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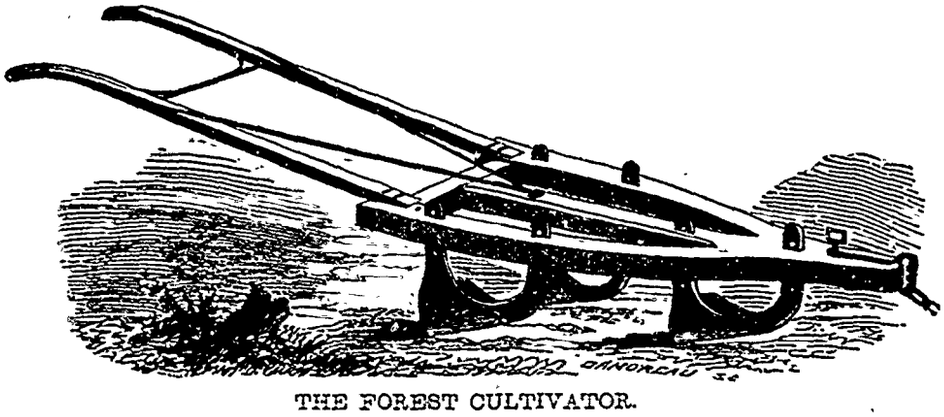
THE CANADA FARMER

VOL. I. No. 10.] TORONTO, UPPER CANADA, JUNE 1, 1864. [POSTAGE FREE.

The Field.

The Forest Cultivator.

THE implement represented in the accompanying cut has been constructed to meet the wants of a large portion of the country which is yet new. It is especially adapted to work among stumps or in land encumbered with roots, where an ordinary plough cannot operate to advantage. The shares, or teeth, are so constructed as to rise and pass over the roots, immediately digging in again, and tearing up the soil. These shares may be set deep or shallow, according to the nature of the land to be operated upon. The inventor and patentee, Mr. John A. Cull, of this city, claims for this implement, that from the thorough way in which it works close up to stumps, and the manner in which it stirs the soil, an average of five bushels of spring wheat more per acre can be obtained by its use, than on the old plan of merely scratching the seed in with the harrow. For oats and barley, when fall ploughing has been done, it is considered very effective, as it breaks up the mixed portions of land round the stumps, and during the hurry of spring work accomplishes the result far more speedily as well as thoroughly, than a second ploughing would do. A good team, well used to the work, will thus go over five acres of fall-ploughed land in a day, and an excellent tilth is obtained. It prepares the land finely for turnips and potatoes, making a seed-bed in which the turnip grows with such rapidity that it is soon out of reach of the fly, and providing for potatoes an ample supply of soil for covering the seed and forming a good-sized hill at hoeing time.



THE FOREST CULTIVATOR.

It is not claimed for this implement that it will work well in soddy, grassy land, yet where there is only a small quantity of grass, or the land is in a rough, weedy state, it is said to be very effective. It does not work well in tough stubble, but when stumpy land has been "haggled" by the plough, running the Forest Cultivator across the furrows makes a splendid job. The shares always carry more or less mould with them, and in rasping over the roots,—often almost touching the stumps,—the mould is shaken off, and enough thus deposited to cover the seed, where none could possibly be dug up except with a spade or hoe. We understand that this implement has been submitted to the most thorough trials and has been inspected by some of the best practical agriculturists in Canada, and that the unanimous opinion about it is that it is unequalled for new land infested with roots and stumps. The cultivator as figured in the subjoined cut is a great improvement upon the original idea, various alterations having been made in order to overcome difficulties which at first presented themselves in the practical working of the implement. It is now submitted to the farmers of Canada in the confident belief that it will be found of great service in subduing newly cleared land, and making it fit for the reception of seed.

Further information in reference to this implement may be obtained from the proprietor above named, to whom, also, all applications for the purchase of single cultivators, County, Township and Shop rights, must be made.

Home-Made Sugar.

OUR neighbours in the Northern States are experimenting with an energy which does them great credit, upon the manufacture of sugar. It is astonishing with what rapidity any new crop, contrivance, or line of business, diffuses itself among them. We find from the Patent Office Report, that although it is only seven years since the Sorghum or Chinese sugar cane was introduced, it is estimated that already sugar, molasses and syrup to the amount of from eight to ten millions of dollars per annum, are being produced in the States north of the Ohio. The editor of the *American Agriculturist*, who has recently made a tour of observation through the Western States, says that in Iowa a very large proportion of the population depends mainly upon home-produced Sorghum syrup for "family sweetening." It is used even for tea and coffee, and in curing beef and pork. Hundreds of plots of from ½ to 1½ acres, and occasionally a large field may be seen, together with home-made mills with wooden rollers for crushing the cane. Near Utica, Illinois, a Chicago sugar refiner, grew a plot of 400 acres the past season, the produce of which he intended manufacturing at his city works.

Not only are our neighbours experimenting with Sorghum as a sugar crop, but on a smaller scale the manufacture of beet root sugar is being attempted. It is a well-established fact that sugar can be profitably made from the sugar beet in Europe, even in the face of a high tax. Various circumstances have discouraged experimenters with this crop on the American continent. Still there are those who are sanguine enough to believe that it can be made to pay. A firm in New York city (Messrs. Genner & Brothers), planted the past season between one and two hundred acres of sugar beet in Illinois, and have erected buildings, machinery, &c., to give the thing a thorough test. They have invested between forty and fifty thousand dollars in the undertaking, and must either be of a very speculative turn, or have pretty good reason to expect success.

Every community and nation should aim to be as far as possible self-sustaining. In the important article of domestic consumption under consideration large sums are annually spent, which flow directly out of the country. It were well if even part of this outflow could be arrested, and this, at least, we believe to be practicable. We have in Canada still remaining large forests of the sugar maple, which ought to be preserved for their saccharine product. There is much destruction in sugar bushes by wrong modes of tapping the trees, needless cutting for firewood, &c, which ought to be avoided. Maple sugar, too, is often so badly made, that it is not in the high repute it deserves. We have before expressed and now repeat the opinion that Sorghum might be cultivated to advantage in many parts of Canada for molasses and syrup, though it is doubtful whether it would ripen sufficiently to granulate into sugar. But even this is not decided as yet by actual and careful experiment. The settled portion of Canada is no farther north than the northern part of Iowa, and though the isothermal lines are somewhat in favor of the West, yet the difference is hardly so great as to deter us from trying our best. Then as to the sugar beet, it can be grown here as well as in Europe. We hope that enterprise and capital will be directed toward this matter, and that what with the maple, Sorghum and beet, we may ere long raise our own "sweetening" as successfully as our neighbours across the lines.

Flax Culture.

To the Editor of THE CANADA FARMER:

SIR,—Since my last letter on this subject, the time is now about up for sowing—a dropping season we are told is the most congenial for the flax plant; in this particular the farmer will have no cause to find fault of late. Should the season turn out favourable otherwise, the increased quantity put in the ground

this year, will furnish all the evidence necessary to prove the great benefit to be derived by the farmers in following up the culture of flax.

There is scarcely a county in the Western part of the Province, that has not taken the matter up, the demand for seed in the various districts, where the trial has already been made, has far exceeded the supply. Col. Mitchall, of the Norval Mills, Messrs. Perine Bro., Messrs. Black & Forrester, St. Mary's, and other mills in full operation, have distributed a much larger quantity of seed this year than ever before, in addition to the quantity kept by the farmers themselves for their own sowing. The number of new scutching mills about being erected, far exceeds all former expectations, and great activity will be exhibited on the part of the mill owners this fall. At Weston Mr. John Dennis, has commenced operations, and in addition to his woollen factory is now getting in machinery for scutching flax At Stratford Woodstock, Brantford, Whitby, Newcastle, St Catharines London, Springfield, Lucan, Elora, &c., &c., mills are being put into operation, and at St Thomas the enterprising firm of Messrs. Perine, Bro. & Co. have extended their works and have distributed from five to six hundred bushels of seed in their usual liberal manner.

The large quantity of raw material produced will furnish strong inducements to the capitalist to commence operations, in preparing to manufacture such goods as will meet a ready sale in the market. - Already a company has been formed in Toronto for the purpose of starting an oil mill, another step in the right direction The attention of some of our ingenious mechanics will also be called into requisition, to furnish all kinds of machinery in this department. The want of a simple brake, to prepare the flax for scutching, is much felt, it being now necessary to send to New York, or some other part of the States, pay duty and transportation, &c, which should be avoided if possible.

Flax requires little or no attention after sowing until harvest sets in, unless some strong weeds make their appearance, which ought to be removed. This is not likely to be so much the case here as in Ireland, and other flax growing countries. Vegetation is so much quicker, and flax of such rapid growth that weeds are likely to be choked, and if they appear at all will be of such a delicate nature as not to injure the flax plant to any extent. Much is required at the hands of the farmer when harvest arrives, in the handling of flax after being pulled or gathered into the stock—considerable judgment is necessary in the process of watering or grassing. Hints on this very important part of the management required, will doubtless appear in good time, in a future number of your valuable paper, for their guidance.

JOHN A. DONALDSON.

Spring Mount, Weston, May 16, 1864.

Growing Interest in Flax Culture.

To the Editor of THE CANADA FARMER:

SIR:—It is only two or three years since the subject of flax culture was much discussed in Canada. Since then it has grown into such unprecedented popularity (owing to the high price of cotton) that this year nearly every practical farmer in the Province, who has land in the proper state of cultivation for Flax is sowing from one to ten acres, and several as high as fifty. Nearly every constituency in Canada West, will boast by September, the possession of an approved Flax Mill, erected by some interprising capitalist. Experiments are being made in the manufacture of this product which annually produce some new and important results. The last and most important of these is the process of cottonizing the fibre by which it is rendered fit for manufacture into linen in the numerous cotton mills in America, now lying idle six months of the year. I am not aware whether this process has been applied to any of the numerous mills in Canada at present.

Should cotton fall to its original price three years ago, farmers have become convinced from the financial returns of Flax culture, that it would be folly to diminish the culture of this valuable textile fibre; nevertheless, the farmers of this section are taking considerable interest in it this season, sufficient to encourage the firm of J. M. Holmes & Co. to erect a mill at Maitland. I also understand there will be one erected at Merrickville, by a company this season, providing they get sufficient encouragement.

S S. S

Frankville, Leeds County

How to Plant Corn Straight.

To the Editor of THE CANADA FARMER:

SIR,—Permit me to describe my way of planting corn, which, after trying markers of almost every kind, I have found to be the best. I use now an iron reel on which is wound a line, such as gardeners or masons use, say two or three hundred yards long, so as to reach over any ordinary field. Upon the line at every distance of a yard is a mark by a piece of white cotton twine sewed through the line and knotted. When the ground is fully prepared by the harrow, without any previous marking, I stretch the line across the field and plant opposite every mark on the line, keeping half a yard from the line up the one side and down the other by the sight of the eye. By setting the line pin on the one side of the field in a straight range and lifting the line six feet every two rows, the field may be planted straight both ways. Where two hands are employed planting, by their going in opposite directions so as to be ready at each end to lift the line at the same time, the work goes on speedily. Whether the hoe or hand planter is used I have found the plan to work equally well. As no gutter is made in this way of planting the young plants are not so apt to be covered with the cultivator the first time of hoeing, and when rows are straight both ways, as by this plan they may be, a careful hand can go very near the plants with the cultivator thereby saving much hand-hoeing. The line requires to be kept dry so as to remain about the same length. When corn is planted in straight and parallel rows the ploughman who fallows for the succeeding crop, by counting and following the rows of the corn stubble, can lay out his ridges in regular order.

F L

County of Essex

Planting Forest Trees.

To the Editor of THE CANADA FARMER:

SIR,—As the time will soon arrive for planting forest trees, for shade and shelter, a selection of trees for this purpose is a matter worthy of consideration. It is not uncommon to see along our roadside les sticks and poles that have been planted without any regard to soil. The maple, for instance, is one of the hardest trees to make grow where the subsoil is of a wet nature; silver maple is sometimes planted in wet soils, but to grow a fine specimen you require a fine moist tillable soil. If our forefathers had adopted "Uncle Toby's" plan of first clearing and levelling the land before planting their trees, we would not have the fine specimens of natural beauty that we now have in many parts of the country. One tree saved is worth half a dozen chances of planting and getting a tree established. It takes a life-time to bring these monarchs of beauty to perfection. I well remember, when a boy, sitting in the shade of a silver maple on my uncle's farm, growing on the bank of a small lake in a fine loamy soil, the admiration of all that saw it, and a landmark for many miles. Ellsworth's Big Maple was a landing place well known; its red bud in the spring and its crimson and gold leaves in autumn, and its symmetry of form made it a beauty seldom to be found. A big maple it was, but like those that cared for it, it is gone. But its beauty was not all, it afforded a great amount of sap, sometimes giving two or three pails in a day, making a pound of sugar each; thus making the maple a profitable as well as a pleasant tree to plant.

Returning to the selection of trees to plant, we would recommend the Yellow Birch as one of the finest trees for wet soils, the Basswood or Linden will flourish in all soils; the Poplar, silver-leaved, and balsam, are quite at home in all soils; European Willow is a fine tree and adapted to wet soils; the Larch or Tamarack is a splendid tree for shelter, growing in all soils; Arbor Vitæ, or White Cedar, is well adapted for hedges or filling up amongst deciduous trees for screens or shelter. Nut-bearing trees have been very much neglected, such as the Beech, Butternut and Hickory, being well adapted to any spare place around the homestead. With a proper selection of trees adapted to the soil, and space allowed for them to spread their branches, we may expect trees of great beauty and symmetry.

AN OBSERVER.

Cobourg, C W

The Peach Blow and the Potatoe Rot.

To the Editor of THE CANADA FARMER:

SIR,—One of your correspondents says peach blow potatoes are rot proof. The truth is they are the very reverse, because they grow a very large strong stalk which makes them more liable to take the disease The kinds that have the lightest and smallest stalks, are the most free from the disease, and every farmer knows it to be the same with the wheat, the larger the straw the smaller the portion of rust, therefore, on light sandy or gravely soils the rust on the wheat, and the disease on the potatoe are much less than on rich heavy clay land.

Mr. Peters, in the last number, has given us the best partial remedy spoken of as yet, although I do not approve of overly deep planting, because it never gives what may be called a heavy crop, although, I know from experience it is the safest to counteract the disease. Mr. Peters' plan of cultivation is good, but he may dispense with a few of his notions about planting whole seed, and cutting his rows into hills. Whole seed and the potatoe-apple seed, are equally liable to the disease. I have proved all these plans many years and I have found the small seed and the round whole potatoe to be as much injured as any crop I ever grew. I find the only plan to counteract the disease, is to plant deep. I do not know the cause of the disease, but believe it to be in the atmosphere. I know how to save the crop when the disease first commences, and it may be as well to give my practice: Always have a small patch in the garden as near to the house, for early use. They, of course, will take disease first, but if they are not done, and I think there is danger, I take my hoe to the field and dig for use every day, and if I find one rotten, in a pailful I use all the force possible and draw the tops every one, and if any break off I dig around them and draw them out. I then remove the tops off the ground and it is as clean as when first planted. Every man of common sense knows that if you remove the cause the effect must cease. I do not say the top is the sole cause of the disease but is the conductor of it, therefore remove it at once and your potatoes will be sound. Then leave them in the ground as long as the weather in the fall will permit to season and dry out, and you will have good sound and wholesome potatoes. I have tried this method for eight years past and never failed.

ADAM GRAHAM.

Whitchurch, near Aurora.

Draining in Quicksand.

To the Editor of THE CANADA FARMER:

SIR,—I notice a question on this subject in a recent number and will endeavour to answer it:—

To drain in quicksand I would recommend your correspondent to have pine boards sawn 3 inches and 5 or 6 inches wide. If 12 feet long two 5 inch boards and two 3 inch do. will measure 16 feet, and make a tube 3 inches square, which is larger than a 3 inch round tile. If 6 inch boards instead of 5 inches, they will only measure 18 feet and will make a tube 3 by 4 inches; a much larger addition to the capacity than to the price. These tubes are more easily and quickly laid than tiles and less liable to displacement, which is a decided advantage in working among quicksand; clay is another thing altogether.

If you come upon the water at once, begin with a box with a hole at one end to admit the tube; leave the other end open; place a few stones at the mouth of the tube, then fill up with fine gravel or coarse sand to act as a strainer. In laying down wooden pipes, I have covered the ends with three boards nailed together to form a cap and then gravel over that. A little straw might answer to break joints, only it is as well to be sure and do that right at first which cannot afterwards be easily repaired. After a year or more you may be able to carry your drain further on or at a lower level. It sometimes takes months to drain off the accummulated wetness of adjacent land.

A FARMER.

Lefroy.

A GOOD CORN STIMULANT.—Two bushels of ashes to one of plaster. Apply between planting and hoeing, a small handful to the hill. If the application be soon followed by a gentle rain, the benefit will be more marked than if a drouth ensue. Some say, that by an application of the above mixture the value of their crop has been increased by one half. On some soils, no doubt, this difference would occur.—*Ed.*

A Fruitful Stalk of Indian Corn.

To the Editor of THE CANADA FARMER:

SIR,—I have in my possession a single stalk of Indian Corn grown on my farm which has produced, and to which are still appended, *five fully developed ears*. The following table gives their measurement and yield :—

	Length.	No. of Grains
1st ear lowest down	5 inches	154
2nd do. do.	5 do.	163
3rd do. do.	7½ do.	350
4th do. do.	8 do.	420
5th do. do.	8½ do.	420
Total		1,507

The land on which the above was grown was six or seven crops removed from its virgin state, coated with barn yard manure and ploughed under; hills 3½ feet apart each way; time of planting first week in June; number of stalks left in each hill 3; variety, small yellow gourd. R. H. W.

Tilbury East, May 19, 1864.

Root Crops and Canada Thistles.

To the Editor of THE CANADA FARMER:

SIR,—In looking over THE CANADA FARMER, I find you recommend the farmers to adopt a regular rotation of crops, also to grow root crops, instead of having a dead fallow. Now, this would do very well if it were not for the tormenting Canada thistle. I find that growing root crops only encourages this pest to grow, instead of killing it. What I want to know is, how is the Canada thistle to be kept down, without a thorough fallow? If any of your correspondents will give a satisfactory answer they will confer a favor on

A PRACTICAL FARMER.

Uxbridge, May 12, 1864.

Thick Seeding of Oats.

THE *Boston Cultivator* says that, as a general thing, in sowing oats, we do not sow seed enough to produce the best crop. "Having occasion some years since, to look into the statements accompanying premium crops of this grain, in different parts of the country, we found that nearly all the great yields had been produced by heavier seeding than farmers in this section usually give. Instead of two to two and a half bushels to the acre, these large crops were grown from three to four bushels of seed per acre. We should prefer not less than three bushels to the acre for soils of medium richness, though on those very rich, somewhat less, say three bushels—on account of the greater tendency of the plants to tiller, or spread on such soils—might answer."

Good and Bad Implements.

