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# FARMER'S ADVOCATE

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VOL. XII.

LONDON, ONT., APRIL, 1877.

NO. 4.

## The Farmer's Advocate!

PUBLISHED MONTHLY BY WILLIAM WELD.

OFFICE: RICHMOND STREET, EAST SIDE, BETWEEN THE MARKET AND G.W.R. STATION, LONDON, ONT.

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### CANADA.

#### Present, Past and Future.

On the 20th of February, just as we had finished our labors in preparing your paper for March, we stepped on the cars for Clinton, in Huron Co.

The last Wednesday in February was the day appointed for the great annual agricultural dinner of the Dominion.

This, the Hallet Branch Agricultural Society, is the only agricultural society that has adopted the plan of having an annual agricultural dinner, and has kept it up for 14 years. It was commenced and is kept up by some whole-souled John Bulls, and people of all nations may now join with them. The dinner takes place at 7 o'clock in the evening; this allows all to attend to their daily labors, and affords an opportunity for more to attend than by holding it at an earlier hour. The time of the year is well chosen, being the time of greatest leisure, as the last year's crops are marketed, and no important farm operations are pressing on our time. A sumptuous repast was provided; the loyal toasts were proposed and appropriately replied to; short speeches were delivered; political and religious subjects were avoided; agricultural subjects were discussed, and a most enjoyable, social, pleasing and useful evening was passed; all met and parted on good terms, and all must have been improved, as people cannot have friendly discussions without being improved; it takes off the dull rust, mould and mildew that accumulates on persons that confine themselves to their own thoughts.

Space will not permit us to report all the speeches; even were we to do so we could not impart the life, joy and merriment that the speeches reflected and the songs inspired.

We hope this society may continue to hold such meetings, and that the rising generation will not

through any fastidious scruples allow such to flag, but that the spirit of social progress may spread to every county and township in our Dominion. There are many features in the association that make it freer and more beneficial than any agricultural meetings we have yet attended.

The farmers in this locality are quite as prosperous as in any part of Canada, and much more so than in most parts. The farmers here have devoted more attention to good, heavy, useful horses, and a more valuable class of horses, taking them on an average, are to be found there than in most parts of Canada. There are a few good farmers here who are raising herds of Durham cattle that are of great benefit to this part of the country. The soil in this locality is unsurpassed in fertility, and improvements are being rapidly made; in fact, this comparatively new country is far surpassing many of the older settled parts of Canada. No one will have a correct knowledge of the richness and fertility of Canada so well impressed upon them as by seeing this locality and the country about it.

Messrs. McPherson have a good foundry at this place. Their principal business is constructing threshing machines of a large size. Independent of their local trade, they shipped nine threshing machines to Manitoba last year, three of which were accompanied by steam engines to drive them.

#### The Past.

In the foregoing portion we have touched briefly on the present. Mr. J. W. Biggins was the first mover in establishing this old English custom—an agricultural dinner. Mr. H. Snell, the Huron-Durham man, has been his right wing. Of the left wing, we now introduce the present President of the Association,

MR. SILAS ANDREWS.

Mr. Haskett Andrews came to Canada in the year 1800, and settled a few miles north of where Prescott now stands. He was one of the old U. E. Loyalists. He had a little money to begin with. In 1805 Silas Andrews was born. In 1816 a most fearful calamity befell the pioneers of our country on the 16th day of June; a frost swept over the country such as has never been heard of since. The corn, wheat, potatoes, &c., were totally destroyed; starvation swept off many of the first settlers. This may have been a blessing sent to our country, as none but the most hardy could exist. The weakly, sickly and shiftless class perished from starvation.

Wherever you meet one of the old U. E. Loyalists now, they are generally more hardy than many of the newly imported stock. In the spring of 1817 Mr. H. Andrews, sr., sent his son Silas on horseback to Port Wellington, near where Prescott now stands, to their store-keeper, who had been furnished with money to procure flour from Ogdensburg. Silas, or Mr. Andrews, as we shall term him, returned with 20 lbs., with the message that this was all that could be had. His father sat down and cried, and said: "We shall all be starved." His mother— "We shall try to live."

And from that time for many weeks they had nothing but basswood twigs to eat. One farmer some miles away had a piece of rye; it ripened before any other grain. While it stood in the field, the settlers wanted to get some to boil. He would not let any one have a handful. Some of the settlers got together, with their reap-hooks, and threatened to bind the old crab, and each took some to keep their wives and children, that were left, alive.

There were no white settlers known to exist for thousands of miles to the north or north-west of Mr. A.'s birth-place at that time. His father used to haul the fire-wood into the house in logging lengths, and roll the logs up with hand-spikes, two doors being opposite each other for that purpose. The family did their own spinning, weaving, dyeing, &c. His sisters wore linen dresses made entirely by themselves; the dresses looked to Mr. Andrews just as good and handsome as any of the fashionable dresses now worn. Up to the age of eighteen, he never wore anything but home-made clothes; the first pair of made or fine boots he wore was a pair he got to get married in. Subsequently Mr. Andrews moved to near Ottawa, and went into the lumbering business. He made a lot of money, then lost \$400,000, and concluded to try his luck in the West. He went on an exploring expedition for five months, thought Clinton to be the best place to settle, and purchased a good farm there. He considers he made the best choice, and would not exchange for any locality or any business; he has every comfort and luxury he requires. To show the profits that can be realized from a small piece of ground in his garden, he has two rows of plum trees which have realized him an average of \$150 per annum, besides supplying his house and his friends.

Mr. Andrews is now 72 years old, stout, active and happy, without ache or pain. He appears now a better man than one-fourth of the men we now see at 30-years of age. Let some of your fantastic epicures compare their food with his; perhaps a few weeks' feed on browse or basswood twigs would be a good dose for some of our grumblers who make such a fearful howl because the wheat crop has not been over half a crop the first year.

#### The Future.

The time is coming when the present destruction of timber in this locality will cease; flowers and vines will be trained in the fronts of the houses in the town or city of Clinton, without fences to protect them; the rail fences, or fences of any kind, will not be required to fence the farms, but only to enclose stock where they are wanted. Avenues of fruit and ornamental trees will flank the public roads; trees will be planted to protect the crops and increase the yield of grain and grass; flowers will be found on every table and in every fair dame's hand in Clinton and many other parts of Canada. We have seen fruit and flowers in towns, cities and villages within hand's reach of the passer-by, without being touched; we have also seen the

waving grain touch a vehicle on the public highway. Time will bring these improvements here. In regard to tree planting, read the article on the Larch in this number. Perhaps some of you may increase the value of your land eight-fold, and the value of the crop a hundred-fold. Money judiciously expended in planting, draining and improving farms will be found more profitable than entrusting it in the hands of some banks, societies and bubbles that will burst and leave but an aching, staring void.

#### Planting Fruit Trees.

What is the best season for planting fruit trees? is still an undecided question. With some planters, trees planted in the fall have thriven well, without one failure, while with others there have been failures, and those planted in the spring have done well. We are inclined to the opinion that success generally awaits those who do their work well, and that the failures have been caused, not so much from planting at the wrong season, as from doing the work in a hurried, careless manner. Each season of planting has its advantages and disadvantages. Trees, when properly planted in the fall, are prepared to profit by the earliest spring weather, having been already rooted in the ground, and their long roots established in the soil and extending all round the stem, imbibing the necessary food. By this means they are not forced to be wholly dormant at any time, and before the drought of summer they are prepared to resist it, especially if they get the aid of a seasonable mulching.

On the contrary, if the planting be not properly done, the transplanted trees have more to contend with than those planted in spring. The storms of winter may loosen and disturb them if not well planted, or planted and secured to stakes; and if so loosened they are apt to perish. Frost may penetrate the open earth and freeze the rootlets to death, or the spring thaws may make the earth about them a mass of slush. Either ice or slush proves fatal.

To those who have not already planted fruit trees, we would say: do not put it off till the fall or another season. A year's delay in planting, is a year later in gathering fruit; and no owner of a farm in Canada, no proprietor of one rood of land, should be without his own fruit. In selecting the site for an orchard, avoid a low damp situation. Spring frosts, so much to be guarded against, especially in this climate, are always more destructive on such situation. A high ground, if well sheltered by shade trees, is as good a site for a fruit garden as you can select. There the spring and June frosts will be less destructive and the soil will be less liable to retain stagnant water than if it were flat and lying low; and the free current of air, only broken off by the trees sheltering the ground on the points of the most injurious winds, will have a most salutary influence on the fruit trees, producing well-ripened wood and retarding premature blossoming in spring.

#### PREPARING THE SOIL.

In selecting the site for your fruit garden be sure that the soil is naturally dry; if not, its drainage should be the first thing attended to. Trees will not long flourish with their roots in cold, stagnant water. By draining the soil the air will have free access to the soil, its temperature will be thereby raised, the feeding and growing properties of the roots will be stimulated to greater activity. The drains in an orchard should not be less than four feet if a fall of that depth can be secured. If the depth be less, the roots will be likely in a short time to choke them. Drainage is not all that is necessary in the preparation of the ground for the orchard. It should be thoroughly cultivated the year before planting—it should be plowed deep-

and, if possible, subsoiled. It should also be well manured with a root crop, that it may be mellow, fertile and free from weeds. Belgian carrots, or, better still, parsnips, are a good preparatory crop, their long roots penetrating deep into the earth, separating its compact particles and quickening the inert elements of fertility. The value of these crops gives sufficient remuneration for the expenses of improvement; and their culture and growth always tend to the improvement of the soil—not merely the surface, but a depth of from one to two feet.

#### PROTECTING THE FRUIT TREES.

The protecting of the trees when planted, is as essential to success as care in preparing the soil and planting. It is necessary to protect them by screens or forest trees on those sides that are exposed to the prevailing winds. A good screen of evergreens will often prevent the entire or partial loss of the fruit of a whole season. The sharp, keen winds deprive the branches of the moisture needed for health and growth faster than it can be supplied by the ascending sap, and so they are killed—frozen to death.

The soil in which they are planted should be mulched, not only in winter against the frost, but also that it may retain the necessary moisture. Mulching not only prevents the rapid evaporation of moisture, but also serves to increase the fertility of the soil, and keeps down the growth of weeds.

#### The New Forage Plant—Prickly Comfrey.

Never was the attention of Canadian farmers directed so earnestly to stock feeding as it is at the present time. The increased demand in England for meat and the products of the dairy, added to the success of the attempts to transport Canadian beeves to European markets, has been productive of a change in the object and mode of agriculture with our best farmers. Beef, not wheat, is now to be the great Canadian staple; and the enquiry now is, how best to increase the produce of food for our stock by the improvement of culture, and introduction of new forage plants.

The prickly comfrey is not a new forage plant to the farmers of Great Britain. It was introduced into England in 1790, but it was not used as a forage plant until 1830. It was then recommended in the *Farmers' Journals*. Shortly afterwards we made trial of it, but not having obtained the Caucasian species, it did not fully realize our expectations. The solid-stemmed variety has but lately been introduced, and it is said to be much more valuable than the hollow-stemmed sorts previously grown, producing more food. This is full of gum and mucilage. The leaves have a rich, mucilaginous character, and grow to a great size, sometimes three feet long, the plant rising three or five feet from the ground before it comes into flower; that is, at the time when the leaves should be cut. The yield is estimated at from 60 to 100 tons of green fodder per annum. No animals take to feeding on it at once, but the taste for it is soon acquired, and, when once accustomed to it, they are very fond of it and thrive well on it.

The mode of propagation is by cuttings both from stem and roots, as the seed produced in England does not germinate. This makes the expense of planting more costly than if grown from seed, but the permanent character of the crop, being well nigh perennial, and its capability of enormous increase by division of the roots, ensures a rapid and easy extension of the crop—when once we have established a plot. Propagation can take place from the stem as well as the root; all that is necessary is to plant portions of the stem with two eyes and take care that the ground is kept moist. It

withstands both heat and cold, growing in the hottest climates and in as high latitudes as St. Petersburg. We would recommend that some of the roots be procured and experiments carefully made. It is a subject that should engage the attention of the Agricultural Department. If it merits half what is said in its favor, the introduction of it into the country would be a means of adding no little to the agricultural resources of the Dominion.

An analysis of the plant by Dr. Voelcker has demonstrated its great richness in flesh-forming substances and heat and fat-producing matters. Highly as this comfrey is spoken of as a forage plant, we recommend its introduction into Canada only as an experiment, and that experiment to be made by the Department of Agriculture.

#### The Potato Bug on Its March.

The potato bug, now so well and unfavorably known in this Western Peninsula, has made but brief halt in his onward march. Eastward he still pursues his way, and it is evident that the whole of North America will be subject to his ravages. It is reported that they have reached the Ottawa Valley. Any attempt to arrest their progress would be futile, and farmers must be content to fight them in every part of the Dominion. Happily our familiarity with their habits enables us to contend with them successfully, and though we cannot wholly prevent their ravages we can mitigate them in a great measure. Every precaution that could be devised has been taken in Europe to keep them away. Trading vessels between Europe and America have been carefully examined lest they might be concealed among the freight, and some of them were actually discovered among the bales of goods. The people of Bremen were in a state of consternation when one of the voracious horde was found in a package about to be delivered on the wharf. In England and Ireland, where the potato crop is no mean item of agricultural produce, every possible precaution is taken to prevent the potato bug effecting an entrance.

#### Spring Crops—Oats.

A great advantage of oats as one of our spring crops is its great hardiness and its adaptability to every variety of soil. It yields well on light or heavy soil, if in fair condition and properly cultivated. We have grown good crops of oats on stiff clay, on light gravel, and on drained peat soils. This, by itself, would be one point in its favor. And the farmer can never dispense with the oat crop. Barley, corn and beans are, each in their turn, good for horses, but none of them can take the place of oats; none of them imparts the same high mettle and power of endurance.

Oats, though taking a place among exhausting crops, is not so much so as wheat. We have had clover and grass seeds, when sown with oats or barley broadcast, to succeed very well and produce heavy succeeding crops of grass for soiling or hay, as well as pasture. This cereal is generally sown broadcast on ground in good tilth, though for it, as well as wheat, drill culture is now preferred. We never had better oat crops than from seed sown on the surface of land that had borne root crops the preceding year; the seed was then plowed under with a light furrow. Oats may be sown earlier than barley. In Britain it is the earliest sown of the grain crops. We have sown them in January to prevent too great luxuriance of the straw, and had a heavy crop. In seeding about two and a half bushels per acre are sown here, but English farmers sow from three to four bushels. They think less than that is *starring the soil*. Back oats are best suited to moist soils, and to dry soils white oats are better adapted. It

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The covering of any cereal with the harrow is now condemned by some agriculturists. They admit that the harrow pulverizes the soil for a depth of two or three inches, thus benefiting it for the germination of the seed and the earliest stage of the growth of plants. They say, however, that owing to the shape of the teeth its action is very deficient, continually packing the soil, and therefore not benefiting the plant later in its growth when the roots require a considerable depth of soil. The cultivator is considered an improvement on the harrow, as the teeth from their peculiar form raise up instead of crushing and compacting the earth.

Oats are sown mixed with peas for soiling, and for that purpose there is no better crop. The yield is abundant. Sown together they yield the heavier produce, each of them requiring somewhat different plant food, and the pea drawing from the atmosphere a greater portion of its nutriment than from the soil. This greater amount of ammonia and of moisture aids the growth of the oat plants, which, growing strong and upright, afford a support for the pea vines that catch with their tendrils anything they can lay hold of. It is said that one acre sown with oats and peas, sown together, will produce nearly as heavy a crop as two acres sown separately, one with each. They are also a much better food for stock than either would be if fed by itself. When cut early a second cutting may be had. It is good food for all farm stock, and for milch cows especially it is very valuable.

**Spring Crops—Peas.**

This is usually the first sown of our spring crops, as it is less liable to be injuriously affected by early sowing than any other cereal. And there is an advantage in sowing peas early—early sowing as a general rule implies early harvesting, and the plough may be started at once in the pea-stubbles when the crop is removed—sometimes in time for a crop of late turnips, or, if not, to prepare the land by an autumn fallow for a succeeding crop. Let us not forget, however, in the haste of our spring sowing that all seeds, even peas, are liable to perish in the soil if they be sown before it has acquired some degree of warmth. Peas are often sown on land that has been quite exhausted by growing grain, and then has been merely scratched over. Even with this treatment they sometimes yield good crops. But if it be worth the farmer's while, by such haphazard cultivation, to take the chance of poor crops, it would surely be better to ensure, as far as in his power, heavier yield of a better quality. Pea soil should be mellow, and moderately fertile. If it be not so naturally, it can be made so by cultivation. Though generally sown broadcast in Canada, the drilling of peas would, we have no doubt, be as profitable as the drilling of wheat. It has been found so in England. There the land for pea crop is ploughed lightly in autumn, then in spring made loose and mellow by the cultivator, and the peas sown in drills from fifteen to eighteen inches apart, permitting the subsequent use of a partial summer fallow, and weeds, the farmer's great foes, are conquered. Besides, the crop itself is benefitted by the hoeing, and by the greater influence of the atmosphere on the growing and maturing crop. The difficulty of covering the seed properly is known to all who have sown peas broadcast. This difficulty is obviated by drill-sowing; by this the seed is all sown at an equal depth and covered evenly. This in itself is no little advantage. As the frequent hoeing of the soil between the rows of peas is a means of attracting atmospheric nutriment more than the soil would receive otherwise, drill culture must add to the improvement of the soil more still than would be derived from the pea crop sown broadcast. Another advantage of drill-culture is the destruc-

tion of weeds. The weevil has of late years been so injurious to the pea as to prevent many from sowing this very beneficial crop. To save peas from the bugs it is well to feed them to the fattening hogs early in the autumn before they have begun their ravages.

**Seeding Clover.**

There is no crop of which there are more frequent complaints of failure than the clover. When to sow it, and in what manner so as to obtain a good stand, is a subject of constant enquiry. Sometimes a catch has not been obtained; at other times, after it had germinated well and given good promise, the young plants have been killed by the spring frosts. This is frequently the case when the old method has been followed of sowing clover seed on fall wheat before the last snow melts. This method of seeding with clover may succeed; it sometimes does, but it is very uncertain. If the season suit it, we may expect a good return; with an unpropitious season it is a dead failure. The English method of sowing with spring grain is attended with less risk of a failure. The spring frosts are less apt to injure the tender plants, the soil being in better condition to nourish them. The plan we adopted was to sow the clover seed after the barley had been covered with the harrow; then cover it lightly with a seed harrow having short fine pins, and then to roll the ground. We sowed a field of clover seed year after year without any failures. The soil had always been prepared for the barley seeding—enriched and well cultivated, and consequently in prime condition for the clover seed. Some farmers sow too little seed to the acre. They seem not to be fully aware of the real importance of thick sowing of clover seed. We would not think of sowing less than ten pounds of clover seed to the acre, with Timothy seed or other small seeds—say five pounds. With that seeding we would expect plants enough to keep down the weeds, to bear a large cutting for soiling or hay, and to enrich the ground highly with the abundance of taproots. Remember—the farmer who sows sparingly receives corresponding returns.

**Onions—Their Culture.**

The culture of onions differs materially from that of most other crops, and especially of such plants as are tap-rooted. While for nearly all other plants a deeply cultivated soil is desirable, and, for some, necessary, no such deep cultivation is needed for a good onion crop, as it takes its nourishment from the surface soil. This, however, requires to be rich, as the plant is a great feeder, its many roots branching out on every side and feeding on every particle of soil within their reach. Dig the ground as early in the spring as its state will permit. Manure it heavily with good, well-rotted manure; with spade and hoo make it quite mellow and fine; level it smooth; then draw shallow drills about 15 inches apart, leaving after every third or fourth drill an alley in which you can walk when hoeing and weeding. In these drills drop the seed carefully. Hoeing and weeding complete the cultivation. In thinning leave about one onion to the inch.

Harvesting takes place in August, sometimes a couple of weeks later. As soon as the tops fall and become brown, pull and put into windrows, three rows in each. In a few days they will be dry enough to take into a barn floor or loft.

The following varieties, from which a good selection can be made, are all recommended:—Large Red Wetherfield, a heavy cropper and good keeper, good for general use, though not so mild in flavour as some others.

Danver's Yellow, an early onion, an abundant

producer and excellent keeper. Is in demand for the late season.

White Portugal or Silver-Skinned, a large onion, ripening early, of mild flavour and handsome appearance. It is not, however, a good keeper.

Besides the above, there are some new varieties highly spoken of—the Bedfordshire Champion, Nuneham Park, New Queen, Giant Rocca of Naples, and Large Red Italian. From 200 to 600 bushels per acre have been raised of onions. The English potato onion is an excellent variety; it matures early, yields a heavy produce, and is of a mild flavor. The onion-bulb, not seed—is planted in rows 3 inches deep, the bulbs further apart than bulbs from seed would be, and clustered around the bulbs grow out a number of young onions. Hoe between the rows and keep free from weeds.

Top Onion or Tree Onion. This variety shoots up a stem, on it grows small seeds or buds. These small bulbs or seeds are saved till the following spring, when they are planted as other onion seed, but slightly deeper. They produce large onions. They are not so much esteemed as other onions, as they are said not to keep so well, though we have kept top onions, the white variety, good during the whole season.

**Canada at the Exhibition in New South Wales.**

In the Report of the Department of Agriculture there is reference to the expected representation of Canada at the Exhibition to be held in April in New South Wales. The goods sent were in all 890 cubic tons from the Dominion. These exhibits are not to be returned, but will be sold for what they will bring.

**Hints to Dairymen, No. 14.**

Written for the Farmers' Advocate, by J. Seabury.

There are several pretty strong arguments in favor of butter-making on the factory principle which it would be no harm to discuss; for every patron and factory-man should give these things his careful consideration and study, and be able to give his opinion on the subject. In the first place butter made in that way will be very much enhanced in value, and will command the attention of direct shippers, and will go directly into their hands (just as cheese now does), and the patrons would receive their returns direct and in cash. I would ask anyone to consider for a moment how much per pound his cheese would have realized him the past season, or, in fact, any season, provided it was made up in the same way that the butter is now made in private dairies, with every man his own cheese-maker. I venture to say that he would not get on an average more than five to six cents per pound.

In the second place the dairy-woman who sends her milk to a first-class butter factory would receive her returns (about once a month) directly in cash, much more than she could get from the grocer in trade. For instance, when ordinary butter is worth 15 to 16 cents in trade, that same butter, made up on the factory system, would be worth 19 to 20c and perhaps 22c, thus leaving 5 to 6c in favor of the butter factory, which, after paying all expenses for manufacturing, drawing milk, &c., would leave a good margin in favor of the factory system, to say nothing of the hard, laborious work which the farmer's wife and family would be relieved of, for setting, skimming, churning and marketing are no light task, especially in the summer season. She would receive the cash at her door, and be relieved of all trouble and anxiety, save the milking and cleaning of cans and pails. If the factory system has enhanced the value of cheese, which every one

must admit it has done, the same system will in time enhance the value of butter quite as much if not more.

Then the milk, properly handled and sent to the butter factory, would yield a much larger amount of butter than when made up at home, for the simple reason that the factory has all the proper appliances for setting, cooling, &c., which the great majority of the private dairies throughout the country have not; in fact, in a host of cases the milk is as good as wasted, for where you have not a good, cool cellar, it is almost fruitless work to attempt to make good butter during the hot weather. Another trouble with the bulk of the dairy butter is that a great deal of the packing and filling of tennets and firkins is spread over too long a space of time, so that in some packages there are two and three shades of color in one package, to say nothing of the quality. No tennet should be more than ten days in filling, for when longer it is almost invariably of more than one shade of color. If the grocers in giving out tennets would not allow any one who cannot fill in that time to take one, but would have their butter brought in to them in rolls, or crocks, and then shaded and packed carefully by themselves.

The great trouble is, we have too much poor butter. Good butter is the exception and not the rule, although I must say that there is a great improvement within the last few years, but there is still great room for improvement. There never was yet too much good butter made, and we never hear of the market being overstocked with finest butter or cheese.

During the discussion at the Ingersoll Convention the idea was brought out that when cows were fed on grain their milk yielded more butter, and the same was of a much more nutty and rich flavor. I have no doubt in my mind that it would pay every dairyman to feed his cows grain of some kind the entire year. He can safely depend that it will either go into the milk pail or on to the cow's back in the shape of beef. With the low price of barley and American corn, no dairyman could go astray in buying for his cows. The careful feeding and care of cows is something to which very few give the attention they should. We often hear the remark made: "Mr. is a good feeder, but Mr. is a poor feeder."

You may have good cows and plenty of good feed for them, but if it is not carefully and judiciously given to them, you will see very little result from it, and probably get less. We all know what an attention our successful stock breeders bestow upon their herds in feeding, and their success depends to a large extent upon that very thing; and we all know that it pays them well. If it pays them well it will pay you better than just as well as best we the same way on our cows.

The low price of cheese last season caused many to take their milk from the factory and make it up to butter. The result of this was that the make of fall butter was heavy, which has helped to keep prices very steady and quiet during the winter and it will be well into spring before stocks are well worked off. Many of the factories talk of starting early, and I would advise all those who can keep good warm fires in your dining room, and market your cheese as fast as you can. New cheese will be in demand this spring at some high prices.

**Mules on the Farm—Reply to Inquirer.**

It is a well known fact that mules are not so generally used for that purpose. They are slower, though at least as strong, and much hardier, and they are kept at much less expense. We have known an instance of a pair of mules driven by a gentleman in his carriage. They were from an imported Spanish sire. They were tall and handsome, and were good travellers. Mules are much used in the Southern States for all purposes. For work in the cities they prefer them to horses, their hoofs not being so liable to be injured by the macadamized streets. Throughout the entire South, on plantations their use is almost universal. Kentucky and Indiana have been their great breeding places. They are mostly from Spanish sires, and bring high prices. The mule, like the ox, being slower than the horse, and more patient in endurance, is especially adapted for plowing and cultivating newly cleared land. We can see no objection to the raising of mules in Canada, not only for work on our farms, but also for sale. To do this it would be necessary to import sires. We have often asked how it is that while many are importing Durham and Ayrshire bulls no enterprising farmer or breeder has thought of importing a Spanish donkey, as there would be a fair prospect of breeding large mules with good profit. The demand for mules is not confined to the Western and Southern States. We see there is a demand for them even in that new country, Manitoba, the price being \$200 per span.

height, sound and young, with good dispositions: also price? How do they answer for farm purposes? A. W. C.

We have known mules to do all the work on the farm as well as horses, though they are not so generally used for that purpose. They are slower, though at least as strong, and much hardier, and they are kept at much less expense. We have known an instance of a pair of mules driven by a gentleman in his carriage. They were from an imported Spanish sire. They were tall and handsome, and were good travellers. Mules are much used in the Southern States for all purposes. For work in the cities they prefer them to horses, their hoofs not being so liable to be injured by the macadamized streets. Throughout the entire South, on plantations their use is almost universal. Kentucky and Indiana have been their great breeding places. They are mostly from Spanish sires, and bring high prices. The mule, like the ox, being slower than the horse, and more patient in endurance, is especially adapted for plowing and cultivating newly cleared land. We can see no objection to the raising of mules in Canada, not only for work on our farms, but also for sale. To do this it would be necessary to import sires. We have often asked how it is that while many are importing Durham and Ayrshire bulls no enterprising farmer or breeder has thought of importing a Spanish donkey, as there would be a fair prospect of breeding large mules with good profit. The demand for mules is not confined to the Western and Southern States. We see there is a demand for them even in that new country, Manitoba, the price being \$200 per span.

**The Orchard—Wind Belts or Not.**

We have received the following:— Please tell through your paper if Norway spruce trees are a benefit to an orchard, and how far should they be planted apart. Or will they be an injury to the fruit trees by not letting sufficient air in to let the fruit come to perfection when grown-up trees. A. S., Stratford.

We have read in many papers numerous recommendations for planting belts of trees to protect the orchard from wind, frost, &c. It is our impression that they are written more to sell trees than for any other purpose. We have seen many orchards injured by shade trees. The wood of the trees has been corroded with moss and fungi; the trees have not as healthy an appearance; the fruit is more spotted, is smaller, and has neither the color nor flavor of the fruit that unprotected trees produce.

Our own orchard has no protection. We would rather have it so. It is on a high hill, exposed to all winds. We believe the more air an orchard or any other trees have the better they will grow, and the better will be the fruit. Plant your shade trees to protect an ornamental yard from wind, cold, and snow, but do not have trees around your orchard. It is all nonsense to stake a young orchard when the trees are properly planted, and a careful person will walk round the trees after a heavy rain and hard wind and stamp the earth about the roots of any tree, should one be found out of its perpendicular. It will be far better than all the galling stakes you can put out. We shall be pleased to insert the opinion of any practical person who may differ with our views on this subject.

Joseph Harris claims we are only raising ten to fifteen bushels of wheat per acre where we ought to get from twenty five to thirty bushels; thirty bushels of corn instead of sixty, and seventy five bushels of potatoes instead of 200. *London Globe*, June 10. True enough, but the slack farmers are so generally working hard to reduce the average of the best farms, that is what's the matter.

**Agriculture.**

**The Royal Agricultural Society of England, as Reviewed by an American Agriculturist.**

The following comparison of "The Royal" with the Agricultural Associations of America has led the writer to appreciate the thoroughness of the work done by the Old Country Societies. Here, too, we have something to learn from that old society of the Old Country. Thus the *Prairie Farmer* writes:—

In looking over the report of the annual meeting of this society in the *Agricultural Gazette*, we have been struck with the quantity and character of its work as compared with our American societies of a similar character.

The Royal Agricultural Society of England was organized about forty years ago. The area of its work is a country not much different in size from Illinois, but containing many times its population and wealth. It is a country in which the landholders and landlords are a very wealthy and influential class, and take a proprietary interest in the advance of agriculture.

The society has, at the end of 1876, eighty-two life governors, seventy-seven annual governors, 2,191 life members, eleven honorary members, making a total of 6,510 members.

The funded property of the society is £25,334, 8s. 5d. New 3 per Cents, with a balance in hands of bankers of £1,023, 8s. 1d. The funded capital was increased during the year £4,000—chiefly the surplus receipts of the Birmingham "meeting" or exhibition.

On this substantial basis of money and men, the following work has been going on during the past year: Dr. Voelcher, the chemist, has made 720 analyses during the year for members, mostly of manures and food, and contributed three papers to the journal of the society. The chemist of the United States Department of Agriculture reports but eight analyses for 1875. Our American farmers are not very anxious for chemical knowledge, apparently.

