages of 15 and 21, are at present, greatly at a loss how to dispose of their time advantageously, and have it not in their power, however they are naturally inclined, (and many are so,) by any means but reading, to increase their little stock of knowledge. The advantages of reading, we have already strongly inculcated, but yet there is a great want of it; for these young men may be spending the whole days, months and years of their youth in the most idle and unprofitable manner, which is so either on account of its being unlearned, too much beyond their comprehension, or even though it appears plain and easy of being followed up, they cannot do so in execution, having seen it put into practice.—an Agricultural College and an Experimental Farm combined is the very kind of remedy for this serious defect in our system of Education, and social improvement.

In the United States, and other countries, the sons of gentlemen resident in Towns and Cities, at one time, having no opportunity of acquiring any knowledge of Agriculture or Horticulture, and consequently knowing nothing of the pleasures of a country life—talked slightly of, or looked upon with contempt, and despised the occupation of a farmer,—but now, having been students in similar institutions to that now under notice, and having had the "BOOK OF NATURE" opened up to their astonished, and formerly benighted vision, explained to their ardent minds by plain, and interesting instruction and experiment; they have thence derived such a stock of useful knowledge, as will prove to them a genuine fund of wisdom and moral contemplation, highly valuable to their character and conduct in whatever situation they may be placed, or profession they may choose to adopt, in life. In their opinion, agriculture as an art and a science, has been raised to its due and proper standard, and in place of despising, they look upon it with something approaching to reverence and delight. With such examples before them, will our Canadian youth be found lagging behind? We answer for them, emphatically, no! We do so with entire confidence, as we are able to point out to them, that at this Institution they will be taught not to follow up the

old beaten track, or to do things in such and such a way, and at such and such a time, merely because "others ALWAYS did so before!" They will be taught to advance to a higher degree of intelligence and efficiency, and will receive a training in rural economy, pending their progress in literature, so that, when their course of study is accomplished, they may not only (as Mr. Skinner appropriately remarks in the *Farmers' Library*.) "have achieved the usual attainments acquired in Literary Institutions, but exhibit a thorough and well grounded knowledge of practical and theoretical Agriculture and Horticulture; and possess in a high degree, the presumable addition of good health and habits; being thereby better fitted to enter upon the general duties of life, or into any profession, as well as that of agriculture."

In conclusion, we trust, that the time—years ago contemplated,—is not merely approaching, but is now quite at hand, if not altogether arrived, when, throughout the length and breadth of our land, there will prevail in the minds of all ranks, classes and conditions of our people, an abiding conviction of the mighty truth, hitherto so unhappily neglected, that the system of Agricultural Education ought to combine the cultivation of the intellect, along with that of the soil.

Fasting good both for mind and body—A degree of abstemiousness is, by all reasonable persons allowed to be favourable to mental effort; but an occasional fast is also found, in our air constitutions, to invigorate both mind and body. It seems to give time for the functions to complete their work, and then to rest for a while. Fasting, for a moderate period, diminishes the carbon in the blood, and thus prevents drowsiness, while promoting a free circulation of highly vitelized blood through the brain; and as on this kind of supply the ready power of the mind depends, a clearness and rapidity of perception may reasonably be expected under such circumstances, provided the muscles are not much in demand. Those who by mental habit can take advantage of this state may then attain the highest ecstasy of meditative abstraction. Probably the greater number of persons who think themselves morally and physically in health, would find how greatly they are mistaken if they could be induced to bring their appetites more into subjection, and wait for something like an urgent demand for nourishment before they indulged in eating. Instead of submitting to custom, and regularly resorting to the table three or four times a day for the mere gratification of the palate, the wise plan would be sometimes completely to break through the habit, and enjoy the quickening powers of a rational will triumphing over animal appetite. Thus health of body and mental fortitude, which together constitute the best assurance of intellectual power, may be equally promoted.—*The Lory in relation to the Mind*, by G. Moore, M. D.