To the Editor of THE CANADA FARMER:

SIR,—In your valuable paper, No. 8, May 2nd, you give us several cuts of ploughs and of their work. I believe there is no part of the farmer's business so much neglected or in which so little interest is felt as ploughing. Let any man take a few days' drive through the country in the ploughing season, and he will at once conclude our farmers are sadly deficient in this most important branch of agricultural labour. If men who are skilled in this branch of labour would give the public, through your paper, their experience and mode of operating, they would do much towards ridding us of a great drawback to Canadian farming. I believe that one source of this evil is the system of false economy among very many of our farmers, who, when they want an implement, ask themselves the question,—Where can I get the cheapest? and, perhaps, purchase an inferior plough for seven or eight dollars, rather than add three or four more to it and get a far better and more substantial article made on scientific principles. If they can get one part of an implement at the manufacturer's they will then get a coulter made at some botch of a blacksmith's and a clevis somewhere else. The pieces are then put together, ploughing is commenced, the work is badly done, the materials are poor, the plough cannot be kept in trim, the man becomes excited, and the team is made to suffer, they get fractious and all goes wrong together. So the work will go on from day to day. The seed is carelessly put in, part of it is lost between the furrows and part by being choked and overrun with weeds, which spring up where the ground was not properly cut and turned over. When the harvesting season arrives, the result is less than a half crop; no grain to take to market to meet the grocery bill, the mechanics' bill, &c. The next thing will be a visit from the bailiff, and thus ends this false economy. My advice to my brother farmers is, when you want an implement go to some good, honest manufacturer, whose character in business is well established; get a good, substantial article—two or three dollars in the price of an article is no consideration when compared to the disadvantages connected with the use of a poor article. One more evil I wish to notice and I have done. Our country is overrun with implements made by bankrupt establishments both in the States and Canada, and hawked about through the country by pedlars who are as soulless as the articles they would sell. They persuade honest, simple-minded people to purchase, and in the article of ploughs especially, they will promise to supply points and landsides as soon as the ones they have on the plough are worn out. In the height of our hurry the implement is broken and worn out, and two or three days are lost looking in vain to have them replaced.

J. A. D.

County of Stormont,
Lunenberg P. O., May 9, 1864.

THE BLACK THORN FOR FENCES. A correspondent of the *Valley Farmer* has become thoroughly convinced, from experiments made, that the common black thorn, which grows wild in our woods and prairies, is peculiarly adapted for fencing.

REMEDY FOR SMUT IN WHEAT.—An old experienced and reliable farmer is responsible for the following remedy (from the *O. Cultivator*) for smut in wheat: "In old wheat, and on ground (if stubble) which has been clear of smut the present season. The theory is that smut is caused by an insect which deposits the germ in the succeeding crops; and by keeping the wheat over, the egg is destroyed. By noticing carefully when the wheat is about half ripe, the smut grains will be found to be full of small insects.

THE POTATO ROT.—At the last meeting of the Farmers' Club, Mr. Carpenter said:—"I have read and observed a great deal on the subject of the potato rot, and the sum of the whole seems to be that potatoes planted in moist tenacious soils are much more subject to rot than if planted in dry ground." Professor Mapes remarked:—"I had a field, half of which was under-drained, and I planted the whole to potatoes. On the under-drained portion none of the potatoes rotted, while on the other half they all rotted."

IS FLAX EXHAUSTIVE?—It is believed by many that flax is an exhaustive crop, but it is to be doubted if it is more so than most of the small grains. All of them are so if the land is continually cropped and nothing returned to the soil. Experiments of Professor Johnson showed that flax is less exhausting than either wheat or oats, judging from the amount of phosphoric acid given by its ash. Dr. Hodges, of Belfast, Ireland, recommends the application of 48 lbs, muriate of potash, 16 lbs. soda ash, 54 lbs. bone dust, 56 lbs. sulphate magnesia, 34 lbs. gypsum, per acre, as a manure for flax land.

FLAX GROWING.—It has often been questioned by practical farmers and others whether flax, as a general crop, was a profitable one. To convince the sceptical on this point, we publish the following account from a well-known farmer in Waterloo, Mr. John Gowdy, which clearly proves that it is a paying crop. He says:—"I have been growing flax these four years and a-half, and find it pays well. Last year the weather was dry in June, which prevented it from seeding well. I had four acres sown, from which I obtained fifty bushels of seed. Of the seed I sold 44 bushels, 45 lbs., for $67, also $80 worth of flax, making a total of $147 received for the produce of the four acres. For labour in growing it, I paid $20, which left me a balance of $127 of clear profit."—*Guelph Advertiser.*

PLANTING WILTED POTATOES.—The *Germantown Telegraph* reports a Pennsylvania farmer as writing thus of this practice:—"I once overlooked a few rows dropped, which remained unnoticed and consequently uncovered during several days, and not only wilted but considerably dried. These had the advantage in the strong and healthy appearance of the tops throughout the season, and in the tubers at digging, over those covered fresh from the pit. Cut the potatoes and scatter on a little plaster, to prevent bleeding, and allow to wilt, if time and circumstances will admit." The editor adds:—"We have long favoured this plan. In the *Telegraph* of the 23rd March ultimo, in referring to some notes on the cultivation of the potatoe, we added:—'Cutting the potatoe, sprinkling with gypsum, and allowed to dry or shrivel for a few days or a week, is undoubtedly advisable.'"

GROWTH OF WOOD.—The season of the year in which forests are cut off, is believed to have an influence on the succeeding growth. To give some test to this matter, Plymouth county, Mass., Ag. Society, offered premiums, several years since, for experiments. A report was made last year, which set forth the conclusion that—"the nearer the season of the ascending sap, (Spring,) wood is cut, the more flourishing will be its succeeding growth." The person who received a premium for this experiment, states that he is satisfied that the nearer the ground wood is cut, the better; the shoots will start and grow more thriftily, and are thicker and less liable to split down. By cutting wood often, you insure not only the greatest growth of wood but the greatest growth of money. Cattle should never be suffered to run on a wood lot, while the trees are small."

BONE DUST AS MANURE.—A. P. Cuming, Esq., of the *New York Observer*, writes that in his experience in Winchester county, he has found ground bones the very best and cheapest fertilizer to be obtained outside of the homestead farm-yard. Cost of transportation makes city manure expensive, and especially if not near sloop dock. When within one or two miles of good dock landing, city stable manure will cost six to ten dollars the cord when it reaches the farm. Bone-dust by the quantity costs as to quality from 50 to 70 cents the bushel. Twenty to twenty-five bushels of bone-dust is a good dressing to the acre, and is worth from two to three times the cost of stable manure brought from the city. Bone-dust should be applied to and left as near the surface as may be, and be suitably covered. We usually sow broadcast after the first harrowing. The second course of the harrow will cover near the surface."

HOW TO DESTROY THE CANADA THISTLE.—Not the least among the cares of the farmer is that necessary to prevent the spread of noxious plants, and not the least noxious amongst plants, is the Canada thistle, which has made its appearance in several points in this vicinity. Unless the greatest vigilance is exercised, it will doubtless become, as it has in other places, a most unwelcome intruder. As this pest has already rendered valueless some of the most productive portions of the country, it is very important that the greatest care should be exercised to prevent its propagation, and to eradicate it where it has gained a foothold. When taken in time this may easily be accomplished by proper attention, and the use of common salt.

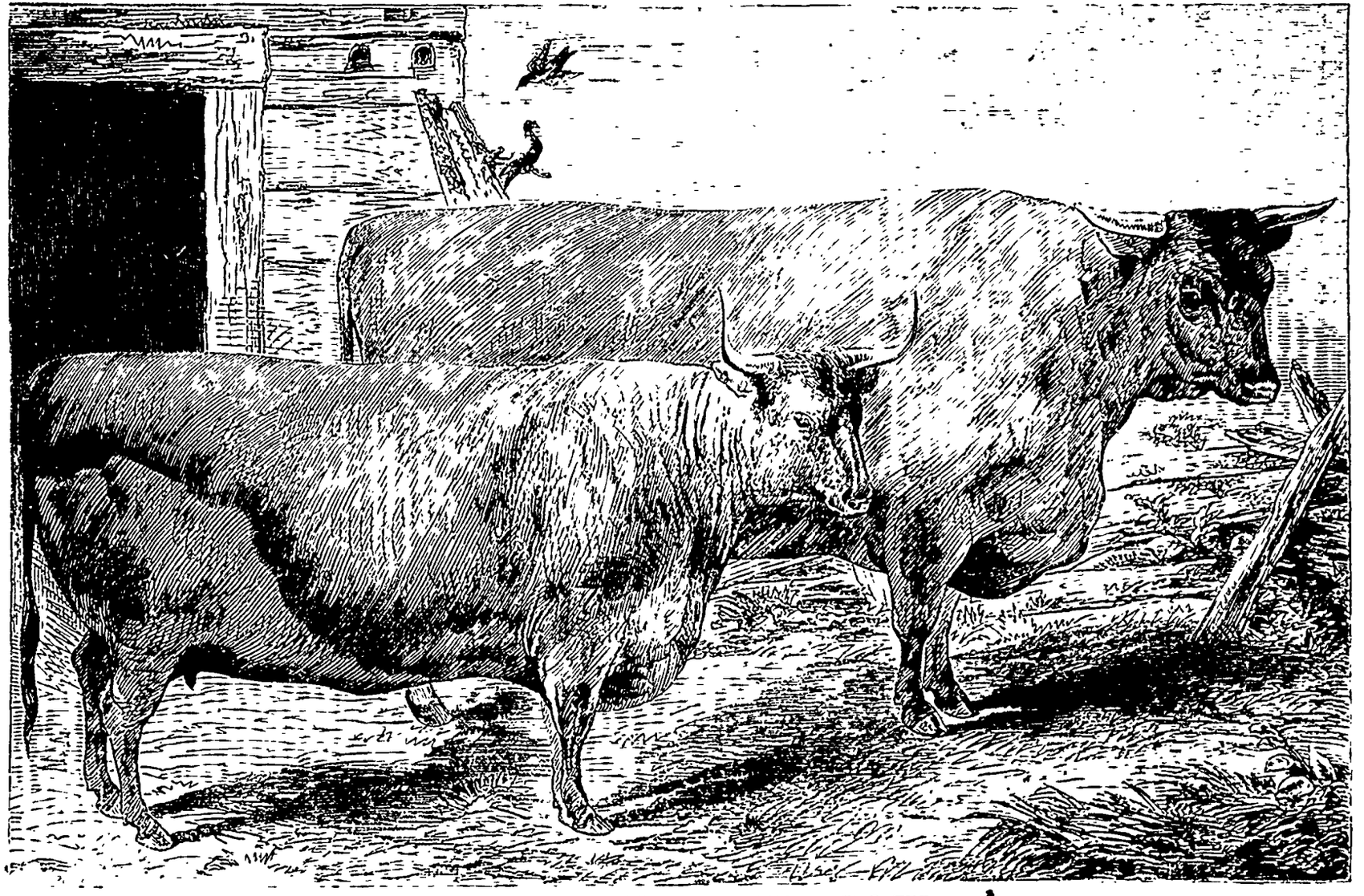
The way to apply it is this: First bruise the stalk of the thistle at the surface of the ground with the head of a hoe or other instrument, and apply a handful of salt to the root. In this way, it (the salt) is communicated to the sap, and circulated with it through the plant, thus effecting its destruction. A few plants may spring up from distant roots, but a second application will exterminate them. I know a farmer who had Canada thistles over several acres of ground, who destroyed them effectually in this way; and I, with one application, destroyed a small patch on my own farm.

In conclusion I would say, try it effectually, and don't let the thistle pest spread.—*Cor. of Culturist.*

THE PARSNIP.—The parsnip is one of the most valuable roots that can be grown. In the island of Jersey it is used almost exclusively for fattening both cattle and swine. According to Le Courteur the weight of a good crop varies from thirteen to twenty-seven tons per acre. When parsnips are given to milch cows, with a little hay, in the winter season, the butter is found to be of as fine a colour and excellent flavour as when the animals are feeding in the best pastures. As parsnips contain six per cent. more mucilage than carrots, the difference may be sufficient to account for the superior fattening as well as butter-making quality of the parsnip. In the fattening of cattle the parsnip is found superior to the carrot, performing the business with more expedition and affording meat of exquisite and highly juicy flavour; the animals eat it with much greediness. The result of experiment has shown that not only in neat cattle, but in the fattening of hogs and poultry, the animals become fat much sooner, and are more healthy than when fed with any other root or vegetable, and that, beside, the meat is more sweet and delicious. The parsnip leaves being more bulky than those of carrots, may be mown off before taking the roots, and given to oxen, cows, or horses, by which they will be greedily eaten. Another thing in favour of parsnips for this country, is that the frost does not injure them. They may remain in the ground until spring, when they make splendid feed, at a time every other kind of root or green thing is scarce, or they may be slightly buried, where they can be obtained almost any time during the winter. On account of their rapid growth when young, the weeding is less trouble than weeding carrots.—*Colonial Farmer.*

The Devons.

From time immemorial a distinct and beautiful breed of cattle has existed on the southern side of the British Channel, comprehending the whole of the higher lands of North Devon and a portion of Cornwall. Much of this district resembles Wales in its physical character, as does also its native cattle, modified by lower elevations, a milder and more uniform climate and consequently richer pastures. The Devons constitute one of the best defined breeds of the British Islands. They are found in the greatest purity along the higher slopes of that county, where the strictest attention has been paid for many years to their breeding and management, hence they are sometimes designated the North Devon to distinguish them from animals of a larger and coarser form that are to be found on the lower and richer pastures of that and adjacent counties.



DEVON BULL AND COW.

The true North Devons belong to the breeds of the higher country. They are somewhat heavier than the improved and hardier races of the Welch and Scotch hills, and fall considerably short in weight and early maturity as compared with the Durham, Hereford, or even the old Longhorn. "Their general form is light and graceful; their skin is of an orange yellow colour; and they are distinguished by having the hair of a bright red and by their eyes being surrounded by a ring of the colour of the skin. The nose is likewise of the same colour, and the inside of the ears is orange red. Their horns are of medium length, very fine, and bending upwards in the manner of the wild cattle of the parks. Their skin is unctuous and soft to the touch, and the hair is fine and tending to curl, like that of other cattle inhabiting a humid climate. The neck is long, and the chest has little dew-lap. The shoulders are oblique, the hoofs and bones of the extremities are small, the limbs are slender and long, the chest is only of moderate width, the back is long, and the distance large between the last asternal rib and the pelvis. These are the most marked characteristics of the true Devons, taking as the type of the breed the variety proper to the elevated district of North Devon. As we recede from this centre, the size and form of the animals deviate more or less from the pure type. In the countries of richer herbage they become enlarged in size, and lose somewhat of the delicacy of shape which they exhibit in their native pastures.

The Devon bull seldom attains to the size of the ox, and the comparative smallness of the cow is a remarkable characteristic. This is, no doubt, as it has always been considered a disadvantage. But it should be borne in mind that the cows internally are really larger than they appear to an ordinary observer. The roundness and projection of the two or three last ribs, so characteristic of this breed, afford considerable room for the full development and action of the most important vital organs.

The ox of this breed stands unrivalled for all purposes of farm labour, and for this object he is extensively employed throughout his native district. Oxen are trained to the yoke when about two years old, and after working four or five years they are usually sold to graziers for the purpose of fattening. They are gentle, agile and above all other races adapted to active labour in quickness of step even surpassing the heavier breeds of horses. Their shoulders have that obliquity which enables them to lift freely their fore-extremities and their quarters behind are relatively long, which is a character connected in the ox, as in the horse, with the power of active motion. Youatt in his excellent treatise on Cattle, remarks:—

"When the ground is not too heavy the Devonshire oxen are unrivalled at the plough. They have a

quickness of action which no other breed can equal, and which very few horses exceed. They have also a degree of docility and goodness of temper, and also stoutness and honesty of work, to which many teams of horses cannot pretend. Four steers on fallow land will plough two acres a day with a double-furrow plough, and will do as much work in the field or on the road as any three horses, and in as quick and oft as quicker time, although many farmers calculate two oxen to be equal to one horse. * * * There is a peculiarity in driving the ox team which is very pleasing to the stranger, and the remembrance of which, connected with his early days, the native does not soon lose. A man and a boy attend each team; the boy chants that which can scarcely be regarded as any distinct tune, but which is a very pleasing succession of sounds, resembling the counter tenor in the service of the cathedral. He sings away with unwearied lungs as he trudges along almost from morning to night, while every now and then the ploughman, as he directs the movement of the team, puts in his lower notes, but in perfect concord. When the traveller stops in one of the Devonshire valleys and hears this simple music from the drivers of the ploughs on the slope of the hill on either side, he experiences a pleasure which this operation of husbandry could scarcely be supposed to be capable of affording. This chanting is said to animate the oxen somewhat in the same way as the musical bells that are so prevalent in the same county. Certainly the oxen move along with an agility that would scarcely be expected from cattle, and the team may be watched a long while without one harsh word being heard, or the goad or the whip applied. The opponents of oxhusbandry should visit the valleys of South Devon to see what this animal is capable of performing, and how he performs it."

It is but fair to mention that in England, as agriculture advances, as deeper and more thorough cultivation obtains, oxen for farm work have gradually but surely given way to horses; and such is the rate of progress in the present day that in some districts the latter seem destined to be ere long superseded by the steam engine. In Canada, however, it may be safely assumed that the labour of the ox will continue for a long time to come to be held in high repute. On new farms he is far more suitable than the horse, and on old cleared farms of considerable extent it will still be found convenient and advantageous to employ oxen in addition to horses in various agricultural operations. The Devon ox, therefore, we must regard as a very desirable acquisition. A modern writer, in *Morton's Cyclopædia*, observes: "Although the milk of the Devon cows is very rich, it is too scanty and their tendency to go soon dry is too marked to admit of being selected for strictly dairy purposes: and although it could be proved that the oxen of this breed, *when their growth is matured* can be fattened more quickly and on less food than Shorthorns, the gist of the matter lies here: will they yield as good a return for the food consumed from birth to maturity: or can as many calves be reared from a given number of cows? We think not; and consequently infer that as the agriculture of their native district improves they will give place to the Shorthorns, as other cherished breeds have elsewhere done." With this reasoning, we, in the main, agree; but it should be remembered that the Devons being a small, or at the most a medium sized breed, they are when fattened, especially during the heat of the summer months, better suited to the wants of the butcher, and their beef is of very superior quality, the fat and lean so desirably intermixed. In these respects they have a decided advantage over larger and coarser breeds. Indeed the Devons, like the Cheviot sheep, may be regarded as the connecting link between the smaller and hardier animals of the higher ranges and the heavy and bulky races of the luxuriant pastures of the plains.

"The Devonshire breeders adhere scrupulously to the deep red colour of the hair, and reject individuals having a tendency to produce white on the face and the body. This is merely a conventional test of purity and goodness, for certainly white is, still more than red, the pristine colour of the race, and its appearance ought not to be regarded as a sign of degeneracy. But although the strict adherence to a given colour may limit in some cases the relation of males and females for breeding, it tends in an eminent degree to ensure the general purity of the breed. The deep blood red colour of the pure North Devons is so peculiar that there is no other race in this country in which an admixture of foreign blood is so easily traced, or which, accordingly, has remained so free from foreign intermixture. Inasmuch then as this limitation of colour ensures uniformity in the typical characters of the race, it is beneficial; and it is not, therefore, expedient that the agriculturists of North Devon should depart from the standard of the purity of their beautiful breed which has been so long established."

The improved Devon has been for many years introduced into Canada; among the earlier importers may be mentioned Mr. David Tye, of Wilmot, who still, we believe, keeps up his herd. Mr. Locke, late of Elgin, had a choice extensive herd of this beautiful breed much of which is now owned by Mr. Pincombe, of London; and from this source many very valuable animals have been dispersed over the western section of the Province. Mr. Courtice, of Bowmanville, has taken in a number of very superior animals, and from his herd several well bred specimens have already been purchased by farmers residing in different sections of the country. Messrs. Spencer, of Whitby, Moon, of Etobicoke, and Rykert, of St. Catherines, may be mentioned as among the principal and successful cultivators of this breed in Western Canada. In the New England States in particular the Devon breed has for many years been highly popular, and we have seen many excellent specimens in New York, Ohio, Illinois, and other Western States.