"The Journal of the Royal Agricultural Society" continues to be published, and made up from the contributions of Voelcher, the experiments of Lawes and Gilbert; it occupies an important place in agricultural literature. Under this head we note that a sum not exceeding £500 was voted to prepare a memorial on "British Agriculture" to be laid before an International Congress at Paris, in 1878, and to be published in the "Journal."

The country is divided into seven districts, called "Country Meeting Districts," in which, in turn apparently, exhibitions of animals, implements, &c., are held. The last meeting, at Birmingham, seems to have been very successful; and for the coming one at Liverpool, the society has offered £3,000 and the Local Committee £2,400 in prizes, or a total of £5,400.

Veterinary matters are looked after by the employment of skilled persons in the investigation of diseases, and by the foundation of scholarships.

Under the head of education, scholarships seem also to be provided for the benefit of those who pass the best examinations in agriculture, chemistry, land surveying and mechanics. Seven candidates out of the thirty-two entered had passed examination for the minor scholarships. These are worth £20 each.

Trials of reaping machines, examinations of well-managed farms, &c., show that the society is pretty well awake, and looking in many directions.

**Grasses, Clover, and Corn for Soiling.**

ORCHARD GRASS AND MEDIUM CLOVER. Clover is too familiar to farmers to need a description. But orchard grass (*Dactylis glomerata*) is not generally grown, and should become more common. As a soiling crop it has some conspicuous advantages. It grows and ripens at the same time with medium clover, and thus furnishes an excellent combination of green food. A much larger crop is raised when both are grown together than with either alone. They should be cut just before coming into blossom, and in moist seasons will furnish three cuttings. Make the soil fine, and sow 20 pounds of orchard grass and 12 pounds of clover.

Timothy and Lucerne Clovers. Here also we have the right mixtures of grasses to produce a model

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soiling food. Timothy (*Phleum pratense*) is worthy to be placed at the head of the grasses. It is adopted to perhaps a wider range of soils than any other, and yields bountiful crops. The large or pea-vine (*Trifolium pratense*) does not materially differ from medium clover in nutritive qualities, but yields a larger crop, and matures with timothy.

MILLET AND HUNGARIAN GRASS.—Millet (*Panicum millicecum*), on a dry, rich, and light soil, will furnish an abundant yield of green food of the best quality. But it is not adapted to heavy soils, which do not easily pulverize. It can be sown from the middle of May to the first of July, broadcast, one bushel to the acre. For soiling, should be cut in bloom. Hungarian millet or grass (*Panicum Germanicum*) belongs to the same family as millet, and has been raised quite extensively in some sections for winter fodder. But on the proper soil, deep, rich, and in fine tilth, it produces a most abundant green crop for soiling, and is a well-balanced food. Its quality as a soiling crop is quite similar to millet, and both have a value, when grown in perfection, equal to that of any other soiling crop. Excellent milk is produced from either, when in blossom.

FODDER CORN.—I mention this last, though not least in value. I regard the different varieties of corn as standing highest in the list of soiling crops, not that its nutriment is highest, but because it is adapted to a wider range of soils than any other crop, save, perhaps, oats. I regard sweet corn as the best variety for this purpose—first, the early kinds of sweet corn, then the early evergreen to be followed by the late evergreen. Three pecks of good seed, planted with a drill, 24 to 32 inches apart, and cultivated two or three times, without hoeing, on good land, will give a crop of great value. Of the common kinds of corn, the small eight-rowed variety is as profitable as any in the Northern, Eastern, and Middle States. This should be planted in the same manner as sweet corn. If corn is sown thick (which I do not regard as the best plan), then you may properly commence feeding when in flower. But if planted so far apart that a large portion of the ears form, then commence feeding when in the milk. If one has a good power cutter, it will pay to cut the stalks, ears and all together. In this condition there will be no complaint of the milk or flesh-production of fodder corn.

Produce the Best.

Let every farmer who is laying his plans for the coming season resolve to produce the best of the sort or kind he is growing or making, be it vegetables or fruits, grains or grasses, hops or tobacco, butter or cheese, hay or straw, or whatever else it may chance to be, whether cattle or sheep, pigs or poultry. On looking over the market reports of the present week, we find, in reference to hops, that it is because of their inferior quality that exporters refuse them. With regard to this crop, we have often seen it stated that the hops grown in the United States are not well grown, nor well picked, nor well cured, every one of which defects is preventable. Will hop growers, in planning for the coming crop, see to it that so far as it is possible for them to do so, all the causes named above, tending to render the goods inferior in the market, shall be prevented? Keep in mind that it is the production of good, well cured hops, that makes this department of husbandry profitable. Resolve to grow none but the best, and be sure that no condition necessary to produce this result shall be neglected on your part.

The same is true of potatoes, apples, cranberries, etc. The prices of potatoes last week were reported as follows: The Davis Seedlings, eighty to eighty-five cents a bushel; Garnets at eighty-five to ninety cents; Profrus at ninety-five cents to one dollar, and Jacksons at ninety-five cents to one dollar; Early Rose sold at one dollar and five cents to one dollar and fifteen cents per bushel. The difference between the labor and cost for producing a bushel of the Davis Seedling and a bushel of the Early Rose would not be perceptible; yet the difference in the price of a bushel of these varieties is thirty-five cents. New England apples are selling as low as one dollar and seventy-five cents a barrel, and Western apples are selling at two dollars and a half and upwards (wholesale prices). Ordinary cranberries sold for six dollars a barrel, and fine Cape cranberries from nine to ten dollars a barrel.

Of butter, the prices ranged last week from fifteen to thirty cents a pound, the latter figure being for a choice article, of which description there is but little in the market, while of the inferior kinds the market, as it almost always is, is greatly

overstocked. Of cheese, fine factory was quoted from fourteen and a half to fifteen and a half cents a pound and upwards; common, or what is called fair, twelve and a half to thirteen cents a pound. Such is the state of prices with regard to dairy products. Who can tell how much more dairy-men would annually realize if they produced none but the best quality of goods?

Look at the reports of the live-stock markets, the wool markets, etc., and the same tendency to overstock the market with inferior products prevails. Would that we could persuade farmers to put forth renewed efforts, with the opening of the season for 1877, to produce none but the best of everything that they grow or make to sell. Thus might they make farming a good paying business, as it is when skilfully conducted.—*Am. Cultivator.*

WHAT IS THE MOST PROFITABLE?—Enquiries are frequently made as to which is the most profitable branch of farming. It depends on contingencies. In some places corn-growing and pork-raising, in others wool-growing, and in others dairying are steadily profitable one year with another. Where circumstances, such as rich corn land, healthful dry pastures, or abundant grass, with pure water, favor one or the other of these specialties, it is best to fall into them, and keep to them. But for general purposes, special crops or employments are rarely suitable, and mixed farming is the best reliance. This implies the culture of roots, grass, and grain, chiefly for feeding to the stock, and only partly for sale. The aim must be to distribute the produce so that a good portion come back as soil manure, and the soil is kept improving constantly in fertility and freedom from weeds. Then immediate advantage can be taken of any exceptional condition of things, and if grain does not pay, meat and wool may be made, and if grain happens to be high, it may be sold, and some other cheaper feed be bought to replace it. A sharp farmer, who has some capital, and can turn about at short notice, will never be caught in a poor year without at least average profit from his business.—*Aman Agriculturist.*

Selecting Seed.

Races of plants, however good, may, like cattle, be either stunted and starved by poor food and want of care, or have their properties of size, quality of flesh, and early maturity, still developed by generous feeding, continued throughout successive generations. Thus the "nursed" root not only shows the ideal towards which all aim in degree, but represents in simply a somewhat exaggerated degree what has really been accomplished by the most eminent seed-growers, and so accomplished quite as much by judicious nursing—or, in other words, feeding—as by any other process. Now, it cannot yet be said that the exhibition of such results is needless. The time is not yet come when such developed and well nourished seed is commonly used throughout the kingdom, any more than it is yet come for every farmer to use, as he should do, a pure-bred bull. Countless numbers still buy their seed—we will not say of a local seedsman, since many such select their seed with as much care as the leviathan houses, and are by such means gradually making a reputation of their own—but of vendors who take no efficient care that the quality is any better than ordinary. The results are of a corresponding character; and such men need to be shown that by such procedure they incur a startling loss.

With all that is said about "nursing," on the other hand, it is quite certain that while no nursing in the world will produce the mammoth roots we see at every show from such poor seed as yet forms the supply of more than half England, so the "nursing" processes themselves tend more and more every day to translate themselves into ordinary farming. Nearly all the great improvements in agriculture have been first worked out in small and special plots; and only by degrees is it discovered in what manner and degree similar means may be employed in the open field. The heavy root-crops already raised by the employment of expensive manures, were in the first instance raised by the special nursing of experimentalists; but it was rapidly discovered similar treatment even paid, when applied with knowledge and skill. It is more than doubtful if those limits of the forcing process which yield profitable results have yet been reached; and we need not point out how much every consideration of this kind is enhanced, when the problem is bound up with the other one of raising and developing new and fine varieties.

It has sometimes occurred to us that root competition on a new system would be beneficial. Suppose farmers were invited to compete for prizes awarded to the heaviest crops off a given measured area, full particulars of seed, treatment and cost being required; such would not supersede the old root shows, but in our opinion would be very useful. The obvious difficulty as to ascertaining the exact facts might, we think, be got rid of by some system of certificates from either the clergyman of the parish, who is usually willing to co-operate with his farming parishioners, or some of the county officers. We have a strong conviction that such defined contest would have a much better effect than the present vague competitions of "prize farms;" but whether or not this be so, we believe root showing has much life in it yet, in spite of the rascality of a few, and much work yet to do, in spite of the good work it is admitted to have already done.

Salt as a Manure.

A correspondent of the *Country Gentleman*, residing in Brant County, Ontario, writes as follows concerning the use of salt as a manure:

"Having seen a communication in your last issue upon the application of salt as a manure, I fully endorse the good results from its use, as expressed by your correspondent. In Brant county, where I reside, its non-application will soon be the exception and not the rule, as a material benefit accruing to those who have used it, is such as to make us feel that our success in growing good crops, particularly barley, depends to a considerable extent upon its application. Experiments have been tried, such as leaving strips in a field without any salt, resulting in such a contrast as to cause any one not knowing the facts to wonder at it. But the most noticeable difference within my knowledge is where a farmer sowed the salt with an attachment on a grain drill for that purpose, by which, not working properly, some drills were salted and others not, making the barley field at harvest time present a rather ludicrous appearance as the salted drills were of a brighter color, taller and ripened fully a week earlier than the others.

"We find we receive the most benefit from an application of about 240 pounds per acre. We sow broadcast on the ground after ploughing or before cultivation, as the case may be, working it in with the grain. There is no question with us whether we shall apply it or not. Of course last season barley was generally a pretty light sample, yet in this vicinity we grew a considerable quantity up to the standard, and which I may say almost invariably received the aid of salt; bringing the highest market price, while the lighter grades could hardly find a purchaser.

"So far as the cost is concerned, we can get good, clean salt at \$3 per ton, costing at our rate of application about 48 cents per acre, surely a very cheap manurial agent. It is considered that salt very generously absorbs ammonia, yet it is not thought to be a permanent benefit, as in the decomposition the ammonia is liberated freely, although it is retained long enough to be of benefit to growing plants. At all events, our experience is where it has been applied to grain, the straw is stiffer and brighter; heads larger and better filled; weighs heavier, proving it to be by practice as well as by theory a very valuable manure."

Foreign Farm and Stock Notes.

In the following correspondence of the *Western Farm Journal* there are some useful hints for us. We are always increasing our own knowledge by adding to it the experience of others.

Saxony possesses a soil much resembling that of Belgium, and barley and rye are the chief crops cultivated, the climate being dry. To keep up the fertility of their soil, the Saxon farmers employ much bone dust, guano, superphosphates, &c., but in a specially associated manner. When the rye is in flower, yellow lupine is sown; at reaping time the lupine has well taken root, and grows vigorously after the rye has been removed. When the plants are in flower, generally about August, they are plowed in, the commercial manures distributed and the soil thus prepared is re-sown with rye. In dry climates and for light lands, this mode of manuring is to be recommended.

In Spain, an ox or a cow consumes annually 60 pounds of salt; a horse 30, and a pig 16. The Swiss say, it is impossible to have good meat or milk, without salt. The latter is cheaper in Switzerland than in France, and yet it is France supplies the Swiss markets with salt.

## Garden, Orchard and Forest.

### Planting Forest Trees.

The work of cutting down the old forests goes on uninterruptedly, and some farms in many parts of the country are becoming as bare of trees as the most densely populated countries. There the necessity of converting all the land into tillage farms, cleared the land long since of their indigenous forests, but the work of planting trees in every available space has been going on mean time. Here we have been clearing without a thought of planting. Were every farmer, in clearing his farm, to leave belts of timber till young trees planted at the time would have grown sufficiently to form the needed shelter for his stock, he would find the profits of his farming greatly increased, and the value of his farm enhanced far above what it would be without timber. In some parts of the Northwestern States they have formed Forestry Associations for promoting tree planting, being fully convinced of its profits in dollars and cents. They say that it is well worth the cost in ready money to surround the stock-yard and farm buildings with a windbreak that will, in five years, protect them effectually from the winds; and that a crop of trees can be grown with far less expense, in proportion to its value, than a crop of corn. Timber sufficient for fuel for a family and for fencing can be had in five years from ten acres properly planted. The Association say that "the net profits of a quarter section of prairie properly prepared and planted with forest trees, will within ten years exceed the net profits of ten sections of wheat;" and "a single cotton seed can, by intelligent culture, be developed into a cord of firewood within twenty years."

Any one who has experienced the difference of the temperature in our rigorous winter on unsheltered lands and that within the woods or in places enjoying their sheltering influence, must admit the great effect treeplanting must eventually have in modifying the rigors of our Canadian winter. This, by itself, without taking into consideration the pecuniary results, should induce us to plant trees for shade, if for nothing else. There is no tree will, in the same time, repay the planter greater profits than the European larch. From an American writer we reprint an article on this tree:—

"There is no tree capable of producing so large an amount of such valuable timber in so short a time as the European larch (*Larix Europæa D.C.*) in countries where its cultivation is possible. A native of high elevations in northern and central Europe, and always growing on poor, gravelly, and well drained soil, it is not surprising that when planted under exactly opposite conditions, as is often the case, it does not become a valuable tree. The rocky, well-drained hillsides so common in Massachusetts are admirably suited to the cultivation of the larch; and there is but little land within the limits of the State too poor or too exposed to produce a valuable crop of timber, if planted with this tree.

The European larch has always been a favorite for ornamental planting here, and has shown itself well adapted to our climate.

In Europe, larch is preferred to all other woods for railroad sleepers, and it is probably superior for this purpose to the wood of any North American tree. Larch fence posts are also in great demand at high prices, and instances are abundant of its great durability when thus employed. A practical forester, speaking of this tree, says, "For out-door work it is considered the most durable of all descriptions of wood. The lengthened period that some larch posts have stood is quite surprising, some of which are known to the writer to have stood nearly fifty years, than which there can be no better proof of its durability." For posts, it will probably equal in durability our red cedar, while in the power to hold nails it is greatly its superior.

The European must not be confounded with the American larch, which, although a valuable tree for many purposes, does not make durable fence-posts.

Timber of the European larch is admirably adapted for rafters, joists and the main timbers in large buildings. When sawn into boards, however, it has the serious drawback of excessive shrinkage, and a tendency to warp in seasoning, and is therefore rarely used in this form. Its principal uses in this country would be for railroad sleepers, fence-posts, telegraph posts, hop and bean poles, and other rustic work, and for piles in bridges, wharves, and similar structures, where the rising and falling of the tide require the employment of the most durable timber possible. White oak is generally thus employed, but it is probably less durable than larch and far too expensive.

According to a writer in the Highland Society's Transactions, quoted by Loudon, the pasturage under a plantation of larches thirty years old, and which had been thinned to four hundred trees to the acre, produced in Scotland an annual rental of eight or ten shillings the acre, while the same land, previous to the introduction of the larch, was let for one shilling the acre. Grigor calls attention to the same good result of planting the larch. "No tree," he says, "is so valuable as the larch in its utilizing effects, arising from the richness of the foliage which it sheds annually. In a healthy wood the yearly deposit is very great; the leaves remain, and are consumed on the spot where they drop, and when the influence of the air is admitted, the space becomes clothed in a vivid green, with many of the finest kinds of natural grasses, the pasture of which is highly reputed in dairy management. And in cases where woodland has been brought under grain crops, the roots have been found less difficult to remove than those of other trees, and the soil has been rendered more fertile than that which follows any other description of timber. Already, in some of the Western States, great interest is taken in the cultivation of the European larch, owing principally, I believe, to the efforts of Mr. Robert Douglas, of Waukegan, Illinois, and large numbers are planted annually with every prospect of success.

"Judging from the growth made by the larches in Mr. Fay's plantation, which are the only ones I know in this State offering any valuable statistics in regard to the rapidity of the growth of this tree, I think we can feel confident that on the ordinary soil suited to their culture, larch, planted when about one foot high and three years old, will in twenty years average twenty-two feet in height, and seven inches in diameter, three feet from the ground; and that in thirty years these will be from thirty-five to forty feet high, and twelve inches in diameter; and if the plantations are thinned to four hundred trees to the acre, that at the end of twenty years more, or fifty years from the time of planting, the trees will reach from sixty to seventy feet in height, and at least twenty inches in diameter. This is also the average growth of this tree in the Highlands of Scotland, under nearly similar conditions."

### Plum Growing.

Can plums be successfully grown in the older portions of the country notwithstanding the strongly entrenched curculio? My success in this direction has far exceeded my expectations; but it extends over so few years that I am not ready to give an emphatic affirmative to the foregoing query. Upon my farm was standing a large plum tree which was annually clothed in a robe of snowy whiteness, which soon gave place to numerous small plums. At this stage I was always doomed to disappointment, for the saucy little turk was always ready to nip my hopes—if not in the bud, in the unripe fruit. Nature seemed to struggle so against such odds in her vain efforts to give us a crop of fruit, that I determined to help her.

I know well that fruit growers would tell me to jar the trees and destroy the curculios as they were caught upon a sheet spread beneath the tree; but one who has a large farm to attend to would quite likely neglect it just in the "nick of time," and thus lose the crop.

I therefore decided to make a trial in another direction. About eight years ago I set an orchard of 25 plum trees, cultivated them well for two years, and then put a fence about them and a hen house among them. About fifty hens were confined within the enclosure, and from that time no cultivation has been required, as the hens allow no

vegetation to grow among the trees. And now for the result: Two years ago, one tree gave a good crop of plums; last year two of them did the same; and this season twelve to fifteen of the trees produced crops that entirely beggar description. Many people came to look at them as the fruit covered the trees, and 'twas the unanimous exclamation: "Never saw such a sight before." Branches a foot in length were packed with plums, like grapes in clusters. I greatly fear that my indiscretion in allowing so large an amount to remain and mature has jeopardized my prospects for a crop the coming year, for I think the trees must be much exhausted after such an effort at production, the crop being not only numerically large, but the fruit was individually large, at least, so it looked to me, as my eyes had never looked upon such a sight before. In size, all the way from that of an ordinary Damson to a fair sized hen's egg. Color, from nearly white to green, red, pink, light and dark purple. Time of ripening, August 20th to October 20th.

Should any one be at a loss to know what kinds to plant, I will say that I sent to Ellwanger & Barry, Rochester, N. Y., for fruit catalogue; from that I selected those kinds, all things considered, that I thought best suited for my purpose, then sent my order as above.

In production of eggs the hens pay a good profit; in cultivation they save hand work; in destruction of curculio they have saved the plums, and thus have fulfilled their mission. I think it would not be wise to attempt to utilize hen labor unless they were confined, as they are not particularly fond of curculio, and probably would not destroy them if allowed to roam where more palatable insects were to be had. I have thrown the curculio to a lot of hens; the first picked it up and dropped it, the second did likewise, but the third came along and put the little fellow beyond the reach of plums.

But for this one obstacle no fruit is more easily grown than the plum, and if a little further trial shall confirm my opinion of the feasibility of plum growing, I shall be richly repaid for the experience.

Any one who keeps a dozen hens can easily have plums for family use, for hens will do quite as well for the shade of the trees, and at the same time keep the trees well fertilized.—G. W. H. in *Scientific Farmer*.

### The Garden Pea.

BY J. H. GARNIER, M. D., LUCERNO.

The varieties of the garden pea are now so numerous, and the qualities so much improved during the last quarter of a century, that every one should have at least three varieties planted for table use, on the same day of the month. It is a well established fact that peas of no sort grow to advantage on too rich a soil, and we have proved this to our cost in our own garden. The ground should be trenched over in the fall and allowed to remain in furrows all winter, by which means as much frost as possible should be introduced into it, and at the earliest moment in spring as practicable it should be dug over carefully and raked level. No occasion for manure of any kind for the crop, for if the ground be too rich the plants will grow to any length in bushy straw and produce very few peas. All that is required is to keep down vermin and weeds, and proper hoeing up.

In selecting the three varieties, we get the earliest, the second earliest and the late, and plant them all on the same day, and we have them coming in due succession and producing one of the most delicious dishes that is found among vegetables. In the earliest sorts we find none superior to Nutting's No. 1, and consider it the best, as it is a dwarf, and we strongly recommend dwarfs as the best and cleanest for a cottage or private garden. McLean's Little Gem and Tom Thumb are also very superior and fine bearing dwarfs, as we have proved for many years.

For second early we sow Blue Peter or McLean's Princess Royal, and for the latest Yorkshire Hero or Dwarf Waterloo Marrowfat. We can recommend these dwarfs, as we have tried them and speak not from hearsay.

Having selected seed and prepared ground, we proceed to sow. Make broad drills four or five feet apart, and sow thickly and evenly about three inches deep. We make our drills the full breadth of the hoe, or seven inches, and as level as possible in the bottom, placing a tally at each end. Not a moment should be lost in planting peas; the earlier the better, in March if possible. Do not let wet, frosty or bleak weather interfere. It makes no

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difference to the pea. Don't let ignorant neighbors trouble you with the idea that there must be "growth" in the ground, whatever "growth" means in this case. Try my recommendation for once, and I guarantee you will do so always.

Now, it may justly be asked—But why plant dwarf peas that seldom exceed fifteen inches in the haulm, four or five feet apart? We answer, for economy, as in the intermediate spaces, exactly half way between the peas, we intend planting our corn in proper season. This will not interfere in the least with its neighbor, as the peas will be all cleared off long before the tall corn stalk interferes with them. We have had large dishes of Nutter's No. 1 as early as the 14th of June, and then as often as requisite for six weeks, the later sorts supplying all demands. All the hoeing the corn and peas get, the better for the soil, and in fact it may be considered as giving the land rest to raise these crops, as they are not exhausters and require little manure. We remember not long ago making a bed some two feet broad, very rich with old hot-bed manure, and sowing a drill of sweet peas. There was no mistake that they did come up magnificently. We rodged them four feet and used guano water frequently. They grew, and grew, and grew, overtopped the brush and fell back almost to the ground in grand luxuriance, but we scarcely got a bloom, and these were very large, flabby and inferior in perfume. On another occasion we planted the Champion of England, Black-eyed Marrowfat and Tom Thumb, and used guano water, plaster of Paris and soakage from a pig pen freely, and had the satisfaction of astonishing our neighbors at the "monstrous fine peas," in fact, the tallest they ever saw, and "some new and grand variety," as we often heard. But we had a mighty small quantity for table use, and I don't intend to cultivate in that "pains-taking" manner again. Any lady or gentleman who wishes to have nothing but straw can easily try, for over-feeding the roots of the pea prevents the crop and makes "magnificent plants."

It has been said that peas do not do well on the same ground for two years in succession, and we generally plant them on some patch that has been used for potatoes or cabbage the previous summer. We prefer dwarfs for the reason that they are far less troublesome, requiring no support, are almost or quite as productive, quite equal in flavor, and far more easily managed. But by all means secure good seed, and let it be well remembered by all your readers that dear seed, if fresh and sound, is one hundred fold cheaper for production than stale trash for nothing. No one should grumble to pay for good seed, and make it a point to get it from reliable seedsmen, avoiding what is generally sold in villages and country shops. There is no money in it, remember that.

Among the taller growing sorts of early peas we may mention the following, which having formerly grown, we know to be good, but for the table think them inferior to the first mentioned dwarfs:—Carter's First Crop, Daniel O'Rourke, Kentish In-victa and Caractacus. These are about three feet high and good. For second early we formerly grew Saxton's Early Long Pod, which certainly is very good, but it does not in our garden come up to the mark, as stated in the catalogues, as we got as many as 8 or 9 peas in a pod, not 11 or 12. The Emperor Napoleon and the Empress Eugenie are also excellent, the former light green and wrinkled, the latter white and wrinkled. The late varieties comprise Champion of England, Black-eyed Marrowfat, Blue Imperial and the Sugar Peas, which are skinless and cooked pod and all, and the late crop is, if anything, the best flavored.

The pea is a very hardy plant, and all practical men know perfectly that spring frosts don't injure it in the least. To sum up, then: Don't give rich soils to the pea; plant as early as possible, even if a flurry of snow is on the ground, or a rim of frost; plant about three inches deep, thickly, in a broad drill; and as soon as they come up cover them with a thin coat of earth, and subsequently hoe two or three times. If this be done, we can ensure success.

**Lilium Brownii.**

Written for the Farmers' Advocate, by John H. Gardner, M. D., Lockport.

Japan is eminently the land of lilies, and we have there obtained for many years those exquisite gems that never fail to excite admiration at their beauty, or please by their surpassing delicacy of odor. The longiflorum varieties are comparatively new to America, reminding us of the Amaryllis,

yet their contour is so peculiarly their own that this stands forward as if the nationality of Japan were in her lilies. The Brownii blooms that appear in our beds were introduced about twenty years ago. Lily bulbs are all intricately or in scales, whether more or less thickened, and that of this species is of average size, from six to eight ounces in weight, and of a dirty yellow color. It is perfectly hardy, having withstood the winters of Canada with me for seven years and blooming well. In Ontario snow generally falls before the ground is frozen, which, acting as the blanket of nature, both fall crops and bulbs suffer little harm. Early in May the shoots of the Brownii are seen, and gradually rise to the height of three or four feet, producing on the summit from one to four charming blossoms. Dark green on the outside at first, these change to a chocolate brown, and lengthen to about nine inches. It then expands in a trumpet shape, the edges of the petals recurved, displaying internally a pure pearly white, which occasionally inclines to creamy. The anthers are deep chocolate brown, and the pollen very copious, freely leaving a mark on the cheek of any fair admirer who approaches too closely to inhale its fragrance. Its scent, which is powerful, but not heavy, reminds you of the orange blossom mixed with the hyacinth and vanilla, and add to this a flavor of honey. When a bed is in bloom it perfumes all its vicinity. It is a rare lily here, as we never saw it except in our own garden. In Holland it can be obtained for about \$2 per bulb, and we know of no florists who keep it on hand for sale. It is a slow producer, requiring four years to mature, but once in bloom it is yearly a source of delight, and we look forward with more pleasure to see this than any of our other 130 varieties of lily. The first season of blooming only one is found, the next two, and along with it likely a second stalk without flower, the third three or four are displayed. This bulb is very impatient of removal, and should be transplanted in October, but the less troubled the better for the bulbs.

We shall now consider the culture of lilies generally. The bed should be excavated thirty inches deep, and, if requisite, well drained, because water lying on the bulb rots it and the permanent roots. In the bottom eight or ten inches of old hotbed or cow dung manure should be tramped firmly and the bed filled in with the removed surface earth, which must be well incorporated with old manure and raked over. This should be left a fortnight to settle. Hot manure must be avoided, as it would force the bulb and likely destroy the roots and the plant during the following winter. All stones, tree roots, and the like, should be carefully removed. It must be remembered that lilies are a permanent plant, and like a rose bush are a fixture. Once planted lilies should remain at least four years, and then only lifted to be thinned, as they might be too thick or overcrowded. Plant them five or six inches deep and two feet apart. The ground must be thoroughly drained, and no water remain to rot the roots.

In the warm, dry days of May we scatter thickly old manure round the coming sprouts, and water freely with lime water to destroy vermin. The next day we give a good soaking to the bed with weak guano water and use it once or twice a month. The effect is wonderful, and we are amply repaid by the grateful bulbs giving us grand, beautiful and fragrant blossoms. When the frost kills the stem, carefully scrape away the earth around it to the crown of the bulb, and cut it closely, and you will find two or three bulblets adhering. Remove these and plant the same depth as the parent bulb, and treat exactly alike; in three years you will have a bloom in general.

The Lilium Brownii blooms in July and remains about ten days, and one opening after another, we have the pleasure of their company for nearly a month.

All lilies have two series of roots, the permanent, lasting for the life of the bulb, and the annual. They therefore require a deeper planting than is generally supposed. The permanent roots descend from the base of the bulb and the stem rising in spring, sends from the sides of it those roots that feed the flowers, and are close to the surface of the soil; and among them the bulblets are produced. A bed for lilies must, therefore, be carefully prepared and allowed to remain for a number of years. It looks well in a lily bed to have intervening rows of tulips, hyacinths or crocus, and a good edging of crocuses in our garden gives an elegant appearance. These early blooms come and are gone ere the more graceful and commanding lilies are seen, and their leaves act as a covering to

the ground, and keep in the moisture and keep it cool at the same time. Hyacinths and crocus can remain for three or four years, till growing too thick, and the tulip can be taken up for its summer sleep and replanted in the month of October. We grow many beds in this way, and find the effect elegant and a saving of our scrimp space.

Lilies flourish in almost any soil. In clay soils a good supply of sharp sand and old cow manure is absolutely requisite; but of course a deep loamy and sandy soil is best. In a wild state they sometimes grow amazingly deep; sometimes we have dug up L. Canadense as much as eighteen inches from the surface, and the Philadelphicum, which is a very small and delicate bulb, we have seen from seven to twelve deep. There are no plants in nature that better repay the anxiety of the amateur than lilies, and we have in our garden one hundred and thirty species and varieties, and are yearly adding fresh sorts, as they can be procured. There are now some elegant varieties from Japan, quite new, and as soon as they bloom we intend to send you photographs and descriptions, as they will be interesting to a large and intelligent portion of your readers.