Ice Cream.

This is a cool and pleasant refectory, exceedingly agreeable in social parties, small or large, at all seasons of the year, and especially so in the hot weather of our summers. Though it is a preparation more especially kept in cities and towns, and dedicated to the refreshing of attendants on the aforesaid gatherings, yet we cannot see why it cannot become a common dish on the tables of those cultivators of large farms and keepers of large families who have the ability and disposition to attend upon the pleasures of *taste*.

In describing the process of making it, we shall not, as is often done, by those who give information to others, proceed on the supposition that every body knows as much of the matter as we do; but shall take it for granted that they know nothing about it.

As preliminary to its manufacture, there will be needed an article called a "Freezer," which consists of a cylindrical jar, made of block tin, and fitted with a close cover, which is so fastened as that the whole can be turned by a large strong handle, with which the cover is furnished. This can be had at the tin shop for, from one to two dollars.

To make four quarts of ice cream, which will be sufficient for a party of about a dozen persons, put three quarts of milk into a tin pail, and set the pail into the kettle of boiling water; add to it three pounds of loaf sugar, and when blood-warm, add nine eggs well beaten. Then stir the whole till it becomes of the thickness of sweet cream. Take it from the kettle, strain it through a thin cloth, and add one quart of sweet cream, flavored with one Vanilla stick. The bean is purchased at the druggist's, broken into small pieces, and steeped one hour in milk. The essence of lemon may be substituted for Vanilla—the taste being the guide for the quantity.

If it is desired that the cream shall be very rich, use the proportions of four quarts of milk, two quarts of cream, and twelve eggs, seasoned and prepared as before. The more cream there is, the more difficult it will be to freeze it.

The freezing is done as follows.—Pour the mixture while warm into the freezer. Then take a common nail keg, or any cask holding about twelve gallons, having only one head, bore two or three holes through that head, and place it in a wash tub. Then being provided with about a half bushel of salt, and about two bushels of ice,

put the latter into pieces as large as walnuts, put a layer of salt of a half inch or more in thickness in the bottom of the cask, and on that layer of an inch of ice; then set the freezer in the centre of the cask, and place another layer of salt about it, alternating with ice, till the cask is filled full. Then taking the freezer by the handle, turn it back and forth horizontally right and left, a few times every few minutes until the cream is frozen.

The effect of mixing salt and ice will be to melt the ice. This will evolve an intense cold, so that if a thermometer be placed in the liquid which flows into the tub, the mercury will sink eight or ten degrees above zero. If the cream is not too rich it will be frozen in half an hour; but otherwise it will require an hour or more.

If it is not to be used immediately, let it stand where it was frozen till wanted, as a temperature of 39° or less will thaw it.—*Amer. paper.*

Invaluable Remedies.—Here are some simple remedies, for every prevalent disorders, that we have no hesitation in recommending as infallible. Try them.

- For sea-sickness, stay at home.
- For drunkenness, drink cold water.
- For health, rise early.
- For accidents, keep out of danger.
- To keep out of Jail, pay your debts.
- To be happy, be honest.
- To please all, mind your own business,
- To make money, advertise.
- To do right and have a good conscience,
- Subscribe for a paper, and pay in advance.

To-Morrow—And what is to-morrow? A time that always is coming and never is come—it is the part of eternity that lies beyond eternity—it is a name, a phantom, a misnomer. Does it deceive us—why? Because we depend upon it—and forget that whatever we do, we must do to-day. Remember it—all your labour in this world must be done to-day—there is no to-morrow.

The British American Cultivator

(FOR 1847, NEW SERIES)

Published by EASTWOOD & Co. Yonge St. Toronto

Edited by W. G. EDMUNDSON.

It accompanies the *Provincial Advertiser*—Both papers, One Dollar per annum.

All payments to be made invariably in advance and free of postage, addressed to the Publisher.