The accompanying engraving of a bull and cow, taken from the portraits of celebrated prize animals in England, will afford the reader a good idea of the form and characteristic points of the modern Devon; a breed that has come down to us in the greatest purity, and apart from its value for labor, grazing and feeding, commands the admiration of every beholder of taste and judgment, for its pleasing symmetry and consummate beauty.

"Samuel Nash" on Pig Feeding.

To the Editor of THE CANADA FARMER.

SIR,—Accident placed in my hands No. 7 of your paper, and in it I read the amusing letter of "Samuel Nash, pork packer, Hamilton." "Nash" is an English name that is frequently found in counties that produce the best of bacon; but that bacon is not produced by Samuel's plan.

In the first place, a pig nine month's old is *not* "just the animal wanted to make bacon for the English market." A pig ought to be twice that age to make good bacon. Making bacon of young pigs is a certain plan for causing Canadian bacon to sell for a lower price in England than bacon that is made there. "Samuel Nash's" statement that "nothing yet tried is equal to peas for feeding pigs," might raise objection, were it not qualified by the innocent words "that I know of." There are, I assure you, friend Samuel, better things. The very materials you place second to peas, "barley meal and milk," are better. I have fed pigs many. I have fed above a hundred at a time, and from my extensive acquaintance with pigs, I would unhesitatingly leave the matter to a jury of these animals. They have the finest discrimination. Their verdict would certainly be in favour of barley-meal and milk.

Samuel places his different kinds of food in this order: Peas, barley meal and milk, chopped stuff. What is that? Sausage meat is "chopped stuff," and very good stuff too wherewith to feed pigs; but it is open to the fatal objection, that it might take four pounds of sausage meat, besides other kind of food, to make one pound of pork. Is "Samuel Nash" an Irishman? I hope so. Surely it is a libel on Irish pork to say, "In Ireland excellent pork is produced from boiled potatoes, mixed sometimes" (on St. Patrick's Day, I presume), "with bran." If this be the way they make "excellent pork," how do they make their ordinary pork?

Samuel says, Turnips and Mangold Wurtzel are bad feed for hogs, worse still are nuts. Nuts! Piggy, what do you say to that? *Grunt!* Exactly. I knew what the response would be. Havn't I seen you in your jocund rounds under the oak and beech trees? Havn't I seen you waxing larger day by day? Havn't I killed and eaten you? And did you ever make sweeter, finer bacon than when fed on barley meal and milk after your autumnal run? Never.

It is evident that "Samuel Nash's" experience in Pigdom has been confined to his duties as undertaker. After the hog was fatted and killed, Samuel 'packed' him. A pig is a nice animal. That is to say when decently brought up and possessed of the means of living respectably. He is then clean, and behaves at dinner like a gentleman. It is true that when driven by hunger he will eat almost anything. So will his betters. When three or four months old a pig will thrive on Swedes and Mangold Wurtzel. Green bean stalks are excellent food, and I do not think he would turn up his nose at green Indian corn. As he approaches eight or ten months, he should have peas, and even nuts will not poison him. Indeed he will be all the better for both or either at all times of his life. He should be finished with barley-meal and milk. Never mind what Nash says. With this feeding and clean water, at eighteen months' old, he will make first rate bacon. I could direct "Samuel Nash" to a part of England where the pig is finished off by careful cottagers with balls of oatmeal wetted with milk and rolled hard between the hands. His contented and happy expression as Piggy, sitting on his antipodes, bolts his bolus and winks his satisfaction, would gratify the pork packer, if he could bring himself to agree with his bristly friend, that meal and milk as a last resource are preferable to peas.

It may be that Mr. Nash was not serious when he made his extraordinary statements. Perhaps they are only undiscoverable humour. I hope your farming readers will think so and neglect them.

Your subscribers ought to thank you for your beautiful engravings.

W. R. CARTER.

Toronto, May 12, 1864.

Stock Farming in Canada.

WE have been requested by Mr. Buchanan, Emigration Agent, Quebec, to insert the following letter which appeared in the *Canadian News*, May 5th, 1864. He considers it likely to elicit useful answers on this important subject, which, transferred from our columns to the *News* and other British journals, may induce men of the class referred to to emigrate to this country. Canada undoubtedly presents an inviting field for the enterprising capitalist as well as the industrious labourer.

To the Editor of the Canadian News:

SIR,—I am a heavily-rented, heavily-taxed tenant-farmer in Somersetshire. My business is chiefly with breeding and dairy stock, but I am by no means satisfied with my position. Some of my friends say I may improve it by emigrating—others say this is doubtful. A near neighbour of mine has a brother in Canada, but he writes home that farming there does not pay so well as in England. Since I have been in town, I have procured some books about Canada, as well as some copies of your journal, which I have attentively perused. In the work called "Letters from Canada," I read—"Mr. Ranney carries on dairy operations on an extensive scale, keeping *as many as* 100 cows." This would be about my figure, so I am anxious to know something more about such pursuits in British North America. In the same page of the same book I see a very interesting comparison made by two very eminent and trustworthy authorities on rural affairs at home and in Canada, viz., Mr. Caird and Mr. Hutton. The former as representing the "Illinois Railway Company," wrote strongly against Canada, but in favour of the prairies of the Western States; while Mr. Hutton, the able Secretary of the Bureau of Agriculture in Canada, answers Mr. Caird most conclusively in figures, demonstrating—if his facts may be relied on—that by clearing 100 acres of wood land in Canada a profit of £269 may be realised in two years on an outlay of £680 6s.; whereas Mr. Caird allows only a gain of £6 in two years on an expenditure of £760 on a prairie farm of similar extent. The following passage in this statement seems to require explanation:—"In Canada West capitalists can bring 100 acres into cultivation as well as in the States, *although such is seldom or never done that I am aware of.*" Now, sir, I wish to know *why* it is this is not done by capitalists? This certainly seems to imply a doubt, and, so far as I have read, all books say that *small working* farmers are the men for Canada.

Whether rightly or wrongly I cannot say, but I find a vague sort of impression seems to exist that agriculture on a large scale is unsuited to Canada—and I wish for your high authority on this very important point. Unless I could purchase and profitably clear from 600 to 1,000 acres of wild land, so as to convert it into a fine farm, I could not turn my capital to good account in Canada. It is absurd to think of agriculture on a large scale in any of England's colonies, if Canada be not really raised to it. My own opinion is that the climate, land, and position of the country all combine to make it pre-eminently an agricultural country; but when you hear of failures or its suitability chiefly for small farmers, the real cause is to be ascribed to want of ample capital, want of knowledge, want of industry and energy, or of personal supervision on the part of the capitalist farmer. I certainly can conceive no reason why a good cleared farm of 1,000 acres, rent, tithe, tax, and rate free, should not pay *better* than a similar

farm heavily burdened in England. It is true labour is very much higher in Canada, but then I think the imposts on land here should balance the item of expenditure on the farm. Mr. Hutton allows £3 10s. per acre as the amount necessary to "clear, fence, and seed" the land *by contract*. Now, if I purchased 1,000 acres of wild land at 3s. 3d. per acre, would it be a safe and profitable proceeding to contract to have it thus reduced a state of cultivation, or *may I do so?* Mr. Hutton names £3 *per acre* as the fair average *clear gain* to be expected the second year of cultivation under barley, rye, oats, peas, and potatoes. Now, I should like to know where is the land in England that will average such profit as this to the tenant-farmer? For £1,750, according to Mr. Hutton, a capitalist may fence and crop 500 acres of land, and this land for and after the second year may be expected to return a *clear profit of* £1,500 *per annum*. This is stated by a man "than whom no higher authority can be quoted," so I assume it is an incontrovertible fact; of course it is understood in average seasons. In your journal of the 2nd July last, I find Mr. David Buchan, Bursar of the Toronto University, states:— "The class of farmers better adapted to this country are those generally known as *small farmers*, men who do their own work or part of it, whose wives are also accustomed to the work of the house and dairy."

Now, I beg to ask if this is to be understood as meaning that a superior class of educated, energetic, men of capital and skill, but who are unused to manual labour, are not suited to the soil of Canada? If such men can farm and *live by farming alone* in England, paying something like £3 per acre in the shape of rent, rates, tithes, taxes, &c., cannot succeed on *their own freeholds* as well as a class who are nothing superior to ordinary farm labourers—if this really is so, then I want a reason for what seems to me an anomaly. Why should not skill, capital, and energy succeed on a large Canadian farm as well as in England? The only real difference I can see in the *modus operandi* in the two countries is this—in Canada seed time is very short, so the farmer must there be much more active and energetic to get in his crops, but the crops and seasons are identical.

Most books recommend the emigrant to purchase cleared land, rating at from £5 to £10 per acre; but if he has capital to clear it *by contract*, having it fenced and cropped for £3 10s., why should it not be better to purchase wild land at 3s. 3d? Thus, with capital you may have it made ready for operations at £3 13s. 3d per acre. Letters from Canada state the farmers in Canada West neglect to breed stock, and think much more of wheat growing than of dairy produce—this implied there is a good opening there for cattle breeding and the dairy. Now, small ploughholding farmers can hardly be good stock breeders: so, perhaps, it may be owing to the absence of men with capital that the costly work of breeding is neglected. The same book states:—"One of our most pressing wants in Upper Canada is a race of country gentlemen." I presume this means capitalist farmers, who are here known as "gentlemen farmers," and those are the very men who make more by agriculture here than any others. I have read that there is now no Government land to sell in the best locations, as private capitalists have secured it all. Assuming this to be correct, I should much like to know the terms on which, say 1,000 acres, might be purchased in one block in the peninsular portion of Canada West, or if any such land is now in the market there? I should much like some remarks on these matters from your able and experienced pen, for I only wish to know *the truth* about the capabilities of this fine country for a

STOCK FARMER.

[NOTE BY ED. C. F.—The above letter suggests a number of topics fruitful of discussion, and will, we trust, draw out facts and opinions from those best qualified by observation and experience to deal with them. At present we shall content ourselves with one or two brief comments. Canada is undoubtedly a good country for small farmers able to do their own work, but it also affords ample scope for enterprising capitalists. Indeed the time has come when a judicious outlay of capital and the employment of more skill in farming are loudly demanded. Whether British agriculturists with means can wisely invest in the purchase and clearing up of wild land, is a question that admits of much debate. The writer of the above letter evidently overlooks the fact that his "cleared land" will be for years encumbered with stumps—a very strong argument for preferring an improved to a bush farm. Another drawback is the want of good roads, and the difficulty of access to market. These considerations, in connection with the many inconveniences attendant on life in the backwoods, incline us to advise the English gentleman farmer to buy improved land, the cultivation of which would be more like what he has been used to in the old country.]

The Dairy.

Milking Once a Day.

SEVERAL months ago there was considerable discussion principally in Eastern agricultural papers, about the number of times a cow should be milked per day. The same subject recently came up before the Fitchburg (Mass.) Farmers' Club. The proceedings were published in the *Fitchburg Sentinel*. Mr. W. G. Wyman gave his experience as follows:

He selected a small heifer three years old, a grade Devon, whose first calf, dropped in September, was butchered in November, and milked her through December twice a day, obtaining between five and six quarts of milk daily. Through January and February she was milked only once a day; the quantity decreasing slowly at first, but constantly through all this time, until, at the end of February he obtained a little less than two quarts per day. Through March she was milked twice a day, and during the first week the quantity of milk was increased to nearly three quarts; during the second week to two and a half quarts; during the third week to four quarts daily, and on the 31st she gave a little more than four and a half quarts. The feed and care was as nearly uniform throughout as possible, and the milking faithfully and regularly performed by himself.

He intended to try the experiment with a larger and older cow giving a larger quantity of milk, but the diminution of milking only once a day was so immediately apparent, that he chose not to risk the loss of milk and the injury to the cow, and contented himself with the one named the result of which disappointed him in two respects. First, that the small quantity of milk obtained during the latter part of February was no richer, apparently, than a similar quantity from the larger flow; and, second, the quantity having been diminished in the manner described, from over five to less than two quarts daily, that it should be increased again to more than four and a half quarts.

Mr. W. stated as the result of his study and experience, that in his opinion, in order to obtain a reasonable quantity of pure, wholesome milk, of best quality, in winter, cows should be regularly fed with the best fodder of the barn, embracing a variety, as of clover and finer hay, corn-fodder and oat-straw, with a little rowen if possible, a small quantity of meal once a day, and a few roots occasionally, and that the cow, not the milk-can, should have access to pure, cold water twice every day, should be constantly well bedded, and milked with the utmost regularity at least *twice* each day.

A. F. Adams remarked that many good farmers in New York milked only one a day. He milked twice a day, and at a regular time. His cows were allowed to go out in the yard in the middle of the day, but most of the time during cold weather he kept them in the barn. It was important that they should have good pure water and be fed regularly.

Abel Marshall said when he wanted to dry his cows he only milked them once a day.

Mistakes in Cheese Making.

There are three classes of mistakes in cheese making, which may be enumerated as follows: first cheese may be spoiled by bad or careless treatment of the milk; second it may be spoiled by bad management after the curd is separated; and third it may be spoiled by bad keeping after being made.

Improper treatment of milk consists principally in want of thorough cleanness of the vessels into which it is necessary to place it. Ordinary cleanliness is not sufficient. Milk so rapidly changes when exposed to the air, that the least particle left in any pail or vessel, becomes altered into a ferment similar to yeast, which the moment it comes in contact with new milk, communicates to it the property of corruption, and hence milk though seemingly pure, may be really unfit to manufacture the best quality of cheese. All vessels used in the manufacture of cheese or the handling of milk, should pass through a thorough immersion in water, that is at the boiling degree of heat, as this only can be relied on to render such vessels perfectly sweet.

The second mistake arises from a want of proper use of the thermometer in ascertaining the right degree of temperature at which the rennet should be applied, and to which the curd should be raised, when it is desired to separate it thoroughly from the whey: and next the want of sufficient manipulation to reduce the curd to a complete crumbled mass, of the right dryness before being subjected to the press.

The third mistake is in the want of proper attention to keeping cheese in well ventilated rooms, and in turning it from time to time as its curing requires. It is found that if the temperature of the cheese room is over 75° that fermentation in new cheese is carried on too rapidly, and causes a tendency to heave; while if the temperature be below 60°, it checks the ripening of the cheese, and tends to destroy its flavour.—*Michigan Farmer.*

Good Milkers.

IT IS an easy matter to distinguish a good milker. The farthest removed from the bull the better. As the male has no milking properties, and the female is devoted to them: and none so much as the cow; so we are to judge from this principle.

No person of ordinary intelligence would select a cow with a thick neck, heavy bones and a bull-like disposition. On the other hand, the true cow, the good milker, is easily known by its thin neck, sometimes almost amounting to deformity (the case with one of ours), small bones; thin sensitive hide; thin tail; and (most of all) a mild, placid disposition, showing absence of animal heat, which consumes or prevents milk from forming. A quiet, motherly face, denoting intelligence and domesticity, is what is wanted. The reservoir of milk, of course, must be large, or there cannot be stored a large quantity. A large, well-formed bag, therefore, is a necessity. A small udder is an invariable sign of a poor milker. The form and size of a cow are not always to be depended upon. The disposition is perhaps as much, if not more, than any other one point; some say than all other points. We remember a heavy-headed, coarse bodied cow, but with the mildest of dispositions, as one of the best butter makers we know. A good eater, always healthy. She made during the month of June, 15 lbs. of the best butter a week; and gave a good flow of milk nearly the year round. Avoid the bull, and seek the farthest opposite qualities for the best milker.

PRECOCITY OF ALDERNEY HEIFERS.—We observe in recent agricultural papers, accounts of the early development of Alderneys, which are truly astonishing. A heifer in the herd of John Giles, of Woodstock, Conn., dropped a calf on the 27th April, 1863, being then only 13 months and 2 days old. From 1st to 6th July, five pounds of butter were made from her milk. A heifer owned by A. J. Sands, of Bainbridge, N. Y., a cross between the Alderney and Ayrshire, dropped a nice calf May 6, 1863, when she was only a year and two days old.—Another calved on the 27th July, at the age of a year and 17 days. The yield of milk in these cases is described as quite large. These miniature mothers are said to be very docile, and though it is admitted that early precocity somewhat dwarfs them as to size, yet it is thought the early excitement of the mammary gland, tends to a fuller development of milking qualities. If this view be correct, it would seem that for dairy purposes, this early maturity is a decided advantage, since it is yield of milk and not size of animal which is desiderated.

TEST YOUR COWS.—May and June are excellent months in which to test the milking qualities of cows. Most new milch cows that do not give a good yield of milk in these months are not worth keeping; the exception is such as to give only a moderate amount but keep up about the same quantity till very late in the season. It is positive loss to keep poor milkers, for the cost is the same as that of keeping and caring for good ones. Make some estimate of the returns that are coming in, and at the same time cast up the cost of keeping through the summer and winter, and it will be readily seen which are the unprofitable animals.—*Prairie Farmer.*

Sheep Husbandry.

Cost of keeping different Breeds of Sheep.

A CORRESPONDENT enquires what is the difference in the cost of keeping the Leicester, and Cotswold, Southdown and Merino sheep? He also wishes to know whether the difference between the long and short-wooled breeds will compensate for the loss of mutton. These points are ably discussed in the *Genesee Farmer* for May, and we cannot do better than quote the remarks of our able contemporary. Though somewhat lengthy, they will amply repay perusal:—

"As a general rule, where sheep of different breeds are equally well bred, there can be little doubt, from the experiments of Mr. Lawes, that sheep consume food in proportion to their live weight. As, however, this is a matter on which many experienced breeders disagree, and as the question turns on this point, it may be well briefly to allude to these experiments.

"The breeds selected for the experiment were the Sussex Down, the Hampshire Down, the Leicester, the Cotswold, and half-bred wethers and half-bred ewes.

"The Sussex Down, which was brought to great perfection by the labors of Ellman, is a very small sheep, with short and very compact wool. This breed is admirably adapted for upland and scanty pastures, where larger breeds would starve. The mutton commands a higher price in London than that of any other breed.

'The Hampshire Down is a larger and coarser breed.

"The Leicester, brought to such perfection by Bakewell, is when pure, larger than the Sussex Down, but not quite so large as the Hampshire Down. Contrary to the generally received opinion in this country, it is really a small breed. It yields a large quantity of long wool, and, in rich pastures, possesses great aptitude to fatten. The Canadian Leicester, though a very useful sheep, is not the original Bakewell Leicester He probably has a dash of Cotswold blood in him, and is much larger than the genuine Leicester.

"The Cotswold is one of the largest breeds of sheep. The wool is very long and of good quality. The mutton is of rather inferior quality, but the Cotswold fattens so rapidly that it has not inappropriately been termed "the poor man's sheep."

"The half-breeds used in these experiments were a cross between a Leicester ram and a Sussex ewe.

"The sheep for these experiments were selected by good judges, from the best flocks in England. Mr. Lawes says: "Letters were written to breeders of eminence (those being generally selected who had obtained prizes for their sheep,) requesting them to select fifty wether sheep, born the same year, and representing fairly the breed required for the experiment. No limit was set upon price. The sheep were sent about the month of September to the farm, and they were kept upon ordinary food until the middle of November. At this time the sheep were about nine months old, having been lambed about the February preceding."

"At the commencement of the experiment in November, the sheep being about nine months old, the fifty Cotswolds weighed on an average, 119 3-4 lbs; the Hampshire Downs, 113 1 2lbs.; the Leicester, 101 lbs., the half-bred wethers, 95 lbs., the half-bred ewes, 91 lbs.; and the Sussex Downs, 88 lbs. each.

"The experiments lasted from five to six months, the sheep being weighed at the end of every four weeks. The quantity of food consumed was accurately ascertained.