**Grapes as a Wholesome Luxury.**

Those who have failed to give attention to the subject, would be surprised at the great amount of delicious, wholesome food that can be grown on a small piece properly cultivated in grapes. Leaving out the question of profit as a market crop, it will pay every farmer to devote more or less ground, according to the size of his family, to grapes for home consumption. There can be but few who do not relish a good, well-ripened grape, and we believe that it is conceded by every well-informed physician that they are quite wholesome, and well adapted to the wants of the system.

There is scarcely any other way in which you can derive so much luxury from a small piece of ground, as to plant it to the best varieties of grapes, and give them clean, thorough culture. Suppose we appropriate one-eighth of an acre to a family vineyard, and decide to plant the vines eight by ten feet apart; then it would require sixty-eight plants to fill the plot. If started right, kept clean from the beginning, and systematically trained up to trellises, it would require but little labor to cultivate it as it should be, and the amount of gustatory enjoyment it would afford to a family, for several weeks, or for several months, if proper varieties are selected, is beyond computation.

If good, strong roots are planted, we do not have to wait long for fruit. Two-year-old plants, set in the spring, will generally make a little show of fruit the second year, and bear a number of bunches to each plant the third year. In a few years, if well managed, the product may reach from three to five tons to an acre. The higher amount would be at the rate of twelve hundred and fifty pounds to the size of plot we are contemplating, which would afford a family twelve pounds, or a half bushel basket full every day for sixty-two days. What luxuries for the palate the farmer might enjoy, by taking a little pains. We would sooner consent to banish meat than fruit from our tables.

**Pear Blight.**

It is a good time to study blind and dark subjects with which we have to deal. So I pen a few lines on pear-blight. I have just been reading A. L. Hatch's article on "Fire-Blight," and conclude that, although his statement as to the direction taken by the circulating sap through the tree is correct, yet that it does not follow that it is not spoliation of sap that produces blight. A. L. Hatch's statements as to the general conditions attending fire-blight, we regard in the main correct. Is there any record of its taking place, however hot the weather, during the continuance of a drought? So, in the words of Mr. Hatch, it occurs when "heat and weather stimulates to a rapid or excessive growth." At such times there is a superabundance of sap flowing in the tree, which has to be elaborated in coming in contact with fresh air through the leaves, and perhaps in a slight degree, through the bark. When is this most rapidly brought in contact with fresh (or unused for the purpose) air? It is when air is in active motion. When times of still air take place, at times of rapid growth, then the circulating sap may not be fully elaborated. Let much heat accompany such still times of the atmosphere, and we have the very conditions which it seems would spoil the sap and make it poison instead of health

to the tree. But let a change come; let the atmosphere bestir itself, and the spoliation of sap, already commenced, is immediately arrested, and health is secured to the tree. When even the spoliation of sap has not so far advanced as to have become an active poison to the trees, the poison may concentrate in smaller or larger amounts, which would account for the occurring of dead spots, smaller or larger, locating themselves here and there about the trees. This reasoning might be extended to account for the gradual destruction of many trees after first being affected, and why some sections are so subject to it; while others are seldom if ever visited by it; but I will not pursue it further at present, only adding another theory to its prevention to the numerous ones gone before, and not as my own, but as that of another. It is, that plenty of charcoal mixed in the soil about the roots of fruit trees, has a very great influence to counteract the tendency of blight, or to prevent it. — *German Town Telegraph.*

#### Fir Trees and Rain-fall.

The influence of the presence or absence of luxuriantly leafy woods and forests on the rainfall of a country has long been recognised. We now read in Biedermann's Centralblatt of some experiments that have been undertaken to ascertain to what extent the same effect may be produced by firs and pines. Two observations were established for purposes of comparison: the one over a clump of *Pinus sylvestris* some 40 feet high, and the other over a bare sandy plain 309 metres (328 yards) distant from the wood, and at the same height above the level of the ground. Twelve months' observations showed that of the total rainfall within that period, 10 per cent. more fell over the trees than over the bare sand 309 metres distant from them. This result is regarded as all the more surprising since experiments of a precisely similar nature in the case of oak and beech woods had given an excess of 5 per cent. only in favor of the wood of site of observation. Further, the mean state of saturation of the air over the wood was found to be 10 per cent. higher than of that over the bare expanse of sand, the former holding much more water in suspension than the latter. The ground, too, under the trees retained far more water than the exposed earth, the evaporation from the surface, thanks to its shade of trees and moss, being only one-sixth of that outside their friendly shelter. All these points forcibly suggest the utility of planting pine forests in sandy and chalky plains, which must otherwise remain unproductive for want of water.

In times of heavy rainfall, such as we have recently experienced, their value can scarcely be over-estimated, absorbing, as they do, much water, and retarding the escape of more, which, but for such checks must inevitably have assumed the form of devastating inundations.

We quote the above from the *Farmer*, published in London, England. The facts deserve the consideration of all farmers and others interested in our national prosperity.

ORCHARD DRAINS. — Cementing over the joints of the tile with water-lime and sand will prevent clogging from the roots of trees.

#### Pinus Austriaca—The Austrian Pine.

This is one of the most ornamental of this class of trees that will thrive in Canada. The long, thick, dark-green foliage makes this tree sought after by every one who plants an ornamental ground. The contrast of the rich appearance of the foliage, when growing near the other varieties of pine, is so pleasing that every one who sees them is sure to admire them.

All varieties of pine may be successfully planted later than fruit or common trees. The present illustration is from one of Messrs. Ellwanger & Barry's specimen trees. They have a very fine supply of specimen trees on their grounds at Rochester, N. Y.: they have the largest stock of

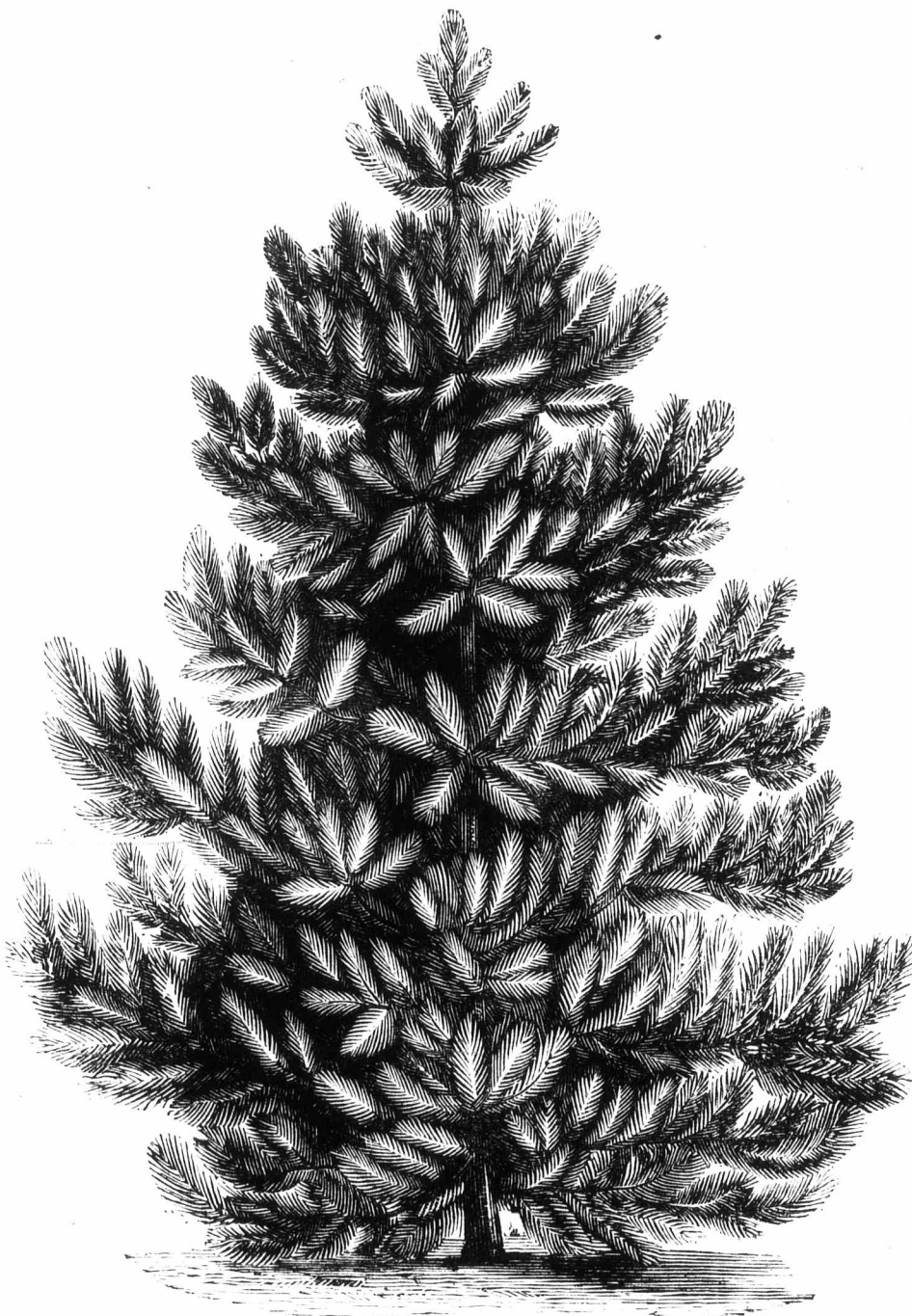
dealers who have but little responsibility, whose warranty is not worth the paper it is written upon, who are continually roving through our country and taking hundreds of thousands of dollars a year out of the farmers' pockets that they should not have. There is always a lot of cheap surplus stock of some varieties to be worked off in every nursery, and such stock is too often palmed off on farmers. It is far better to pay a fair price and get something you want than to be disappointed and vexed all the rest of your life by having inferior trees or unsaleable fruit.

We can speak from experience about this plant. Have more ornamental trees about your dwelling, more shade trees on your farm, and more fruit

trees, if you can take care of them and of the fruit. Spend one day, before the ground is dry enough to begin your spring work, in planting maple and other trees on your farm. Cut off a good part of the tops; they will grow the better for it.

PRIMROSES. The Primrose likes a shady border. Some of the finest samples we have ever seen of the double varieties were on the foot of 18-inch spaces, so common between wall trees and alleys. Here the white, the lilac, the yellow, and the purple, or champagne, as it was then called, were in all their glory, and we never saw them so fine nor so many of the purple or yellow or primrose double variety before nor since. What is rather unexpected by many is that primroses in such cool quarters flower as early as those in warmer and drier sites. We have also noticed the same thing in regard to the earlier varieties of the common single primrose. The purple and the white are far earlier than the yellow strains, and the former on north and east borders are as early this year as the same sorts on southern and western ones. The purple is, however, considerably earlier in vases raised about four feet from the ground than on the flat, thus giving fresh proof that the coldest stratum of air is found on the surface, or within a few inches of it.

VIOLA PEDALA (Bird's-foot Violet). Perhaps we would be more willing to decorate our borders with some of our native flowers—some, even, which we exterminate from our grounds as common weeds—if we realized how highly prized many of them are in Europe. The *Viola Pedala*, for instance, is in great demand in England, while in this country its beauty is rarely appreciated. It is one of the finest of our violets, with handsome flowers, an inch across, in color ranging through all the shades of lavender and violet. The leaves are deeply divided, like the foot of a bird, and the plant very dwarf and compact in habit. It is a perennial, and found growing wild in masses in the woods and dry soils of our Northern States. It blossoms about the beginning of June, at which time the flowers may be picked by the bushel if the locality is favorable to their growth. It may, however, be easily cultivated in our flower gardens, if planted in a dry sandy soil, and in the shade. — *The Flower Garden.*



PINUS AUSTRIACA.—AUSTRIAN, OR BLACK PINE.

trees we have seen. When you wish for trees that are not procurable in Canada—and it is a well known fact that there are not near enough trees yet raised in Canada to supply our requirements—the best way to procure your stock, that is, if you want trees that you can depend on, is to send your order direct to the most reliable nurserymen. We know of no better establishments than those of Ellwanger & Barry Rochester, N. Y.; G. Leslie & Sons, Toronto, and Pontey & Taylor, London. There are many large wholesale nurseries in the States that raise for such men as Ellwanger & Barry and for our Canadian trade. There are

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Root Pruning.

For promoting the fertility of fruit trees, root-pruning is an operation now generally resorted to. If properly carried out, it is perhaps the most certain way to reduce a luxuriant tree to a fruitful state. We wish to emphasize the word *properly*, because it is quite as possible by root pruning to reduce a tree to a state of permanent sterility as to make it fruitful. Fruitfulness in trees of luxuriant habit, such as apples, pears, and plums, and, in fact, in all other trees, depends upon that balance of force between the roots and branches which, while it insures sufficient force in the branch, at the same time promotes the complete maturation of the wood, and thus the formation of flower buds. To hit the happy medium, to so balance the forces of the tree that fertility shall be attained without merging either into luxuriance or weakness, constitutes the success of the careful cultivator. If, however, trees are planted and, as is frequently the case with the amateur cultivator, are allowed to grow on and on for years, with the expectation that they will grow into fruit, the cultivator must not be surprised, if root pruning is resorted to, and not very carefully carried out, to find his tree thrown into a state of unfruitfulness. Sterile, in fact, until such time as sufficient force is again accumulated to form healthy growth. Fortunately, however, our leading nurserymen are so particular in the stocks they make use of, and resort so systematically to root pruning and transplanting, that it is only by bad management after the plant leaves the nursery that the balance of force will be disturbed. Such disappointments, however, do occur, and generally result from mistaken kindness in using rich soils and manures. When the luxuriant habit is induced, the wood formed is too strong and sappy to form flower buds, and hence barrenness is the result. This may arise from over rich soil, or from one or more roots pushing away deep into the subsoil, where they suck up such crude matter that growth is promoted late into the autumn instead of being brought into the maturing state not later than the middle of August. With the luxuriant tree, and when the luxuriance is the result of over-feeding for a series of years, the best plan will be found to lift it out carefully from the place in which it has been growing, to shorten in the strongest roots, and to plant it again almost upon the surface of the ground, using a little fresh soil around the roots, and mulching the surface of the ground with some spent dung or leaf mould. Carefully staked to prevent wind-waving, and the branches judiciously thinned out in early spring, and those retained shortened back, such a tree will be moderated in its growth the following season, and will almost invariably produce abundance of fruit buds. But if the check is too great, sterility may be the result for a year or two, which sterility will be more quickly overcome by liberal treatment.

So far, the treatment of unfruitful trees may be said to be confined to those only recently planted. When trees of more mature years are barren, then more cautious treatment must be resorted to. For example, nothing is more common than for pear or plum trees, of large size, when trained against a wall, to be entirely fruitless. To take up such trees and replant them would not generally be the right thing to do, because being of mature growth, the check of complete removal might be too great. In such cases the best thing is to commence at the extreme point of the roots, and to lift them, according to the size of the tree, to within two, four or six feet of the main stem, and then to re-lay the roots near to the surface of the ground; or, in case of wall trees, half the roots may be taken up one season, following them to the very base of the stem, and the remaining portion, if necessary, the following season. Such treatment cautiously carried out will generally restore the balance of force, and with it fruitfulness will ensue. Now come we to the ordinary trees—such as are prepared by root pruning before they are sent out from the nursery, and may be said to have been reduced to a moderate and healthy state of growth. These, sometimes, if transferred to a rich soil, may start after

a time into an over-luxuriant habit. In such a case it is customary to check them by root pruning, simply by digging round one side of the tree this year, and cutting off some of the stronger and more perpendicular roots, and treating the other portion in the same manner the following year. Early autumn, while there is yet some heat in the ground, is the best time for root pruning, as the warmth enables the wounds to heal quickly, and also to throw out fresh feeders so as to become re-established before the active growth of spring commences. Trees thus managed, with bi-annual attention to root pruning, may be easily kept in a constantly fruitful state, and for small gardens nothing looks so neat as bush or pyramidal trees so managed.—R., in Garden.

Potatoes.

The question has been asked by more than one of our subscribers, what are the best kinds of potatoes to plant. We are unable to answer this to suit

Gregory's Catalogue, of Marblehead, Massachusetts. Mr. Gregory, we consider, has as good a reputation as any seedsman in the States on vegetables and potatoes; he introduced some good cabbages and squash, lettuces, &c., &c.

BURBANK'S SEEDLING

Is a seedling of Early Rose, but is of Massachusetts origin. Unlike its parent, it is white skinned. The remarkable productiveness of this new seedling will be seen in the fact that the first year from the seed ball the yield was three pounds three ounces, all large sized potatoes! Since then it has yielded 36 pounds to a rod of row, has averaged a bushel to nine hills, and 435 bushels to the acre. Planted side by side with Early Rose, New York Late Rose, Peerless and Brownell's Beauty, it has excelled them in yield. In beauty of form it is unexcelled, the proportions being all that can be desired, and is never hollow hearted. It has the good characteristic of yielding almost no small potatoes; while but five-sixths of the Early Rose,

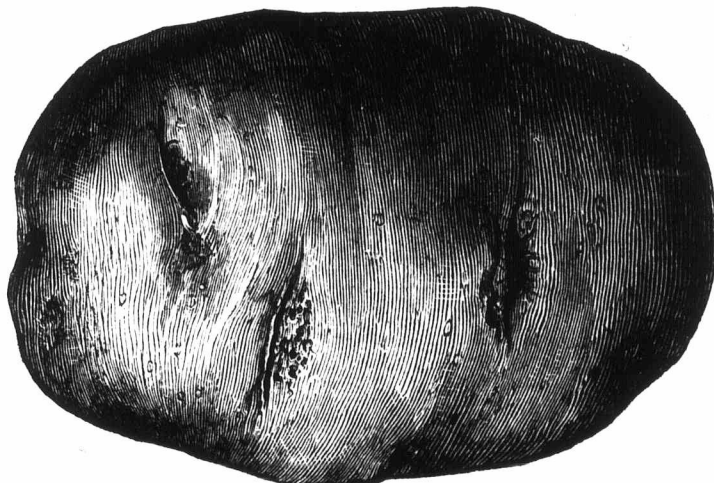
growing side by side, were of market size; of the Burbank forty-nine fiftieths were marketable. Hardly a rotten potato has been found thus far in its history, while standard varieties growing side by side under precisely similar circumstances have rotted badly. It has but few eyes, which are sunk but a little below the surface. In quality it is fine grained, of excellent flavor either boiled or baked, is dry and floury; in fine, is all that can be desired. It ranks between the very early and very late varieties.

In brief, the argument for sending out the new seedling is as follows: 1st, its exceptionally great productiveness; 2nd, the first-class quality of the potato; 3rd, the capital trait for market, that it produces almost none of unmarketable size; 4th, its hardy vigor; 5th, it does not grow hollow-hearted even when weighing over a pound to a single potato; 6th, the proportions and appearance are so attractive it will draw the attention of marketmen.

THE EARLY OHIO.

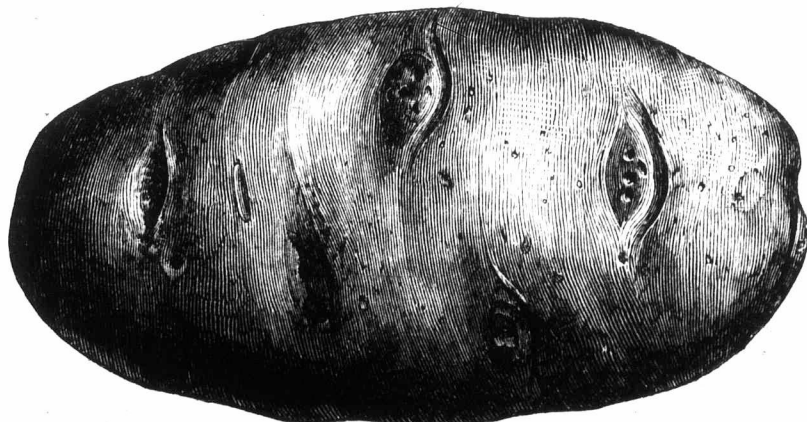
One of our Canadian seed-potato growers has informed us that he has found the Early Ohio much superior to the Early or Late Rose or the Vermont Beauty. Mr. Gregory also introduced this potato, and has a lot of certificates showing its superiority. The following we quote from his Catalogue:—

I have received from kind friends, on an average, about fifty new seedlings a year. To all of these I have given a careful and conscientious trial of their merits, on my experimental grounds, planting them with note-book in hand, and following their growth and development, with note-book, throughout the season. Among such a multitude of varieties, I have found many that were almost decided acquisitions, but were either similar to varieties already well known, yielded too many small potatoes, or potatoes that were prongy, ran to too sharp a point, or were in some other way badly shaped for market; had too many or too deeply sunken eyes; were of poor quality or too prone to rot. Ultimately I have found but three out of over two hundred seedlings that have proved themselves to be decided acquisitions. This is one of the numerous seedlings of the Early Rose, but while almost all of these are so like their parent as to be undistinguishable from it, the *Early Ohio*, while in color like the Early Rose, is, in shape, distinct, being round-oblong instead of oval-oblong, so that side by side it is readily distinguishable. On the largest specimens, the cluster of eyes at the seed end is located slightly one side of the longer axis. Quality excellent. Grown side by side with the Early Rose, it proved a week earlier, while the yield was a third greater. The result of a careful trial of its merits, side by side with all the new seedlings now before the public, besides over thirty new varieties sent me from various localities in New England, the Middle and Western States, each of which being sent as a new seedling of special promise, leaves the Ohio in the same high rank it previously held: 1st, as decidedly earlier than *Early Rose*, and 2nd, as emphatically a better keeper than any other variety equally early, and equalled by but two of the latter varieties.



EARLY OHIO.

every person and every locality. It 1875 we thought the Late Rose better than the Early Rose; we planted more extensively the latter variety in 1876, and found those that had the Early Rose had a better crop. No doubt the season caused this. Of the much-lauded Compton's Surprise that were to branch and grow again, we think but little. If they grow too near the surface they often become



BURBANK'S SEEDLING.

bare and turn green; the eyes are too deeply indented; they waste too much in cooking. The quality is excellent, but we would not commend them. The Alpha are commended by many, but we think but little of them from the last two years' experience. The much-lauded Excelsior we found to excel all others for rotting, although they had been much recommended. The last-named three were the leading varieties of the most noted American potato dealers. There is a difficulty about all new varieties of seed; they are generally hauled too highly. It is difficult to tell, without actual trial, which are best. We by all means advise you to plant your main crop of whatever variety has yielded best in your neighborhood; and if for sale, the variety that will sell best in your market. The Early Rose will be most generally planted, although many that have tried the Early Vermont will prefer them. Brownell's Beauty is a good potato. Many like the Snowflake. There are many other varieties introduced by different seedsman; many are seen abandoned. Of the new varieties advertised this year we give the following description from Mr. J. H.

Correspondence.

The Free Grant Lands of Muskoka.

(Continued.)

ROADS.

Large sums of money have been annually laid out by the Ontario Government in building colonization roads through this district, and now it is intersected in almost every direction by them. The principal one is that from Washago to Gravenhurst, which was the first made in Muskoka; it was then extended to Bracebridge. Then the Bracebridge and Huntsville Road was built, from which diverges the Parry Sound, the Port Carling, the Brunel and the Stisted Road, each having branches of minor importance, all tending to open up the surrounding lands, which have been surveyed for settlement.

During the summer months steamboats ply upon the Lakes Rosseau, Muskoka, Joseph, Mary and Vernon, which are a great accommodation to settlers located in the vicinity of these waters. The railway, too, has been extended to Gravenhurst, which is its present terminus at the foot of navigation of Muskoka Lake; it is, however, expected that a further extension of the line will be made northward, passing through several townships, to tap the Pacific line now under construction from Lake Nipissing to the Georgian Bay; with this line completed, every portion of the district will be within easy and direct access of Toronto and Ottawa.

DEVELOPMENT.

The progress of development and improvement in the district has been very rapid indeed. In this immediate neighborhood, on my first settling here, neither roads, churches, schools, post offices or stores existed, but now we have all within easy distance; lines of telegraph have also been constructed. Persons who visited Muskoka five years ago would scarcely recognize it now, so great have been the improvements in a short time. Ministers of almost every Protestant denomination are stationed in the district, and a Roman Catholic Bishop now resides in Bracebridge. Five newspapers are published, viz., the Free Grant Gazette and the Liberator, the former at Bracebridge and the latter at Huntsville. Saw mills and grist mills are numerous, and liberal encouragement is given to manufacturers of all kinds. The municipality of Bracebridge has just voted a bonus of \$2,000 for a tannery, and has also granted bonuses to other descriptions of manufactures. The unlimited water power throughout the district offers an facilities for manufacturing enterprise, not to be surpassed in the province.

MARKETS.

The continual influx of new settlers creates a demand for produce of all kinds at varying prices. Store-keepers, etc., will take a price of say cash for any quantity of grain, etc., or say. The operations of businessmen have improved the market for hay, grain, and other supplies as required by these parties. Hay sells at about \$10 a ton, and oats for 50 cents per bushel at the present time, and when the wintering business is in very brisk these prices are lowered. Every settler coming in goes further back in the unsettled land. He, in turn, wants apples, wheat, and he grows enough for his own consumption, he purchases from older settlers, who however secure a ready market for what they have to dispose of. The home demand will thus be good for some years, but as the means of communication now pretty good is always improving, there is no danger of the local market becoming glutted before a railway is opened through the district, a circumstance which has been felt by settlers in some of the more remote townships in Western Canada.

By this act each of families obtain a grant of 200 acres of land; single adults, a third, etc., or those who are 25 years of age, get 100 acres, or if more is required they are a liberty to purchase 100 acres at 50 cents an acre cash. The conditions of settlement are, that here and there a tract of five years, at least east of here, when must be cleared and under crop; a mortgage bond must be given, the dimensions of which must not be less than 50 x 20 acs. These conditions seem quite liberal, and in no way of the sort, the best yet in issue. The home demand for produce and to secure it may remain in the mind of a settler, and be cleared or ten or twenty years. The free grant

Act has, undoubtedly, proved a great stimulus to the settlements to which it extends, and has proved a great boon to many families, who, under its provisions, have been enabled to secure good farm lands, which they could not otherwise have hoped to possess. Of the several Free Grant Districts of Ontario, Muskoka has far surpassed the others in progress of settlement. During the year 1876, in this township (Stisted), 38 persons located, the number of acres located for being 7,566. During the same period seven patents were issued for those locations upon which the regulation duties had been performed.

THE SETTLERS.

The present inhabitants are perhaps as good a class of pioneers as ever invaded a new district. Certainly, the classes and nationality of them are of great variety. We find here some rich, and some poor; many intelligent and well educated, as well as unlearned; but all are throwing their energies into the same channel and vie with each other in hewing out for themselves independent homes in the new settlements. Doing this now in 1877 is easy, compared with what it was a few years ago, when there were no colonization roads running through the district in all directions, as we have now. There is little trouble experienced by new comers now to reach their locations, whereas settlers in days gone by had no such advantages, but rather many trying privations and drawbacks to contend with. Many of those settlers are now living in comparative ease and comfort, and enjoying the results of their many years of toil, and they delight to recall the thrilling incidents connected with the early history of settlement.

INTENDING SETTLERS.

Those who are likely to succeed in Muskoka are men who have been accustomed to work. A strong, hardy man, who has courage and perseverance, with powers of endurance, and has some little means to commence with, cannot fail to get along. There are, however, other classes who also do well here; I refer to those who have lived on rented farms, and who possess sufficient means to enable them to employ labor and to support their families until they can raise crops from the land they take up; others, too, who, though they may not have been accustomed to armer's life, are anxious to adopt agriculture as their profession, and who have means to support them until they become acquainted with the work, and get some and secured. Many men even with families have come here without money, and have succeeded, but these experience many hardships and privations; here the experiment is not one that I would recommend, as the man who takes up bush land without the necessary means to give him a start, has a poor chance. At least two hundred dollars would be requisite for a married man to have at command to expect to succeed in a bush lot. It is a common practice of those of limited means to hire out, and get employment from home, either upon the roads or with the lumbermen, but this way of working can only succeed for a short time at first, as their absence from home only leads to their farms being neglected. Some have adopted a plan which has been found to succeed well in cases where persons of limited means wish to make farms or themselves here; the mode of operation is this:—The person locating being in steady work in some city, or other settled district, visits the Free Grant lands, and after making a selection of land or location, engages with some reliable and respectable settler in the neighborhood to clear a few acres for him as his means will allow, while he himself steadily works away at his accustomed employment at which he can earn good wages, until he can see his way clear to buy a bush lot upon his own. I would not recommend any one to do this unless they had some cash beside in hand and after a year or so of wages, as a longer period of absence might result in the loss of their land. Those who have money and wish to make a farm home, can do so well as to hire out; they will find that they can get a good deal of money in the bush, and those who can secure themselves a few acres, and live on them for some time, some say a year or more, will have some and here are the many who are at once who would be best. There are many of small farms, or of a few acres, or of a few acres, with families growing up, and these are the best ones to get, and here are the many who are at once who would be best. There are many of small farms, or of a few acres, or of a few acres, with families growing up, and these are the best ones to get, and here are the many who are at once who would be best.

living in cities, paying high rents, paying high prices for provisions and fire-wood, and losing their health into the bargain, whereas, if they were here, they would get land of their own for nothing, a house of their own for raising fire-wood for chopping, and very soon they would be able to raise their own provisions. Many spend their winters loafing round, not being able to obtain a day's work, and consuming what little means they have acquired during the summer, besides often running into debt before the spring opens. To the attention of this class in particular I would recommend the advantages which the Free Grant Lands present. Many, doubtless, there are who would willingly come here if they knew more about the country and were to seek the information they require.

HOW TO SEE THE LANDS.

The best time to look for land is in the spring, before the leaves are fully out, or in the autumn, after they have fallen; at these times the trees are not troublesome, nor does the snow prevent a thorough examination of the land. New arrivals cannot too readily examine the land before locating; there being no foundation to select from, they should not begrudge a few days in search of good lots, so that if they do not get them, the fault is their own. It is to be regretted that through carelessness or a too hasty decision in this matter, sometimes settlers become dissatisfied after residing a while on their land, a state of affairs which they might have avoided by exercising a little more discretion in the choice.

ADVANTAGES OF MUSKOKA.

The advantages which Muskoka presents are both varied and substantial. Being within easy access of Toronto, almost in the line of the shortest route from the Atlantic to the Pacific, and forming the intermediate space between the northern extension line of the Canadian Pacific Railway, it must, at no distant date, be intersected by a line which will be the main artery of communication; such a line as the projected Muskoka Junction and Canadian Pacific Railway, which is to connect the two lines. This line completed, Muskoka will be placed in a position equally as favorable as any district through which the Grand Trunk or any of our principal lines of railway pass, or being linked by railway with Toronto, its market will be little inferior to that of any other in the Province. The advantages, too, which the ample water-power of this district presents is unsurpassed and practically unlimited, and enough some day to cause this to be an important manufacturing country. Minerals have been found here in sufficient quantities to pay for working as soon as more efficient means of communication are completed, in order that they may be transported to a distance. Besides the pine, the hardwood timber in several localities will become an article of commerce with increased facilities for exporting it. Much of the fine birch found throughout the district will be very valuable. Black oak bark, too, will be in demand for tanning purposes. As a stock-raising country, Muskoka possesses advantages which surpass every other portion of the Province. It will doubtless become the nursery for sheep and cattle, and will eventually be the district from whence the older settled portions of the Province will draw their supply. The land is high and rolling, is well watered, and is a growing country; it will always be fertile. The climate of Canada will be found to be much more favorable than so many advantages combined as Muskoka presents, providing that they be not so much means to gain a footing in it. This, however, may be acquired by investing a few dollars, and soon be acquired by industry and hard work for wages for a year or two, and then proceed. Indeed, I would not be so easily deterred, excepting those who have means to settle here, until they have been in Canada a year or two, and until they have acquired some knowledge of the mode of working, and the ways of the country, which are of most importance to the settler, and to what they have been accustomed to in the Old Country. Some winters and the climate of Muskoka presents a great contrast to that of the Province; the seasons being more regular and although the winters are rather severe in winter, though, sunny days, the sky will be bright and clear.

navigation. At this village there are plenty of stores and good hotels. A stage leaves Bracebridge three times weekly, by which persons in search of land can reach any of the Free Grant townships now open for location. The Crown Lands Agent for the District resides in Bracebridge. This gentleman will supply lists of the unlocated lots in each township.

In conclusion, I hope that the few plain facts I have laid before the readers of the ADVOCATE may be of some service, and that particulars of the district which I have adopted as my home may result in leading some families to settle on a Free Grant lot in Muskoka. I may say that I shall at all times be pleased to answer any inquiries through the ADVOCATE, or otherwise, providing a stamp is enclosed for reply.

JAMES ASPDIN, Aspdin P. O., Muskoka, Ont. March 12th, 1877.

**Poultry Raising.**

DEAR SIR,—According to promise, I now give you a short account of my experience in poultry raising.

I have been for the last fifteen years trying to find out which is the best fowls, and the most profitable for a farmer to raise. I have tried some four or five different breeds, viz.:—The Black Spanish, which I found excellent layers in summer, but very tender, and, unless kept in a warm place, no winter eggs to be got from them, the very time we enjoy such a luxury. The White Leghorn are very similar. The Game is a fine fowl, both to look at and on the table, but I found them so given to fighting that sometimes before well out of the shell they were at it.

I imported, some four or five years ago, from Mr. Loyd's stock of Brahmans, "Coldstream Poultry Yards," Baltimore, U. S., one pair light and one pair dark Brahmans, and I find it the investment I ever made, as I never want to winter now; I have not been a fortnight without plenty of fresh eggs since I got them. I prefer the Light to the Dark, and some of our best breeders with whom I have been conversing say the same. In speaking of the Light Brahmans the editor of the *Poultry Chronicle* says:—"It should be a large, weighty fowl, of a free, majestic bearing, alike removed from the waddle of the Cochinchina and the upright carriage of the Malay; short in the leg and neck, wide and full in the breast, and wide and deep in make; legs yellow and well feathered; tail short, but otherwise full in size and spread, that of the cock opening into a fan; comb small, and it may be divided and separated almost like three combs, or nearly united into one, but its triple form is always evident." He sums up by saying, what are they then? They are Brahma Pootras, large, heavy birds, symmetrical, prolific, good layers in winter, and hardy, living where Cochins would starve. I showed a pair of L. Brahma Cockerels, dressed ready for table, at our Guelph Xmas poultry show, weighing 18 lbs. A cross between the Brahma and B. Spanish makes an excellent layer and gives hardiness, which the Spanish has not got. They are certainly the most profitable fowls for a farmer that I have yet met, and do not eat more than other fowls; and when the grain comes off will wander in search of food all over the farm.

In speaking to Mr. Thomas and Mr. Butterfield at our show here recently, they both recommended the Light Brahmans as being the best and hardiest fowl for a farmer's use.

I see the Plymouth Rocks are highly spoken of by those who have tried them, and I believe are good layers; but I intend to stick principally to Light Brahmans, as being far ahead of anything I have yet tried.

We had one of the finest shows ever held in Canada here recently, and I am only sorry to see my brother farmers patronize it so poorly. They stand in their own light, as nothing pays better than poultry when properly attended to. I sold some \$50 worth of poultry last year besides 100 dozen eggs, and had all we wanted for our own use in a family of twelve, and started in spring with some thirty hens, principally of the L. Brahma breed.

I might give you a description of our show here, but as I have no doubt you have got full accounts elsewhere I will not trouble you; suffice it to say there were over 1,000 entries—41 pairs of geese and turkeys exhibited alone, some of the turkeys weighing over 40 lbs.

I hope you will try and encourage the farmers, at any rate the farmers' wives and daughters, to

take a greater interest in poultry, as well-bred poultry, I am convinced, pays as well in proportion as well-bred stock. I think we ought to offer more prizes at our Central and Provincial Shows for "farmers' fowls only," as it is almost impossible for them to compete with such breeders as Messrs. Thomas, Butterfield, Allen, Sturdy, Bogue, &c., and if they once took an interest in competing with each other you would soon see as good breeds shown by farmers as by professionals.

I would suggest that a class ought to be made at our Provincial Show at least for a few of our leading poultry breeders "for farmers only." I hope some of our leading poultry men will take this matter up. I hope some others will give their experience in your valuable journal soon again. Springfield Farm, 13th March, 1877. J. A.

[We entirely agree with the suggestion of our correspondent. There should be special prizes for farmers' poultry. And for the professionals proper precautions should be taken that the prizes be for poultry bred and actually owned by the exhibitors, not bought for the occasion, or borrowed, as it is said has been done at former Exhibitions.—Ed.]

SIR,—The ADVOCATE for March has just reached me, and I am sorry to find you have lost a subscriber, merely because you stated the truth respecting the Red Chaff wheat. A farmer in this township told me he tried it, and although it yielded well, yet it makes bad flour. The grain dealers, I believe, generally ship it off to England, when it lowers the standard of wheat in the English market, and, consequently, dealers should refuse to buy it even when mixed with other wheat, except at a reduction of 20 cents per bushel. I am sorry to find that so many of our farmers after having robbed their farms of its fertility by repeated cropping with wheat, and selling their wheat at good prices, are so stingy that instead of using their profits in underdraining their farms, wherever necessary, purchasing artificial manures, making home comfortable, and educating their children properly, prefer to deposit their money in the banks, so that if a panic is imminent they will make a rush to draw it out, and so make bad matters worse. In a legal point of view a man has a right to do what he will with his own; but no man has any moral right to use his property in such a manner as to injure the community. The hard times for this Province have only just begun, and must become worse yet before business can be again settled on a sure foundation. Whenever the weakest bank in the Province fails, a panic is sure to set in, and those stingy, narrow-minded farmers I have alluded to, will immediately make a rush on the banks, to withdraw their funds. In the *Daily Globe* of the 24th ult., I noticed a detailed statement of the liabilities and assets of all the banks in the country, and on looking over it I found that the amount of specie and Dominion notes put together held by some of them was not equal to the amount of notes in circulation, and deposits, payable on demand, for which they are liable; consequently, when a panic does come, they would soon have to suspend specie payments, although many of them appear to have abundance of assets, and only require time to utilize them; but this would involve a general panic similar to that in 1866, but even worse, as we have now more banks and many more stores than existed then. Although all classes seem to be possessed with such a rage for gambling and fast living, that the Province must be reduced to the verge of bankruptcy before they can be induced to economize. I have noticed your remarks concerning the wheat supply from India. A supply of cheap wheat is an absolute necessity for England, and from no other country can such a cheap supply be obtained. Considering the disorganised condition of the laboring classes in England, even amongst agricultural laborers, dear bread will be the signal for a social revolution and consequent anarchy for a time, and consequently the English Government will make every exertion to stave off such a calamity as long as possible, but a few years may elapse first, and till then a good market will be found in the United Kingdom for all the butcher meat, alive or dead, and horses that we can export. As you have observed, we must look more for a market at home, and in other foreign countries, than we have hitherto done. In conclusion, I would only observe that those who may this season experiment on different kinds of wheat should never sow two varieties in one field as they would be sure to hybridize, so that the crop can not well be pure. SARAWAK.

[Thanks for your communication. We will be pleased to hear you at any time, and your letters

shall receive due attention. In the article on lime in the last number there was an unintentional omission. To spread the lime evenly on the ground, it was first wheeled out in heaps, and then spread evenly with a shovel. This was necessary in order to spread the fifty bushels evenly over half an acre.

We fully agree with your remarks as to the wrong done by farmers in hoarding the profits from their farms instead of investing them in needed improvements on their lands. Money expended judiciously on the farm is placed in the safest as well as the most profitable bank. The increased value of the land amounts to far more than bank interest, and it is there a deposit that cannot be affected by any panic. Still we do not think that deposits in our banks are unsafe; if there be at any time a loss, it will be to the stockholders, not to depositors; nor do we think the prospect in the Province quite so gloomy.

Concerning the condition of the laboring classes in England we have no fear for the future. England has passed in safety and triumph through many storms. Powerful enemies without, and false friends within the camp, have been powerless to shake her throne as Ruler of the Nations, and we have no doubt that she will maintain her proud position.

The hybridizing of wheat is at any time attended with such difficulty that there need be no dread of casual occurrence from two or more varieties being sown in the same field. Even when seed is sown, as it frequently is, the varieties grow quite distinct, and the distinction in the sheaf and bin is apparent to any one.—Ed.]

**Apple-Tree Borers—Western Corn Gypsum.**

SIR,—As a farmer I find every No. of the ADVOCATE instructive and interesting, although I do not spend much time on "Minnie May's Department;" the boys and girls attend to that part of the paper with much amusement and delight. So much of the contents being written by practical farmers, makes it, in my opinion, of so much the more value to us as a class, than it would be if filled up with long learned disquisitions by professors of agricultural chemistry, &c., from the best schools on the continent.

I cannot admire the letter of A. C. I do not see how he will mend the matter by "stopping the paper," unless he can stop the whole future issues of the ADVOCATE; the farmers of Canada need such a paper—one that will tell the truth independently of private interests, and while the ADVOCATE is conducted on such honorable principles it cannot but succeed, for be it remembered the farmers of Canada are the bone and sinews of the Dominion.

The Red Fern wheat has been tried by me, and others near, and appears to be the leading variety since the Fife wheat has failed; it makes good flour and a very good yield.

"Hints to Dairy-men; by J. Seabury," are among the best I have ever read on the subject, and should be read by every cheesemaker in Ontario. As a farmer I feel much interested in the production of butter and cheese as the only stronghold for many of the farmers in the old grain-worm lands; my farm is one of them, therefore, for the last two years, I have encouraged cheese factories, to the best of my ability, as more remunerative than raising grain, and even now I am not satisfied with cheese factories alone, but am trying to get butter factories united with cheese factories, wherever around me sufficient water can be found to make a good article of both.

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If success attend our efforts in that line, several other creameries will be put in operation next year in the Old Leeds Co., Ont.

Your correspondent W. K., speaks highly of gypsum. I have proved it on light soils to be an excellent dressing for meadows, especially if clover has been sown and failed, it will restore clover. I have mixed it with unslacked ashes, equal parts,

## Correspondence.

## The Free Grant Lands of Muskoka.

(Continued.)

## ROADS.

Large sums of money have been annually laid out by the Ontario Government in building colonization roads through this district, and now it is intersected in almost every direction by them. The principal one is that from Washago to Gravenhurst, which was the first made in Muskoka; it was then extended to Bracebridge. Then the Bracebridge and Huntsville Road was built, from which diverges the Parry Sound, the Port Carling, the Brunel and the Stisted Road, each having branches of minor importance, all tending to open up the surrounding lands, which have been surveyed for settlement.

During the summer months steamboats ply upon the Lakes Rosseau, Muskoka, Joseph, Mary and Vernon, which are a great accommodation to settlers located in the vicinity of these waters. The railway, too, has been extended to Gravenhurst, which is its present terminus at the foot of navigation of Muskoka Lake; it is, however, expected that a further extension of the line will be made northward, passing through several townships, to tap the Pacific line now under construction from Lake Nipissing to the Georgian Bay; with this line completed, every portion of the district will be within easy and direct access of Toronto and Ottawa.

## DEVELOPMENT.

The progress of development and improvement in the district has been very rapid indeed. In this immediate neighborhood, on my first settling here, neither roads, churches, schools, post offices or stores existed, but now we have all within easy distance; lines of telegraph have also been constructed. Persons who visited Muskoka five years ago would scarcely recognize it now, so great have been the improvements in a short time. Ministers of almost every Protestant denomination are stationed in the district, and a Roman Catholic Bishop now resides in Bracebridge. Two newspapers are published, viz., the *Free Grant Gazette* and the *Liberal*, the former at Bracebridge and the latter at Huntsville. Saw mills and grist mills are numerous, and liberal encouragement is given to manufacturers of all kinds. The municipality of Bracebridge has just voted a bonus of \$2,000 for a tannery, and has also granted bonuses to other descriptions of manufactures. The unlimited water power throughout the district offers rare facilities for manufacturing enterprise, not to be surpassed in the province.

## MARKETS.

The continual influx of new settlers creates a demand for produce of all kinds at paying prices. Store-keepers, too, will take in trade or pay cash for any quantity of grain, &c., or furs. The operations of lumbermen have improved the market for hay, grain, and such supplies as are required by these parties. Hay sells at about \$10 a ton, and oats for 50 cents per bushel at the present time, and when the lumbering business is any way brisk these prices are doubled. Every settler coming in goes farther back to the unsettled lands. He, in turn, wants supplies, which, until he grows enough for his own consumption, he purchases from older settlers, who thereby secure a ready market for what they have to dispose of. The home demand will thus be good for some years, and as the means of communication (now pretty good) is always improving, there is no danger of the local market becoming glutted before a railway is opened through the district, a misfortune which has been felt by settlers in some of the more remote townships in Western Ontario.

## THE FREE GRANT ACT.

By this Act heads of families obtain a grant of 200 acres of land; single adults, of either sex, or those who are 18 years of age, get 100 acres, or if more is required they are at liberty to purchase 100 acres at 50 cents an acre cash. The conditions of settlement are, that there shall be cleared in five years, at least 15 acres, which must be fenced and under crop; a habitable house must be built, the dimensions of which must not be less than 16 x 20 feet. These conditions being complied with, at the end of five years, the deed will be issued. The Homestead Law provides that if a locatee or his heir remain on the land it cannot be seized for debt for twenty years. The Free Grant

Act has, undoubtedly, proved a great stimulus to the settlements to which it extends, and has proved a great boon to many families, who, under its provisions, have been enabled to secure good farm lands, which they could not otherwise have hoped to possess. Of the several Free Grant Districts of Ontario, Muskoka has far surpassed the others in progress of settlement. During the year 1876, in this township (Stisted), 68 persons located, the number of acres located for being 7,566. During the same period seven patents were issued for those locations upon which the regulation duties had been performed.

## THE SETTLERS.

The present inhabitants are perhaps as good a class of pioneers as ever invaded a new district. Certainly, the classes and nationality of them are of great variety. We find here some rich, and some poor; many intelligent and well educated, as well as unlearned; but all are throwing their energies into the same channel and vie with each other in hewing out for themselves independent homes in the new settlements. Doing this now in 1877 is easy, compared with what it was a few years ago, when there were no colonization roads running through the district in all directions, as we have now. There is little trouble experienced by new comers now to reach their locations, whereas settlers in days gone by had no such advantages, but rather many trying privations and drawbacks to contend with. Many of those settlers are now living in comparative ease and comfort, and enjoying the results of their many years of toil, and they delight to recall the thrilling incidents connected with the early history of settlement.

## INTENDING SETTLERS.

Those who are likely to succeed in Muskoka are men who have been accustomed to work. A strong, hardy man, who has courage and perseverance, with powers of endurance, and has some little means to commence with, cannot fail to get along. There are, however, other classes who also do well here; I refer to those who have lived on rented farms, and who possess sufficient means to enable them to employ labor and to support their families until they can raise crops from the land they take up; others, too, who, though they may not have been accustomed to farmer's life, are desirous to adopt agriculture as their profession, and who have means to support them until they become acquainted with the work, and get some land cleared. Many men even with families have come here without money, and have succeeded, but these experience many hardships and privations; therefore the experiment is not one that I would recommend, as the man who takes up bush land without the necessary means to give him a start, has a poor chance. At least two hundred dollars would be requisite for a married man to have at command to expect to succeed on a bush lot. It is a common practice for those of limited means to hire out, and get employment from home, either upon the roads or with the lumbermen, but this way of working can only succeed for a short time at first, as their absence from home only leads to their farms being neglected. Some have adopted a plan which has been found to succeed well in cases where persons of limited means wish to make farms for themselves here; the mode of operation is this:—The person locating being in steady work in some city, or older settled district, visits the Free Grant Lands, and after making a selection of land for location, engages with some reliable and trustworthy settler in the neighborhood to clear a few acres for him as his means will allow, while he himself steadily works away at his accustomed employment (at which he can earn good wages), until he can see his way clear to finally settle upon his land. I would not recommend any one to follow this plan who did not wish to reside on their land after, say, one or two years, as a longer period of absence might result in the loss of their land. Those who intend going into the bush to make a farm should consider well before they make a move that way; if they can do as well elsewhere they should not come here, but those who can benefit themselves by leaving, should lose no time in doing so. Some have come who never should have come, and there are also many who are not here who should be here. There are many on small farms, on rented farms, or on mortgaged farms, with families growing up, who could here secure homes both for themselves and their families; many are hired out and working hard, who, if they would come here and work as hard for themselves, would soon be independent. It is surprising that there are so many able-bodied men

living in cities, paying high rents, paying high prices for provisions and fire-wood, and losing their health into the bargain, whereas, if they were here, they would get land of their own for nothing, a house of their own for raising, fire-wood for chopping, and very soon they would be able to raise their own provisions. Many spend their winters loafing round, not being able to obtain a day's work, and consuming what little means they have acquired during the summer, besides often running into debt before the spring opens. To the attention of this class in particular I would recommend the advantages which the Free Grant Lands present. Many, doubtless, there are who would willingly come here if they knew more about the country, and were to seek the information they require.

## HOW TO SEE THE LANDS.

The best time to look for land is in the spring, before the leaves are fully out, or in the autumn, after they have fallen; at these times the flies are not troublesome, nor does the snow prevent a thorough examination of the land. New arrivals cannot too closely examine the land before locating; there being an abundance to select from, they should not begrudge a few days in search of good lots, so that if they do not get them, the fault is their own. It is to be regretted that through carelessness or a too hasty decision in this matter, sometimes settlers become dissatisfied after residing a while on their land, a state of affairs which they might avoid by exercising a little more discretion in their choice.

## ADVANTAGES OF MUSKOKA.

The advantages which Muskoka presents are both varied and substantial. Being within easy access of Toronto, almost in the line of the shortest route from the Atlantic to the Pacific, and forming the intervening space between the northern extension line and the Canada Pacific Railway, it must, at no distant date, be intersected by a line which will be its main artery of communication; such a line is the projected Muskoka Junction and Canada Pacific Railway, which is to connect the two lines. This line completed, Muskoka will be placed in a position equally as favorable as any district through which the Grand Trunk or any of our principal lines of railway pass, for being linked by railway with Toronto, the market will be little inferior to that busy centre of commerce.

The advantages, too, which the ample water-power of the district presents is unsurpassed and is practically unlimited, and enough some day to cause this to be an important manufacturing country. Minerals have been found here in sufficient quantities to pay for working as soon as more efficient means of communication are completed, in order that they may be transported to a distance. Besides the pine, the hardwood timber in several localities will become an article of commerce with increased facilities for exporting it. Much of the fine birch found throughout the district will be very valuable. Hemlock bark, too, will be in demand for tanning purposes. As a stock-raising country, Muskoka possesses advantages which surpass every other portion of the Province. It will doubtless become the nursery for sheep and cattle, and will eventually be the district from whence the older settled portions of the Province will draw their supply. The land is high and rolling, is well watered, and as a grazing country it will always be famous. In no portion of Canada will be found for the family of the emigrant so many advantages combined as Muskoka presents, providing that they have but sufficient means to gain a footing in it. This, when not possessed by those when arriving in the country, can soon be acquired by industry and thrift, while working for wages for a year or two after their arrival. Indeed, I would not advise newly arrived emigrants, excepting those with some means, to settle here, until they have been in Canada a year or two, and until they have acquired some knowledge of the mode of working, and the ways of the country, which are in most instances so totally different to what they have been accustomed to in the Old Country. Such persons will find the climate of Muskoka preferable to that of Great Britain, the seasons being more regular, and although the winters are colder, we have warm, bright, sunny days, the sky being bright and clear.

## ROUTE.

Muskoka is reached from Toronto by the Northern Railway, which extends as far as Gravenhurst, now a thriving village in the Free Grant District. The next point is Bracebridge, distance 11 miles, by stage in winter, or by boat during the season of

navigation. At this village there are plenty of stores and good hotels. A stage leaves Bracebridge three times weekly, by which persons in search of land can reach any of the Free Grant townships now open for location. The Crown Lands Agent for the District resides in Brackbridge. This gentleman will supply lists of the unlocated lots in each township.

In conclusion, I hope that the few plain facts I have laid before the readers of the ADVOCATE may be of some service, and that particulars of the district which I have adopted as my home may result in leading some families to settle on a Free Grant lot in Muskoka. I may say that I shall at all times be pleased to answer any inquiries through the ADVOCATE, or otherwise, providing a stamp is enclosed for reply.

JAMES ASPDIN, Aspdin P. O., Muskoka, Ont. March 12th, 1877.

Poultry Raising.

DEAR SIR,—According to promise, I now give you a short account of my experience in poultry raising.

I have been for the last fifteen years trying to find out which is the best fowls, and the most profitable for a farmer to raise. I have tried some four or five different breeds, viz.:—The Black Spanish, which I found excellent layers in summer, but very tender, and, unless kept in a warm place, no winter eggs to be got from them, the very time we enjoy such a luxury. The White Leghorn are very similar. The Game is a fine fowl, both to look at and on the table, but I found them so given to fighting that sometimes before well out of the shell they were at it.

I imported, some four or five years ago, from Mr. Loyd's stock of Brahmas, "Coldstream Poultry Yards," Baltimore, U. S., one pair light and one pair dark Brahmas, and I find it the best investment I ever made, as I never want eggs in winter now; I have not been a fortnight without plenty of fresh eggs since I got them. I prefer the Light to the Dark, and some of our leading breeders with whom I have been conversing say the same. In speaking of the Light Brahmas the editor of the Poultry Chronicle says:—"It should be a large, weighty fowl, of a free, majestic bearing, alike removed from the waddle of the Cochin China and the upright carriage of the Malay; short in the leg and neck, wide and full in the breast, and wide and deep in make; legs yellow and well feathered; tail short, but otherwise full in size and spread, that of the cock opening into a fan; comb small, and it may be divided and separated almost like three combs, or nearly united into one, but its triple form is always evident." He sums up by saying, what are they then? They are Brahma Pootras, large, heavy birds, symmetrical, prolific, good layers in winter, and hardy, living where Cochins would starve. I showed a pair of L. Brahma Cockerels, dressed ready for table, at our Guelph Xmas poultry show, weighing 18 lbs. A cross between the Brahma and B. Spanish makes an excellent layer and gives hardiness, which the Spanish has not got. They are certainly the most profitable fowls for a farmer that I have yet met, and do not eat more than other fowls; and when the grain comes off will wander in search of food all over the farm.

In speaking to Mr. Thomas and Mr. Butterfield at our show here recently, they both recommended the Light Brahmas as being the best and hardiest fowl for a farmer's use.

I see the Plymouth Rocks are highly spoken of by those who have tried them, and I believe are good layers; but I intend to stick principally to Light Brahmas, as being far ahead of anything I have yet tried.

We had one of the finest shows ever held in Canada here recently, and I am only sorry to see my brother farmers patronize it so poorly. They stand in their own light, as nothing pays better than poultry when properly attended to. I sold some \$50 worth of poultry last year besides 100 dozen eggs, and had all we wanted for our own use in a family of twelve, and started in spring with some thirty hens, principally of the L. Brahma breed.

I might give you a description of our show here, but as I have no doubt you have got full accounts elsewhere I will not trouble you; suffice it to say there were over 1,000 entries—41 pairs of geese and turkeys exhibited alone, some of the turkeys weighing over 40 lbs.

I hope you will try and encourage the farmers, at any rate the farmers' wives and daughters, to

take a greater interest in poultry, as well-bred poultry, I am convinced, pays as well in proportion as well-bred stock. I think we ought to offer more prizes at our Central and Provincial Shows for "farmers' fowls only," as it is almost impossible for them to compete with such breeders as Messrs. Thomas, Butterfield, Allen, Sturdy, Bogue, &c., and if they once took an interest in competing with each other you would soon see as good breeds shown by farmers as by professionals.

I would suggest that a class ought to be made at our Provincial Show at least for a few of our leading poultry breeders "for farmers only." I hope some of our leading poultry men will take this matter up. I hope some others will give their experience in your valuable journal soon again. Springfield Farm, 13th March, 1877. J. A.

[We entirely agree with the suggestion of our correspondent. There should be special prizes for farmers' poultry. And for the professionals proper precautions should be taken that the prizes be for poultry bred and actually owned by the exhibitors, not bought for the occasion, or borrowed, as it is said has been done at former Exhibitions.—Ed.]

SIR,—The ADVOCATE for March has just reached me, and I am sorry to find you have lost a subscriber, merely because you stated the truth respecting the Red Chaff wheat. A farmer in this township told me he tried it, and although it yielded well, yet it makes bad flour. The grain dealers, I believe, generally ship it off to England, when it lowers the standard of wheat in the English market, and, consequently, dealers should refuse to buy it even when mixed with other wheat, except at a reduction of 20 cents per bushel. I am sorry to find that so many of our farmers after having robbed their farms of its fertility by repeated cropping with wheat, and selling their wheat at good prices, are so stingy that instead of using their profits in underdraining their farms, wherever necessary, purchasing artificial manures, making home comfortable, and educating their children properly, prefer to deposit their money in the banks, so that if a panic is imminent they will make a rush to draw it out, and so make bad matters worse. In a legal point of view a man has a right to do what he will with his own; but no man has any moral right to use his property in such a manner as to injure the community. The hard times for this Province have only just begun, and must become worse yet before business can be again settled on a sure foundation. Whenever the weakest bank in the Province fails, a panic is sure to set in, and those stingy, narrow-minded farmers I have alluded to, will immediately make a rush on the banks, to withdraw their funds. In the Daily Globe of the 24th ult., I noticed a detailed statement of the liabilities and assets of all the banks in the country, and on looking over it I found that the amount of specie and Dominion notes put together held by some of them was not equal to the amount of notes in circulation, and deposits, payable on demand, for which they are liable; consequently, when a panic does come, they would soon have to suspend specie payments, although many of them appear to have abundance of assets, and only require time to utilize them; but this would involve a general panic similar to that in 1866, but even worse, as we have now more banks and many more stores than existed then. Although all classes seem to be possessed with such a rage for gambling and fast living, that the Province must be reduced to the verge of bankruptcy before they can be induced to economize. I have noticed your remarks concerning the wheat supply from India. A supply of cheap wheat is an absolute necessity for England, and from no other country can such a cheap supply be obtained. Considering the disorganized condition of the laboring classes in England, even amongst agricultural laborers, dear bread will be the signal for a social revolution and consequent anarchy for a time, and consequently the English Government will make every exertion to stave off such a calamity as long as possible, but a few years may elapse first, and till then a good market will be found in the United Kingdom for all the butcher meat, alive or dead, and horses that we can export. As you have observed, we must look more for a market at home, and in other foreign countries, than we have hitherto done. In conclusion, I would only observe that those who may this season experiment on different kinds of wheat should never sow two varieties in one field as they would be sure to hybridize, so that the crop can not well be pure. SARAWAK.

[Thanks for your communication. We will be pleased to hear you at any time, and your letters

shall receive due attention. In the article on lime in the last number there was an unintentional omission. To spread the lime evenly on the ground, it was first wheeled out in heaps, and then spread evenly with a shovel. This was necessary in order to spread the fifty bushels evenly over half an acre.

We fully agree with your remarks as to the wrong done by farmers in hoarding the profits from their farms instead of investing them in needed improvements on their lands. Money expended judiciously on the farm is placed in the safest as well as the most profitable bank. The increased value of the land amounts to far more than bank interest, and it is there a deposit that cannot be affected by any panic. Still we do not think that deposits in our banks are unsafe; if there be at any time a loss, it will be to the stockholders, not to depositors; nor do we think the prospect in the Province quite so gloomy.

Concerning the condition of the laboring classes in England we have no fear for the future. England has passed in safety and triumph through many storms. Powerful enemies without, and false friends within the camp, have been powerless to shake her throne as Ruler of the Nations, and we have no doubt that she will maintain her proud position.

The hybridizing of wheat is at any time attended with such difficulty that there need be no dread of casual occurrence from two or more varieties being sown in the same field. Even when seed is sown, as it frequently is, the varieties grow quite distinct, and the distinction in the sheaf and bin is apparent to any one.—Ed.]

Apple-Tree Borers—Western Corn Gypsum.

SIR,—As a farmer I find every No. of the ADVOCATE instructive and interesting, although I do not spend much time on "Minnie May's Department;" the boys and girls attend to that part of the paper with much amusement and delight. So much of the contents being written by practical farmers, makes it, in my opinion, of so much the more value to us as a class, than it would be if filled up with long learned disquisitions by professors of agricultural chemistry, &c., from the best schools on the continent.