"The following table shows the average amount of food consumed weekly by each sheep:

	Oilcake.	Hay.	Turnips.
Cotswold	8 lbs. 1 oz.	6 lbs. 14 oz.	113 lbs. 4 oz.
Hampshire,	8 lbs. 0 oz.	7 lbs. 0 oz.	106 lbs. 10 oz.
Leicesters,	5 lbs. 13 oz.	5 lbs. 9½ oz.	83 lbs. 12 oz.
Half-bred wethers	5 lbs. 14 oz.	6 lbs. 9½ oz.	82 lbs. 14½ oz.
Half bred ewes,	5 lbs. 9½ oz.	5 lbs. 4¾ oz.	78 lbs. 0 oz.
Sussex,	6 lbs. 3 oz.	5 lbs. 14 oz.	79 lbs. 1 oz.

"The average rate of increase per head per week was:

Cotswolds,	3 lbs. 2½ oz.
Hampshire	2 lbs. 12 oz.
Sussex,	2 lbs. 1¾ oz.
Leicesters,	2 lbs. 1 oz.
Half-bred wethers,	1 lb. 14 oz.
Half-bred ewes,	1 lb. 13¼ oz.

"By ascertaining how much water there was in the quantity of food consumed by the different breeds, we are enabled to see exactly how much *dry food* was eaten. This was done. Then, by taking the weight of the sheep at the commencement and at the end of the experiment, we are enabled to determine their mean weight. Thus, if a sheep weighed 100 lbs. at the commencement of the experiment, and 150 lbs. at the conclusion, we should call its mean weight 125 lbs. Now, if this sheep eat three pounds of dry food per day, we say that the amount of food consumed by 100 lbs. of live weight would be 2.4 lbs. per day. (If 125 lbs. eats three pounds., 100 lbs. will eat 2.4 lbs.) Knowing the weight of the sheep, then, at the commencement and at the end of the experiment, and also the quantity of total food consumed (and the exact quantity of dry matter which it contained,) we are enabled to calculate how much 100 lbs. live weight of the different breeds consumed of dry food per head per day. The result was as follows:

Cotswolds,	2.16 lbs.
Hampshire,	2.01 lbs.
Sussex,	2.01 lbs.
Leicester,	2.15 lbs.
Half-bred wethers,	2.02 lbs.
Half bred ewes,	2.03 lbs.

"In commenting on these figures, Mr. Lawes remarks: 'Although there is a general impression among agriculturists that large sheep eat proportionally less than small sheep, it is evident that *equal weights of sheep consume equal amounts of food.*'

"If this is true and we think there can be no doubt on the point,—the small Merino sheep will consume much less food than the South Down, and still more less than the Leicester and Cotswold. In fact, a Spanish Merino sheep will, on the average, weigh not more than half as much as the above breeds, and consequently we can keep two Merino sheep on the same food as is required for one Leicester.

"We think it will be admitted that the Merino sheep, *in proportion to size or live weight*, will afford more wool than the Cotswold, Leicester or South Down; and it would seem clear, therefore, that so far as the production of wool is concerned, if fine Merino wool sells for no more than coarse wool, the Merino is the most profitable breed to keep. But of course it will not do to leave the mutton out of the calculation. There can be no doubt that Cotswold, Leicester or South Down sheep will afford more mutton in a given time than the Merino, and we think it is equally certain that they will afford more mutton *in proportion to the food consumed.* These breeds mature much earlier than the Merino, and the mutton, as a general rule, is of better quality, and certainly commands a high price.

"After all that can be said in regard to the relative advantages of the different breeds of sheep, much will depend on the taste and experience of the farmer—as well as on the character of the soil and system of agriculture adopted, and also on the relative price of mutton and wool.

"If a farmer has a *good* flock of sheep of any of the above breeds, it is not wise lightly to change the breed. If you have a good flock of mutton sheep, do not give them up, simply because wool happens to bring a high price, and you may think that it will, for the time being, be more profitable to keep sheep principally for their wool, because by the time you have effected the change the probability is that the market will have changed also."

Knocking Sheep in the Head to Expel the Grub.

To the Editor of THE CANADA FARMER.

SIR,—I noticed in your paper, No. 8, some remarks respecting the grub in the heads of sheep. Now I will give my experience with regard to it. In the spring of '63, I lost six of my best ewes from the grub in the head. I tried Scotch snuff by blowing it in their heads, by putting it in a quill and blowing it up their nostrils, but to no effect. Some of my neighbours lost sheep the same year by the grub—one of my neighbours had a sheep that he thought would die, and to put it out of misery, as he thought, he struck it several times on the head with a club and left it for dead. The next morning when he went to the sheep pen, to his astonishment he found that same sheep running about the pen. He told me the circumstance, and I tried the same method on some half dozen of my sheep with good success, not losing any more. My plan is, as soon as I see that the sheep refuse food or look stupid, to strike them on the head with a hammer, or piece of wood sometimes, until their noses bleed. They immediately begin to snort and out come the grubs.

B. M. CLARK.

Ernesttown, May 12, 1864.

NOTE BY ED. C. F.—The above seems to us a very severe if not cruel mode of treatment, and quite as likely to kill as to cure. As, however, our correspondent gives his name in full, we publish the receipt on his responsibility.

Washing Sheep—Merino Sheep, &c.

To the Editor of THE CANADA FARMER:

SIR,—R. G. T. gives directions for washing and feeding sheep for exhibition. Can any one tell the great benefit which sheep derive from washing, and in what way does it enhance the value of the animal? It appears to me closely connected with the practice of half shearing in January and February, only calculated to please the eye and deceive incompetent judges

The practice of high feeding of breeding animals cannot be too strongly denounced and should be discountenanced at exhibitions, and I am glad to see the Board of Agriculture has made a move in the right direction in placing a wholesome check on the imposition practiced in shearing.

In the 15th of April No. I notice two articles on the profits of sheep; the first on Leicester and the second on Merinos. After twelve years' experience with the Merinos I am satisfied to continue them, feeling confident that if they are not the most profitable they are equal to any other breed.

My flock has varied from 30 to 45. I have always fed hay with a moderate supply of turnips; I never feed grain. The yield of fleece has been quite uniform, never below five and a half pounds, nor to exceed six. I have obtained from 40 to 60 cents per lb. Last year (1863) the average weight of fleece was 5¾ pounds. My wool sold at 63 cents per pound, $3 62 per fleece. T. R.

Barton, County of Wentworth.

To Make Ewes own their Lambs.

To the Editor of THE CANADA FARMER.

SIR,—In your last No. I noticed a question, How to make ewes take to their lambs when the ewes refused them? The best way, in my opinion, is to drive two stakes in the floor of the sheep-pen, and fasten them at the top so that the ewe cannot pull them apart; then put the ewe's head through between them so that she cannot run from the lamb. She will take up with the lamb in a few days at most. Give her plenty of food and water, and be careful to have her so arranged that other lambs cannot come near her. I have made ewes take with other lambs that were not their own. BALSAM.

May 11, 1864.

Another Cure for Grub in the Head.

To the Editor of THE CANADA FARMER:

SIR,—In 1861 my whole flock was diseased with grub in the head, so bad that they refused food, and some could not stand for days. I tried various remedies all to no purpose, and at last found the following a certain cure:—To one ounce vial of whiskey, add a teaspoonful of Scotch snuff, shake well, and pour some of the mixture in each nostril at least twice a day. Not one sheep has died under this treatment in this township that I know of.

ALEXANDER GORING.

Township of Niagara, May 13th, 1864.

GRUB IN THE HEAD.—We learn from an exchange that this disease has been making alarming havoc among the sheep, in various parts of the United States. In Rutland Co., Vermont, the loss from this cause is said to have amounted to "scores and even hundreds on single farms." The Woodstock *Standard*, gives the following remedy recommended as almost infallible by a farmer who has used it repeatedly:

"Take yellow snuff, in the proportion of one tablespoonful to a tea-cup full of water, and steep till a good strong liquor is produced. Inject a tablespoonful of this liquor into the sheep's nose once a day as long as necessary."

The *Boston Cultivator* says:

"We understand that in some parts of New Hampshire sheep are dying in large numbers from what is supposed to be 'the worm in the head,' and we are desired to give some information in regard to a remedy. If we were to give, in the briefest space possible, the best prescription within our knowledge, it would be that given a few years since by Dr. Dadd, now of Chicago, who on being asked what was the best remedy for the 'grub in the head of sheep,' replied, 'Grub in the belly.'"

Correspondence.

☞ "HUMBERFORD'S" letter on Draining is in type and will appear in our next.

☞ QUERIES ABOUT DITCHES will be replied to in our next.

UNDERDRAINING.—Some enquiries on this subject will be attended to in an illustrated article shortly.

TO K..P GRUBS OFF CABBAGE.—"Briar" says: Instead of the paper recommended on page 108 of THE CANADA FARMER, I have tried a leaf of soft maple, and found it answer the purpose

MARKET FOR DRESSED FLAX. "George Killingbeck," of Mount Webster, County of Leeds, wishes to know which is the best place in the Province to sell prepared and dressed flax?

STOCK ITEMS.—A correspondent who forgets to tell us his name or place of abode, sends us the following information:—Mr. James J. Davidson killed a calf 15 months old this winter, which dressed 723 lbs. clear of head and neck.

Mr. W. Atkinson sold a 2-year old steer this Easter for $75, and one last Christmas the same age for $60.

MUSCOVY DUCKS AND POLAND FOWLS.—"Poultry-Fancier" can procure Muscovy Ducks, winners of the first and second prizes at the Provincial Fair, also Silver Polands, Black and Golden ditto, by applying to A B. Box 338. St. Catharines P O

LARGE YEARLING DURHAM. J. T. says. I beg to give you the weight of a Short Horn bull I purchased from Mr. Snell, Chinguacousy, at the Kingston Exhibition last fall. He was calved on the 13th January, 1863, and I weighed him this spring at the Township Agricultural Show held here on the 28th April, when he was found to weigh 1,100 lbs., being at the time in rather low condition."

BAROMETERS.—"C. Foreman," of Biddulph, wishes to know where good Barometers suitable for farmers can be got, and at what price?

ANS.—We believe Kendall's Barometer is a good and cheap one, but do not know where it is kept for sale.

ITALIAN BEES.—"H B" of Wolfe Island, wishes to get a swarm of *Italian Bees*," and asks where they are to be had.

ANS.—We doubt if a "swarm" can be obtained, as the supply of them is limited The usual mode of getting into the breed is to obtain an impregnated queen. Those who have this variety for sale would do well to advertise.

RECEIPT WANTED.—"Passus" writes as follows: "A reliable receipt for the washing of flannels without thickening and hardening them, would merit the thanks of many of your readers."

LOST HAIR.—"H. C. T. A." asks what will make hair grow on horse's leg?

ANS.—If the hair bulb is destroyed the hair will never be reproduced, therefore it is useless to apply any remedy. If the bulb is uninjured the hair will soon grow again.

H B, FRONTENAC COUNTY, sends us a lengthy letter on the culture of apple trees. He recommends a deep sandy loam, not to plant too deep, to mulch both summer and winter, to support the trees by tying to a strong stake, and to keep the ground well drained. The subject has been already so thoroughly discussed, and the demand upon our space is so great, that we beg pardon for giving only this short synopsis of our correspondent's letter.

THE BERBERRY.—A correspondent sends us the old story that the Berberry caused "a blight" in wheat, and quotes a communication in the European Magazine for 1810, in which the writer appeals for confirmation to every respectable farmer in the counties of Suffolk and Berks. We had thought this idea fully exploded, but will be happy to receive any evidence on the subject.

He also asks whether the prickly ash would not make a good hedge plant. Can any of our readers tell him?

EXPLANATION.—We have received a communication from our esteemed correspondent "W. S.," in reply to some observation made by another correspondent relative to the plan suggested by "W. S." of planting apple trees shallow and near together; but we have had such a demand upon our space that we have been unable to make room for it. And perhaps he will excuse us if we now omit it altogether, lest an honest difference of opinion become by reply and counter-reply a mere personal controversy. Our readers will "weigh all these things," and decide for themselves which course to adopt.

"PETER PRUNING KNIFE."—P Straw, Esq., of Grimsby, seems to take sadly to heart the playful article of Peter Pruning Knife, so much so that were we to publish his letter our readers would shrewdly suspect that the coat fitted only too well. But we cannot insert in THE CANADA FARMER any communication that endeavours to cast reflections upon the motives of our correspondents. The statements and arguments are open to fair criticism; the motive that induced a correspondent to write is personal to himself. There is enough of this thing in the political journals of the day—the domain of Agriculture and Horticulture lies in a purer atmosphere.

BUCKWHEAT AS A GREEN MANURE.—Two correspondents, one writing from Sarnia and the other from Mariposa, have sent enquiries on the above subject and our answer to both may be embodied in the same paragraph Both ask what is the value of Buckwheat as compared with Clover for green manure? It is less valuable than clover, but ploughed in when in blossom, is beneficial to all soils which contain but little organic or vegetable matter. The seed is sown in June and harrowed in About three pecks per acre is enough when sown for a crop, though some farmers sow a bushel broadcast It should be sown more thickly when intended to be ploughed in. It is best adapted for poor, light soils.

HOG CLASSES IN THE PRIZE LIST.—"Essex" writes:—"It is very generally believed that the 'Large Breed' of Berkshires is obtained by a dash with the Yorkshires, and the 'Improved Berkshire' by a dash with the Essex. Now, if such be the case, is it proper that the Board of Agriculture should offer premiums for two classes of Berkshires and leave the Essex breed to compete among the 'All Other' small breed class?"

ANS.—Our partiality for the Essex would lead us to answer—"Decidedly not,"—though, fairly judged, we believe the Essex will hold its own among "all other small breeds."

The Canada Farmer.

TORONTO, UPPER CANADA, JUNE 1, 1864.

Farmers' Clubs.

THESE Societies have been established for many years in all the principal agricultural districts of Great Britain and Ireland, with the most satisfactory and valuable results. Similar advantages have been experienced in Canada where they have been fairly tried. Farmers are necessarily an isolated class, and they labour under the disadvantages incident to that condition. Much, however, might be done to remedy such a state of things, and we know of no better means than those which are afforded by Farmers' Clubs. No difficult or elaborate organization is required to effect the objects of such instrumentalities; every agricultural society has the means within itself, of accomplishing the desired results. If the members or any considerable portion of them, would meet some half-dozen times during the most leisure portion of the year, for the reading and discussing of papers on agricultural subjects, and comparing notes, very valuable consequences would arise.

We subjoin an extract from an address to the Wigton (England) Farmers' Club, which has been sent to us by a correspondent, and to which the attention of our readers is invited:—

"This Club professes to be a Farmers' Club, and, of course, it was intended to convey information to every individual who was a member of that Club, as well as to give general information in the district. How difficult is this task, considering the number of views men take upon different subjects, and the state of agriculture at this present moment. Year by year the older of them were inclined to believe that the seasons were entirely altering in their character, and in the periods of the various changes taking place; and when they considered the different prejudices, the different styles adopted in the management of land, they would see that the difficulty must be great for agriculturists in general to arrive at such a position as might be reckoned partially secure. It did not follow, therefore, that this Club was not a wise movement, the greater the difficulty, the greater the necessity for union of intelligence. The great object was that they should be enabled to bring together the general knowledge that is diffused through the country, and make it bear upon every individual of the Club. With the diffuse views taken by agriculturists, owing to the great variety of land, owing to the different localities, owing to different pecuniary means possessed by agriculturists, nay, owing to the mental and physical constitution of the agriculturist himself,—how difficult did it become to generalize? It was in the pursuit of generalization that all the errors were taking place. One came before the Club to read a paper, honestly intended, honestly composed, and with the full vehemence and energy of his mind, he considered he was laying before the Club a mass of truths which were the result of his own observation and experience; and yet his views were possibly contradictions of the experience and opinions of his brother farmers. Was he, therefore, to be set down as a fool, or a knave, or an intruder? Decidedly not. If two men were standing in a room and a third struck the door, the two men would give different views of that action, though in all probability both their statements might be perfectly true so far as their line of vision affected the act. So it was in farming. If their experience had not been different the constitution of their brains had not been different.

"Two men tried an experiment,—one of them took one point, and saw that to be a leading point, while the other never noticed *that* point, but thought another the most important, so they came before a jury, and both declared them different things altogether; they were not, however, to be set down as unobservant men. Every man saw every effort of life in his own particular light, and it might be an entirely different light from that of his neighbour. This was taking a philosophical view of human nature. Two men upon two sides of the fence might meet with entirely different circumstances,—one man might have drained with a drain running north-east, while another might have gone in another direction, and one struck the water and another missed it; there in the same soils different results were produced by the same operation differently directed. What would be good management for one farmer would be wrong for another. Indeed the varieties were so great that all agriculturists should feel slow and timid about laying down any dogged rule for others to follow, and every one should feel slow in condemning the views of another. If in their meetings they could look upon every effort made as that of a true friend, though they might think him an erring friend, what a happy family they should be. It was within the power of all o. them to try and arrive at this; and if any man read a paper, and pointed out certain principles to be in his opinion correct, they should receive them with all kindness and gratitude. That was the way to improve; it was only by observation and study they could learn."

AMERICAN POMOLOGICAL SOCIETY.—We have received a circular from Hon Marshall P Wilder, President of the American Pomological Society, from which we learn that the TENTH SESSION of this Association will commence in CORINTHIAN HALL, in the City of Rochester, N. Y., on TUESDAY, September 13, 1864, at 12 o'clock, noon, and will continue several days. All Horticultural, Pomological, Agricultural and other kindred institutions in the United States and the British Provinces, are invited to send delegations, as large as they may deem expedient: and all other persons interested in the cultivation of fruits are invited to be present and to take seats in the Convention. Members and Delegates are requested to contribute specimens of the Fruits of their respective districts, and to communicate in regard to them whatever may aid in promoting the objects of the Society and the science of American Pomology.

Packages of Fruits may be addressed as follows: "American Pomological Soc. care of James Vick, Rochester, N. Y."

☞ The Norwich Agricultural Society will hold its exhibition on the 7th and 8th of October, at Otterville.

Maple Sugar making.—The *Guelph Advertiser* says that School District No. 9 in London comprising twenty families, has made 22,010lbs. of maple sugar the past season—over 1,100lbs. to a family in the aggregate. If other districts have done as well or better let them report.

Weather and Crop Items. "J. W. B.," of the Township of Oxford, County of Grenville, writes under date of May 27th:—"The month of May here has been very wet, so much so that the farmers could not get the spring grain sowed when it should have been (we raise no fall wheat here), but still I cannot regard it as a very late spring. Wheat that is sown is coming on beautifully: the meadows and pastures are looking remarkably well."

"A. H." writes from Hossierville, Moore, also at date of May 27th:—"In this part of the country, fall wheat has been very much winter-killed, so much so, that some people have ploughed their fields up and sown them with other grain. The spring here has been very cold and wet, until about two weeks ago. Since then we have had fine weather, and farmers have got nearly through with their seeding. Fruit trees are in full bloom just now, and bid fair for a good crop, and there has been no frost to do them any injury as yet. Stock has wintered in general, pretty well and I hear no complaints of sheep or cattle dying."

A correspondent in the *E. R.* of Northumberland says, 'what little fall grain was sown hereabouts, looks well. The grass I think never appeared more promising Continued wet weather has thrown spring sowing late."

"A Subscriber" writes from East Oxford, at date of May 26th: "As I travelled through the township recently, I was surprised at the rapidity of the growth the last two weeks. Winter wheat is damaged greatly in a great many instances and some of the farmers are ploughing it up and sowing spring wheat on the ground. I saw a field belonging to John Weir as good as ever I saw. The seeding, in general, is now almost done. A great quantity of the grain is up, and looks well. Grass looks well also."