I cannot admire the letter of A. C. I do not see how he will mend the matter by "stopping the paper," unless he can stop the whole future issues of the ADVOCATE; the farmers of Canada need such a paper—one that will tell the truth independently of private interests, and while the ADVOCATE is conducted on such honorable principles it cannot but succeed, for be it remembered the farmers of Canada are the bone and sinews of the Dominion.

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If success attend our efforts in that line, several other creameries will be put in operation next year in the Old Leeds Co., Ont.

Your correspondent W. K., speaks highly of gypsum. I have proved it on light soils to be an excellent dressing for meadows, especially if clover has been sown and failed, it will restore clover. I have mixed it with unleached ashes, equal parts,

with equal good success; also tried it on corn with good results.

For apple trees I prefer unleached ashes, especially close around the stem. My trees were badly affected with the borer, so much so that I lost several large and thrifty trees before I was aware of the cause. I then examined the trees with the knife and wire, and applied ashes, and the result is I can keep the insect in check; and by constantly attending to the trees in spring I have no trouble with worms' nests. I do not sell ashes since the ashman refused to purchase ashes measured in my half-bushel—although stamped with V.R. my measure was only about one-third as large as his iron tub.

To your correspondent from Meaford, I would say that Western corn, sowed in June, at the rate of 130 lbs. to the acre, in drills 18 inches apart, in good clean land, will produce one of the most valuable substitutes for grass that can be raised at such a trifling expense. Cut in the latter part of July, August or September as required, about 24 hours before being fed, will be a good feed for milch cows; what is not needed to feed out then, cut before frosts injure it, bind it in small bundles and set up about 8 bundles together for a few weeks, then drive a long stake into the ground and bind 40 or 50 small bundles around the stake near the top, use in winter as you need it. Some farmers will mow and cure it as hay and mix it with straw in the mow or stack. If properly cured I consider it worth more than ripe timothy hay for cows, and an acre will produce an immense lot. Sow Western corn, if not too far north, and I think you will not regret it. A slight cultivation may be needed unless the land is clean and mellow.

If you can find anything in what I have written worth copying, use it as you think proper and oblige  
CANADENSIS.

#### Guano.

SIR,—As I imported a quantity of guano from England, and intend to apply it to the land this spring, would you be so kind as to inform me of the best mode of applying it on light soil, and what crops it is best adapted for?

Do you consider it would pay to import it at the rate of \$80 per ton? Please answer in the FARMER'S ADVOCATE.

A SUBSCRIBER, Lower Montague, P. E. I.

[Guano is applied as a fertilizer to grass lands as well as to root and grain crops. Peruvian guano is one of the best artificial manures for grass land; when used alone, it may be employed at the rate of from one and a half to two and a half cwts. per acre. A very generally useful top-dressing for the hay crop may be made of three parts Peruvian guano, one part nitrate of soda, and one part sulphate of ammonia. Of this mixture, two to two and a half cwts. per acre may be employed.

For root crops the following practice has been found very beneficial on light soils: Give barely half a dressing of dung in the spring to all the land for turnips, along with three cwts. of superphosphate of lime per acre. Give a full dressing of farm-yard dung in autumn to the land for the mangold wurzel crop, along with two or three cwts. of guano and two or three cwts. of common salt per acre in spring. Give a fair dressing of dung in autumn, if possible, to land intended for potatoes, along with two or three cwts. of guano as a top-dressing in spring, at planting time. Give a fair dressing of dung to the clover in autumn for the wheat crop. This is the practice of good English farmers.

We have employed guano, without any additional manure, for mangold crops. Having opened drills at 30 inches distant, we sowed guano in the drills, then covered the drills with the plow and dribbled in the seed. We had a very heavy yield. We may add, the ground had been manured for a root crop the previous year.

"Would it pay to import guano at \$80 per ton?" We think the experiment would be one of considerable risk. The profits of any crop depend so much on seasons and other circumstances that any opinion would be merely a probable estimate. We would advise any such experiment to be made on a small scale. Besides, the value of guano is wholly according to its richness in ammonia. The simplest test that can be applied to guano is weight. A bushel of good guano, filled in, without pressure, should not exceed seventy-three pounds in weight. The best substitute for guano, available to all, is fowls' manure.—Ed.]

SIR,—The Red Fern spring wheat has done very well this year; again it yielded 27 bushels to the acre. I fancy I sowed it a little too thin—one bushel to the acre, broadcast—the consequence was it had to stool out a great deal, and did not ripen as soon as it should, but for all that it did better than any other I have heard of.  
Cherry Creek, Mar., 1877. R. F.

PROFIT OF COWS.—SIR,—I would like to inform you how my cows paid me during the past year, having kept four cows, two new milch cows and two farrow cows; from which I made one thousand weight of butter, having sold \$134.90 worth besides that required for our own use. Total amount made amounts to \$175. GEO. A. COOPER.  
Clinton.

Can you or any of your readers inform me through the ADVOCATE how to prevent turnips and carrots from running to seed or long stock, if so you will much oblige a constant reader.

BLUENOSE.  
Upp Stewicke, Colchester Co., N. S.  
[The principal cause is the sowing of inferior seed raised by people who do not understand the business. Roots planted out of the proper season will produce bad seed. In England too early sowing has been known to result in weakly and seely crops. Turnip seed one year old is not so liable to become weakly as new seed. Your best way to avoid this is to get your seed direct from some good seedsmen. Often a lot of cheap and inferior seed is packed and sent to the small groceries throughout the country. The cost of good seed is nothing in comparison to the loss of a crop.—Ed.]

SIR,—I sowed three bushels of Red Fern wheat last year. I sowed Fife wheat along side of it. I had threshed 20 bushels of Red Fern. I sowed them about the same quantity on the ground. The land was the same. The Fife wheat was shrunken poor stuff, fit for hen feed. The Red Fern would have yielded double if the season had not been so dry. The midge injured the Fife badly, but it did not affect the Red Fern. The Minnesota wheat did very well with a neighbor of mine.  
DANIEL FERGUSON, Wilton Grove.

FROZEN APPLES.—It may be of value to some to know that frozen apples, if taken from the tree before they thaw, and put in a cool cellar, will be very little injured. We put some down in that way last fall, and the frost came out in large shells on the outside, and left the apples very little worse, while others left on the trees were ruined. A plan which a neighbor took last fall to preserve apples for family use, and which I thought so well of that I will mention it. Instead of barrels he took cheese boxes into the orchard, and carefully picked the fruit into them, put on the lids, and then piled them on top of each other in a cool cellar. The different kinds might be marked on the side of the boxes, and they so placed that this could be seen most readily. The advantages of this plan are—The boxes will keep for future use much better than barrels, and will, consequently, be cheaper in the end. They are more convenient to handle and fill, and it will be much easier getting at the apples when wanted. I intend ordering a quantity of boxes next fall, to be made strong and good, and to hold about a bushel each for my own use. In this part of the country they will cost probably about 15 or 16 cents each.  
Innerkip, March 8th, 1877. J. M.

1. Please to tell us in the ADVOCATE what the clover seed that is shipped to the old country is used for? Is it used for dyes; if so, what color?

2. I enclose you a sample of worms that are found this year in clover seed. I do not remember to have seen them before, nor to have heard of them, either through the papers or otherwise. They seem to be most prevalent in poor seed. Do you know anything about them; have they anything to do with the quality of the seed?  
E. D. M.

[1. We have several times heard here of clover seed being used for dyes. We have made enquiries on the subject, and to ensure greater certainty we wrote to most reliable houses in England, and we are assured the seed is not used for dyeing at all, but solely for seed.

2. Wm. Saunders, well known as an entomologist, kindly gives us the following information to the second query:—

SIR,—The insect mentioned in your correspondent's letter, as affecting clover, is, I believe, what

is known as the clover worm (*asopia costalis*). The specimens contained in the letter were so dried up as to be difficult to recognize, still I think the determination is correct. The moth produced from this caterpillar is a very pretty little thing, and very quick in its movements. WM. SAUNDERS.

#### Wire Fence—Caterpillars.

I propose building a wire fence, or part wire at least; that is, I intend putting in two cedar posts per rod and then putting a board twelve inches wide in the bottom and a two by four scantlon on top; then fill in the intervening space with as many wires as I think necessary.

I would be very much obliged for your opinion of such a fence in your next issue, and what thickness of wires and where best obtained, &c.

As it will be coming on toward the time when we may expect to see the caterpillars on our fruit trees (by the time of your next issue), I will here give you my plan (which I discovered several years ago and again called into practice last year when they were so bad throughout this part of the country) of destroying them. If you deem it worthy, publish it for the benefit of others.

When the sun is warm place a ring of coal tar about one inch wide around the trunk of the tree, up pretty near the branches. Then jar all the branches that have any caterpillars on them, and they will immediately fall to the ground. Break the web by which they let themselves down, and in less than half an hour they will all be gathered on the trunk up as far as the tar, where they can easily be killed with an old broom or something of that sort.

One half day of your time, and a gallon of tar (costing about fifty cents) will make your orchard an ornament instead of an eyesore to your farm, to say nothing of profit. But here the want of space compels me to discontinue.  
T. M. E.  
Porter Hill, March 6th, 1877.

[REPLY TO T. M. E.—We have had little experience with wire fences. The galvanized wire is the best, and will be found cheapest eventually. Apply to the nearest wholesale hardware merchant. The method you have given is, we believe, a very good one; the twelve-inch board at the bottom and scantlon on top would secure the fence.—Ed.]

#### Send Postage Stamps.

SIR,—Since the insertion of my letter on Muskoka in the February number of the ADVOCATE, I have received numerous letters of enquiry, asking for further information, none of which contained stamps for reply. Will you kindly insert a line in the April number to the effect that I will willingly supply information, to those that require it by mail, if the party who writes will enclose a stamp for reply; but, unless this rule is complied with, I cannot undertake to answer communications by mail. By inserting this in the next number you will confer a favor on  
JAMES ASPDIN.

Asplin P. O., Ont.

[Other correspondents have made similar complaints. Persons desirous of obtaining information should consider that stationery and time are of value. The least thing they can respectfully do is to send stamps for return postage.—Ed.]

#### Unclean Milk.

SIR,—Can you or any of your subscribers inform me why cows give unclean milk out of some of their teats. We have a fresh milk cow that gives bad milk from one of her teats; the last milking was quite bloody, but not lumpy. The cow is six years old, kept in a warm stable, and fed boiled barley once a day. We had a heifer last year that had two teats the same way all last summer. I would like to know the cause, and if there is a cure.  
A SUBSCRIBER.

[This is a trouble which every dairyman has to contend with more or less, and we think comes from several causes. But the most potent one is a feverishness in the cow's bag or in a portion of it. Some cooling food and medicine should be given. A tablespoonful of saltpetre given once a day in her food will be found beneficial. Many use poke-root—a small piece cut up fine and given in a bran mash. If it proves troublesome or incurable, the best plan is to fatten and sell to the butcher, and fill her place with another.—Ed.]

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A LITTLE ABOUT THE RED FERN OR EMPORIUM.—  
Two years ago I got 10 lbs. and I like it better than  
any spring wheat I ever had before. I let a neigh-  
bor have five pounds, and from my five pounds I  
raised the first year 175 lbs. of good wheat, and  
last spring I sowed 140 lbs. and I cleared up 32  
bushels of very good wheat. This season I have  
sold 12 bushels at \$3 per bushel. I intend to sow  
20 bushels myself if all is well. I also got 10 lbs.  
of your Emporium oats which also did very well.  
I believe the Red Fern is both midge and rust proof.

E. H., Brampton P. O.

**Protection of Insectivorous Birds.**

SIR,—The Society for the Protection of Fish,  
Game, and Insectivorous Birds are doing a good  
work; their endeavors to induce farmers to pro-  
tect, instead of ruthlessly destroying our birds, es-  
pecially those known by the name insectivorous,  
should meet with hearty approval. The number  
of injurious insects are increasing, and agricultur-  
ists require all the allies they can get to keep them  
in check. It is not enough to cease killing birds,  
but every facility should be afforded them for  
breeding. This can be done to a large extent by  
persons surrounding their homes with ornamental  
trees, shrubberies, hedges, &c., at the same time  
beautifying and adding to the value of their prop-  
erties. The bareness of the grounds around the  
majority of our farm houses is a frequent subject  
of comment.

The necessity for planting trees, both with a  
view to shelter and profit, (at the same time afford-  
ing cover for our game birds,) might also be urged  
in connection with this subject. The claims of the  
European larch have been presented to land-  
owners of late, and not without good reason. It  
is a deciduous tree, belonging to the fir tribe  
(Coniferae), very hardy, and a rapid grower. The  
following extract is from Chambers' Information  
for the People:—"Of this valuable genus there  
are several species grown in Britain, the more com-  
mon is the larix Europaea. The larch is the most  
beautiful in figure of any of this class of trees,  
shooting straight up, its elegant stem tapering to  
a point, is furnished with pendulous branches, or-  
namented with delicious drooping spray. Its qual-  
ities are rapid growth, flexibility and durability in  
situations between wet and dry—a circumstance,  
perhaps, attributable to the quantity of resin in  
its fibre. It possesses a great superiority over the  
common fir in point of ornamental effect."

The larch is not without value from a medical  
point of view. It yields Venice turpentine, and a  
sweetish substance called Briancon Manna, which  
exudes spontaneously and concretes upon its  
bark. The bark possessed astringent properties,  
and has been found efficacious in hemorrhage from  
the lungs, and is also employed in other diseases.  
LIXUM.

**Poultry Yard.**

**On Breeding Poultry.**

The all prevailing topic now with the farmer,  
his wife and daughters, as they are making their  
plans for the spring and summer, is fancy poultry,  
and which breed is the best, and how many can I  
get for the fewest dollars. In the latter they are  
wholly wrong. It should not be the aim to get the  
most for the least money. To get the best is ap-  
plicable to fine fowls as it is to all other stock. Do  
we want to buy a so-called Berkshire hog, or  
Short-horn bull, for almost as much money as we  
would have to pay for an animal, which we know  
to be better, and when we examine its or their  
progeny, to find it sadly lacking in all the points,  
which go to make up the fine show animal? The  
same rule is applicable to fine poultry that is to  
fine horses, cows, sheep, or anything else. In the  
first place, decide on the breed you wish to keep,  
whether for size or eggs. Next send to a reliable  
breeder of the variety, and ascertain his prices. If  
too high for your slender purse, buy eggs and learn  
the wants of your fowl day by day, and by this  
means learn your poultry as you would a book (by  
constant study). To those who are not posted in  
the fancy or high-bred poultry, I would say, buy  
eggs and subscribe for a good poultry journal.  
There is nothing about the farm which pays as  
handsomely and requires as little attention as poul-  
try. A few dollars laid out in the spring, will  
bring you returns you little dream of by fall. I am  
an old breeder, and have paid highly for all I have

learned, but nothing cost me as dear as my early  
poultry experience. I would study the papers, and  
find where I could buy cheap fowls or eggs—send  
my money, and when the stock came—then the  
disappointment. My eggs would not hatch, and  
if they would, after months of care and anxiety, I  
would find my birds (bought cheap) sadly lacking  
in all the essential points, which go to make a bird  
what it should be. The cheapest eggs I ever  
bought were those I paid the most money for.  
They always hatched well, and the birds proved  
to be all the breeder claimed for his stock.

In conclusion, allow me to say, get the best, and  
when you go to the fall shows or fairs, you can  
say with pride, as I have heard farmers in the  
east say, "\$20, why I have just as good at home!"  
And they have, for why should not the farmer  
make as good a breeder as any one.

**Eggs—How Increased.**

If an increase of eggs be desired in the poultry  
yard, before large sums of money are expended in  
the purchase of everlasting layers, we would re-  
commend the system of keeping no hens after the  
first, or at the most, their second year. Early pul-  
lets give the increase, and the only wonder is that  
people persist, as they do, in keeping up a stock of  
old hens, which lay one day and stopping one. In  
some parts of Europe it is the invariable rule to  
keep the pullets only one year. Feeding will do a  
great deal—a surprising work indeed—in the pro-  
duction of eggs, but not when old hens are con-  
cerned; they may put on fat, but they cannot put  
down eggs. Their tale is told, their work is over;  
nothing remains to be done with them but to give  
them a smell of the kitchen fire, and the sooner  
they get that the better. Of course, there are some  
old favorites whose lives ought to be spared as long  
as they can send forth their representatives. Ju-  
dicious mating—by which we mean the advantage  
of a comparatively youthful cockerel—may be the  
means of even exhibiting poultry making their ap-  
pearance from the eggs of the good old hen, and  
here we have the exception to the rule upon which  
we insist.—London Agricultural Gazette.

**Poultry for Farmers.**

We fear that farmers are allowing the fancy  
poultry men to carry off not only all the honors,  
but the profits as well. Farmers seem to think  
poultry very well for the women, and keep a few  
to please them; but they do not regard them as  
part of their farming operations, and worthy of the  
same attention as they give to their sheep, cattle  
and swine. They have not, evidently, examined  
the economical question with due attention. Sup-  
pose we make a little estimate of the comparative  
capacity for profitable production between the sheep  
and the hen. Farmers have no doubt of the profits  
of sheep husbandry, and therefore we take the  
sheep as a standard of comparison.

In the first place, the farmer expects to make  
definite provision for sheep; to give them good  
pasture in summer, good food and shelter in winter,  
and he studies their wants, and provides for them  
as a necessity in his farm economy, with confidence  
in an adequate return. But how does he treat his  
poultry? Why, he lets them take care of them-  
selves. He makes no provision for them. Some-  
times they get an abundance in their lawless forag-  
ing expeditions about his premises, and again they  
get little or nothing for days; yet he speaks of his  
poultry as worthless, in point of income, when he  
has made no certain provision for their wants.

If we go into a calculation of the profits of poul-  
try, we find, as a starting point, that a good breed  
will lay, on an average, from 100 to 150 eggs per  
year, to each hen. If we estimate the general  
average at 125 eggs per hen, and the average price  
at two cents each, we have \$2.50 as the income  
per hen for eggs; and besides this, the hen will  
raise at least one brood of chickens—say an aver-  
age of eight chickens, and should dress, on an av-  
erage, three pounds, and bring in market, on an  
average, in any of our large cities, three shillings  
each, or \$3 for each brood. Suppose it costs \$1.50  
to raise each brood, then we have \$1.50 profit,  
which, added to the eggs, makes \$4 as the income  
from each hen. We know instances where, on  
small flocks of thirty or forty hens, the average has  
been more than this, and yet \$4 is a fair average  
for each sheep in respectable flocks; and one sheep  
will eat as much, in value, as six hens.

Poultry have a higher degree of animal heat, and  
a more rapid pulse than sheep, and thus eat more  
in proportion to weight; but after making this  
proper allowance, still six hens can be kept as  
cheap as one sheep, and it is easy to see, that if

you reduce one-half the estimated income from a  
hen, still, hens are more profitable than sheep.  
The reason is quite obvious. The flesh of poultry  
brings nearly double in market that of mutton.  
As long as the taste of people prizes poultry so  
much higher than other kinds of flesh, the farmer  
should find his profit in raising it. All it requires  
is, that the farmer should study the wants of poul-  
try as he does his other stock, and be as assiduous  
in their care, and he will find that nothing on the  
farm pays him a better proportional profit.

**Care of Sitting Hens.**

The sitting hen, to be under favorable circum-  
stances, should have a room by herself in which a  
supply of pure water and grain is constantly kept,  
and the all-important "dust bath" of coal ashes,  
road dust, or sand mixed with flour of sulphur,  
must be furnished for the healthful condition of  
her ladyship. When the hen cannot have the ad-  
vantages of a separate room, she must, at all  
events, be allowed to leave the nest once or twice  
daily for food and exercise. If she is not fed she  
will be very apt to eat her eggs to appease the de-  
mands of appetite, and unless she is allowed space  
for exercise her bowels will become deranged so  
that constipation will set in, to be followed, very  
likely, by a violent diarrhoea. In order to thrive,  
a sitting hen must have space to run, flap her  
wings and shake herself up generally, and if she is  
made to search for her grain and scratch it out,  
kernel by kernel, from under leaves and straw, all  
the better, provided the weather is not cold, in  
which place do not tempt her to stay away from  
her nest too long.

Laying hens now need a variety of grain and fat  
and lean meat once a week. They cannot make  
eggs without a varied diet. Wheat screenings,  
oats, buckwheat, and corn are good.

**Veterinary.**

**Ringbone.**

SIR,—In looking over the columns of the ADVOCATE  
my attention was drawn to an article con-  
demning the treatment practised by the veterinary  
profession for the cure of ringbone—that of firing  
and blistering. Your correspondent surely cannot  
understand the nature of a ringbone, or he would  
never have recommended such an erroneous treat-  
ment as that of removing from the posterior part  
of the fetlock a membrane that grows around the  
muscles, as I. M. terms it. This, I suppose, is  
what is termed "cutting out the feeder," a treatment  
too absurd to require remark. This so called  
feeder is a small bursal, or synovial sack, placed  
there for the protection of the tendons in those  
parts, and has nothing to do in any way with ring-  
bone. We cannot say too much against such cruel  
treatment. Several cases have come under our  
notice where the animal was rendered entirely use-  
less by this brutal treatment. It is the duty of  
every veterinary surgeon to condemn such cruel  
practices, to open the eyes of the public against  
such empiricism, that the poor dumb animals may  
be saved from the cruelties of quackery. Ring-  
bone is an osseous deposit around the head of the  
small postern bone and lower end of the large one,  
interfering with the proper action of the joint,  
consequently causing lameness. We make no hesi-  
tation in saying that, if properly done, firing and  
blistering will remove the lameness in nine cases  
out of ten. Hoping, Mr. Editor, I have not tres-  
passed too much upon your valuable space.

A VETERINARY SURGEON.

Gormley, March 9th, 1877.

[Doctors differ.—Ed.]

**Value of Horse Feed.**

From an exchange we take the following table  
upon this subject:—The comparative value of horse  
feed is found by experiment to be as follows:—100  
lbs. of good hay is equal in value to 59 lbs. of oats,  
57 lbs. of corn, 275 lbs. of carrots, 54 lbs. of rye or  
barley, and 105 lbs. of wheat bran. Such tables,  
however carefully prepared, are too indefinite to  
be of any practical value, and, besides, they are  
too liable to be affected by attendant circumstances  
to be accurate. It cannot be meant that either of  
the varieties of oats valued in comparison with hay  
would be an equivalent substitute for it.

### Stock and Dairy.

#### Potatoes for Horses.

L. T. Scott writes in the *Country Gentleman*:— Nearly every winter when I have my horses up in stable, I think I will call the attention of your readers to the practice of feeding potatoes to their horses. I once came very near losing a very valuable horse from feeding him dry hay and oats, with nothing loosening. I have never believed in dosing a horse with medicine, but something is actually necessary to keep the horse in the right condition. Many use powders, but potatoes are better, and safer, and cheaper, if fed judiciously. If those who are not in the habit of feeding potatoes to horses will try them, they will be astonished at the result. I have known a horse to change from a lazy, dumpish one, to a quick, active, headstrong animal in five days, by simply adding two quarts of potatoes to his feed daily. If very much clear corn meal is fed, they do not need so many potatoes. Too many potatoes are weakening, and so are too many apples. When I was a lad I was away from home at school one winter, and had the care of one horse, one yoke of oxen, and one cow, everyone of which I had to card or curry every day. The horse had three pails of water, four quarts of oats, two quarts small potatoes, and two quarts of corn extra every day he worked, with what hay he wanted, and a stronger, and more active horse of his inches, I have never yet seen.

#### Judging Wool.

Many farmers have been annoyed, when selling their wool, to find that the acute and practised eye of the wool buyer had detected the fact that his sheep had been allowed to run down in condition at some time during the growth of the fleece. They are half inclined to think that the buyer is merely trying to depreciate the price. As a matter of fact, there is nothing which renders wool so useless for certain kinds of manufacture as unevenness or break in continuity of the thickness of fibre; and there is no defect more common, and nothing that year by year touches the sheep-grower more severely on that tender part of his anatomy—the pocket. However good the wool in all other respects, the keen eye of the buyer singles out the defective wool, and down goes the price of it. And it is not mere fancy that regulates the prices, for the uneven wool will break at the weak places during the first process of manufacture. Some persons suppose that this unevenness of fleece is hereditary in certain animals, and perhaps unevenness might be made hereditary by generations of ill-usage and neglect. But as the wool of an entire flock is found to be uneven one year, and not so in another, it shows that management has more to do with it than descent. If sheep are allowed to get into a low condition, are neglected, underfed, or not sheltered properly, the pores of the skin will contract, and the wool that issues will be of very fine fibre. As soon as the animal recovers a vigorous condition the pores again open, and a longer and stronger fibre grows. The wool is thus weaker in one place than in places at each side of it, and breaks at the weak place on the slightest strain. Nothing induces unevenness more easily and surely than want of water. It is a common notion that sheep can do without water or a very little. If supplied with roots daily they will not want much water; but it is well and humane, too, that water should be always within their reach. Not only is it important that the fibres should be even, but the fleeces throughout should be even as regards length, softness, density and firmness. A practised wool buyer gives the following description of the way in which an expert examines a fleece:—Always assuming that the wool to be inspected is really a fine wool, we first examine the shoulder at the point where the finest and best wool is usually found. This we take as the standard, and compare it in turn with the wool from the ribs, the thigh, the rump and the hinder parts, and the nearer the wool from these various portions of the animal approaches the standard the better. First, we scrutinize the fineness, and, if the result be satisfactory we pronounce the fleece in respect to fineness, very "even;" next, we inquire into the length of the staple; and, if we find that the wool on the ribs, thigh and back, approximates reasonably in length to that of our standard, we again declare the sheep as regards length of the staple, true and even. We next desire to satisfy ourselves of the

density of the fleece; and we do this by closing the hand upon a portion of the rump and of the lion wools, the fleece at these points being usually the thinnest and most faulty, and, if this again give satisfaction, we signify the fact by designating the wool "even" as respects density. Now, to summarize these separate examinations, if you find the fleece of nearly equal fineness from the shoulder, rib, thigh and back, and of equal density at the shoulder and across the loins, you may conclude that you have a perfect sheep.—*English Exchange*.

#### Practical Views of Practical Breeders.

Mr. Wise, of Prescott, writes as follows to the *Turf, Field and Farm*:—

In the first place, I would say my first purchase was the brood mare Lady Patchen, by George M. Patchen, dam Long Island Maid, by Montauk, son of Cassius M. Clay, bought of W. H. Pick, Esq., Hartford, Conn. The next one, Belle, by Rysdyk's Hambletonian, dam Rhoda, by Ames' Cassius M. Clay, jr., bought of C. M. Pond, Esq., also of Hartford, Conn. My third purchase was Rysdyk, also of Mr. Pond. These three purchases were made in the spring and summer of 1874; and you will say they have been very productive when I tell you I have to-day something over sixty head of stock. The two mares named were in foal when I bought them—Lady Patchen to Peck's Idol, and Belle to Rysdyk. Lady Patchen's produce was a bay filly, now 32 months old, 15.3 hands high, and weighs 975 pounds. She is a right good one, has been handled a little, and can show a 2.40 gait very handily. Produce of Belle: a bay colt, 31 months old, 15.3½ hands high, and weighs 1,105 pounds. He has not been worked as much as the above filly, but is well broken, and can show a 3 minute gait. I have kept him a stallion, and think him a very promising young one. Now, as to how they were fed, &c. At 5 months they were weaned, put into a box-stall 16 to 20 feet, run out doors daytimes, and shut up nights; were turned out every day; don't think they missed a day all winter. I commenced by giving them two quarts each per day, and kept increasing it up to six quarts daily; was changed to ground oats, then back to oats again. Carrots twice a week in place of oats, and in addition to this, about four quarts of milk each night and morning all winter, together with all the good hay they can eat. I have treated all my colts in this manner till this winter, when I have added one-quarter corn to three-quarters oats, and I like it better than the clear oats. For the two (this is the third) years I have been breeding, I have not had a sick colt for an hour—always well and ready for their three meals a day. As I have said above, as I fed my two first colts, so I have fed them all, and I think successfully. One of my yearlings, Louise, by Rysdyk, dam Minnie Day (grandam Old Kate, dam of Orient), she by Green's Hambletonian (full brother, as you know, of Volunteer); this filly is fifteen hands high, as handsome as a picture, and can pull a man in a road cutter in one minute, and has done it. Then I have two weanlings that stand 14.2½ hands, good ones, and show good promise of speed.

The stallions—Rysdyk, Phil Sheridan, Chestnut Hill, Wm. B. Smith and North America—are given eight to ten miles daily. Chestnut Hill, by Rysdyk, is a slick one; trotted a quarter for us the other day in 37 seconds. The brood mares are never worked; run out days and stabled nights. They are fed four quarts of oats daily, carrots twice a week, and all the hay they want. They all look well, and notwithstanding it has been thought by some our winters are so severe, we could not breed and raise the trotting horse successfully, I am very much inclined to think we can, and hope in a few years to be able to prove it. I am satisfied myself that we can, and am well pleased with my stock so far. I am told by those who have seen Eastern and Kentucky stock that mine compares very favorable with their stock; that they have seen no better ones than mine, and I need not be ashamed of my efforts thus far. I consider this very flattering, indeed, for the remarks are made by those having no interest in one section more than another. If there is any difference, it is rather against Canada than for it.

#### Ayrshire Cows.

The report of the Ayrshire Agricultural Association gives the following points as the standing of superiority in Ayrshire dairy cows:— Head short, forehead wide, nose fine between the muzzle and eyes, muzzle moderately large, eyes full and lively, horns wide set on, inclining upward and curving slightly inward.

Neck long and straight from the head to the top of the shoulder, free from loose skin on the under side, fine at its junction with the head, and the muscles symmetrically enlarging towards the shoulders.

Shoulders thin at the top, brisket light, the whole forequarters thin in front, and gradually increasing in depth and width backward.

Back short and straight, spine well defined, especially at the shoulder, the short ribs arched, the body deep at the flanks and the milk veins well developed.

Pelvis long, broad and straight, hock bones (ilium) wide apart and not much overlaid with fat, thighs deep and broad, tail long and slender, and set on level with the back.

Milk vessels capacious and extending well forward, hinder part broad and firmly attached to the body, the sole or under surface nearly level, the teats from two to two and a half inches in length, equal in thickness, and hanging perpendicularly; their distance apart at the sides should be equal to about one-third of the length of the vessel, and across to about one-half of the breadth.

Legs short, the bones fine and the joints firm.

Skin soft and elastic, and covered with soft, close, woolly hair.

The colors preferred are brown, or brown and white, the colors being distinctly defined.

Great value is attached to the above form and points by the dairy farmer, and he quickly takes them in when effecting a purchase, so that a mistake is rarely made.

#### Value of Cattle Food.

There is an enormous difference in the value of cattle foods used in this country, both for fattening and for labor sustentation. This difference is mainly due to the varying amounts of water and nitrogen substances they contain. Take the difference in the manurial value for illustration, between two kinds of meal. The worth of the manure from a ton of linseed and cake is about \$17.50 in the New England markets; that from a ton of cotton seed cake is worth nearly \$24. This value is based upon its use when fed to fattening animals. If feed to working oxen and milch cows, it falls to about half this value. The amount of labor and milk obtained will be in proportion to the relative manurial value of the experiment. All foods that hold a large amount of water, like roots, potatoes, &c., have comparatively a small value as fattening or working foods. The percentage of nitrogen or phosphatic substances is so small that large quantities must be consumed to produce desirable results. The percentage of water in several of our most ordinary foods is as follows:—

	Per cent.
Meadow and clover hay.....	14.3 to 14.6
Straw.....	14.3
Dry grains of cereals, &c.....	14.4
Green fodder.....	.75 to .80.
Mangle-wurzel.....	.88 to .90.
Turnips.....	.90 to .91.
Potatoes.....	.75

Cattle food should be selected with reference to the ends desired in their use, and relative cost of the same. Foods for work, for milk, for fattening, should be better understood among farmers. The time will come when science will be applied to the use of cattle foods, and it will be of immense service to the industry of the country.—*Boston Journal of Chemistry*.

Not all the green and juicy plants which the animal relishes are nutritious or unprofitable for food. The richest varieties of grasses and stalks of cereal grains, are not those which have the largest growth. The product of a field of clover or timothy grown in deficient sunlight, or under the influence of excessive moisture, is much less valuable than that grown under different conditions of light and moisture. It is a common practice in many localities to grow the corn plant in drills, or from broadcast sowing, as feed for the milch cows, late in the season. But it is maintained that this kind of food is not the best to produce milk, because the conditions under which it is grown are unfavorable to its perfect and healthy development. If grown in hills in open space, with a full supply of air and light, the plant is richly saccharine at maturity; but where grown in moss this principal is almost entirely wanting. The sweet millet, green oats, and clover, are much to be preferred to corn, as fodder for milch cows in summer.



The Short-Horns for the Dairy.

BY H. LEWIS IN AMERICAN FARMER.

If any one doubts the value of short-horns for milk, I will refer him to the great dairy show held in October last, at London, where they are best known as milkers and where they have been longest and most carefully bred for milk.

[Mr. Harris gives an extract from the report, showing that at the show the prizes for cows for "dairy purposes" were carried off by the short-horns, over Yorkshires and Ayrshires, and all others but the Jerseys. The report includes the following: The London Field says of sixteen groups entered to compete for the magnificent prizes, fourteen groups were short-horns or crosses, and two groups were Ayrshires. In class four, the one hundred guinea cup for the best Channel Island cows, there were six competitors. The Jerseys took the first honors; the second prize went to Guernseys, and the second on a single cow was awarded to an Alderney.]

I could present a great many records of enormous yields of milk by short-horns and their grades, but will say that the best dairy cows I ever owned or milked, were short-horns or grades, possessing from one-half to seven-eighths short-horn blood.

To sum their milking qualities up in a nut-shell, I will declare them capable of giving from one pound of milk per day to one hundred, if the records here be true; and that the quantity of milk they produce is in exact proportion, as a rule, to their breeding, food and care. And this very quality possessed by them in a greater degree than by any other breed of cows adds vastly to their value as dairy stock.

For certain reasons of my own, I prefer thoroughbred short-horn cows of the Princess family, to any others for the dairy. Yet I am willing to admit that the calves raised from our best native cows, sired by a thoroughbred short-horn bull of a milking family, if properly managed in rearing, will insure cows of equal value to the thoroughbred for dairy purposes only. In conclusion I will give my reasons for the choice I have made for my dairy as follows:

First. The short-horn cows have good teats and nice square bags. Second. They are very quiet and docile.

Third. They make the best use of the food consumed of any breed.

Fourth. If not giving milk will lay on flesh.

Fifth. If not good for the dairy they can be cheaply turned into good beef.

Sixth. They yield a large quantity and good quality of milk, well adapted for the manufacture of both butter and cheese, and also well adapted for the market.

Seventh. The well-bred short-horn cow is decidedly good looking. Now if any man in this association objects to beauty in the dairy cow, I hope he will arise and remain standing until he can be counted.

Eighth. I prefer the short horn cow for the dairy because she will produce the most milk, the most butter, the most cheese, and the most beef, for the food consumed, of any breed of cows we have.

In Bretagne horses are fed on parsnips instead of oats, and no complaints are registered as to falling off in condition. M. Le Bian feeds his carriage horses exclusively on parsnips, and the animals that he now exhibits in Paris are superb. He gives each horse forty pounds of the roots daily, distributed in three feeds; the expense of cultivating one hundred weight of parsnips is one franc, so that the daily ration of each horse is about seven sous, or four times dearer.

CATTLE FOOD.—Experience teaches us that cattle thrive best on a mixed diet. All hay or all grain will produce less beef than hay and grain. The animal structure of the ox also demands bulk in food, as well as richness; the feeding of concentrated food being only profitable so far as the animal assimilates it—beyond that of simply increasing the manure heap, at a cost far beyond its value. The ox has approximately eleven and one-half pounds of stomach with only two and one-half pounds of intestines, to each one hundred pounds of live weight; the sheep has less stomach and more intestines, giving a smaller per centage of digestive apparatus; while the pig for every one hundred pounds of his live weight has only one and one third pounds of stomach to six pounds of intestines. A steer would thrive on a bulk of straw, with a little oil meal, that would shrink a sheep and starve a pig. Pork can be produced from clear corn-meal, while mutton requires a greater variety of food, and beef cattle would become cloyed and diseased with its exclusive use. A thoughtful attention to these broad facts will change much injudicious feeding into cheaper meat production.—Cultivator.

"Magic," or "Poland China" Hogs.

SIR,—As the subject of hog raising is being so generally discussed by the farming community of your country, as well as in the United States, I trust and hope that a few lines from my pen may prove interesting if not instructive to those of your numerous readers who are especially interested and devoted to the raising and improvement of that

the other most noted breeds, has invariably terminated in favor of the "Magic" or "Poland China" hogs. These hogs are unquestionably the favorite hogs for the farmer. D. M. MAGIE.

Soiling Cattle.

On our own farm soiling has been practiced quite extensively for more than twenty-five years. At first we were not inclined to recommend the practice to farmers in general, but only to those who might, like ourselves, be located where good pastures all the summer long are entirely out of the question; but as our reading and observation has been extended we are inclined to believe that partial soiling, at least, is a practice that might well be adopted on nearly all, or quite all, dairy farms.

Feeding green food to cattle in their stalls in summer was formerly advisable only in villages, or near cities where grazing lands were held at prices too high for ordinary farming purposes, and those writers who treated the subject through the newspaper press almost spoke disparagingly of the soiling system, except under such circumstances as we have named. On comparatively cheap lands, away from the cities, and especially at the West, it was believed that the expenses of soiling cows would always far exceed the advantage that might accrue. But within the past few years, since the dairy interest has assumed such an important position among the agricultural industries of our country, it has been discovered by hundreds of enterprising farmers in all the Northern and Western States, that feeding cows at the stall during portions of the summer season, for the purpose of

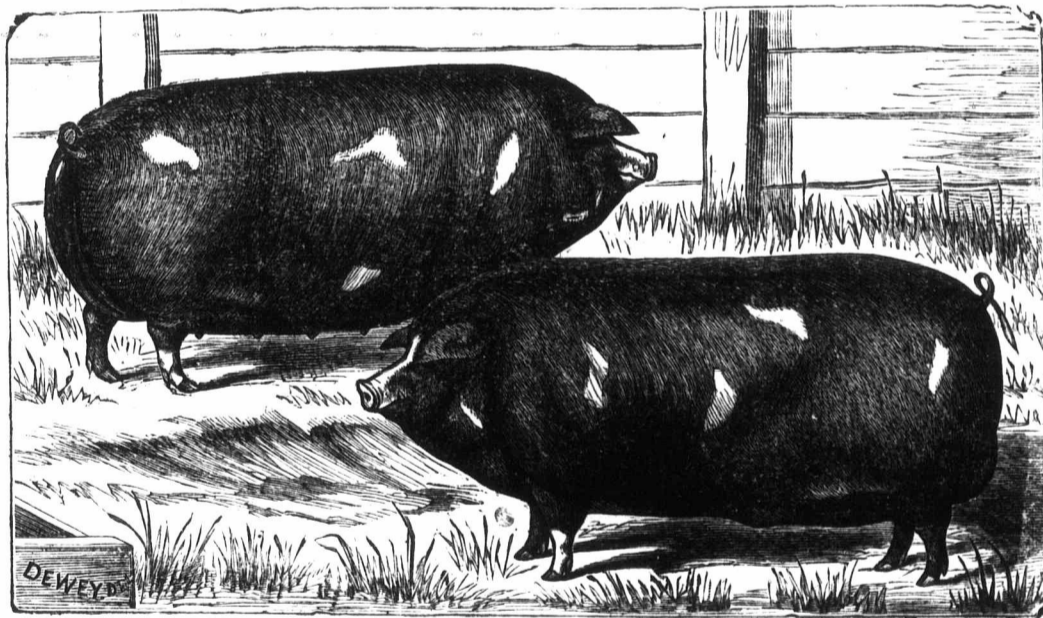
keeping up a regular and uniform flow of milk, is not only a commendable, but almost an indispensable practice.

During the past year we have seen urgent appeals from leading Western dairymen to the farmers of Wisconsin, Michigan, Minnesota, and other far Western States to raise special forage crops for feeding to cows in summer, and we no longer feel diffident about urging farmers everywhere to practice this system of summer feeding to such an extent as each may find profitable in his own particular case.

Spring rye, if sowed very thick, say four bushels to the acre, and cut as soon as it begins to blossom, or a little before, will, if well cured, make hay that will be eaten by horses in winter with a fair relish, but we should not recommend its use on a large scale for cows in milk without further trial. We raised a field of it last year, and intend to repeat the experiment this season, although it was not fully successful last year as a substitute for cows. It probably stood a little too late. What is true of spring rye is equally true of the winter variety. Both make excellent green feed for cows if cut early enough, but they are in perfect condition but a short time. We consider both indispensable on all farms where soiling is carried on, or one wishes to keep a heavy stock of cattle in proportion to the number of acres.

We should not mix oats and rye together, as they do not ripen at the same time. The spring rye will be several days earlier than the oats, and if allowed to stand till the oats were grown would be almost or quite worthless as feed. Better sow them separately and cut of each what will be needed for feeding green, and cut the remainder at the right time for winter fodder. Oats, we think, will be liked rather better by your cattle than rye, although much depends on the age at which they are cut and the quantity of seed to the acre. The finer the fodder, other things being equal, the better it will be, and the earlier it is cut the better it will be if it has nearly reached its full height and thoroughly cured.—New England Farmer.

Manitoba, as a grazing country, has few if any equals in America; a man can have hay in abundance for the cutting alone.



"MAGIC," OR "POLAND CHINA" HOGS, THE PROPERTY OF D. M. MAGIE, ESQ.

department of rural pursuit which yields such an extensive remuneration for the capital invested.

I am frequently asked:—"When did you originate the breed of swine known as 'Magic' or 'Poland China,' and what bloods did you use in their production?" &c. I originated this breed of swine from the years 1837 to 1840 inclusive. The breeds I used to establish the "Magic," or "Poland China" hog were four, namely, "Poland," "Big China," "Irish Grazer," and "Byfield." The "Magic" or "Poland China" hog is of fine bone, but large size, combining more eminently than any other the excellencies of both large and small breeds, being docile, very good feeders, breeders and sucklers, fattening readily at any age and yet attaining great weight at maturity. They sometimes dress 350 pounds at from ten to twelve months old—from eighteen to twenty months old, 500 to 600 pounds. They have long bodies, short legs, broad straight backs, deep sides, with square, heavy shoulders. They are dark colored, drooping ears, and are of very superior style generally. These hogs have been growing in public favor every year, and the more they are known the better they are liked.

In the Middle, Western, North-Western and South-Western States they are more extensively and universally bred and raised than all other breeds of swine combined. The result of the experience of many of the best breeders of hogs in the U. S. who have tested the merits of the "Magic" or "Poland China" swine with that of

As advocates of the matchless merits of the great Shorthorn race of cattle, we have controverted the claims set up on behalf of these few fancy strains of being superior to all other strains of the breed in useful or profitable qualities. This we have done in the interest of the great mass of the breeders and farmers of America, who are resorting to the Shorthorn blood for the improvement of their herds as beef and milk producers. In this discussion we have done nothing more than we deemed essential and necessary to truth and justice. That we have been right in insisting that the few fancy strains did not possess the superiority claimed for them over well-bred Shorthorns in useful qualities we are quite confident we should be able to establish by the testimony of at least nine-tenths of the practical breeders of America, if we had authority to examine them under oath! We have no hostility whatever to fashionable families of shorthorns. Indeed, we are always glad to get a fashionable pedigree, when we can get a good animal with it. It was only the other day that we were enquiring of one of the most zealous advocates of the fancy strains if he could inform us where we could find a bull that was in all essential points a first-class animal, and had besides a fashionable pedigree. His answer was: "Why, my dear sir, you expect too much; to fill your bill will require at least two bulls!"—*National Live Stock Journal.*

### Canadian Agricultural Notes.

#### Quebec.

The resources of this province that are available to agricultural labors are not sufficiently known. The following remarks on this subject, by Mr. C. Lesage, D. M. A. for Quebec, are well to the point: Mr. C. Lesage, Deputy Minister of Agriculture and Public Works for the Province of Quebec, was then examined. He stated that in his opinion the Province of Quebec had room for a large number of immigrants, but he would not recommend any class except agricultural immigrants, who had means to settle on their wild lands. He had known immigrants who had come out here and done remarkably well. In the County of Suffolk there was a Belgian settlement—people who had come without money and been assisted to build their log huts, and who had been very successful. In two years they were as prosperous as our farmers. There were 5,000,000 acres of surveyed land, 60 per cent. of which was suitable for settlement. The pine timber on all of the water courses was more or less exhausted, but there was still a good deal of spruce timber on the surveyed lots not disposed of yet. In regard to the country in the vicinity of Lakes St. John and St. Maurice, he could not give much information in regard to the latter district, but was well acquainted with the former. He believed the Saginay district would become the best portion of the Province for settlement, but the want of communication was against it at present. The climate at Lake St. John was much milder than that of Quebec; the nearest market was Chicoutine; the average yield per bushel of seed was fifteen bushels; the rock was mostly limestone and the clay a bluish gray; the clay was not stiff, and the farmers were able to plough with one horse.

#### Ontario.

**WESTERN ONTARIO FRUIT-GROWING PROSPECTS.** Large preparations for fruit culture are being made in Kent county, along the Talbot or Lake Shore road, as during the tornado last fall a number of orchards were blown down completely. This district is the finest fruit bearing section in Canada. One of the farms has a hundred acres of orchards; and, notwithstanding the low price of fruit this fall, handsome returns have been made. The majority of the large growers shipped their own apples to Montreal, and realized \$2.50 per barrel, when the price in local markets was only \$1. The Northern Spy is the favorite in this section and brings 50 cents a barrel more than other kinds in the Montreal market. Farmers in the vicinity of Leamington have tried some tropical productions. Peanuts last year were raised in small quantities, and did well. Grapes did not pay in comparison with other fruits, and the different vineries have gone to waste, and are now being planted with apples, quinces, &c.

**GO FOR THE CANKER WORM—NOW!** Whatever is used to prevent the ascent of the trunks of the trees by the female (wingless) insect, should be put on early, as they come out after a few warm days. Heavy brown paper, applied closely, so that the

insects can not get under, and smeared with cheap printer's ink or tar, is as simple and cheap as anything. But the ink, tar, or whatever adhesive barrier be used, must be looked after every few days. Dust, dead insects, or something else may form a bridge by which the live insects can cross the barrier, when the work will have been in vain.

John B. Miller, in *American Farmer* says:—I do not think orchard-grass seed ever ought to be sown without clover, as the first year the growth of orchard-grass is small and even the growth of clover will be fine; the second year the crop of orchard-grass will be good and the clover will not interfere in saving the seed, as the orchard-grass will get ahead of the clover sufficient to top it for seed, and the pasture is so much better with clover mixed, as is also the hay if you should want to mow it.

My plan for sowing my orchard-grass seed is, mix six pounds of clover seed, place them in a mixing or feed-trough, mixing the two seeds thoroughly, and then pour in about one and a-half or two gallons of water, making them thoroughly wet, and then I put plaster in until each seed separates, stirring as I put the plaster in. Any one who has orchard-grass to sow that will try this plan, will be convinced at once that this is the only true way to sow it. It will only need to be sown one way. The plaster, clover seed and water will give so much weight to the orchard-grass seed that there will be no trouble in spreading it, almost equal to wheat.

**EFFECTS OF SOIL ON AN ORCHARD.**—The *Gardener's Chronicle* once related a case of an orchard of apples and pears, plums and cherries, which was planted in heavy clay, trenched down to an iron pan on which it rested. For a few years the trees grew very well, that is to say, as long as their roots were near the surface and got the warmth of the summer's sun; but as they advanced downward the growth became small, and by degrees less, till at last the trees ceased to grow, and nothing flourished except gray lichens, with which the branches soon became covered.

#### CLOSE PRUNING OF RASPBERRIES, CURRANTS, &c.

We are more and more becoming converted to the practice of close pruning of the above. Take for instance, black raspberries, or blackberries; grow them close in the row, and like a hedge, by keeping well cut back as they grow. This makes branches stiff so that they do not get down in the dirt, and are easily passed among to get the fruit, and too, by mulching the entire surface, the same amount of mulch mulches a much larger number of vines. The roots of all kinds of plants run much further than few people have any idea of, and simply mulching close around the plant does not answer the purpose. The roots of a plantation of raspberries and blackberries, or currants, or even strawberries, run through the entire surface, and hence to be properly benefitted, the entire surface must be mulched, or kept worked by hoe or cultivator, and the part that most needs this, is the extremities of the root. Currants and gooseberries must have a cool, moist place to do well, and, if planted on dry soil, this is best secured by a heavy mulching of the entire surface. So, if fruit, and that of the best quality is what is sought for, plant close, prune close, and mulch heavily is our advice.—*Fruit Recorder.*

#### Manitoba.

Real estate transfers lately made through A. W. Burrows' general land office, were ½ section 22 and ¼ section 23 in township 11, range 5 east, 640 acres, to E. Roberts, at \$3 per acre; whole section 21 in same township, to John McGoffin, London township, Ontario, at \$2,000. Scrip investments are not so much in demand lately, the price having gone so high that improved farms near the city are preferred.

**THE CLIMATE AND PROSPECTS OF MANITOBA.**—A letter written by Mr. David McConnell, who lives at Woodside, Golden Stream, Manitoba, to his brother, at Eden Mills, contains information that will prove of interest to the farming community of this Province, and will enable them to institute a comparison between one Province and the other. In answer to a number of questions submitted to him the writer says:—

1. The climate is much the same as in Ontario, except that the winter is steady. We seldom have any change in winter, and although the frost is a little more severe than in Ontario, a person does not feel the cold any greater. The spring, summer and fall are much the same in this respect.

2. As an agricultural country it is better than Ontario. Cereals of all kinds fully mature and return a better average.

3. Land can be obtained in different ways; but the manner the most of *bona fide* settlers do is by making affidavit that they are taking the land to make it their home, and thereby they are entitled to 160 acres of land any place they choose, except on reserves. You can also preempt 160 acres more, which merely gives you three years to pay for it, and then you pay one dollar per acre. You can also get land by buying half-breed scrip, volunteers' warrants, or for cash, which you will bear in mind is the one thing needful here as well as other places.

4. You wanted to know if we got any fresh fish. Lake Manitoba, as well as all the lakes, are full of the very best of whitetish and pickerel, and in the spring when the streams are flooded, the pickerel and suckers go up the streams in millions. We can fill a wagon-box in two hours on such occasions. Flour-mills and saw-mills are getting plentiful and easy of access. Implements of all kinds can be procured at reasonable prices.

**BACK AGAIN.**—Mr. Thos. West, who has been visiting the States and Ontario the past few months, his many friends will be glad to learn, has returned home. He distributed a large number of the *Free Press* crop reports in Missouri, and feels confident that he has placed them where they will do the most good. A number of Missourians, disgusted with that State, intend emigrating, and some will come to Manitoba.

#### Farm Notes

**CORRECTION.**—Mr. T. McCrae and Mr. W. McCrae were the principal purchasers of Mr. Hood's herd of Galloways. Many of the animals brought between \$70 and \$80. We think they were sold at such low prices because the sale was not generally known.

**EARLY SOWING.**—Several farmers residing in the Township of Ameliasburg, Prince Edward County, sowed spring wheat on their farm on Tuesday and Friday of last week. This week the work of sowing has become general. What is this country coming to when spring wheat can be sown in the month of February.

The Belgian Government has organized measures for still further extending the plan of agricultural conferences in the rural districts, as well as calling upon the teachers of primary schools to impart instruction in natural history in its bearings on agriculture. Belgium has this advantage over many countries, that those interested in teaching agriculture are *qualified* by study and training for the important work. Comte Belrupt, in his pamphlet, sets forth that Belgium expends on agricultural education 232 francs per 1,000; Austria, 249 francs; France, 310 francs; and Prussia, 432 francs. It would not be too much to add, that Belgium receives the most value for her money.

The arrangements for the agricultural section at the 1878 Universal Exhibition, are very complete, and at the same time simple. The display will be magnificent; there will be two shows for butter and cheese—at the close of May and September, respectively.

Dr. Schneider still maintains the superiority of leguminous over meadow hays; on dried clover, he adds, a horse can work well, without receiving oats, while he would sink under fatigue, if supplied exclusively with meadow hay.

A bill has been reported in the Maine legislature looking to the encouragement of manufacturing sugar from beets in that State. A capital idea.

Tobacco growers and dealers say that it is a fact, that tobacco furnishes employment to more people than any other crop produced on the farm.

A local paper in Minnesota in making up the aggregated amount of wheat in hand, speaks of the average yield of that State as eight bushels per acre. We should call that a very small and insignificant result in New England.

Sheep owners should bear in mind that the United States imports annually \$50,000,000 worth of woollen goods and \$11,000,000 worth of wool. We ought to produce wool to a profit with a heavy protective tariff on foreign wools.

English farmers give their breeding ewes a pint per head per day of a mixture of oats and whole Indian corn, with a full allowance of well-cured straw.

The Story.

Scenes from my School Life.

BY HENRY FRITH.

LILLIE CAMERON.

"Only her love I ask'd for,  
Only her love—and yet—"

It is very true, if a very trite, observation, that little causes produce great events. Thus, if at the age of fifteen I had not been possessed of a piece of chalk, I should never have been sent to Dr. Cameron's as a private pupil. You may, perhaps, say that as I in no manner chalked out my own destiny I need not complain. Do not complain, although I think I was rather to be pitied; said Lillie—but wait.

My grandmother prophesied that, as an unlucky wight, I (not the chalk) had made my mark in the world, and should come to no good. As it happened, I went through a good deal, but it didn't adhere, and my fortune is not yet made.

But I had best relate the cause of my sudden departure from home to Dr. Cameron's Private Establishment for Young Gentlemen, which combined every educational advantage, with the unlimited motherly care of the doctor's wife. See advertisement.

At this time my family lived in a terrace, at No. 1. In the same terrace, at No. 14, lived an elderly lady named Smith. Mrs. Smith had become decidedly obnoxious to us—that is, to me and my school friends—because she objected to our leaping over the railings which divided her front garden from the next wherein we played at "prisoner's base." She alleged that in jumping over we spoiled her flowerbeds. We admitted the jumping—who could deny it;—but demurred when the injury was attributed to us. She sent for a policeman to watch our movements; we mocked the constable from our own side, whereat he laughed, and Mrs. Smith was wroth. This was the state of things when the lady issued invitations to a dinner party. My family were not personally acquainted with Mrs. Smith, but our cook's sister was "keeping company" with Mrs. Smith's parlourmaid's brother, so the party was known to us soon as the notes of invitation were issued.

Of course, I mentioned the news to my "chums" during our weekly study of the "Use of the Globes"; but what use the globes were to us I never ascertained. I question if the earth ever revolved with half the rapidity it did when our master's back was turned, yet the (mis)use of the globes went on. It was that afternoon decided that we should play Mrs. Smith a trick, and we did it in this wise. After the carriage had set down the guests, and the road became quiet, we brought out my largest lump of white chalk, and, unperceived, drew a broad band across the dry, hard road. The night was dark but clear, and the white band could be distinguished at some little distance. Ten o'clock approached, and we strolled along the terrace as usual. At last one of the expected carriages came dashing along. Suddenly the coachman perceived the white line just ahead and checked his horses. He might have saved himself the trouble; the horses would not pass the chalk line. There they stood and pawed the ground, but across the white streak they would not. To make it more unpleasant, there was no other way by which No. 14 could be approached, and so in half an hour we had the happiness to perceive all Mrs. Smith's guests walk to their carriages. We heard afterwards that they were very angry with their hostess, and she was simply "mad," as the cook said; but somehow suspicion attached itself to me, and I was questioned. I confessed to supplying the chalk, and also to being a spectator of the result of the chalking. This, was, of course, enough. I was told that my conduct was ungentlemanly (so it was), and that arrangement had been made for my removal to Dr. Cameron's "private" school. At Midsummer I left home for the first time, amid the well-remembered advice of my father, the tears of my mother, and the Cassandra-like prophecies of my dear old Granny.

"Never forget you are a gentleman," said my father; "always have money in your pocket, and never owe, borrow, or lend it to any one."

"Take care of your clothes," was my mother's parting suggestion, "and write when you get there."

"Good-bye, Frank," said my grandmother, "and here's a sovereign for you. Mind you behave yourself, and don't fall in love with the young ladies."

So I left home, these good counsels ringing in my ears, and after a somewhat tedious railway journey, I found myself at Roxborough station.

"Be you the new pupil, sir?" said an elderly man, half butler, half groom, as I stood gazing about in dire uncertainty as to my future movements.

"Are you from Dr. Cameron's?" I replied, in Irish fashion, by another question.

"Yes, sir; you be Master Hardy, I suppose, eh?" I confessed to the fact. "Then please, sir, jump up yonder while I fetch your box."

This feat he accomplished in a few minutes, and then mounting the trap beside me, he took the reins from my unwilling hands, and we started.

"What's your name?" I asked, as a commencement.

"Job," he replied, "and I ought to have his patience as well as his name among you young gent's."

"Job," I said, "you're a Briton, I can see; we shall be friends in no time."

My companion shook his head, muttering something about Britons never being slaves; while I involuntarily hummed "Rule Britannia."

In about twenty minutes we entered a narrow lane at the end of which was a gate.

"There's the house," said Job, "and here's the pupils." In a moment we met them.

"Hullo, Job, whom have you there? Mr. Chalker, your most obedient."

I now learnt that the reason of my being sent to the doctor's had leaked out; but I took no notice of the remark, merely saying Job to proceed, which he did amid some sarcastic "linekilns" and "mortar."

I received by the doctor, and introduced to his parlourmaid, Lillian. She was a pretty dark-haired damsel, with soft grey eyes and a very sweet smile.

I had no sisters, and perhaps for that reason more than boys of my age usually do, I was very respectful to the journey, I was shown

my dormitory, in which I perceived two other beds, and was left to find my companions, if I chose, after I had unpacked and put away my clothes.

I was wandering rather disconsolately about the extensive garden, when I perceived Lillie Cameron approaching.

"Tea is waiting," she said, "will you not come in?" Of course I accompanied her, and as I entered the room I was the "observed of all observers."

"This is Frank Hardy," said Dr. Cameron; "I hope you will do your utmost to make his sojourn with us agreeable."

Mrs. Cameron bowed to me; two of the pupils did likewise; two others looked at the biggest boy, who, without looking at me, replied—

"Certainly, sir, we'll treat him as you wish in all respects," and then he plunged into his tea.

I did not enjoy the meal, and was glad to escape with the rest into the open air. The evening was lovely, and I already felt the influence of the sweet country air and scene.

"Well, Chalker, what do you think of this, eh?" said the big boy I have mentioned, whose name was Fleming; "better than Dubstone, isn't it?"

"Yes," I replied, "but my name isn't Chalker."

"Still if I choose to call you 'Chalker,' you must be called so; you've no choice."

"I shall not answer to such a name," I said; "so I tell you once for all."

"Then," said Fleming, calmly, "we must put you in the river. I'm sorry to do it so soon, Chalker; but we must duck you." So saying, he called the others, and by his directions I was carried to the river close by.

It was neither a very deep nor a very rapid stream, still it was sufficiently formidable to me. I could swim, however, and somehow didn't feel afraid, but I had to learn that swimming with and without clothing are two very different things.

"Now, Coster, catch his heels; tightly, you muff."

I here made such a violent demonstration that the "Barrow-Knight," as Mr. Coster was usually termed, was nearly precipitated into the water.

"Now Chalker are you ready?" inquired Fleming.

I made no reply.

"Well, then, here goes. One, two, three, and go," he shouted, and I found myself flying through the air, and, in another second, plash I fell into the river. Quickly rising to the surface I struck out for the opposite bank; now I began to feel the weight of my clothes tell. True, I had denuded myself of my coat and waistcoat in my struggles, but the current was pretty strong, and, worse than all, the mill sluice was open.

"Look out for the mill," shouted the frightened Fleming, who had run along the bank, and now for the first time perceived my danger. "Get across, Hardy, slant over."