"S. W.," Township of Mornington, County of Perth, May 26th, 1864, says:—"We have had a very backward and wet spring, but from the beautiful weather for the past two weeks, the crops at present look remarkably well. Very little fall wheat sown in this township. What little there is looks well and healthy" Never has there been a better growth in spring crops than has been for the past two weeks.

Darlington Fair.—The Spring Show in connection with the Township of Darlington Agricultural Society, was held in Bowmanville on Friday, May 5th. In the class of Draught Horses there were four entries, but the animals were first class, and there was considerable difficulty in deciding. In the general purpose class there was not much difficulty in deciding, there being but three entries, and a marked difference in the horses. Of carriage and saddle horses there were seven some of them really first-class animals, and equal to any turn out generally seen at a Spring Show. The Durham bulls, although good animals were not in first-class trim, and but two shown. Of Devons there were two, about as fine animals as are to be found in the Province. Altogether, the fair was a decided success, and gave general satisfaction.

☞ The Nottawasaga Agricultural Society held its Annual Spring Show at Bowmore, on the 2nd ult. The day was most unfavourable, being raining all the time of the exhibition,—nevertheless the exhibition was a successful one. The entire Horses looked well, and were an improvement in comparison with last year. The Bulls, also, taken as a whole, were much superior to those exhibited last fall. The best one—a through-bred Durham, shown by Mr. Hewson, and which was from the stock of Walter Raikes, Esq., Barrie—is a fine-looking animal; also that exhibited by Mr. Taylor, to all appearance, will produce excellent stock. The Judges, Messrs. William Bethune, Thomas Robinson and Samuel Gordon, ranked them as follows:—Best Stallion, Alexander Hannah; 2nd do., do., P. McSherry; 3rd do., do., John Isaac; 4th do., do., Melville, Fair & Co. Best 3-year old Bull, F. Hewson; 2nd do., do., Patrick Taylor. Best 2-year old Bull, H. M. Frame; 2nd do., do., Peter Dallas.

Exhibition of the Toronto Horticultural Society.

The first Exhibition of the Toronto Horticultural Society for the present year, took place in the Music Hall on the Queen's birthday, and was among the most successful shows of the kind ever held in the city. The attendance was large, exceeding that of any previous exhibition, the hall, especially during the evening, being uncomfortably crowded. The display of flowers, plants and vegetables was really fine and decidedly the best the society has yet made. There were eight large tables, covering fully one half of the floor of the hall, and every inch of them was occupied by either flowers, fruits, or vegetables—of the latter there was a fine collection, considering the backwardness of the season. The rhubarb, celery, lettuce, onions and cucumbers were very fine, while the asparagus could not, we believe, be surpassed. The floral collection, however, offered the chief attraction, and a great attraction it certainly was. The geraniums, roses, fuschias, gloxinias, tulips, and verbenas were highly creditable to their respective exhibitors. Mr. Fleming's collection of geranium blooms, was much and deservedly admired. So were Mr. Gray's hybrid perpetual roses. But the most attractive objects among the flowers were the first prize verbenas, exhibited by Mr. G. Vair, gardener to D. L. McPherson, Esq. These were the observed of all observers on account of a simple but most effective mode of training, whereby the creeping habit of this flower is corrected and the spikelets of bloom made to stand erect. We give a cut of this mode of training which will enable our readers readily to understand and adopt it.

FIRST PRIZE VERBENA.

There was a large table devoted exclusively to foliage plants and specimens of new and rare plants which were much admired, particularly by those versed in botany. Some very beautiful and tastefully arranged bouquets table and hand—were also exhibited. The collection of fruits was small, as of course, must be the case at this season. A very fine orange plant, bearing fruit, stood at the head of one of the tables and was an object of unusual attraction.

The Hon G. Allan's gardener exhibited some table apples which, though long since out of season, appeared as fresh and sound as when taken from the tree. It is said that Mr. Allan has a secret for preserving tender apples from decay and keeping them sound and fresh-looking for any length of time. If so, we hope he will let the entire brotherhood of Horticulturists have the benefit of it without delay. A rare fruit from the hot house of Judge Harrison attracted much attention, from its shape and taste. It somewhat resembles a cucumber in appearance, and its flavour is not unlike that of the pine-apple. It is named the *Philadelphus pertusum*. For the prize list in full we refer our readers to the city papers. The Horticultural Society have reason to be proud of their first exhibition for this year, and we trust future ones will surpass that just held.

Farmers' Club Meeting.—A regular meeting of the North York Farmers' Club, took place at the Railroad Hotel, Newmarket, on Thursday evening the 5th ult. After the usual routine business, the Club proceeded to the discussion of the question previously announced, viz:—"The Root Crop—mode of culture—soil best adapted—manner of seeding, and kind of plant best suited to this section of country."

Lime as a Manure.—"Enquirer," of Greenbank, wishes to know, "How, when, and where" to apply lime to land, and puts the following questions, on these points. 1. "Should lime be applied to the dung-heap in the yard?" 2. Should it be used as a top-dressing to crops. If so, what kinds? And where? 3. Should it be applied to the land when ploughed? If so, at what time? spring or fall ploughing, and for what crops, will it be the most suitable? 4. For what kind of lands, heavy or light, is it more useful? 5. Should lime be mixed with any other fertilizer, such as gypsum? &c., &c.

Ans.—1. Caustic, or quick-lime, should not be applied to the dung-heap, but lime compost may. 2. Lime acts very beneficially as a top-dressing upon meadows and old pastures, giving clover and the grasses a thick luxuriant growth, and chocking down the weeds. Late in the fall or early in spring are the best times for applying it. 3. The usual practice is to spread the lime on the land just before ploughing, whether in the spring or fall, but some recommend scattering the lime *after* ploughing, especially on sod land, as its more immediate effect will thus be secured, while it tends to settle down into the soil. Leguminous plants of all kinds are benefitted by lime. Beans, peas, vetches, &c, produce heavier straw and grain of better quality under its action. Barley is most stimulated by it, the finest barley in Britain growing in what are called the chalk districts. Lime in small quantities must exist in the soil to render it good for wheat. Lime is an important element in tobacco, potatoes, turnips, and the clovers. 4. It is good for both, but especially beneficial to clay lands. 5. A compost of lime and vegetable refuse makes a valuable manure, and when the compost has been made long enough to extract the caustic properties of the lime, to mix it with barn-yard dung makes a most valuable manure. Gypsum is a compound of lime and sulphuric acid.

[The above communication and reply having been already kept back some time, by the pressure on our correspondence columns, we insert them out of their proper place, rather than defer them any longer.]

Entomology.

Cut Worms.

At a recent meeting of the Cincinnati Horticultural Society, Dr. J. A. Warder read a paper on this subject from which we make the following extracts:

We discover the ravages of these insects so soon as our garden vegetables appear above ground, when the worm, emerging from the soil during the night, eats the stalks, generally above the surface—in the morning he retreats, burrowing near the roots, and often drags the unconsumed portion of the young plant after him. The worms resemble each other in their general appearance, and might readily be taken for one species, and hence they are considered indiscriminate feeders, as they consume any of our garden products, but it may be found that a certain species of these rustic moths are provided for different species of our culinary vegetables—as the *devastator* for the cabbage, another for the corn, and so on. Their habit of descending into the earth very near to the plant they have consumed, however, is common to all the species, and enables the gardener to discover and destroy them by digging them out.

Dr. Melsheimer, of Pennsylvania, is quoted by Dr. Harris to the following effect: "The corn cut worms make their appearance in great numbers at irregular periods and confine themselves to no particular vegetables; all that are succulent appear to be relished by these indiscrimate devourers, but they prefer the maize plants when not more than a few inches above the earth. They seek their food in the night or in cloudy weather, and retire before sunrise into the ground, or beneath stones or other shelter from the rays of the sun. The transformation in pupæ occurs at different periods, earlier or later, according to the forwardness of the season, usually not much later than the middle of July." The pupæ become moths in about four weeks.

Remedies.—Having studied the habits of this insect, and learned something of its ways, we may be prepared to meet the foe, but, unfortunately for us, the worm, as well as the moth, being nocturnal, they escape our observation until too late, we see the damage the worm has done to our tender crops. The moth deposits her eggs on the ground; they are beneath our observation, and the young worms do little harm in the autumn, as they feed chiefly on the roots of grasses. But great numbers of the moths might be destroyed by burning lamps in vessels of water, in the summer. In the winter the young ones are supposed to lie torpid in the ground, and a fall or winter ploughing has been recommended for their exposure to the frost and to insectiverous birds.

The insects being very clumsy, and unable to climb up a steep bank, it has been recommended to make conical holes near the plants, as traps, into which they would fall when rambling about as they do at night, in search of food, and it is claimed that many are caught in this way, the holes being found half filled with worms. This can only be practiced where the soil is tenacious, else the holes will crumble down, and indeed the worms could burrow away after falling in, if the soil were mellow.

A very simple and efficient device, by the way of prevention, is the application of a strip of paper, wrapt about the stem of the cabbage or other plant, at the time of setting it out; this is so applied as to guard the stem for an inch or two at and above the surface of the ground. In my early experience we restored to a leaf of the hickory, or other tree for the wrapping.

In the cornfield, however, where the depredations of this insect are very annoying, and where hand-picking is manifestly out of the question, other means must be restored to. First in importance among these is the encouragement of our insectivorous birds.

We are assured that the crow is seeking these insects when he visits our corn fields, and Mr. Glover's examinations, alluded to in a previous report, prove this, and will no doubt give us a higher regard for the visitor than we have heretofore held, when calling him the bird of ill-omen. Most intelligent farmers, where the crow abounds, have already learned to appreciate his insectiverous propensities, and to value his services accordingly, and many not only resent an injury offered to their sable friends, but take pains to encourage them by providing a few [illegible] of corn, to be cast upon the surface of the headlands of their fields.

Predacious insects destroy a great many of the cut-worms. One of these, the "Cut-worm's Dragon" is represented by Mr. Fitch as "a large, black, rather slender and flat larva of a beetle, of the family Carabidæ probably the *Pasimus calignosus*; it is very agile in its motions. When not glutted with food, it is running about incessantly, in search of these worms, and slays them without mercy, seizing them by the throat with its powerful jaws, and sucking their substance." Another is described by Mr. Morrison in the Albany *Cultivator* as follows: "A remarkable insect, somewhat resembling the black wasp, but longer, of a shining black and very active, was pointed out to me as their natural enemy." This, he says, hunts the worm as it were, by scent, digs it out and stings it, and afterwards buries it in the ground. It is probably a species of the Ichneumon fly. Many die from some cause when fully grown, and the popular belief is that this is produced by bright sunshine after a warm shower: they look bloated and swollen.

We recommend, also, early cultivation of the crop, to encourage the strong growth of the young plants, and also to invite the birds to come and examine the fresh soil, which the blackbird especially is sure to do, following close behind the plough, in his eager pursuit. It has been recommended to steep the seed and otherwise to prepare it so as to be obnoxious to the insects; but these worms do not eat the seed—they eat the succulent shoot at or near the surface. Steeping with the sulphate of iron, however, stimulates a vigorous growth, and is in that way of value.

It seldom happens that the cut-worms destroy all the shoots in a hill of corn, hence it is well to use plenty of seed at planting time. This accounts for the practice of the old farmers, who used to sing:

"One for the blackbird, one for the crow—
Two for the cut worm, and three for to grow."

Coal Oil and Insects.

Two correspondents testify to the efficacy of Coal Oil as an Insect Exterminator, as follows.

To the Editor of THE CANADA FARMER.

SIR,—As I was greatly annoyed with worms in my fruit trees during the spring of '61, '62 and '63 and as I have found a remedy by means of which their ravages may be stopped, I send you the following for the benefit of my fellow-farmers. After I had tried different things, and had about given up in despair, I thought at last I would try *Coal Oil*, which proved a perfect cure. I found that the worms ascended to the top of the trees at night to feed, and that they come down when the sun rises and collect together in groups on the trunks and large limbs. I accordingly took my *oil can* and saturated the places where the worms were with oil, and they died forthwith. As the result, I had more apples last year than I have had altogether in the past four years. I spent about a week at this work and was amply rewarded for my pains.

L. CARLEY.

King, April, 1864.

To the Editor of THE CANADA FARMER:

SIR,—I take this opportunity of sending you a discovery which I found out last season, and now the spring is advancing and the proper time is at hand when the Canadian farmer is preparing his trees by pruning and washing them, I deem it my duty to send it, as I have found the same efficacious in keeping all insects from the trees. It is as follows:—Take a strip of cotton from three to five inches in breadth, well saturate the same with coal oil, wring it until there be no drops hanging, then tie round the trunk of the tree, about two feet from the ground. This, I think, will have to be renewed every spring at the time of budding.

A SUBSCRIBER.

Beverley, C. W., April 12th, 1864.

Veterinary Department.

Broken-wind.

It is not our intention to deal with the cure of broken-wind, but as much as is in our power with its prevention. Doubting the efficacy of medicine upon a heavy horse, we would urge upon our farmers the necessity of practically avoiding this disease.

With many owners, and more so with the regular teamsters, than with the farmers, the horse is often compelled to be exposed to every kind of weather, as well as the dusty atmosphere of our roads, and the foul air of our city stables. These, however, are partially irremediable evils, but not the most predominating nor aggressive. The farmer's horses, which seldom travel the road during its dusty period, suffer as severely, and in numerical comparison, as much as those of the teamsters. This should not be; indeed we should not find the horses which have the best feed, air and exercise, suffering most severely with diseased lungs. But, if our reader will go any morning he will, when there is a fair assembly of farmers at any of our markets in the Western Province, he will not be at a loss to find specimen samples of heavy horses. Visit the stables where the farmer puts up his team, and he will find a considerable portion of them suffering with chronic coughs, broken-wind, or roaring. These three diseases are all derivable from the same causes: and their treatment, though never specific, is of the same class. But while none of these diseases can be cured, they can by care be considerably lessened, or relieved. That which will relieve them would also have prevented. In the Eastern Province broken-winded horses are not very prevalent. Montreal is by no means full of them; but as we get further east, and among the habitants of the neighbouring country of Quebec we may almost search in vain. In the St. Paul's market place, St. Rocks, after a careful search we could discover but two broken-winded horses from amongst six hundred. In the upper town market place, where nearly five hundred stood, we found two broken-winded and one roarer. We, therefore, only found five with unsound wind, amongst say one thousand horses. The horses were generally in good condition.

In cases of emergency any horse may be over-driven, and his lungs impaired when too full of feed; but we have not to deal with special cases. To enumerate all the causes tending towards injuring the lungs of the horse is here unnecessary; therefore, we will only speak of those mostly practised, and with the most injurious effect.

When one section of a country or a different country finds the other surpassing it in producing a superior article, or a finer and sounder breed of cattle, it immediately commences to import or to imitate the other's mode of manufacturing. Why, then, when we find a larger percentage of broken-winded horses in the Western than the Eastern Province, should we not adopt their method of prevention; or rather discontinue the mode by which the horse's respiratory organs become impaired? The feed is, taking it as a standard, of a superior quality in the Western than in the Eastern Province, and the climate is not so severe. The water is as good in one section as in the other, and the horses as hardly worked in the one as in the other. No! the fault does not lie with the horse, its feed, or the climate; but it is entirely dependent upon the usage,—the manner in which they are fed and watered, and worked. In the neighbourhood of Toronto, where broken-winded horses abound, at every mile or two along any of its turnpikes is temptingly displayed to the horse, the water-trough, to the man driving, the bar-room sign. And there, the horse is allowed to injuriously swell himself with water, while his driver is exhilirating himself for a smart drive, and as he will tell you —"to prevent the water foundering his team." He forgets that in working the prevention of the one he does it at the cost of the horse's wind. The quantity of hay a regularly and hardly worked horse will eat, if it is good sweet hay, will not injure his wind; but he should not be allowed to stand with his rack full before him during Sundays, wet days, or resting days. In the Eastern Province it is not customary to pull up at a tavern and leave your horse standing over one of these pests of troughs; what water he is allowed is given him out of a pail, and if it is in the extreme cold weather, the chill taken off the water by pouring a little warm into it before he is allowed to drink. The hay is, also, nearly always tied up in bundles of sixteen pounds each, which gives the advantage to the person feeding of judging the proper quantity, giving a judicious allowance to any greedy feeder, or to any that has fasted for an unusual time.

A horse of the Lower Canadian breed travelled the distance from Chicoutimi to Quebec, three hundred and some odd miles, in five days. The sleighing was good; the horse allowed five gallons of oats per day, and not all the hay he would eat. Was allowed after he was cool, in the evening, as much water as he liked to drink, the same before he left the stable in the morning, but was very carefully and sparely watered during the day. He averaged sixty miles per day for the five days. Could he have accomplished this if he had been allowed to drink his fill every few miles, at some water trough? We would warn all who have so delicate an animal under their care as a horse, to avoid extremes in watering and feeding. A horse had better suffer from thirst or hunger a little time, while travelling, than to have entailed upon him for the rest of his days, any chronic disease.

Objections to Paring Horses' Hoofs.

To the Editor of THE CANADA FARMER:

SIR,—My attention has been called to an article on this subject in your last issue, by your correspondent "Take Care," in which he condemns the non-paring system of shoeing, on the ground that Delabere Blaine, in his "Veterinary Art," advises the sole to be well thinned out at every shoeing. Your correspondent forgets that the article he refers to in Blaine was written upwards of forty years ago, and that the art of shoeing has made considerable progress since that time. Blaine (as remarked by your correspondent) advocates paring as a preventive of contraction, and places neglect of it at the head of "a long and *correct* list of causes of injurious contraction." Modern science proves, however, that he, along with other writers of his time, was wrong in considering contraction as a primary disease. It is now clearly understood that contraction is but a symptom, or rather a consequence, of a more serious disease, which was first discovered by James Turner to have its seat in the navicular bursal. This, therefore, is no plea for thinning down the poor horse's foot till it will yield to the pressure of the thumb, and render his foot liable to be bruised by every stone he steps upon.

Before any arguments for not paring the sole can be made intelligible to your readers, it will be necessary to advert a little to the structure and arrangement of the hoof. The hoof is divided into the wall or crust, the sole and the frog, each of which are of different textures. The wall or crust is made up of parallel fibres resembling coarse hairs glued together in rows, and covered externally by an unctious covering to protect it from moisture, &c. The sole is also fibrous, but the fibres are much finer, and are laid in transverse layers, and are devoid of the outer covering which protects the crust. The frog is also fibrous, but the fibres are still finer, and are oblique in their direction. The sole is formed of transverse layers, which from time to time are thrown off in flakes, as the new horn grows. It is not protected by the gluey covering outside. The outer layer acts as a covering to the under, and retains its moisture until it is thrown off, thus rendering paring unnecessary, nature having made this wise provision herself to prevent the sole accumulating to an injurious thickness. Not only is paring useless, but I think it is highly injurious, as it makes the feet tender, and liable to be bruised by everything the animal treads upon. Moreover, by not paring we do away with stuffing the feet, as the outer layers protect the under, retain their moisture, and keep them soft and elastic, as every farrier knows; for when he has removed this outer layer, the under ones are handled by the drawing knife. Paring is further prejudicial, inasmuch as it predisposes to corns, bruises of the sole, picking up of nails, &c. It used to be advocated as a preventive of corns, contraction, and almost all diseases of the foot; but half a century has failed to show where it has been beneficial in any of those cases. On the contrary, we find that where "the sole is well thinned out," in nine cases out of ten the horse is lame in the foot; while, if the sole is left as nature leaves it, we have seldom a lame foot.