These cries fell upon my ears but indistinctly, as the roar of the "lasher" began to assert itself cruelly above other sounds. Still I swam on and battled with all my strength against the increasing swiftness of the current. My heart gave one big jump as I looked and perceived that the mill-wheel was revolving, and that the sluice was gradually dragging me beneath its influence. I dared not cry out. The horrible sluice kept sucking me down, but I made one mighty effort, and in my despair plunged headlong over the "lasher" in front. I was conscious of being beating on stones, and then I remembered nothing until I found myself lying on the grass by the side of the river. A gentleman was supporting me, and to my faint inquiry as to where I was, told me I was safe, and that I was to keep quite quiet until his carriage should arrive to convey me home. As it did not immediately appear, and as I felt sufficiently recovered to walk, I was assisted to the mill, where I was packed between blankets until my clothes were dried. My companions evinced by their sympathy and ready assistance, the remorse which had taken possession of them. It scarcely needed the stern prophecy of the miller as to their being one and all shortly executed for murder, to make them penitently beg my pardon and forgiveness, added to the expressed hope that I would say nothing of the "accident," as they cheerfully termed the affair.

My preserver was Mr. Cunningham, the medical practitioner of this district. He had been fishing below the weir, and as I came headlong down, he loosed his punt-pole and picked me up. To his fortunate love of sport I owe my life, and I expressed my gratitude in a befitting manner as we drove back to Dr. Cameron's house. My appearance in company with the surgeon caused some astonishment, and the subsequent arrival of the other boys gave rise to inquiries, when we parted effectually for that evening, and I retired with the others at the usual hour.

Next morning, however, I was obliged to see Mr. Cunningham professionally, as I felt quite unable to rise. Mrs. Cameron was most kind, but my gentle little nurse Lillie quite won my boyish heart. All through the long weeks during which I was constantly visited by my parents, no presence gave me half the pleasure that Lillie's imparted. Carefully, and unselfishly as a sister, she tended me, unwearied by my petulance and restlessness. One evening when I was very ill indeed, I asked her if she should be sorry were I to die? Bursting into tears she replied, "Dear Frank, you make me unhappy when you speak so, pray don't." This decided the matter, and I resolved that should I ever get well I would marry Lillie Cameron. Well, perhaps it was "nonsense," but I meant it then and afterwards, as you shall hear.

Long before I had fully recovered I loved Lillie with all the first fervour of boyish affection. Her sweet kind eyes seemed to beam upon me even during the weary waking nights, and morning was indeed worth living for, for it brought her to my side. The convalescent period was the happiest time of my life. I recall even now. The friendship of my school-mates and the kindness I received from the Doctor and his family deserve a word of special remembrance. Mr. Cunningham took me out in his brougham daily, and at length, after an absence of five weeks, I re-entered the class-room.

All were unfeignedly glad at my appearance, and the "Barrow-Knight," to my surprise, began to "feel my muscle," as he termed it. "He'll do, Fleming," said he.

"Do," I exclaimed, releasing my attenuated limb; "do for what?"

"Why," replied Fleming, "you see we have been just challenged by Dormer's 'Four' to pull from Howden to Brambling up stream, and we want you to be No. 2."

"I fear that's impossible," I said; "I've no strength for rowing."

"But it's not for two months yet; Miss Cameron is working us a flag, and wants you to row."

"That's different," I said; "if Lillie wishes it, of course I'll pull."

My glib manner of speaking of "Lillie" excited some surprise, but the Doctor entering, to put me through "my facts" in classics, postponed the discussion. He was apparently satisfied, for in half an hour he dismissed me upstairs, saying he had letters to write, and bade me go to the drawing-room. I hurried up hoping to find Lillie; nor was I disappointed.

"Here's a letter for you," she said as I entered; "you had better read it at once," and she turned away to search for something in the next room. The letter was from my mother, bidding me return as soon as possible to accompany her and my father to Wales, whither they intended to proceed for a few months' change. I communicated the contents to Lillie. "I suppose I had better go," I said.

"Of course," she replied, "are you not bidden? Besides, this is school; with your parents you will be at home."

"Ah! Lillie," I said, "I had much rather remain where you are, you know I love you better than anyone else." I confess I was sentimental, but had I not an excuse?

"Frank, now you are talking nonsense; the idea of your speaking to me in that way! Of course, you cannot care for me as you do for your home; besides—"

"Well, Lillie, besides what?"

"It's absurd, Frank. There, I didn't mean to say it; but it is, of course, absurd to talk of loving me now you are well. While you were ill, you know I didn't mind; but now you have recovered your senses, it is absurd—isn't it?"

The sweet earnest eyes came so close to mine as she put the question that I forgot my manners, and drawing her close to me, gently kissed her cheek.

"No dear, it is not absurd," I replied, "I shall always love you. Why, I am now past sixteen," I added, proudly.

"But I am now seventeen," she said demurely, "and, Frank, you mustn't kiss me again. You won't try, will you?"

Her innocent pleading face was close to mine, and I muttered, "Never, dear, if you will forgive me."

"I will forgive you," said Lillie; "there!" and, pressing her lips upon my forehead and ran out of the room.

When she appeared at luncheon, I fancied I could detect tears; but she was gentle and winning as ever, and took great interest in the forthcoming race. I took the opportunity of mentioning the letter I had received; but it appeared that the Doctor had already written to my father on the subject, and I was to leave at the end of the week.

The Saturday came all too quickly for me, and at 3 o'clock the trap was ordered to convey me to the station; but Mr. Cunningham, who had called to see the Doctor, offered to drive me over, and, as the delay would give me the opportunity of bidding good-bye to Lillie, I gladly accepted the offer, and ran out to find her in the garden. I soon descried her dark dress near the hedge bordering the croquet-ground, and hastened in that direction. She was listlessly swinging a piece of honeysuckle as I met her. She blushed slightly as I addressed her.

"I've come to say good-bye, Miss Cameron," I began in a constrained tone; "I'm going home."

"Oh, Frank, are you angry with me for what I said the other day? You know I was right."

"Yes," I replied; "but I mustn't call you Lillie any more, of course?"

"Yes, you may," she cried. "We are friends, great friends, are we not? and my best friends always call me by my Christian name. You may then, Frank, you see."

"Dear, dear Lillie," I burst out, "you know how much I like you. Can you like me when I am away—say?"

"Hush! Frank, indeed you mustn't talk like that; there's papa and Mr. Cunningham waiting for you. Good-bye. Here, take this, I plucked it for you."

I half drew back, but as I looked up I met her dear, honest eyes, and hesitated no longer.

"Dearest Lillie, good-bye," I cried, and ran off. She was down at the gate by a short cut as we drove out, and waved me a farewell. I saw that tears stood in her eyes; I turned, kissed my hand to her, and we parted—I feeling as though I had left home instead of being on my way thither, and that Lillie Cameron was the world to me then.

Yes, my boy readers, long ago as it is since I saw Lillie, I still gladly recall her image as she stood at the gate while the dog-cart drove rapidly away. Remember, I had no sister, and had scarcely ever associated with young ladies. Lillie's tenderness and kindness stirred up all my hitherto latent feelings, and, boy as I was, I loved her dearly and truly, as I do still.

I pass rapidly over the six weeks which intervened between my departure from and my return to Dr. Cameron's. I employed this interval in practising rowing, and, if the old fishermen were to be credited, got on capitally. Of course I was aware that my style must be somewhat modified when I came out on the Roxborough river, but this daily practice put me in capital trim. I gained strength and flesh daily; I grew rapidly, and, before I returned to school, I began to pay some attention to my personal appearance. Indeed, I got rather particular in the matter of gloves and boots, greatly to the amusement of my father and to the intense gratification of my mother, who said I was now "quite a man." At any rate I was a very different boy when the station fly deposited me at the well-known entrance, and my friends recognized the change.

"How you have grown, and I may, perhaps, be permitted to say, improved," said Lillie demurely.

"Not really changed, Lillie," I whispered as I went upstairs to dress for dinner.

The forthcoming boat-race was the all absorbing topic that evening. Strange reports were rife concerning Dormer's crew. They were pulling splendidly, and steered to a marvel. Stroke was powerful as an elephant and as enduring as the camel, and a feeling of despair pervaded us, I am afraid, when we retired for the night.

During the following week I had little leisure to think of Lillie, yet she was really never absent from my mind. She seemed to be so wrapped up in my daily work and practice, that it required no effort of thought on my part to recall her every tone and feature. I accepted her as part of creation, as the sun on the river, without stopping to analyze the feeling or thinking it strange. I was quite happy and worked hard in and out of school; and the improvement in our rowing became every day more marked.

TO BE CONTINUED.

### Minnie May's Department.

DEAR NIECES,—Knowing of the busy life of farmers' wives and daughters, particularly in the spring and summer seasons, I think probably a few hints concerning the spring fashions may be of use and interest, as many of my nieces will be availing themselves of the opportunity of making their summer dresses before the approaching hurried season.

The graceful *Princesse polonaise* will be worn for house and street dresses alike. This pattern is useful for making over old dresses. Use the longest widths of the skirt for the pieces, beginning on the shoulders and extending over the hips as far down as the cloth allows; then join other pieces to fill out the length, and trim across with scarf drapery to hide the joints. Knife pleating still prevails on the newest dresses. The *polonaises* are worn so long that very little of the under skirt is seen, hence they are made very narrow and clinging. *Janares* bows will fasten the front, and many long looped bows trim the pockets and ornament the back of *polonaise*. Box pleatings and gathered flowers are also worn with knife pleating. *Basques* and over-skirts are worn much the same as last winter.

The *Princesse* dress is being made up for little girls' summer wear in gray and buff linens, white repped pique, and in dark blue linens, trimmed with white embroidery or Smyrna lace. It is fastened in front, is only half fitting, and therefore cool, and sometimes has box pleats down the front. These pretty dresses hang all the weight from the shoulders, are in one single piece, and are as suitable for the street as the house, all of which are desirable things in children's dresses.

MINNIE MAY.

Perhaps some of our readers who live in the country are not aware of the extensive floral trade carried on in New York and other large cities.

How elevating, pleasing and refining is the study and care of these little beauties, though many farmers are too apt to look upon the cultivation of flowers as an expense, and not a pleasure or profit; and though they are all able to admire a nice bouquet, or the few flowers which we in the house may have.

There is no other branch of trade in which sentiment and the hard practical duties of business are so closely blended as in this traffic in nature's loveliest and most fragile handiwork—foliage and bloom. Large as is the seeming discrepancy between the wholesale prices of flowers paid to the growers and the retail prices demanded from the public, it is in reality small when the inevitable losses, expenses and risks of the business are taken into account. The fluctuations of supply and demand are unequalled in any other business.

On Broadway, Fifth and Sixth Avenues, and the up-town cross streets near them, between Third and Forty-seventh, there are 30 large florists' establishments, each of which pays a rent of from \$1,000 to \$4,500 per annum, and does a business of from \$6,000 to \$40,000 yearly in ordinarily good times. Outside these there are probably 50 small shops and parts of shops in which the sale of flowers is carried on in different parts of the city.

From 1860 to 1870 were the florists' good days. The European style of ornamenting both our homes and public places with the transitory beauty of blossom and leaf upon all public occasions. Without doubt, too, the lavish expenditures of the ill-gotten gains of the old Tweed "ring" gave an impetus to the florist's trade. Thousands upon thousands of dollars were often lavished upon single events, as, for instance, at the wedding of Tweed's daughter, when the floral designs, bouquets and parlor decorations are said to have cost nearly \$4,000. Weddings, christenings, balls, banquets, funerals, receptions, and all other occasions of public assemblage are deemed incomplete unless graced with flowers.

Few if any cities possess greater varieties of flowers than New York. First upon the list natur-

ally seems to come the rose, of which there are many varieties. There are four varieties of camellias shown. One man alone raises 50,000 choice camellias each winter. Of carnations there are 150 varieties, but only two or three are grown to any extent.

Violets are cultivated in abundance; they are worth a cent each. A great many ladies have developed a passion for growing violets. They impart a delicious fragrance to the breath, and even at a cent apiece are cheaper for the purpose by comparison with the candied ones imported from France, and sold at the rate of about \$16 a pound.

Of the 20 or more known varieties of heliotrope, only three or four are commonly cultivated here. The lilies of the valley seem to gain popularity constantly; so high have they become in favor that their price is always good. Moehrs, of Union Hill, grows 150,000 sprays of them annually. He sent one day last year, by one man, 10,000 sprays for which he received 15 cents each. Few persons would be likely to imagine that one man could carry \$1,500 worth of market flowers, but let them undertake to buy a "back load" of these choice little sprays, and they will soon be convinced of its entire practicability. Orchids are difficult to procure and very costly; sometimes \$2, \$3, or even \$5 has been paid for single flowers. Large and strong orchids are sold from \$25 as high as \$300. They belong only to the conservatories of the rich. Peter Henderson, Elliott Wilson, and others of the best informed of the large flower growers, estimate that there are in the vicinity of New York not less than \$10,000,000 invested in the wholesale florists' business, in land, green-houses and stock. There are over 45 acres under glass in one establishment. In the matter of permanent house decorations, grasses, immortelles and pressed leaves are coming into great favor.

Incidentally, before concluding, it may be confidentially mentioned to the young man of the period, as a matter of contemporaneous interest, that it will be safe for him to view with grave suspicion elegant baskets and bouquets of flowers which chance to be received by his charmer—just when he happens to be making a call upon her.

Young women are becoming terribly sharp in these days, and they have taken a wrinkle from the old dodge of the actresses who buy flowers to be thrown to them on the stage. It is now by no means an uncommon thing trip into a florist's store, order a \$10 basket of flowers, and be very precise in directing that it may be sent, with a card bearing her name, to her residence, exactly at 4.30 p. m., or 8.30 p. m., or some other especially chosen moment. Why so particular? Simply because she knows that at that precise moment some one will be with her, whose jealousy she hopes to stimulate with fantastic vision of a rival flower-sending adorer to such a height that he may rashly propose, and receive the acceptance which has been hanging like the sword of Damocles over his head for perhaps a twelve month. Ah, that cunning device has proved fatal to the guidance of many a nice young man. There was one girl, well known last summer in a certain Broadway flower store who kept it up for seven months, and conquered at last. It is, indeed, not every one who love flowers for their own sakes, like the poet who, with devout tenderness, born of true love, sung:—

'Neath cloistered boughs each floral bell that  
swingeth,  
And toils its perfume in the passing air,  
Makes Sabbath in the fields, and ever ringeth  
A call to prayer.

### Recipes.

#### PARSNIPS.

Boil them till tender, in salt water; remove the skin and mash them; for every cup of parsnips add half a cup of bread crumbs, and one egg, with pepper and salt to taste. Form them into cakes, and fry till brown in butter; serve hot. Or, when boiled tender, pour off the water, cut into pieces lengthwise, add butter and milk, and boil a few minutes; then stir in a little flour mixed smoothly with water. Serve hot.

#### A NOVEL WAY OF MAKING JELLY CAKE.

Take the whites of six eggs, one cup of white sugar, same of flour, one teaspoonful of butter, two tablespoonfuls of sweet milk, two teaspoonfuls cream tartar and one of soda. Bake in a large oblong dripping pan, so the cake will be very thin; meanwhile stir another batch, making just the same, with the exception of using the yolks instead

of the whites; when both are done, spread while warm with jelly, or preserves of any kind; put together, bring the largest side of the cake toward you, and roll immediately; or cut in four or eight parts, put together alternately, putting jelly between each layer, and frost lightly over the top. Another method is to make three pans, making the third layer of one-third red sand sugar, proceeding the same as for the other layers; in putting together let the first layer be the yellow, made of the yolks, then the red, and lastly the whites. Nicely frost the top, and you have a beautiful as well as a delicious party cake. They are very pretty made into rolls.

#### TO CLEAN BRUSHES.

Hair brushes, or any other brushes which become oily, dirty or greasy, may be cleaned in a few minutes by washing in moderately warm water, into which a few drops of spirits of ammonia have been dropped; after washing, shake out the water, and leave the brush in the sun to dry. The ammonia is not only very cleansing, but the bristles will not be softened as when washed in soap and water.

#### ICING THAT WILL NOT BREAK.

The whites of three eggs beaten very stiff, add one pound white sugar, with one tablespoonful corn starch, flour the top of the cake as soon as taken from the oven, put on the icing with a steel knife wet in warm water.

#### BAKED INDIAN MEAL PUDDING.

One quart sweet milk, boil and stir into it one teacup meal; let it cool, and add four eggs, one-half cup butter, one cup sugar; bake three quarters of an hour; eat with sauce; very nice.

#### DELICIOUS BROWN PUDDING.

One cup Graham, one of meal, one of sugar, one of cream, one of raisins, one-half of sweet milk, one egg, one teaspoonful soda; stir all together and bake one hour; with sauce this is a delicious pudding.

#### BLACK SILK.

Do not iron black silk. Peel about two potatoes, slice them thin, and pour one pint of boiling water on them. Leave it standing four hours. When ready for immediate use, put in about a quarter of a teacupful of alcohol. Sponge the silk well on the worn side, rubbing any shiny spots with care. Then roll it tightly around a thick pole. This renews its freshness, and cleans it well.

#### HOME-MADE CREAM CANDY.

To a coffee-cupful of white sugar, add two table-spoonfuls of water to dissolve it, and boil, without stirring, in a bright tin pan, until it will crisp in water like molasses candy. Just before it is done put in a teaspoonful of extract of vanilla, or lemon or peppermint essence, and a quarter of a teaspoonful of cream tartar; when done, pour out into a buttered pan, and when cool enough to handle work it as you would molasses candy, until it is perfectly white, then stretch and lay on a marble slab or moulding board; with a chopping knife cut into mouthfuls and lay it on buttered paper on a plate. When children want candy, by all means let them have that made at home, and they will not eat plaster of Paris, chalk, starch, and poisonous compounds, which derange their stomachs and ruin their teeth.

#### A RECIPE FOR SORE LIPS AND EYES.

One teaspoon level full of sulphate of zinc, or white vitriol, dissolved in one pint of rain water. Moisten your finger with the liquid and apply it to the part affected, two or three times a day, until a cure is effected.

The above recipe I know to be a good one for sore eyes. It cured me of sore lips after being badly troubled with the same for eighteen years during warm weather.

I would not be without this simple remedy for \$10 per year. It is now one year since I have been cured of sore lips. I still occasionally use the remedy to prevent my lips getting sore.—*Ex.*

#### BLANC-MANGE.

Put on to boil a quart of new milk, adding four table-spoonfuls of sand sugar. As soon as it is up once, remove from the fire, and when cold, stir into it one ounce of gelatine, which has been dissolved in as small a quantity possible. Flavor with almond or vanilla into a mould to stiffen.

**Don't Forget the Old Folks.**

Don't forget the old folks,  
Love them more and more,  
As they with unshrinking feet  
Near the "shining shore."  
Let your words be tender,  
Loving, soft and slow;  
Let their last days be the best  
They have known below.

Don't forget poor father,  
With his failing sight,  
With his locks once thick and brown,  
Scanty now and white.  
Though he may be childish,  
Still do him be kind—  
Think of him as years ago,  
With his master mind.

Don't forget dear mother  
With her furrowed brow,  
Once as fair and smooth and white  
As the driven snow.  
Are her steps uncertain?  
Is her hearing poor?  
Guide her gently till she stand  
Safe at heaven's door.

Don't forget the old folks,  
Love them more and more,  
As they with unshrinking feet  
Near the "shining shore."  
Let your words be tender,  
Loving, soft and slow;  
Let their last days be the best  
They have known below.

**Love Letters.**

FROM A LADY'S NOTE-BOOK.

This is an age of reform, moral and political; and as reform is needed in this matter as much as any other, I wish I could say a few words that would sink deep in the heart, and never be forgotten by every unmarried man, in reference to this so often miscalled *romance* of love-letters. They are almost always, indeed, universally, held in derision as nonsensical, love-sick trash, but it is an egregious blunder, for they are most eminently practical; and whenever we hear them so spoken of, especially by our poor old bachelor friend, we long to whisper in his ear that we have not yet forgotten the time, although it has been a score of years ago, when he offered all his heart and half his kingdom to pretty Nelly Bly, and only missed having a happy home and family because Miss Nelly, perverse creature, would marry Tom Brown on his return from sea, and start out with him on a voyage for life—as first mate, for which reason our friend the old bachelor has had a general antipathy to water ever since, and a strong dislike to captains and first mates in particular. We would like to remind him of the valentine, with tender verses attached, that he so adroitly had handed to her without "anybody's knowing."

Truly, love-letters are foolish and nonsensical; a little nonsense, now and then, is relished by the wisest men. But I must come to my reform, for, as I have said before, there is need of it. Let "dear John," the object of a girl's affections, be separated from her by time and space, and what are the results? Let us follow them. The brave Apollo leaves, vowing eternal love and fidelity, with promise to write every day, if not oftener. He feels gay and buoyant, with the prospects of a fair business life ahead: the weeping maiden is left behind to solace herself from "past blessings," and wait for news from the absent one, obliged to learn the hardest of lessons that "They also serve who only stand and wait."

Now the practical part of life commences as the correspondence begins. For a while the letters come and go regularly, and everything is nice; but suddenly the letter comes not: several anxious days and sleepless nights, imagining of all sorts of diseases and disasters. When the truant letter is handed her, quickly is it torn open, to see "What can be the matter, that he has not written before?" when she finds, to her great relief of mind, that "owing to press of business, I carried this letter in my pocket for several days, entirely forgetting I had not posted it; hope the delay caused you no uneasiness of mind." The bare possibility of such an idea, when he must have known it caused her the greatest anxiety; and does he not always close his letters with, "Don't fail to write me on Sunday, or I shall think you are ill!" But she forgives the "dear fellow," and sighs, "Shall we ever meet again?"

For a few weeks the letters reach her regularly; so she takes courage, and presses forward to the mark of the prize of her high calling, which is to be "John's" wife. But it is only for a short season. "Sorrow cometh in the morning." After a wearisome delay, the "long looked for comes at last," which, after reading, makes her feel that "life is all a fickle dream," for if there was anything she was unlawfully proud of, it was John's voice, his beautiful tenor voice. Now he tells her "he unfortunately took a heavy cold; was confined to his bed for several days; there was no danger, but a great inconvenience, as it has settled in his throat, and in all probability would entirely lose his voice."

The time has now arrived when "the girl I left behind me" tries to have her mind prepared for anything or everything in or out of season; but, at last, "forbearance ceases to be a virtue," as she reads in his last:—"On Monday morning, in passing down High street, I barely escaped death, having just passed a building in the course of erection, when it fell, killing one workman, and wounding several others."

She quickly folds the letter up, puts it away, feeling thankful that there is a Providence especially provided to take care of absent lovers who can't take care of themselves. Now, can you tell me of any more trying period in the existence of a woman's life than this very time I have been talking about?

Her letters I will venture to say, are as regular as clock-work; and, if she did fall and sprain her ankle, or barely recover from a serious attack of the diphtheria, she will be careful not to mention it until the worst is over, for fear of worrying "John," while as to accidents and hair breadth escapes that "might have been," they are never mentioned. All of the foregoing contribute to the *romance* of courtship; but we think it is the most trying period in a girl's experience; for, "as distance lends enchantment to the view," under such circumstances, so it is that imaginary or slight ills are harder to bear, when the loved one is absent from us, than real trouble is if encouraged by each other's presence. But then we should not, for "all the world beside," be without these dear old lovers and husbands, for, "with all their faults, we love them still."

**Vegetables in the Farmer's Family.**

In years past some English and Scotch gardeners have been experimenting in the growth of the pea, with marvellous success. Varieties have been produced that should never be absent from the daily board of the farmer's meals. The tomato is equally good as a toothsome condiment. The onion, also, although in many farmers' families considered a luxury, is, according to eminent physicians, a great corrective and alterative of the human system when freely consumed, and a preventative, as well as a remedy, for some affections of the kidneys that are becoming so alarmingly frequent among our active men of middle life. The same influence upon the liver is attributed to the free use of the tomato. Equally effective is the celery plant upon the nervous system. But the great questions of food and economy are the ones which come nearest home. It is of no use to talk of the heart and the moral senses until the stomach is right. To have that right it must be well filled, and if the farmers cannot see their way clear to grow more of these articles on their farms, they must eat more and better vegetables. The list is large, succulent and healthy. They can be grown successfully not only for summer, but for winter consumption. Let our wives and daughters devote a little time to preparing them for winter use in the family. We have so burdened ourselves with business and superfluities that a goodly portion of our vital forces is expended in taking care of things, instead of procuring food and raiment. But, as we must work or starve, why not accept the situation, and when spring opens begin at the garden, and let our tables groan, if need be, with the fullness thereof?

**When Not to Laugh.**

Unless you would be set down as vulgar, don't laugh at people's mistakes or misfortunes. There's a time to laugh; but when your schoolmate has slipped down on the ice, and is hurt, perhaps; or by accident the fruit stand at the corner is overturned, and the poor old man's oranges and apples are scattered in the mud; or some lover of a very low quality of fun has pinned a ticket for sale on a person's back as he walks the street; or an absent-minded lady, thinking more of the poor she is

going to visit than herself, has gone out with one boot and one slipper on; or a near-sighted person, whom you never saw before, addresses you as Jane or John, and cordially inquires after your grandma, when you haven't any; or the new boarder next door, in a block of a dozen houses all precisely alike, walks familiarly into your hall and comes to a dead stop on the stairs; or the bashful student comes awkwardly upon the platform and breaks down in an attempt to declaim; or the same sort of sensitive youth, through extreme diffidence, commits in company the very error he was trying to avoid; or whenever anything trying or humble happens to any person—that is not the time to laugh, if you do by others as you would be done by. If you are the person laughed at in such a case, consider that, at least, you are a great deal better than those who laugh at you. The too bashful girl or boy almost always turns out better than the too bold. The people who are always right side out in looks and dress and style, are not necessarily by any means the best or the brightest. Nothing more surely indicates good breeding and a large heart than not seeming to notice a blunder, whether of friend or stranger—unless it is by a word or simple act of kindness to show sympathy or render assistance, when this can spare the feelings or lighten a misfortune.—*Christian Era.*

**A Plea for Boys.**

Every boy, if he is in sound health, has an excess of energy which must find an outlet. The mother is alarmed and worried at what she calls his mischievous proclivities. He is always breaking things, is never still, is always in the way, wanting to act outside of household law. He keeps the mother and sister in a constant fever. Their *bete noir* is a rainy day, when Charley can't go out doors to play; a school vacation is a burden hard to be borne; and the result is Charley must be packed off to a distant boarding school, not so much for his education, but to get rid of him.

If, as we hold, the interests of husband and wife are one, and it is essential to train the girl for wifehood in all household duties, it is equally so to train the boy for his part in the same direction. He should be under the law of home order; taught to be as neat and tidy as the girl; to arrange his bed-clothing and furniture instead of leaving it to his sister to do. He should have provided him needles, thread and buttons, and be taught their use, that he may not be subjected in manhood to that terror of nervous men, a buttonless shirt. He should take lessons from the cook, and be capable of preparing a wholesome dinner. He should learn how to do the multitude of little things that are constantly demanding attention in the house. There is no knowledge, however trivial, that will not at some time come into service.

It is said that a "Jack of all trades is master of none," but he need not make himself master. He may know enough of the general principles of mechanics to be able to repair wastes and to keep things in order. If a swollen door sticks, he should know how to ease it. If a hinge creaks, how to get at and stop its music. If a lock or clock is out of repair, how to take it to pieces and arrange it properly. If a pipe or a pan leaks, how to use iron and solder for its benefit. If the seams of a tub are open, how to cooper it. If a glass is broken in a sash, how to set another. How to hang paper on walls, and use brush and paint and putty. How to make a fire and lay a carpet and hang a curtain. Everybody may learn enough of these things to do away with the necessity of calling in a cobbling mechanic to his house when he is a man.

We say, then, teach the boys, or put them in a position to learn how to do for themselves what your experience tells you they will need to know when they are housekeepers. Let them have access to your kitchen, and be friendly with its goddess. Receive with approbation the cup of coffee or steak they have prepared for you. Initiate them into the mysteries of marketing, trust them to make purchases on their own discretion, and don't be hasty to condemn their first ventures. Teach them as to quantity and quality and value. Wink at their failures, and make them feel that they are helping you. Give them tools, carpenters' and plumbers' especially. Give them some little corner for a workshop all to themselves, and you will not only make them useful but happy. You will keep them near you. They will not feel that home is so dull that they must seek entertainment away from your eye, but will delight to be where you should have them, near you, doing you good.

### Why and When Lamps Explode.

All explosions of coal-oil lamps are caused by the vapor or gas that collects in the space above the oil. When full of oil, of course a lamp contains no gas, but immediately on lighting the lamp, consumption of oil begins, soon leaving a space for gas, which commences to form as the lamp warms up, and, after burning a short time, sufficient gas will accumulate to form an explosion. The gas in a lamp will explode only when ignited. In this respect it is like gunpowder. Cheap or inferior oil is always the most dangerous.

The flame is communicated to the gas in the following manner:—The wick tube in all lamp burners is made larger than the wick which is to pass through it. It would not do to have the wick work tightly in the burner; on the contrary, it is essential that it move up and down with perfect ease: In this way it is unavoidable that space in the tube is left along the sides of the wick sufficient for the flame from the burner to pass down into the lamp and explode the gas.

Many things may occur to cause the flame to pass down the wick and explode the lamp.

1. A lamp may be standing on a table or mantel, and a slight puff of air from the open window, or the sudden opening of a door, cause an explosion.
2. A lamp may be taken up quickly from a table or mantel and instantly explode.
3. A lamp is taken into an entry where there is a draft, or out of doors, and an explosion ensues.
4. A lighted lamp is taken up a flight of stairs, or is raised quickly to place it on the mantel, resulting in an explosion. In all these cases the mischief is done by the air movement—either by suddenly checking the draft, or forcing air down the chimney against the flame.
5. Blowing down the chimney to extinguish the light is a frequent cause of explosion.
6. Lamp explosions have been caused by using a chimney broken off at the top, or one that had a piece broken out, whereby the draft is variable and the flame unsteady.
7. Sometimes a thoughtless person puts a small-sized wick in a larger burner, thus leaving considerable space along the edges of the wick.
8. An old burner, with its air-drafts clogged up, which rightfully should be thrown away, is sometimes continued in use, and the final result is an explosion.—*Sci. American.*

### Family Matters.

The best friends are those who stimulate each other to do good.

If you give love to others, they will return it with interest, and, if you hate you will be paid in the same coin.

No true artist ever yet worked for ambition. He does the thing that is in him to do by a force far stronger than himself. The first fruits of a man's genius are always free from greed.