It must not be supposed that I undervalue the teachings of Blaine; on the contrary, his work will always be a standard authority, but we must keep pace with the progress of science, even though it should differ from him or other writers of his time. I would, therefore, with Mr. Jones and others, give the following advice: Having removed the old shoe, shorten the toe, remove all dead and loose parts of the hoof, but do not cut the sole or pare the frog. Of course, in case of disease or accident it is different.

ZOIATRIST.

Woodstock, 15th April, 1864.

"INTERFERING" OF HORSES.—A correspondent of the *Scientific American* says—"If any reader has a "cutting" horse and wishes him cured (which doubtless he does), permit me to say that if he will add twenty-five per cent. to the *quantity* of his food—supposing it to be good food, such as oats or corn, cornmeal, hay, &c.—he will most probably correct the evil. This is very simple; it may be expensive, but yet it is economical. Symptoms of fatigue, in either man or beast, are nearly always first visible in the raising of the feet; and a horse of a certain formation about the shoulders and haunches will first exhibit this weakness in striking the inner forward portion of the hoof against the neighbouring fetlock joint, which action is termed "cutting" or "interfering." I have tried the correction frequently, and it has never failed me; but the owner must not be content with the theory; he must see that his horse actually gets the feed. A "cutting" horse is frequently cured by taking him away from a livery stable and feeding him at home. This experiment is easily tried."

The Apiary.

"Bee-Bod."

MR. LANGSTROTH mentions that he finds that bees when swarming, can be determined to some "selected" spot. He speaks of stringing bees on a thread, making a ball the size of a hen's egg, and carrying it among the flying bees—that the Rev. T. P. Hunt says, by this device he can always prevent bees leaving his premises. Mr. L. says, "a black woolen stocking or piece of cloth, fastened to a shady limb in plain sight of hives, would probably answer a good purpose." That swarms are attracted to such places not only by the color but by the ease of attaching themselves to such objects. It is well known that places selected by first swarms, are very apt to be chosen by those that come after. That when one swarm is followed in quick succession by others, that they are very liable to cluster all in one location. Analogy would then lead us to suppose that the bee-keeper who furnishes imitation clustering devices, at convenient points of the apiary, would be rewarded by having his swarms settle where they can be easily secured or hived.

Mr Solomon Sawyer, of Rolling Prairie, Wisconsin, informs me that he has had good success with a decoy made of black felt hat shaped like a cluster of bees, about the capacity of a pint, stuffed and hung in the limb of a tree or small shrub, in plain sight of his hives. That most of the swarms settled on these devices. They should be made so as to be readily detached from their location, so that they can be carried and shaken, or laid at the entrance of the hive. If such or similar devices succeed, the securing and hiving of natural swarms will be much simplified.—L. L. F. *in Country Gentleman.*

Strengthening Weak Swarms.

THE following experiments have been tried with good success, so far as we are aware. A hive that is weak in numbers is made to change places with one that is strong and can spare bees without particular detriment. For instance, you have a stock in the spring, that is weak in numbers but other ways all right. Another stock has abundance of bees. When they are in flight, quietly change the hives to each others' stands. The bees will seek their marked location, and bees enough from the strong stock will enter and remain with the weak one, to reinforce it and make a good stock. In swarming time, if you have a small swarm come off, hive it, and place it where you wish it to stand. Two or three days after hiving, change stands with another hive that has refused to swarm, but is "black with out-hanging bees." Swarm will speedily become strong in numbers, and if the honey season continues good, will lay in a good supply for the winter. The old stock is not injured, as still enough bees remain to carry on their usual labors. Before changing stands, blow into each hive a little tobacco-smoke, to make them fill themselves and mix peaceably. When they find they are away from their own location, and in a strange hive, they seem to take things kindly and make the best of the matter. At least such has been our experience in the four or five cases of trial the past season. We propose to experiment still further another season.—*Ibid.*

Caps on Bee Hives.

To the Editor of THE CANADA FARMER:

SIR,—I am much obliged to W. H. Sherwood for hints on bee management, but think his remarks more useful to one who has some knowledge of the subject than to one who, like myself, is only intending to keep bees; and should be further obliged for more information. Having got a hive without holes in the top, how can the caps be applied, and when? Are the caps secured in any way? I should suppose, if not, they would be liable to be displaced in an open bee house by strong winds. It appears that the removal of the caps is not altogether without danger, from the necessity of using a veil and long gloves. I suppose the new hives described at page 104 will save much trouble, but I fear their cost will prevent their coming into general use.

BRIAR.

County of Carleton.

Rural Architecture.

Split and Sawed Shingles.

I HAVE been interested in the communications of your correspondent in regard to shingles. I have had over thirty years' experience in building and repairing roofs. I have taken rifted pine shingles from off several roofs that were worn entirely through, at the line where the water falls from one shingle upon the next one below, while underneath the courses the shingles were as bright as when first laid. Such is not the fact with sawed and cut shingles, from any kind of timber. The reason is, that sawed and cut shingles are cross-grained, so that water runs through the pores of the wood,—wets the under course, and, in wet seasons, seldom if ever dries.

The agents of decay are, air, water and heat. All are combined on a roof to produce decay, and you have the effect on all roofs made of sawed or cut shingles. I have replaced many roofs of sawed shingles, but they never were half worn; they were rotten and unfit to remain longer. Let any one examine a sawed shingle, and he will find the grain severed and every pore, through which the sap was pumped up from the roots to the branches, is a water-pipe to conduct water through the shingle, instead of over it, as is done by a rifted shingle.

I advise every man, who has means to procure a rifted and shaved shingle, never to use a sawed or cut one. I think slate is the most economical and durable of all roofs. Tin will do well, and roofs with it will be laid more flat, thereby making less surface to cover. There may be compositions that will make good roofs, but I know of none I would accept as a gift, and I have tried several kinds.

In choosing rifted shingles, don't get those of twisted grain, so that one side will turn up and the other turn down.

Any person who will discover a cheap kind of roofing, that will endure our variable climate, will deserve the everlasting gratitude of his kind. But forever deliver me from sawed, and more especially cut shingles.—*Cor. Boston Cult.*

SHINGLES RENDERED FIRE-PROOF.—John Mears writes, in the Boston *Cultivator*, that he has prepared shingles in the following manner, and after an experience of eleven years, and using seven forges in his blacksmith's shop, he has never seen a shingle on fire, nor has a nail started. He says:

"Having a large trough, I put into it a bushel of quicklime, half a bushel of refuse salt, and five or six pounds of potash, adding water to slack the lime and dissolve the vegetable alkali and the salt,—well knowing that pieces of an old lime pit, a soap barrel, or a pork tub, were not the best kindling stuff, and having long since learned, while at the Vineyard Sound, that *hot salt water* whitewash would endure far longer than that made with fresh water,—absorbing moisture, striking into the wood and not peeling and washing off. I set the bundles of the shingles nearly to the bands, in the wash for two hours; then turned them end for end. When laid on the roof and walls, they were brushed over twice with the liquid, and were brushed over at intervals of two or three years after."

CELLARS.—A cellar which opens inside a dwelling should be kept as faultlessly clean all the year round as any other part of the house, because its atmosphere is constantly ascending, and impregnates every room in the house with its own odours. In reality, there ought not to be any cellar under any dwelling.

The Flower Garden.

THE growing taste for flowers—the desire to make home cheerful and attractive by surrounding it with ornamental trees and plants—is one of the most cheering indications of our rural progress. Who passes a farm-house, built of logs though it may be, around which even a few flowers and flowering shrubs have been tastefully set, but is cheered by the sight, and drawn towards its unknown occupants with a feeling of kindly sympathy and esteem? There are some unfortunate beings who take peculiar views of life—views bounded by the narrow circle of physical wants, or the yet narrower limits of sordid gain—who sometimes make their boast, in no jesting mood, that of all the *flowers* to them the *cauliflower* is the most attractive, or in their utilitarian conceit, ask, "What is the use of flowers?" As we pity the blind, so we pity those who can see no use in flowers. They do have their uses, and not the least of these is their humanizing power. They refine and elevate; they cultivate our taste, enlarge the boundaries of our thoughts, deepen our love of the beautiful, and quicken all our better feelings.

To the lovers of flowers—to those who, for the sake of the flowers, are willing to take the care and do the labor necessary for their cultivation—we send a word of friendly greeting, and a few hints for their flower garden.

When the frosty nights have disappeared, and the earth has become warmed by the sun, then is the time to sow the flower seeds. Those who can take the trouble to make a frame and cover it with a sash can sow earlier and get their plants more forward than by sowing in the open ground. But there are very many desirable flowers that may well be sown in the open border. That this may be done with the best success it is of the first importance that the soil be made as light, fine, and friable as possible. To secure this it must be well dressed. If the soil be naturally a heavy clay it will be very much improved by mixing with it considerable leaf mould from the forest, and some ashes with sand if the latter can be had. An excellent fertilizer for all kinds of flowers can be easily obtained by gathering the sods from the fence corners and road-sides into a heap and pouring upon them the soap-suds and slops of the house until they are thoroughly decayed, and then adding a little well-rotted manure. Fresh, unrotted manure should not be used in flower beds. This should be most thoroughly incorporated with the soil until the whole is light and fine. Many flower seeds are very small and cannot force their way up through the crust of a stiff soil. The finer seeds are best sown upon the bed, and covered by sifting fine mould over them, taking care to cover them only just deep enough to keep them moist. Much of the disappointment experienced from seeds not coming up is occasioned by planting them too deep. When buried to such a depth, they do not receive warmth enough from the sun to enable them to germinate, and they consequently rot in the ground. Sometimes the seeds do sprout, but the tender shoots have not strength enough to grow up through such a thick covering, and perish before they reach the surface.

After the plants are up it will be necessary to see that they have sufficient room to grow. Where they stand thick it will be necessary to pull out some, endeavouring always to leave those that are strongest and give promise of making the finest plants. If the ground be frequently stirred, the labour will be amply repaid in the increased growth and vigour of the plants, and the greater abundance and higher perfection of the flowers. If there should not be sufficient rain to keep the beds moist, it may become desirable to give them an occasional watering. Whenever this is done it should be done thoroughly, not by giving a little sprinkling that will just wet the leaves and moisten the surface, but by giving the ground a good soaking. Use water that has stood in the sun long enough to be somewhat warmed by its heat, not cold water from a spring or cistern. The next day after watering, stir the surface of the soil so that it will not bake and form a crust, and your single watering will be all that the flowers will need unless the drouth be very severe.

By keeping in mind these few simple general principles there will be no difficulty in raising flowers. We give the names of a few of the hardy annuals, which can be easily grown in the open border and will well repay the needed care and attention.

The SWEET ALYSSUM is such a free flowering plant, although the flowers are small, continuing in bloom the whole summer, and withal is so fragrant that we cannot pass it by.

The CANDYTUFT makes very showy beds. There are purple, white, lilac, and crimson varieties. The plants should be thinned out to about five inches apart.

The CONVOLVULUS MAJOR, or Morning Glory, is of many colours and a very showy climber, but displays its beauties to early risers only.

The CONVOLVULUS MINOR is a dwarf variety, growing only about a foot high; the flowers mostly light blue and dark purple.

The DOUBLE GREEN-CENTRED HELIANTHUS is the best of the Sunflowers, and grows about five feet high.

The MARIGOLDS, both African and French, are very showy. Their peculiar fragrance renders them unfit for boquets.

Of MIGNIONETTE every one must have a bed for the sake of its most delightful fragrance.

EVENING PRIMROSES make a beautiful display as the sun goes down. Lamarck's Grandiflora is the most showy. The plants should stand from two to three feet apart.

The DRUMMOND PHLOX fairly rivals the Verbena in the brilliancy of its flowers and constancy of bloom. From June until severe frosts the bed is covered with showy blossoms of almost every hue, some most delicate in colouring, others dazzlingly brilliant.

The PORTULACA is also a very showy flower. The colours are crimson, yellow, white, striped, &c. It does not thrive well in the shade, but flourishes best when fully exposed to the clear, hot sun.

The PETUNIA keeps up a succession of flowers until the hard frosts of approaching winter kill the plants. Set in beds, with the plants about eighteen inches apart, they soon cover the ground and make a beautiful display.

The SWEET PEA is very fragrant and makes an exceedingly desirable climbing plant. If the blossoms are cut freely it will continue to flower all summer.

The ACROCLINIUM is one of the most desirable everlasting flowers. The colours are bright rose and pure white. If the flowers are gathered, as soon as they open, and dried, they can be kept in the dark in a drawer or box and used for making winter boquets.

The HELICHRYSUM is another everlasting flower for winter boquets, large and showy, and of a great variety of colours. The flowers should be cut just before they are fully expanded.

Phenomena of Plants.

PLANTS exhibit some phenomena supposed to arise from the state of the air, which accurate observers regard as prognosticating changes of weather.

When the flower of the chickweed expands boldly and fully no rain will fall for at least four hours after.

When the chickweed half conceals its miniature flowers the day is generally showery.

If the chickweed entirely shuts up its white flower let the traveller put on his great-coat, and the ploughman give up his day's work.

If the flowers of the Siberian sow-thistle keep open all night there will certainly be rain the next day.

The different species of trefoil (clover) always contract their leaves at the approach of a storm.

If the African marygold does not open its flowers about seven o'clock in the morning, you may be sure it will rain that day, unless it thunders.

The unusual fruitfulness of white thorns and dog rose bushes is a fore-runner of a severe winter.

There are several plants, especially those with compound yellow flowers, which during the whole day turn their flowers toward the sun, looking towards the east in the morning, the south at noon, and the west at night, a fact particularly observable in the sow-thistle.

The flowers of the chick winter-green droop in the night, to keep the dew or rain from injuring the tender pollen.

One species of woodsorrel shuts up, or doubles its leaves before storms and tempests, a rule which the sensitive plants and cassia also observe.

The flowers of both species of tragopogan open in the morning at the approach of the sun, and without regard to the state of the weather, regularly shut about noon, from which fact the plant has attained the name of "go to bed at noon."

The four o'clock (mirabils) is well known from its remarkable property of opening its flowers at four in the afternoon, and not closing them till the same hour in the morning.

The evening primrose (Enothera) [a native of Farmington] is noted for its remarkable property of regularly shutting with an audible popping noise about sunrise and opening at sunset.

The tamarind tree, the water lily, the marygold, and the false sensitive plant in serene weather expand their leaves in the day time and contract them in the night. The flower of the garden lettuce opens at seven o'clock and shuts at ten.

A species of serpentine aloes, whose large and beautiful flower exhales a strong odour of the vanilla during the time of its expansion, is cultivated in the Imperial Garden in Paris, where it does not blossom till towards the month of July, and at about 5 o'clock in the evening, at which time it gradually opens its petals, expands them, droops and dies, and by ten o'clock in the same evening it is totally withered.

The cereus, a native of Jamaica and Vera Cruz, exhibits an exquisitely beautiful flower, nearly a foot in diameter, the inside of the calix a splendid yellow, the numerous petals of a pure white, and emits a highly fragrant odour during a few hours in the night, and then closes to expand no more.

The flower of the dandelion posses ses very peculiar means of sheltering itself from the heat of the sun, as it closes entirely whenever the heat becomes excessive.

Linnæus enumerates forty flowers possessing this kind of sensitiveness, and divides them into three classes.

1. Meteoric flowers, which less accurately observe the hour of folding, but are expanded sooner or later, according to the cloudiness, moisture, and pressure of the air.

2. Tropical flowers that open in the morning and close before evening every day, but the hour of their expanding becomes earlier or later, as the length of the day varies.

3. Equinoctial flowers, which open at a certain and exact hour of the day, and for the most part close at another determinate hour.—*Farmington Chronicle.*

Spring in the Garden.

HARDLY was the snow gone and the earth loosed from its fetters of ice, when the gladsome spring flowers, springing up in the very footprints of Old Winter, came to tell that his reign had passed. How welcome are these first tokens of returning life! They tell such a winsome tale of balmy south winds and coming verdure that we love them, both for their own loveliness and for their promise of sunny days in store.

The Double Snow-Drop was among the first that came to say that the chains of winter were broken. It raised its modest white flowers even while the snow showers were yet falling, in itself beautiful, and beautiful as a harbinger of coming buds and blossoms. Then came the Crocus, with more showy flowers, in colors white and blue, and yellow, many delicately shaded or veined and striped. Hardly had the Crocus began to fade when the beautiful Hyacinths opened their spikes of many colored blossoms, and the air was laden with the rich perfume. And beautiful, indeed, they were, of every colour—crimson and blue, purple and pink, yellow and rose, and white, of every shade and hue. With them came the Double English Violet, mingling its sweet fragrance with their rich perfume—an unpretending flower, whose odors filled the air with a delicate sweetness. Then the more gaudy Early Tulips, in scarlet and yellow, blazed forth in the warmer sunshine, and the curious Frittellarias opened their chequered flowers in colours of purple and brown, white, yellow, and pink.

And now the reign of Flora may be said to be fairly inaugurated. The Pansy bed has been daily increasing in bloom and beauty; the Dicentra, or Bleeding Heart, is throwing out its graceful branches, all strong with rosy, heart-shaped blossoms; the Japan Quince is a-blaze with its crimson flowers; the yellow Forsythia is loaded with its golden bells; the sweet Narcissus shows its golden, crimson-edged cups; and all through the Garden, Plant, and Shrub, and Tree is putting on its bridal attire.

How to get good Celery.

Sow the seed in a hot bed in March, or as early as the weather will permit. Some prefer a cold bed, starting it in some warm place as soon as the soil is sufficiently dry to work it. As soon as the season will permit, and the plants have attained a proper size, transplant them into a rich, warm spot. Set them four inches apart, give them a liberal watering, and shelter them from the sun until they have taken root. Here let them grow until about the first of July, when they must be planted where they are to grow through the season.

In preparing for this, some dig trenches to set the plants in, and others do not. We have cultivated in both ways with about equal success. If a trench is decided upon, dig it eight or ten inches deep, spade the bottom and make it fine, add a coat of composted manure, then rich mould and set the plants. The plants must be taken up with care, and with all the earth adhering to them that is possible. Set them six or eight inches apart, after trimming off all the straggling leaves, then give them a good watering, and let them be shaded with boards until they strike root and begin to grow. The trenches should be four feet apart. If the weather is dry, water freely morning and evening.

After the plants have attained considerable size, and when they are dry, the earth must be drawn around them a little at a time, as they progress, taking care always that the leaves be held together so as to prevent the soil from getting in among them. By earthing up gradually, the stems are bleached and become tender and crisp.

It should stand out doors until there is danger of frost, which ought not to touch it. There are various modes of keeping it. Ours is, to take it up with as much of the soil as we can save about the roots, and set it out in a cool cellar, in plenty of the earth in which it grew. If the plants are set a little apart, and the temperature of the cellar is cool and even, they will keep fresh and ready for use until April or May.

If the plants are set on the surface of the ground, as cabbage plants are usually set, the same process of earthing up must be observed.

No weeds should be allowed to grow among the plant, and the ground should be frequently stirred with the hoe or some other implement.

Celery is easily cultivated. There is no mystery about it, whatever. Any farmer's son or daughter may do it that will try. If one prefers, he can purchase the plants ready for transplanting.

Fifty to a hundred of them might be enough for a family.

It is a convenient and healthful salad, and should be more common on the tables of our farmers.

An Orchard preserved by the "Canada Farmer."

To the Editor of THE CANADA FARMER:

SIR:—Enclosed you will find one dollar to pay for THE CANADA FARMER, sent to A. Anderson, Rockwood P.O. THE FARMER has been worth more than $20 to me already. I was like to lose the best of my fruit trees with what one of your correspondents calls the Apple-tree Bark Louse. I made inquiry for a remedy of parties who had old orchards, but no one knew or could tell what I should do with them. At last I met with a gentleman who told me that the only remedy was to cut off the old top, and let the tree form a new one. I took his advice and lost my tree. But using what your correspondent suggests, has killed the louse without killing the tree. I write this in order that others may be induced to take THE CANADA FARMER and be able to save their trees from certain destruction by this pest.

A. ANDERSON.

Rockwood, May 10, 1864.

ŒNOTHERA LAMARCKIANA.—This long and uninviting name belongs to a superb flower of the class known by the more familiar title of "Evening Primrose."—"Lamarck's Evening Primrose" will, perhaps, be the name by which it will be distinguished, when it comes to be more widely known,—as it well deserves to be. It is a truly magnificent flower, reaching the height of three feet, and producing a profusion of immense light yellow blossoms, three or four inches in diameter. It is an exceedingly ornamental plant for mixed flower gardens. By sowing the seed in a hot bed, it will blossom the same year. It is a perenial.

Apples at the West.

To the Editor of THE CANADA FARMER:

SIR,—When you say that the apples of the entire West and South-West will not keep throughout the winter, as do those of Western New York and Canada, &c, &c, you make a statement that would astonish many thousands of intelligent horticulturists in Michigan, Illinois, Missouri, and Indiana.

That many or even most of those varieties, depended upon by the people of the North and East for long keepers, are only Fall or Early Winter Apples in the South-West, is true; but their places as long keeping varieties are more than filled by others as good that have been originated in the South-West. But we, of the Prairie County, do not propose to quit even with you in the reputation of our different sections for winter fruits. We claim that for size, colour and flavour the apples of the same varieties are far superior when grown on the prairie soils, and in the climate of Illinois and Missouri, to those grown in Western New York.

Yours truly,

Cuba, Missouri. B. SMITH.

NOTE BY ED. C. F.—Our friend Smith ought to know whereof he affirms. Time will show whether the apples of the West will be able to compete in the markets of the great cities of America and Europe with those of Western New York and Canada. At present our remark is true that the fruit dealers of those cities rely upon Western New York and Canada for their supply of choice long-keeping apples, and we are strongly of the opinion that it will be a very long time before the showy apples of the West will supplant them. There are reasons for this opinion, based upon the meteorological conditions of the two sections of country, which we have not space here to discuss, but which will ever continue to make the apples of Canada of *finer flavor* (pardon the assertion), firmer texture, and more capable of enduring handling and transportation than the coarser grained, larger sized, and more watery fruits of the prairie region.

DWARF PLUMS.—The *Horticulturist* says:—"Dwarfs are admirably calculated for the garden, All parts of the tree being within easy reach, the fruit is readily gathered, and the little Turk is more under control. Trees of this kind become objects of regard, receive better treatment, and consequently produce better fruit. There is no reason why they should not be alternated with pears in the garden. They are deserving of a place there, and will repay the little extra trouble they demand in their formation. Our object at present is simply to call attention to the subject."

A CHEAP GRAPE TRELLIS.—I have a grape trellis that I like better than any I have seen a description of. It is substantial, does not get out of place, and is rustic in its appearance. It is made of five or six inch cedar posts eight feet long, set six feet apart, with spruce poles fifteen or sixteen feet long, nailed on to the posts a foot apart, running the whole length. The posts cost eight and ten cents each, and the poles three dollars a hundred here. I have used this kind of trellis for a few years past, and like it better than wire. Laths can be nailed across the poles perpendicularly to tie the growing shoots, if any one should wish, although I do not use them.—C., Provincetown, Mass., in *Horticulturist*.

SOILS FOR POTTING.—Those who are novices in the cultivation of plants in pots, are often troubled when they see the directions to use some particular soil or compost, given in the works on gardening. Various formulas for these composts are given, and some of their ingredients are mentioned by names which are little known in this country. These minute directions are frequently sufficient to deter those who think they are essential to success, from cultivating many plants. The fact is, that most plants will grow in any good garden soil, by which we mean a light loam enriched with vegetable matter and well-decayed manure. Sods from an old pasture stacked up and allowed to decay, will decompose into a compost which will suit the great majority of plants, and may be easily varied to suit particular ones by the addition of sand for those requiring a poorer soil, and by the use of some top soil from the woods to suit those requiring more vegetable mould. The sods and surface soil of a rich pasture, with about one-fourth of well-decayed manure like that taken from an old hot-bed, mixed together and left in a heap for some months, with an occasional forking over, will give a compost which will answer for all ordinary plants. Run it through a coarse screen to remove sticks and large lumps, and preserve under cover for use.

INFLUENCE OF FLOWERS.—During the raid of Quantrell in Kansas, and the sacking and ravaging of Lawrence, the gang came to the residence of George Ford, whose neat house was surrounded with flowers. The soldiers appealed to their leader to spare the place, "as it was too pretty to burn;" he assented, and the house was spared, almost the only building left. Mr. Ford says now he shall cultivate flowers as long as he remembers the rebellion. The charm of a few flowers touched the heart of men whom no misery or suffering, in the midst of which they were revelling, could reach, and saved from destruction the house referred to. Who does not love flowers, and who will not devote even a little space to them? They refine, they elevate.

MOWING OFF STRAWBERRY VINES.—At a late meeting of the Waltham (Mass.) "Farmers' Club," Dr. O. D. Farnsworth said he had been trying a new experiment with his strawberry beds. After his bed had ceased bearing, he mowed it closely and raked off all the vines, put on a little guano, and the result was that the ground was literally covered with the finest fruit. The bed which he experimented with is now five years old, and he intends to continue this course with it. He thought it would not be well to pursue this course if there were many weeds, as in that case it would be easier to set out a new bed. In setting a bed, he would trench 1½ feet deep and manure highly. The rows should be 3½ feet apart, and the plants 8 inches apart in the rows. Paths should be dug from 18 inches to two feet apart, and filled with meadow hay.

A NEW REMEDY FOR THE BORER.—In conversation with one of our subscribers the other day, he casually stated that his apple trees were not troubled by that pest, the borer. Upon inquiry we learned that he applied the earth and substance taken from where his sink-spout emptied, to the trunk, or rather around the collars of his apple trees each autumn, and then dug it away or removed it the next summer. He considered this an effectual remedy, as the borer did not trouble them, and further, it was a good dressing for the soil around the tree, after being dug away. Of course the soil where the spout emptied would have to be renewed yearly, by supplying a cart-load of earth, sods, &c., to absorb and hold the refuse liquid. If not used in this manner, the slops from the sink should always be added to the compost heap, or applied to the garden crops during the growing season, as they are too valuable and rich in fertilizing material, to be wasted.—*Maine Farmer*.

SAWDUST FOR ORCHARDS.—A year last fall I hauled a load of old rotten sawdust and threw it round my young apple trees. My neighbour over the way is one of those characters who plods on in the same old track that his father and grandfather did before him, believing that they knew all, and more too. My neighbour said, if I put saw-dust around my trees I should surely kill them! I told him I would risk it "any how." I put fresh stable manure around one row, and sawdust around the next. Around another row I put leached ashes. And the remainder of the orchard I manured with rotten barn yard manure, and in the spring spread potatoes. The result was, many trees grew very luxuriantly, but the trees where the sawdust was grew the best, the bark being smoother, and the trees had a healthier appearance. I will state also that the part of the orchard planted to potatoes grew greatly better than that planted with corn, The soil was clay loam.—*N. E. Farmer*.

CULTURE OF LETTUCE.—Everybody, we believe, likes lettuce. It is considered healthful, has a slight narcotic influence on the system, and, perhaps may be especially useful to such nervous temperaments as find it difficult to secure a *nap after dinner*.

It thrives best in a light, rich soil; a soil that is rich from prior cultivation, rather than from the immediate application of manure.

If it is wanted quite early—and that seems desirable—the seeds must be sown in a hot-bed in March, and transplanted in April, in a spot favourably protected from cold winds; and even here it may need occasional covering. It only requires proper cultivation after this to secure a crop. Allow sufficient room between the plants for them to head out without crowding each other, and an occasional evening watering if the weather is dry.

Those who keep poultry will find it worth cultivating for their use. They are excessively fond of it. A dozen hens will eat two large heads each day if they can get them. The store pigs like it equally as well. We have been in the habit of growing it along the sides of the paths in the vegetable garden, and on any little vacant spots, where it appears well, and gives us a cart load or two each summer for the pigs and the hens!

There are many varieties of lettuce, among which, four excellent kinds are the Early Curled Silesia, Drumhead, Victoria cabbage, and Bruce's nonpariel, the latter raised by Mr. Bruce, of Hamilton, and stands our summer heat better than most other kinds.

Poultry Yard.

Care of Chickens and Young Ducks.

As soon as the hens come off with their broods, they should be confined, for a day or two, in a moderately warm room. The chicks should at first be fed with crumbs of bread moistened with milk or hard-boiled eggs chopped fine. After the little chicks have gained some strength, the mother hen and her little family may be cooped and placed, if the weather be fair, in a dry, sunny situation The coop should be large and airy; and here a very great error prevails with many in confining the hen and chickens in much too cramped and narrow quarters, to the no small inconvenience of the mother, say nothing about the great danger of the chicks being killed by the tread of the hen. In nine cases out of ten the coops are entirely too contracted, low and uncomfortable for the mother and her young. Just draw a comparison between a hen and her brood confined in a small, low, contracted room, hardly sufficient for her to turn about, much less to carefully brood her young, with a large, airy apartment, well protected from heat, wet or cold, and sufficient space for exercise.

In order to keep the chickens in good health, so confined, it is essential that the greatest precautions should be taken to ensure cleanliness in all departments; therefore the coops should be cleaned out daily, and the floor covered with sand or fine gravel, to prevent any portion of filth adhering to the floor. Fresh water in clean vessels should be placed before them morning and afternoon. Impure, filthy water may be set down as a main cause of all the diseases poultry are subject to—diarrhœa, gapes, and other maladies. At a later season the chickens may be left much more to themselves, only let them remember that if in possession of good fowls, and they desire to have healthy chickens at an early period of the year, their chance of success will be infinitely increased by following our advice. Chickens hatched the latter part of May and June may be confined in the coops only about two weeks, after which they may be allowed their liberty, and they will thrive far better than when confined either in courts or coops

As to feeding, it is not easy to name the quantity which chickens will eat, or the number of meals a day that they will require, as these continually vary according to their age and the opportunity they have of catering for themselves We have found old fowls thrive well on three meals a day, while chickens, until they reach cocks and hens estates, want ten, seven or five, according to their age. Young chickens require a little very often When they fail to be hungry for every meal, reduce the number of meals. When they are not found to be hungry for seven meals a day, reduce the number to five, and so on; and most likely the chickens will go to work upon their food as healthy chickens should. The food also should be varied—a poultry bill of fare may be made very lengthy. For standard dishes we have corn, barley, buckwheat, oats and boiled potatoes; then there are millet, sunflower seeds, crushed oats boiled, to vary the diet, especially for the young; and for casual change we have boiled carrots, wheat-screenings, fresh meat, and any item that presents itself.

Following the rule to feed when fowls are hungry, and not to feed until they are hungry, makes frequent changes necessary in the number of the meals, and consequently in the hours at which they are given; and with regard to the kind of food, the more varied the feeding can be in that respect the better, provided all pampering be carefully avoided. The more the food is scattered the better. Throw it well abroad, and when the fowls or chickens are no longer anxious to run for it, hunger is appeased.

The Ducks now require attention. Ducks generally commence laying the latter part of March, and continue to lay until May, if the sitting did not intervene and interrupt the bird. They are not generally inclined to sit; but to induce them to do so, toward the end of laying take away their eggs, being careful every morning to take away the oldest, in order that they may not spoil. From nine to thirteen eggs are allowed her, according as she is able to cover them. The only time the duck requires some care is while she sits. As she has but little time to spare to procure her meals, food and water should be placed near her; and she is content with it, let the quality be what it may. It has even been remarked that when she was too well fed she did not sit well; for that reason she should be portioned. Incubation, as with the goose, lasts thirty days; and the first broods are generally the best, because the warmth of summer helps to bring them about. The cold always prevents the late broods from getting strong and giving as large ducks Every duck of the same species is far from giving proofs of much foresight, for the preservation of the warmth of her eggs. It often happens that they let them cool. Besides, hardly are the ducklings dry when the mother takes them to the water, where they dabble and eat at first, and many of them perish if the weather is cold. For the foregoing reasons, it is well to sit hens on ducks' eggs. Being more assiduous than ducks, these foster-mothers have more affection for their young, will watch and guard them with more attention, and as they are unable to accompany them on the water—for which ducks show the greatest propensity as soon as they are excluded—they follow the mother-hen on dry land, and become a little hardy before they are allowed to take the water without any guide.

On hatching there is no necessity of taking away any of the brood, unless some accident should happen; and having hatched, let the duck retain her young upon the nest her own time On her moving with the brood, prepare a coop and pen upon the short grass, if the weather be fine, or under shelter if otherwise; a wide shallow dish of water, often to be renewed, near by them. Their first food should be crumbs of bread moistened with milk; curds, or eggs boiled hard and chopped fine, is also much relished by and is good for them. After a few days, corn meal *boiled*, and rolled between the hands, and if boiled potatoes and a few chives or lettuce chopped fine be added, all the better. As soon as they have gained a little strength, a good deal of pot-herbs may be given them raw, chopped and mixed with a little bran soaked in water, barley and potatoes beat up together. They are extremely fond of angle-worms and bugs of all kinds, and for which reason they may be useful to have a run in the garden daily. All these equally agree with young ducks, which devour the different substances they meet with, and show, from their most tender age, a voracity which they always retain. The period of their confinement to the pen depends on the weather and strength of the ducklings. Two weeks seem the longest time necessary; and they may sometimes be permitted to enjoy the pond at the end of the week, but not for too great a length of time at once, least of all in cold weather, which will affect them, causing them to scour and appear rough and draggled. Care must be taken that the water where they are at liberty to go contains no leeches, which occasions the loss of the ducklings by sticking to their feet. Look out for mud turtles and bull-frogs in the water; cats and rats on land—all enemies of young ducks. When young, ducks are exposed to many dangers and mishaps. Their waddling gait quite unfits them for running from a foe on land and they are but too apt to be trodden on by horses, cattle, and even by the foot of man *Bement*

PRIDE IN FOWLS.—Fowls have plenty of vanity and pride. They are very sensible to admiration from man, and miss accustomed notice. A prize bird knows itself. The queen of the poultry-yard must eat first, and stand by the king at feeding time. She resists any invasion upon her rights, and will have a precedence in all things. Indeed, precedence in the court-yard seems as valued as at earthly courts. Age and priority of residence in the yard, not less than size and strength, constitute right to precedence. No dowager ever treated young chits of girls more contemptuously than the senior hen treats her juniors. One has heard of a Swiss cow which died of vexation when her bell was taken from her. So did a hen of mine, long mistress of the poultry-yard, die of smothered pride, when a new queen-hen, partner to a new king (a pair I bought at a poultry show), came into my enclosure. The rival queens eyed each other for a moment steadfastly, then rushed to the combat. The new comer, though the old hen fought bravely, was the stronger. Mrs. Mercury, as we called the old hen, from the wing-like feathering on her legs, never attempted to try her chance again, succumbed in a melancholy manner, and after a few days' moping gave up the ghost.—*All the Year Round.*

NOTE BY ED. C. F.—The above is no fiction. We had a beautiful bantam cock, who died of mortified pride. A black Spanish cock was uncooped in the same yard in which the bantam was strutting about when the latter attacked the new comer with tooth and nail. The Spaniard treated the little fellow with cool contempt, and from that moment the bantam pined, drooped, refused food, and at length died.

The Household.

Keep Your Teeth Clean.

We have met people who are noted for their neatness, who yet have unclean teeth. But these people are not truly neat, else the mouth, the most important part, would be kept clean and sweet. Dirty teeth are unindurable—in every sense you may take it; bad looks; bad breath; bad person (to permit such a thing); and bad health, or leading to it. It is for this reason, as well as to see the tongue, that some doctors look into the mouths of their patients. If every breath inhales stench, it needs no doctor to tell that this is injurious. Without number are such mouths. And yet the mouth pretends to take in only what is clean, when the uncleanest thing it can take is not half so foul as itself. But the remedy. It is to keep your mouth clean (after the dentist has thoroughly cleansed your teeth) by the use of the brush, which, if it is news to you, you can buy for twenty cents. This is simply all. Use the brush dipped in water, after each meal—thoroughly after the last, as during the night the particles of food if not removed, will turn sour and fetid, and breed insects (*animalculæ*) before morning. The brush then and cold water; or, if the brush is hard, dip in warm water; this will soften it. Now and then teeth will require more cleaning. In such case, use a little tooth-powder. You can buy it of the dentist, or get it at the druggists. Chewing gum, smoking, and chewing tobacco, make the teeth dirty. The use of acids—lemons, oranges, apples, will clean them (if not too dirty); but it will also hurt them, as it has an action upon the enamel.

☞THE droppings from stove-pipes, where wood is burnt, leave very persistent stains. Oxalic acid will remove the iron, and when the spot is then well washed, ammonia may take up what is soluble.

SOILED CARPETS.—When soiled, carpets may be cleansed after beating, with the following mixture: two gallons of water, with half a pound soft soap dissolved in it, to which add 4 ozs. of liquid ammonia; this may be rubbed on with a flannel cloth, and the carpet then rubbed dry.

CEMENT FOR THE MOUTHS OF CORKED BOTTLES.—Melt together a quarter of a pound of sealing wax, the same quantity of resin, a couple of ounces of beeswax. When it froths, stir with a tallow candle. As soon as it melts, dip the mouths of the bottles into it. This is an excellent thing to exclude the air from such things as are injured by being exposed to it.

SLEEPING WITH THE MOUTH OPEN.—Mr. George Cathin, in his quaintly got-up monograph, "The Breath of Life," attributes very many human bodily ills to the extraordinary habit, so common, he says, among the people, of sleeping with the mouth open—in this condition breathing being injuriously performed through the mouth, instead of the safe and natural process through the nostrils.

A SUBSTITUTE FOR COFFEE.—A writer in a late number of the *Farmer* mentions "barley" as a substitute for coffee, the best substitute our family have tried is brown bread crust, and we prepare it thus: As fast as the usual loaf is used for the table cut up the crust (from the bottom and sides as well as the top), and bake it again in the stove oven till it is very brown—not black, then pound it in a mortar and use as the burnt and ground coffee.

HOW TO SAVE A DROWNING PERSON.—It may not be generally known that when a person is drowning, if he is taken by the arm from behind, between the elbow and shoulder, he cannot touch the person attempting to save him, and whatever struggles he may make will only assist the person holding him in keeping his head above water. A good swimmer can keep a man thus above water for an hour. If seized anywhere else the probability is that he will clutch the swimmer, and perhaps, as is often the case, both will be drowned

WHOLESOME BREAD.—Stir unbolted wheat flour into cold water until as thick as common stirred cake; bake twenty minutes in a hot oven, in small tart tins; this makes a nice wholesome dish for breakfast, far preferable to buckwheat cakes.

An improvement upon this, for those who like something richer, is, to take a pint of milk, and four eggs well beaten, thicken with unbolted flour and bake in the same way A friend of ours, at whose table we first tried it, pronounces this the only wholesome form in which hot bread can be eaten.—*Lady's Friend.*

Miscellaneous.

Comments on No. 6 of the Canada Farmer.

"W. S." estimates that from 6 to 12 stumps per hour may be extracted by using a hydraulic press. When we consider that the proposed force of many tons must originate entirely in the arm of the operator by the interesting process of pumping, a day would be found rather a short period for the work of extracting the number specified. Even then, few would care to use hydraulic means the second day.

"*Is there any machine for sowing plaster quickly?*" Yes. Put your plaster and yourself on board your cart or waggon. Tell the boy to drive on, while you throw it out, right and left.

"*Change of seed*" is desirable only when we get better seed. Changing seed for the sake of change, without any specific improvement, is frequently productive of more evil than good.

"*Scab in Sheep.*"—Tobacco water or salt brine, corrosive sublimate, arsenic, sal ammoniac, blue stone, oil of vitriol, and spirits of turpentine. Did hat "shepherd" calculate the decompositions which would occur on mixing this rather heroic medicine? What, for instance, would he expect to get by mixing sulphuric acid (oil of vitriol) with salt, sal ammoniac, and spirits of turpentine? Which is really the curative agent in this mixture? A "sure cure" would no doubt take place if any considerable portion of the mixture were used. The sheep would not be able to come to time for a second application.

Does "*Clover Hay contain as much nourishment as Wheat*" as stated by Robert Irvine, Esq., F.R.S.? While wheat is composed of starch so nearly allied to the fat of animals, and gluten so nearly allied to the muscles of animals, no dry fibrous stalks can possibly afford as much nourishment as wheat.

"*Dogs.—How should they be treated?*" Chain them up by all means. One dog may do more damage by killing sheep than a hundred can compensate for, whether kept for "sporting or other purposes."

Honey Boxes.—Mr. W. H. Sherwood's caps would be much improved by putting panes of glass for end pieces, and covering the two caps with a larger one to exclude the light. He could then at any time ascertain the quantity and quality of honey deposited in his boxes.

Answers to Queries.—Bees do work in boxes until the hives are filled. They are too sensible to *work* out while they have profitable business at home.

"*The Best Bee Hive,*" for ordinary purposes, is just a plain box, with convenient caps on the top when required, such as described by Mr. Sherwood. Any one can make them. For certain experimental purposes a moveable comb hive is desirable, though not one person in twenty really gains anything by their use. A rough box for a hive will give you as much honey and of as good a quality as any patent humbug that has yet been invented. All non-swarmers are humbugs, pure and simple. The foregoing opinions, though given in oracular style for the sake of brevity, are as liable to error, and as open to criticism, as those of other people

NOTA BENE.

Hastings Co., C. W

Short Notes on Various Topics.

[BY J. A. S.]

KEEPING A JOURNAL is a very useful habit, but one which few farmers adopt, because they think it too much trouble. Nonsense! Get a blank book and begin at once, if you don't set down every day's doings, at least put down the most important Put down the weather, wet, dry, hot and cold, the first and last mow, the first and last sleighing, when you began to feed your cattle and when you left off, when you start the plough, what you sow and when, the time you harvest, the yield of the crop, and the price at which you sell it. Be sure to know about what time your animals are to have their young, and a host of other things which will occur to you if you once begin. It is not much trouble to keep such a book of farm notes, and I am sure if you but try it one year you will never neglect it again.

"KEEP A THING SEVEN YEARS AND IT WILL COME OF USE," is an old proverb with more truth in it than many suppose. Farmers should save odds and ends of everything that can possibly be of any use. Old iron especially should never be passed by; keep a box and throw in every scrap you come across, no matter what the shape or kind, and you will be astonished how often you will find them of use, saving many a journey to the blacksmith, and many a shilling of outlay.

WINTERING CATTLE means with some folks, bringing them through alive, and he is the smartest man and the best farmer who can give them the least and yet keep the breath of life in them, no matter if they have to be lifted in the spring,—"*'tan't much of a lift.*" This way suits some people, but I like to see cattle kick up their heels in the spring, not in the death agony, but in sportiveness and vigour. Sometimes a man is short of both feed and money and is obliged to "feed through a knot hole," as the saying is, but he who has plenty and yet starves his stock, is a loser in the end, and a mean man to boot.

PASTURING IN THE ROAD is a very common practice and a very general nuisance. So soon as the first blade of grass appears in the spring, out come a swarm of hungry brutes ranging up and down, "seeking what they may devour," and the man who has most land generally has most stock in the road, training them by a summer of hardship to go through the winter in orthodox style. Sometimes you will find them in your crops of a morning, and you don't like to make trouble with your neighbour, by taking them to the pound, so you turn them out and repair your fence, mayhaps' without much outward demonstration of wrath, but methinks your inward meditations will be anything but tranquil. Sometimes they have bells on and you can hear them and be on your guard, but in general the bells are small and not much count; I suppose a good big bell would overbalance their hind quarters. Seriously, though, I would ask, is there any profit in such a custom? If there is, I hope the owners of the cattle, hogs, horses, colts, sheep, and geese that infest our highways will give us the figures.

Cherry Bank Farm, Burford, May, 1864.

Threshing Machines Again.

To the Editor of THE CANADA FARMER:

SIR,—As I intend to get a new threshing machine this summer, I have been watching the columns of THE CANADA FARMER for replies to "John Bull's" enquiry, in No. 4 of THE FARMER; but I find by your correspondent, J. Brett, that they are nearly as far back in progress in his district as the Lower Canadians are. I have seen in Lower Canada an eight-horse power thresher and seperator at work, but all they can thresh is from 100 to 200 bushels per day in the fall: 200 is a good day's threshing—generally 150 bushels. Now, I do not want Upper Canada to be represented by J. Brett's locality for threshing. I have run a ten-horse threshing machine for several years. I have threshed in places where there was just room to set the machine and about two feet to spare to carry off the grain—total width, seven feet In other places the ends of the machine have been out at the side of the barn. so the size of a barn floor for a machine is not a matter of much consequence. It requires nine men generally to keep the machine running, viz. one to drive, one to feed, one to cut bands, one to carry off the grain, two in the mow, and two on the straw stack. If there be more than one day's threshing at the same place, three will be required on the stack. I put up the straw-carriers, or stackers, at every barn where it is possible. I have threshed 500 bushels of wheat per day, 600 bushels of barley per day, 350 bushels of oats in half a day, 70 bushels of peas in three hours (with the same machine), time of setting and loading machine included. I take two span of horses and two men with me with the machine. It is not the grain that bothers the machine, it is the straw. I have threshed all day steady for 100 bushels of wheat, and at other places I have often threshed two bushels of wheat per minute with greater ease than the day I threshed only 100 bushels. I run one of Hall's machines, of Oshawa, and I prefer a Pitt's power before any other to drive the machine, except a steam power. Mr. Alcorn, near Port Hope, has a steam threshing machine, and I am informed it does no more than a ten-horse power. The getting of water is the trouble with the steam. Taking all things into consideration, I think the horse-power is the cheapest. I charge for threshing three cents per bushel for wheat, barley and peas, and two cents per bushel for oats. Some persons thresh by the day, and charge six and eight dollars per day; others work by the job.

I have just come home from a trip away up through the western part of Canada, and I made it an object to visit the principal agricultural works on my way. Messrs. Patterson, Belleville, Massey, Newcastle, and Brown, Whitby, build machines about the same style—price, $310. Sawyer, Hamilton, Billington & Forsythe, Dundas, about the same. Watson, Ayr, builds his machines to run with shaft along one side and gearing instead of belts. This I do not like, for I have run my straw carriers several times putting straw on the stack when the rest of the machine was still. It hurts a machine more to run it empty than full. On my way home I visited Hall's works, Oshawa. He is making a great improvement on his machines this season, and the style of finish far excels all the others I have seen. Of course, each firm represents their's to be the best built in Canada, excelling all others in some point or other; but I have not seen any I would prefer before Hall's. His price for the new improved style is $315. It took the first prize at the Provincial Exhibition last year; besides the above prices there is $25 for straw-carrier and chains. The machines are a little dearer this year, and the reason is, I am told, the iron is a little higher in market. I would advise all getting machines to get them from shops near a railroad station, for in case of accident the time lost is considerable in the threshing season. I always go to the nearest station and telegraph for the repairs I want, and they are down to the station by the next train. I must give Hall's people great praise for their promptitude in forwarding repairs. J. O.

Northumberland, May, 1864.

Key to Epitaph, on Page 110.

BENEATH this stone lies Katharine Gray,
Changed from a busy life to lifeless clay,
By earth and clay she got her pelf,
And now she is turned to earth herself
Ye weeping friends, let me advise:
Abate your grief and wipe your eyes;
For what avails a flood of tears?
Who knows but in a run of years,
In some tall pitcher or broad pan,
She in her shop may be again.

Saltfleet, April 25, 1864. HENRY LUTZ.

Does Farming Pay?

To the Editor of THE CANADA FARMER:

SIR,—Having read attentively the numbers of the CANADA FARMER already issued, I have noticed a great desire on the part of your numerous correspondents to impress their readers, with the easiest, most practicable way of making money. Some speak in the strongest terms of the profits easily realized by a dairy farm, others are in favour of stock raising in general, some would invest in Sheep alone, and some even in bees or poultry. From the different statements made, I cannot see a fair case or a good balance sheet properly made out, but it may be owing to my shortsightedness, and consequently not the fault of your correspondents. In the statements given of the profits arising from various systems of farming so strongly recommended, it appears to me that the most important point has been overlooked, namely, the return made for the capital invested in land, stock, and implements. Then the working expenses must be thought of before striking a balance, which in many instances I fear will look small on paper. In the ordinary business of the country, money pays from 8 to 10 per cent, and when writing of farming as a paying avocation, this fact should be taken into account. Should any of your correspondents be able to furnish the readers of the CANADA FARMER with a good margin of profits of farming such as I have mentioned, I for one should like to settle in whatever part of the country he may hail from. But from the experience I have had in the last twenty years, which have been devoted most closely and exclusively to farming, I have concluded that agriculture in this cold and changeable climate, is a very poor investment for capital, and will not return more than from 2 to 5 per cent, which is a very low rate of interest just now.

CALCULATOR.

☞ WHY does a donkey prefer thistles to clover? ANS.—Because he is an ass!

☞ The principal of a public school, who wanted permission from his patrons to corporeally punish his pupils, had free permission given him in the following response from a fond and tender parent—"Dear

Sir: Your flogging cirklar is duly received. I hope as to my son John you will flog him just as often as you like. Hoes a bad boy is John. Although I've been in the habit of teaching him miself, it seems to me he will larn nothing—his spelling is speshall ottragously deficient. Wallup him well sur, and you will receive my hearty thanks. Yours, Moses Walker. P S—Wat accounts for John being sich bad scholar is that he s my sun by my wife s first husband."

Markets.

Toronto Markets.

"CANADA FARMER" Office, June 1, 1864.

Flour dull and lower, Superfine, nominal at $3 50 to $3 75 per barrel, Extra $4 40 to $4 40, Fancy none in market; Superior $4 75 to $5 10, Bag Flour $4 00 per 200 lbs.

Fall Wheat, weaker, 85c to 90c for common to good per bushel; 93c to 96c for good to choice.

Spring Wheat 75c to 80c and 82c per bushel; occasionally a load of extra brings 83c.

Barley at 70c to 80c, and in one or two cases, as high as 82c per bushel.

Oats in good supply at 35c to 38c per bushel, for common to good; 40c to 41c for good to extra; occasionally a load brings 42c to 50c.

Peas 45c to 50c per bushel for common to good; 52c to 55c for good to extra.

Hay $8 00 to $11 00 per ton.

Straw $5 to $6 50 per ton.

Hides (green) at 4½c to 5c per lb., the latter price for extra; trimmed 5c to 6c per lb.

Calf skins at 8c to 10c per lb.

Sheep skins at $1 25 to $1 80, the latter for extra.

Lamb skins at $1 25 to $1 70, the latter for extra.

Wool, 30c to 36c.

Coal $7 25 to $9 per ton.

Wood $4 25 to $5 per cord.

Provisions—Hams 10c to 11½c per lb. wholesale. Flitch Bacon 7½c to 8½c per lb. wholesale, 8½c to 11c retail. Cheese, wholesale 11c to 11½c per lb; retail 15c per lb.

Beef—Inferior $5 per cwt.; extra, $6 00 per cwt. wholesale; 7c to 9c per lb. for ordinary; 10c to 12½c for superior, retail.

Calves scarce at $4½ to $5½, upwards.

Sheep at $5 to $7 each, according to size and quality.

Lambs $2 to $3 00 each.

Butter—Fresh, wholesale, at 15c to 16c per lb.; retail 18c to 20c per lb. Tub butter, dairy packed, 13c to 15c according to quality, wholesale; retail, 15c to 17c.

Eggs—10c per dozen, wholesale, retail 10c to 13c per doz.

Salt—$1 75 to $2 per barrel.

Water Lime—$1 50 per barrel.

Potatoes—25c to 40c per bushel, wholesale; 45c to 55c per bushel, retail.

Apples—Common to good, $1 50 to $2 25 per barrel; extra $2 50 per barrel.

Coal Oil—30c to 37c for Canada; 40c to 58c for Pennsylvania.

London Markets—May 28.—Market rather easier to-day. *Wheat*—No change in prices. *Oats* in good supply at 45c. top price. *Wool* in large supply, and eagerly bought up. The competition was exceeding brisk to day, and prices went up rapidly within an hour. The opening bid was 40c., an advance speedily followed, until 45c. was gained—rather a high figure for wool in this market. The principal buyers were Messrs. McIntosh, Gordon, Shannon, Roe, Hilliard & Saunby, and Yarwood. *Butter, Eggs, &c.* in fair supply, at former rates. *Fall Wheat* 90c. to $1 00 per bushel; *Spring Wheat* 76c to 78c. *Oats* 44c to 47c. *Peas* 50c to 55c. *Corn* 50c to 60c. *Hay* per ton $10 to $12. *Beef* per lb. 07c to 10c. *Oat Straw* per load $3 to $4. *Butter, fresh* per lb. 14c to 16c.; keg 12c to 14c. *Apples* 50c to $1 50. *Potatoes* 60c to 80c. *Flour* $2 25 to $2 75. *Eggs* per dozen 8c to 10c. *Hides*, dry per lb 9c to 10c, green 4c to 5c. *Sheepskins* $1 25 to $2 25. *Clover Seed*, per bushel $4 50 a $5 00. *Timothy Seed*, $2 to $2 25. *Wool* 38c to 40c.—*Prototype.*

Chatham Markets—May 30.—*Flour*, ₱ 100 lbs $2 50 to $2 63 *Wheat*, No. 1, white ₱ bu. 85 to 95c, do. No. 2 80c to 85c.; do. red 75c to 85c. *Barley* ₱ 100lbs $1 75 to $2 00. *Oats* 45 to 50c *Beans*, ₱ bu $1 00 to $1 25 *Potatoes* 63c to 75c. *Hay* ₱ ton $12 00 to $16 00 *Peas*, ₱ bu. 50c to 60c. *Wool* 37c to 40c. *Tobacco*, ₱ 100 lbs 4c to 5c.—*Planet.*

New York Markets—May 31.—*Flour*—Receipts 14,851 barrels; market less active, but prices without decided change, sales 7,000 barrels at $7 25 to $7 40 for superfine State; $7 50 to $7 60 for extra State, $7 65 to $7 70 for choice do., $7 25 to $7 40 for superfine Western, $7 55 to $7 75 for common to medium extra do, $7 90 to $8 05 for common to good shipping brands extra round hoop Ohio. Canada flour quiet; sales 300 barrels, at $7 55 to $7 65 for common, $7 75 to $8 60 for good to choice extra. Rye flour steady, at $6 to $7 75. *Wheat*—Receipts 85,472 bushels, market less active and closes a shade easier, sales 70,000 bushels, at $1 60 to $1 67 for Chicago spring; $1 61 to $1 67 for Milwaukee club; $1 68 to $1 69 for amber Milwaukee; $1 70 to $1 77 for winter red Western, $1 78 to $1 81 for amber Michigan. *Rye* quiet, at $1 52 to $1 55. *Barley* quiet and steady. *Corn*—Receipts 22,258 bushels, market 1c to 2c better, with limited supply, sales 15,000 bushels, at $1 56 for new white Western and Western mixed; $1 61 for new yellow. *Oats* firm, at 86c to 88 for Canada; 87½c to 88c for State, 88c to 89c for Western. *Pork* quiet and scarcely so firm. *Beef* firm.

Buffalo Markets—May 30.—*Flour*—The market has been very quiet all the week. The supply, although light, is in excess of the demand, as buyers are only taking for immediate use. Prices are without material change. Sales Canada spring extra at $7 60; Canada bakers at $7 87½, XX Canada white wheat at $8 25. *Wheat*—There has been only a moderate speculative demand for wheat during the week. No. 1 Milwaukee Club at $1 45; and No. 2 Chicago Spring at $1 39½. *Corn*—There has been an active speculative demand for corn all the week, with a strong upward tendency, and prices at the close were 3c to 5c better than at the close of the previous week. New Chicago corn at $1 28, 14,700 bushels No. 2 do. at $1 25, and 16,000 bushels do., do., to arrive at $1 24½. *Oats*—The market was inactive early in the week, with but little doing, but Thursday an active demand sprang up, with very large transactions, mostly for through shipment. Western at 80c, and Canada at 80c. *Rye*—There has been no receipts by lake during the week and the market is entirely bare. Prime samples would sell at $1 30 to $1 35. *Barley*—Scarce and firm, no sales reported during the week. We quote Canada at $1 35 to $1 40; and prime Western at $1 48. *Peas*—Market quiet; sales at $1 06.—*Express.*

Albany Markets—May 28.—*Flour*—Steady at $7 00 to $9 75. *Wheat*—Steady, $1 56, White Michigan at $1 85. *Rye*—Steady; held at $1 50. *Corn*—Firm and more active at $1 43 to $1 45 and $1 46. *Oats*—More active at 87½ to 88c.—*Statesman.*

Detroit Markets—May 27—*Flour*—Sales continue to be confined mainly to the local trade: Superior $8 12½ to $8 25, High extra $7 62½ to $8 00, Extra $7 00 to $7 25, Superfine $6 00 to $6 25. *Wheat*—Owing to the prevailing high rates for gold there is more disposition to invest, and we note an improvement of 3c to 4c during the week, the rates being firm at the close, at $1 70 for No. 1 white and $1 60 for No. 2 do. *Corn*—Sales, both on milling account and to distillers at $1 20 delivered. *Oats*—street price, 75c to 76c. *Rye*—The demand continues good, with none offering. Nominal rate, $1 45.—*Tribune.*

Oswego Markets—May 28—*Flour* unchanged. *Wheat* firm with better demand; sales Canada club at $1 46, Milwaukee club at $1 48 to $1 50. *Corn* scarce and market firm, sales old Illinois yellow at $1 34½. *Oats* steady, sales Canada at 80c. *Peas* dull, sales Canada at $1 10.

Chicago Markets—May 28.—*Flour* active and advance of 5c to 10c. *Wheat* active, sales at $1 28 for No. 1, $1 25¾ for No. 2. *Corn* quiet at $1 14 to $1 14½ for No. 1, $1 09½ to $1 11 for No. 2. *Oats* quiet and declined ½c to ¾c., sales at 68¼c to 68½c.

Milwaukee Markets—May 26.—The *Wheat* market, sales at $1 26½ to $1 27½ for No. 1 Spring; and $1 23 for No. 2 do., the market closing at $1 27 for No. 1 on the spot. *Flour* was dull and neglected. Buyers were holding off. *Oats* were firmer, but no improvement was established; 66c. offered and 67c. asked. *Corn* was a trifle better, No. 1 selling at $1 07 to $1 08 delivered. *Barley* scarce and nominal. *Rye* very scarce and would bring $1 25 in a limited way.—*Sentinel.*

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