It is a secret known but to few, yet of no small use in the conduct of life, that, when you fall into a man's conversation, the first thing you should consider is whether he has a greater inclination to hear you, or that you should hear him.—*STEELE.*

The woman who has no sense of beauty, and who lives only for herself—the woman who has no sense of love, and who cannot compass its divine sacrifice, its exquisite self abnegation; and she who has no sense of modesty—not one of these is woman pure womanly—the woman by whom men are ennobled and the world kept pure.

There is no soil for the roots of a true man which is better than the soil that trouble makes—when it is trouble; for that which other folk think to be trouble is not necessarily trouble to you; and that which in you is trouble may not be necessarily be trouble to other people. Each man, in his own nature and circumstances, finds what trouble is to him; and it is the thing which you cannot bear that you must bear to make yourself a man.

**MEN WITHOUT OCCUPATION.**—The man who has nothing to do is the most miserable of beings. No matter how much wealth a man possesses, he can neither be contented nor happy without occupation. We can find a field for usefulness almost anywhere. In occupations we forget our cares, worldly trials, and our sorrows. It keeps us from constantly worrying and brooding over what is inevitable. If we have enough for ourselves, we can labor for the good of others; and such a task is one of the most delightful duties a worthy and good man can possibly engage in.

### Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES,—Here it is April again. What if it is April? Sure enough what. Well, we all know that a quarter of another year has passed and gone, and our beautiful spring is again with us. When we look out and see the sun shining so brilliant and warm, it reminds us that we can soon prepare our gardens, for the season of flowers and sweet perfumes is close at hand, though we must expect to have cold winds yet. How are your house plants after our cold winter? I have been very unfortunate with mine, having forgotten to remove them from the window, consequently, had them frozen, and was obliged to cut them down. Fresh shoots have sprung up again, and are now looking fresh and beautiful. I let them get all the sunshine that is possible and wash them frequently with water, for if in a room where you are constantly in, a great deal of dust adheres to them, which must prevent them from breathing freely. I also find it is a good plan to put a few drops of ammonia in the water used for watering. Some of my nephews and nieces are, no doubt, thinking of their Easter holidays, or, probably, ere this reaches you, will be at home enjoying them, no doubt, devising all manner of plans for making an "April fool" of some of your companions. One of my little nephews says his father has given him an acre of land to cultivate, and plant and sow as he pleases. He says he intends to plant some corns and beans, also some potatoes, cabbage and cauliflower. He thinks he will also try a few melons, cucumbers, and a bed or two of onions. He is going to see how much he can make from his acre, and buy a calf and sheep, which his father says he will furnish food for. I think this a good plan, and would suggest that many fathers encourage their boys in some similar manner. It not only furnishes them with a little private money, but teaches them to calculate and take the responsibility of their miniature farm upon themselves. I hope to hear from many of my little nephews, and of their different modes of cultivating the little corner that their father may allow them to have.

UNCLE TOM.

### Puzzles.

#### 52—NUMERICAL ENIGMA.

I consist of 20 letters.  
My 17, 14, 9, is a month;  
My 2, 19, 4, is a house for travellers;  
My 1, 5, 3, 16, is a place for stamping coin;  
My 7, 8, 15, 20, is a kind of sale;  
My 12, 11, 11, 9, is a whirlpool;  
My 13, 18, 8, 10, 6, is a kind of grain collectively.  
My whole may be seen in the FARMERS' ADVOCATE every morning.  
ARCHY G. TAYLOR.

#### 53—DIAMOND PUZZLE.

A consonant; the whole; a color; fragile; broken; name of a race of Kings of England; a species of antelope; currents; a coin; a number; a consonant.  
EDNA CLIFFORD.

#### 54—SQUARE WORD.

Not soft; extent of territory; true; a valley.

#### 55—SQUARE WORD.

To increase; hoar frost; a sign; part of the vest; to go.  
KITTY LOVE.

#### 56—NUMERICAL PUZZLE.

I am composed of 15 letters.  
My 4, 13, 5, 13, 11, is good feed for animals;  
My 8, 1, 14, 15, is a troublesome insect;  
My 9, 7, 2, 3, is a kind of grain;  
My 9, 1, 6, 10, is a place of proverbial industry.  
My whole is what every farmer should do.  
HENRY PROLEMY.

#### 57—THREE CONUNDRUMS.

1. Why is a man who has had his eye put out like the majority of schoolmasters?
2. When is iron most ironical?
3. What chemical instrument is like a written reply?

MARY LEE.

### 58—ENIGMA.

If you would my nature know,  
Seek for me in frost and snow;  
On the slope of the lofty mountain,  
In the cool and flowing fountain,  
On Norway's coast I have been found,  
But in Sweden ne'er have been;  
In populous towns you hear my sound,  
But ne'er in peaceful village green.  
In Russia you might seek in vain,  
It would only give you needless pain;  
But where the mighty ocean rolls,  
You'll find me, and at both the poles.  
LUCY MILLS.

### 59—CHARADE.

My first I must confess to you,  
Is contrary to being true;  
My third a number is, I ween,  
And you I think will do between;  
My fourth an insect may be reckoned.  
In rank my whole is termed the second.

If ever you my final see,  
You'll say five hundred it must be;  
And second reference has to me.  
My third a portion of our dress;  
And if my whole you wish to guess,  
It means to trip or dispossess.

My first is great without a doubt;  
A ring you'll find my second;  
You must do third to make me out,  
If I have rightly reckoned.  
Now in my total when combined,  
Blind zeal or superstition find.

### 60—ANAGRAMS—EUROPEAN TOWNS.

1. Ten marches.
2. Mad retort. A noble car. Sell a miser. Said to men. Ah, I can't stir.

### 61—FLOWERS.

Waste them Willie. Eat coal Charley. Catherine's hat. The King's a victor. Cannot hear it. Ha, love till I fly.

Make names of flowers from the above letters.

### 62—LOGOGRIPH.

Complete, a noble river  
In England I will name;  
Curtail me and transpose me,  
I am of Irish fame;  
Cut off the final letter,  
Behold I'm used for food;  
Transpose, I draw the wagon,  
A heavy load of wood;  
Again if you transpose me,  
You'll own I am not wild;  
Another transposition  
Discloses man or child;  
But whether man or child it be,  
It always goes in company.

- 63— I am a pretty flower's name;  
If you in two divide the same,  
And take the latter half away,  
A color I then display.

### Names of Those Who Have Sent Correct Answers to March Puzzles.

Edna Clifford, Henry Ptolemy\*, Archy J. Taylor, Harry W. Huband, John Bunyan, Kitty Love, J. Drummond Dickson, Janet Hartley, Jane Dixon, Ada Gibbons, Laura Gemley, William Ford, James Carruthers, Harriet Cox, Fred Baird, Helen Anderson, Mary Jane Flock, Minnie Morris, Dora McPherson, Susan Jones, Lucy Priddis, John Jones, Nanie Henderson, Eleanor North, Frank Luce, Mary Lee, John Wright, Samuel Gunn, A. J. Smithe, Nora Hooper, Jane Shore, Maggie Johnson, Sarah Lemon, Rosie McNorton, William Dyson, Oliver Godfrey, Arnold McNeil, Maude Lynn, Jennie Godson, J. Simpson, Louie Fairbrother, Jacob Leach, Tabitha Doust, Kittie Lowe, B. Stewart, Ida May.

We place a star as a mark of honor at the name of the one who answers the greatest number of puzzles.

### Answers to March Puzzles.

36.—  
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37.—A pair of spurs. 38.—A blush. 39.—Thames, Tyne, Severn, Dec, Wye, Ouse. 40.—The moon. 41.—Captain Marryat. 42.—The sleeping fox catches no poultry. 43.—Sir John Franklin. 44.—Dairymen's Convention.

45.—

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46.—Johnston's Dictionary. 47.—Cromwell. 48.—Daily News: thus, Dorset, Arklow, Iona, Longford, Yeddo, Navan, Endor, Warsaw, Sidon. 49.—Sweet-meat. 50.—Cowper, Milton, Dryden. Thus:—

Clu Mpe D  
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51.—Shakespeare; Robert Burns; Shelter, HerO, AdverB, KinE, Ear, Scott, PaolB (Pablo), EmU, AltaR, RaiN, ElveS

**How to Get Along.**

Pay as you go.  
 Never fool in business matters.  
 Do not kick every one in your path.  
 Learn to think and act for yourself.  
 Keep ahead rather than behind the times.  
 Don't stop to tell stories in business hours.  
 Have order, system, regularity and promptness.  
 Use your own brains rather than those of others.  
 Do not meddle with business you know nothing of.  
 A man of honor respects his word as he does his bond.  
 No man can get rich by sitting around stores and saloons.  
 If you have a place of business, be found there when wanted.  
 More miles can be made in one day by going steadily than by stopping.  
 Help others when you can, but never give what you cannot afford because it is fashionable.  
 Learn to say No. No necessity of snapping it out dog-fashion, but say it firmly and respectfully.

**HUMOROUS.**

**THE CHIPMUNK.**—The chipmunk iz the smallest ov the squirrell tribe. They are striped goods, having three blak lines wove into them, running the same way the squirrell duz. Az a spekulator in corn the chipmunk stands at the hed ov all the small operators, beating the blujay, in hiz yearly opershuns, about a quart. The chipmunk carries hiz corn in hiz mouth, and when he cums out ov a cornfield loaded with the cereal, hiz cheeks stik out like a duch baby's. Sumtimes the chipmunk iz kaught and kept in a kage, and iz made to turn a wheel for a living, this iz the only useful work they hav ever been known to du. I hav ofen lookt at them at work in their wheels, and dont kno which i pitty the most, the chipmunk, or the party who has to tend them, both ov them mit be in better bizzness. They are the only insekt who dig their holes and sho no pile ov dirt at the entrance. I hav asked sevral smart men what bekums ov the dirt, but they all shook their heds and lookt awfull wize. When i waz a boy i used to ketch chipmunks bi running away from-skool, and the day that i brot in two ov them waz a big day for me.

They tell this story of a Maine greenhorn, who recently made a visit to the Hub:—Seeing a hotel sign, he entered and inquired the price of lodging. "One dollar," said the obliging clerk, handing him a pen and pointing to the register. "What am I to do with this here pen?" said the rustic. "Why, put your name on the book," said the clerk, "and I will assign you a room at once." "Not as you know on," said the young man from Maine; "you don't catch me. My father signed his name once into a book, such as those 'ere patent-right fellows carry round—not nigh so big as that—and he had to pay \$1,000. No, siree, I can pay my way, but I don't sign no note, you bet!"

**THEY DIDN'T GET MARRIED.**—A few days ago a Detroit widower, who was engaged to a Detroit widow, each having two or three children, and both being well off, determined to test her love for him, and at the same time discover if she was actuated by mercenary motives, as some of his friends had asserted. He called upon her at the usual evening hour, and, after a while, remarked: "My dear, you know I have two children, and to-day I had my life insurance policy, amounting to \$25,000, changed to their sole benefit in case of my death."

"You did quite right, my darling," she promptly replied. "I have three children, as you are aware."

As soon as we were engaged, I had every dollar's worth of my property so secured that they alone can have the benefit of it."

He looked.

She looked.

The marriage didn't come off at the time last week, and it may never occur.

We have taken wood, potatoes, corn, eggs, butter, onions, cabbages, chicken, stone, lumber, labor, sand, calico, sauer-kraut, second-hand clothing, coon skins, and bug juice on subscription, in our time, and now a man writes us to know if we would send the paper six months for a large owl. There are few things an editor would refuse on subscription, and if we come across any fellow who is out of owl, and in need of one, we'll do it.—*Osborne (Kan.) Farmer.*

There has been a separation between an uptown lover and his sweetheart. She presented him with her photograph, which, on his bended knees, he swore he would always wear next to his heart. Last Sunday he pulled his handkerchief from his back pocket, when lo! the photograph fell at the lady's feet. She says he is either a liar or else his heart does not lie in the right place.

It was a rich old widow who wondered that the handsome young man had fallen in love with her. "Yes, it is wonderful," said Mr. Sprucup; "but I do love you to distraction; why, I even love the ground you walk on." "I thought so," observed the widow; "but I am not in want of a landlord at present."

**THE MIZER.**—The mizer digs hiz heart out hollow to stow away hiz munny in. He akumulates bi littles, and never opens hiz harte, only on a krak, to let another shiling in. An old mizer iz a sad sight enuff, but next to an idiot, a young mizer iz the most revolting thing on earth. Mizers enjoy what they don't use, looze what they save, and die possessed ov the only treasure that iz of no use to them. The most terrible sarkasm iz a mizer's phuneral, the heir often makes it gorgeous, and expensiv, and then pitches hedlong into the pile the old phool haz left.

**A Scotch Story.**

A certain minister having become much addicted to drink, his presbytery had to interfere, and got the minister to sign the pledge. The result was that the sudden reaction proved too much for him, and he became so ill that the doctor had to be sent for. The doctor said he must begin to take his toddy again. This the minister said he could not do, as he had taken the pledge. The doctor replied that he might get a bottle or two quietly, and that nobody but their two selves and the housekeeper would know it.

"Man," said the minister, "my housekeeper is worse than all the presbyters put together, so that would not do."

However, it was arranged that the doctor should bring in the whisky and sugar, and that the minister was to make up the toddy in the bed room with the hot water he got for shaving purposes in the morning. The result was the minister got speedily well, and one day on going out, the doctor said to the minister's housekeeper:

"Well, Margaret, your minister is quite himself again."

"There's nae doubt of that, sir," she replied, "he's quite well in the body, but there is something gane far wrang wi' his upper story."

"What's wrong there, Margaret?" asked the doctor.

"Weel, sir, I dinna ken, but he asks for shavin' water six or seven times a day."

**The Past Winter.**

We have just passed the most pleasant winter ever experienced in Canada, as far as the weather has been concerned in making it so—just sufficient frost to keep the atmosphere clear and dry, and snow sufficient to give us excellent sleighing, without inconvenience. Stock have thriven better than they would have done if the weather had been more variable. The winter wheat has been well protected; if we do not have thawing and freezing weather for the next two weeks, we may expect a good crop of winter wheat. The clover is also in a healthy state at present. The prices of all agricultural products have been good, except for hops and barley. It is our impression that the prices of both these products must rise. The exporting of

live stock to England will give us a stimulus to raise large cattle and better horses. The dairy-men, on account of the low price of cheese in the early part of the season, were rather discouraged, but the prices improved; the prospects are that good prices will be realized for new cheese this year.

**Correspondence.—Continued.**

Some time ago I noticed in the *ADVOCATE* some remarks respecting the different varieties of spruce, in which you express a doubt as to whether the black and white spruce are really different varieties. Seen from a little distance they are very similar, but, nevertheless, they are two distinct species. The black spruce, *abies nigra*, has the leaves needle-shaped, four-sided, not two-ranked, uniformly green, cones ovate, 1 inch to 1½ inches long, with thin-edged scales. The white spruce, *abies alba*, has the cones oblong cylindrical, 1 or 2 inches long, the scales with thickish edges, otherwise nearly like the white spruce. In both varieties the cones hang from the ends of the branches and do not fall to pieces. In this respect they differ from the balsam fir, *abies balsamea*, which has the cones upright on short side shoots, falling into pieces when ripe, the scales separating from the axis, leaves flat, becoming more or less two-ranked, whitish beneath—but is too well known to require further description. The bark of the black spruce is of a darker color than that of the white spruce, but the wood is whiter and harder, so that in the Old Country, whenever it can be procured, it is used for the floors of ball-rooms. In Canada East the essence of spruce is distilled from the branches, which is used in making spruce beer, a very refreshing summer beverage and not intoxicating; formerly much used by the French Canadians. As ornamental trees there is nearly no difference between the white and black spruce, but for this purpose the balsam fir excels them both, as it naturally forms a pyramid, as I have often seen it growing wild where it had room to spread. Growing in the woods amongst other trees it shoots up to a good height and size. In Canada East it is always used by the French Canadians for the purpose of making sugar troughs. It is easily split and hollowed out, and does not communicate any unpleasant flavor to the sap. It is also used for making butter tubs, or tinnettes, as they are called. The gum, which issues from the bark in small bladders, is collected in the spring by the French Canadians and Indians, generally in the swamps to the north of Quebec, and is sent to England as Balsam of Canada. Mixed with grease it is applied to the face and hands by men when at work in the woods during the summer to keep off the mosquitoes and sand-flies. It is of a healing nature when applied to the chaps in the hands, or slight cuts; for deep cuts it is better mixed with a little turpentine. It is also used in making a varnish for water-color or pencil drawings. I have seen it applied to water-colored prints, when the colors were faded, and they were brought out in their pristine brightness. For this purpose the pictures must first be stretched in a frame, then sized with a clear solution of ising-glass, and when that is dried in, varnish with a mixture of one-third balsam of Canada and two-thirds spirits of turpentine. This would form a cheap and excellent varnish for the picture of the "Offer" which you have given as a premium for new subscribers this year. SARAWAK.

**Try It.**

I find the best thing to clean a horse with is a broom corn scrubbing brush. There is nothing like it, as it never can scratch his legs, as the curry comb of tin does, while it does more work in the same time than curry comb and brush put together. S. G., Wolfe Island P. O.

Seeing in your last number of the *ADVOCATE* an enquiry from "Farmer," asking if you knew any cure for hard lumps on horses. A neighbor of mine had a colt hooked by a cow. It had a lump on its side as large as a peck measure and as hard as a stone. I told him to rub it with geese grease. He did so, and there was about a bucketful of matter ran out of it, and in about six weeks it had entirely disappeared. Last year I had an ox with a lump on his jawbone, about as large as a hen's egg, and as hard as a stone. I began rubbing it with warm goose grease. In about a week it became very soft, broke open and disappeared. If I had not seen both cases myself, I could hardly have believed it, and I can recommend it as a sure cure. C. M., Windsor, N. S.

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LUCY MILLS.

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**Have Sent Corch Puzzles.**

by J. Taylor, Harry W. Drummond Dickson, Laura Gemley, Wilcox, Fred Baird, Helen Morris, Dora McPherson, Nannie Henderson, John Wright, Samuel Shore, Maggie Johnson, William Dyson, Oliver J. Leach, Tabitha Doust,

at the name of the one puzzles.

**Puzzles.**

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h. 39.—Thames, Tync.  
on. 41.—Captain Marryat.  
oultry. 43.—Sir John  
on.

SIR,—Could your correspondent "Windy Knowes" kindly inform me through the medium of your paper what was the nature of the soil in his experiments with gypsum? R. McE.  
Byron P. O., March 23rd, 1877.

Would you inform me if the English cob nuts will thrive in any part of Canada. W., Napanee.

[We have never seen any grown here. One person raised a peck of filberts near this city. They have generally failed to produce fruit when tried here. Perhaps some of our readers might give us their experience in the nut question. We have no doubt but many varieties of nut will prove very remunerative here to the enterprising who plant suitable varieties.—Ed.]

COLLARD'S HARROW.

To J. S. Pictou, N. S.—The Collard's Iron Harrow, manufactured by G. Gillies, of Gananoque, is an excellent implement. There are a great many of them used in Ontario—more than of any other iron harrow. They give good satisfaction. You will be safe in getting one.

Our dairymen, manufacturers and farmers should read the advertisement of the Royal Agricultural Society of England. Some of our subscribers, no doubt, will attend it; we should like to be there. Our Government should encourage Canadians to exhibit. A good display, obliging attendants, and a few suitable circulars, might tend to open up more direct trade with our fatherland, and might induce a better class of emigrants to our country than have been sent here by emigration agents.

Notes on the Garden and Farm.

Those who live near blacksmith and machine shops, and can get iron filings and rusty chips of iron, and working them into their flower beds, will add greatly to the rich and bright coloring of their flowers.

TRAINING VINES OVER WINDOWS.—A lady writer in the *Rural New Yorker* says:—"What more beautiful than green leaves falling around the casement in graceful festoons? If a grape vine is out of the question, the next best thing is a hop vine. I have a luxurious hop vine now, that shades two of my kitchen windows; and the cold tendrils clinging so closely to the house, with the aid of a friendly nail and string here and there, that it makes closing the windows, even in a storm or shower, wholly unnecessary, securing a capital ventilation of the room. And there is such a silky, sociable rustle of the leaves all day that I like to sit close up to them and listen to what they say. Then fill a few vases with roses, and place out on the window sill, and the green background makes a delightful receiving picture."

Grasshopper fighting is the order of the day in many of the Western States, and grasshopper clubs are being formed for the purpose of destroying the eggs of the pests. Deep plowing is strongly recommended, and roadways are being harrowed and overturned with a view to eradicate them in the State of Nebraska. The Minnesota Senate has passed a bill appropriating \$100,000 for the destruction of grasshopper eggs, and the raising of more turkeys and chickens than he etofore to extirpate them is strongly urged upon the farmers, many of whom cannot retain possession of their farms if their crops are again eaten up by the locusts.

FATTENING ANIMALS.—A very common error among farmers, which needs correction, is the opinion that animals may be fattened in a few weeks, and fitted for market, by heavy feeding, or, as it is termed, by pushing. Many farmers do not think of beginning to fatten their hogs or cattle for early winter market until autumn has actually commenced. Their food is then suddenly changed, and they are dosed with large quantities of grain or meal. This sudden change often deranges the system, and it is frequently some time before they recover from it. From observation and enquiry we find that the most successful pork-raiser that we have met with commences the fattening of his swine for the winter market early in the preceding spring. In fact, he keeps his young swine in a good growing condition all through the winter. He begins moderately, and increases the amount gradually, never placing before the animal more than it will freely eat. With this treatment and strict attention to the comfort and cleanliness of the animal, his spring pigs at ten months usually exceed three hundred pounds, and have sometimes gone as high as four hundred and fifty

pounds; and pigs wintered over reached a weight of five or six hundred. The corn, which is ground and scalded before feeding, nets him on an average, not less than one dollar per bushel when the market price of pork is five cents per pound.

THE HATCHET IN PRUNING.—A writer to the *Gardeners' Monthly* says:—"Of all the blunders that the common farmers, and some others, make with trees, none is so common, or so hurtful and which he is so long in finding out, and of which he might know so certainly, as the practice of cutting off lower limbs. All over the country nothing is more common than to see mutilated trees on almost every farm. Big limbs cut off near the body of the tree, and of course rotting to the heart. This is a heart sin against nature. The very limbs necessary to protect the trees from wind and sun, and just where the limbs are needed most, they are cut away. But the greatest injury is the rotting that always takes place when a big limb is sawed off—too big to heal over it must rot, and being kept moist by the growing tree, it is in the right condition to rot, and being on the body, the rotting goes to the heart and hurts the whole tree. It is common all over the country to see large orchards mutilated in this way. We often see holes in the trees where big limbs have been cut away, where squirrels and even racoons could crawl in. Perhaps the only reason these trimmers would give is, that the lowest limbs are the easiest got at; and some would say, they wanted to raise a crop under the tree.

Take every precaution to prevent the accumulation of dust upon plants, and above all protect them from that terrible infliction, carpet sweeping. It may be well enough to kill the old people by compelling them to breathe the clouds of dust, but send the children into the fresh air to skate, or to snowball, and screen the plant if possible. The essentials of success in plant culture are, suitable soil, air, light, moderate and regular heat, a moist atmosphere, regular and moderate watering, and freedom from foul gas.

The celebrated farmer, John Johnston, of Geneva, N. Y., says he has used plaster every year since he came on his farm, now fifty-four years; and it has done wonders for him on corn, soaking the corn in water, then mixing it with plaster when wet. He planted the plastered corn, and a hired man planted the corn that was not plastered. When the corn was up, that which was plastered was stronger and better colored than the other. It kept ahead throughout the season, and when ripe a blind man could have told the difference by feeling the stalks and ears.

ONION SETS.—A Mr. Fellows, of Kentucky, grows onion sets as follows:—He selects a dry piece of ground. His ground is rich alluvial loam, but the character of the soil is of no special importance. Beds are formed two feet wide, with a path of one foot between. The beds are excavated to the depth of two inches, or, in other words, the path or alley between is two inches higher than the beds; the bottom of the beds are nicely smoothed with the back of a spade, so as to present a level surface whereon to sow the seed. The seed is sown so that from fifteen to twenty seeds will cover a square inch. If the surface of the beds were sprinkled with plaster or white sand, the seeds, which are black, could be sown more evenly. After sowing, the seeds are covered with two inches of clear, pure sand, which brings the beds and paths to the same level. The whole is then rolled with a light roller, or patted down with a spade. The advantages of this plan are, that there being no seeds of weeds in the sand, the labor of weeding is entirely saved, and the sets when matured are far more easily gathered.

CELERY AS A CURE-ALL.—The habitual daily use of this vegetable is much more beneficial to man than most people are aware of. A writer who is familiar with its virtues says:—"I have known many men and women who, from various causes, had become so much affected by nervousness that when they stretched out their hands they shook like aspen leaves on a windy day, and by a moderate daily use of the blanched footstalks of celery as a salad they became strong and steady in limb as other people. I have known others so nervous that the least annoyance put them in a state of agitation and they were in constant perplexity and fear, who were also effectually cured by a moderate daily use of celery as a salad at meal time. I have known others to be cured of palpitation of the heart. Everybody engaged in labor weakening to the nerves should use celery daily in the season and onions in its stead when not in season."

PRUNING ROSES.—The time to prune rose bushes depends entirely upon the class or family of roses to be pruned. Without going into a systematic consideration of the different species of the rose, for which we have no time just now, we will merely say that there are three grand divisions of the rose genus, each of which requires a mode of pruning peculiar to itself. For the first class, or those roses that bloom but once a year—summer roses, as they are called—we have always found it best to prune them pretty severely as soon as the period of blooming is over, unless it should be very dry, in which case we defer the pruning until just as the fall growth begins. By this course we get an abundance of young spurs or shoots for flowering the next season.—*The Household*.

THE AMERICAN POMOLOGICAL SOCIETY.—The sixteenth annual meeting of this Society will be held this year in Boston. It will commence on Wednesday, the 11th of September, and will last three days.

Messrs. Gibson, Taylor & Hope are to have a short-horn sale in London, Ont., on the 16th of June.

MANITOBA AND THE CANADIAN NORTH-WEST.—We would direct the attention of our readers, interested in Manitoba and the Canadian North-West, to the advertisement of the "Manitoba Free Press," in another column.

The International Exhibition, at Philadelphia, is to be re-opened this year in the main building, in Fairmont Park.

The examination of scholars at the Government Farm, at Guelph, took place on Thursday, the 29th of March. There is a marked improvement in the management; it was much needed. We shall give more particulars in our next issue, as time or space will not allow it in this issue.

Patrons of Husbandry.

Subordinate Granges Newly Organized

- 564, Glenelg Jno. Weir, M., Durham; James Edge, S., Durham. 565, Queen of the West—James Pollock, M., Blyth; Jno. Wilford, S., Blyth. 566, Mt. Hope—J. W. Whealy, M., Lakeside; Alex. D. Sutherland, S., Bennington. 567, Sidney—Sam'l P. Knight, M., Belleville; C. W. Huffman, S., Wallbridge. 568, Progress—Jeremiah House, M., Stratfordville; S. G. Marshall, S., Stratfordville. 569, Cambray—Robt. Irwin, M., Lindsay; A. B. Coots, S., Cambray. 570, Royal—Sam'l E. Pegg, M., Stevensville; F. Morningstar, S., Stevensville. 571, Thurlow—Wm. Van Cleek, M., Philipston; J. W. Silbs, S., Philipston. 572, Pioneer—Luke Sidwell, M., Claverburg; C. D. Jarvis, S., Winton. 573, Moria—James Salsbury, M., Moria; J. G. Foster, S., Moria. 574, Clyde—Robt. Young, M., Galt; Arch. Ferguson, S., Clyde. 575, Stanstead—E. B. Gustin, M., Beebe Plain, Que.; E. G. Miller, S., Beebe Plain, Que. 576, Learteen—R. J. S. Drinkwater, M., Price's Corners; Wm. S. Gibbon, S., Price's Corners. 577, Sutton—A. J. Dyer, M., Sutton, Que.; C. E. C. Brown, S., Sutton, Que. 578, Newboro—G. Knowlton, M., Newboro; D. K. Preston, S., Newboro. 579, Saugeen—Matthew Mearns, M., Durham; Henry Byers, S., Allen Park.

Division Granges.

- 35, Northumberland—J. T. Mallory, M., Cobourg; D. Ewing, S., Dartford. 36, Essex—Jno. Hooker, M., Blytheswood; G. W. Johnson, S., North Ridge.

As will be seen by the above list, Granges have increased in the past month quite rapidly, many being formed in counties where but little interest has been shown before, proving conclusively that it only requires a knowledge of the true principles of the Order to insure its introduction amongst our farmers in every part of Canada.

Born of a necessity, consequent upon the unorganized condition and natural isolation of the agriculturists, it is fast assuming a position of respect in the minds of all classes, and fulfilling an important duty, by supplying us with a suitable means for social and intellectual improvement, and by intelligent efforts in a co-operative way, offering an opportunity for financial benefits. Our brother farmers in the Province of Quebec are actively arousing to the situation, flocking into the Grange by hundreds. Through the commendable and valuable efforts of Deputy Levi R. Whitman, a number of large Granges have been formed there this winter. One Grange, Stanstead (in the Co. of Stanstead), enrolled 41 names as charter members, being the largest organization from which application has been received this winter. The people of that section are alive to their own welfare, and with prudent management and harmonious action, will undoubtedly soon be able to reap the ripened fruits of their efforts.

W. PEMBERTON PAGE.

At the last meeting of the Surplus Grange No. 76, Mr. John Watters moved that the surplus money in the treasury be expended for numbers of the FARMERS' ADVOCATE. Thirty-eight numbers were ordered for the year. This is a step in the right direction. The farmers of Canada require all the agricultural information they can obtain.

A Grange picnic is to be held in Strathroy on the 2nd of June.

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Commercial.

Beebom's London telegram of March 28th stated :-

Floating cargoes wheat at opening the turn dearer; corn quiet. Cargoes on passage and for shipment - Wheat at opening the turn dearer; corn quiet.

In New York wheat was quiet, but firm, sales amounting to 10,000 bushels. This afternoon the West was unchanged.

A cable despatch states that the receipts of wheat at Liverpool for the past three days has been 10,000 quarters, of which 2,000 are American.

Toronto.

Produce of all kinds keeps firm, but the movement drags. The American markets have risen several cents within the week, and Liverpool has advanced in some particulars.

The trade for wheat has been exceedingly quiet during the week. Millers have shown no desire to purchase in excess of actual requirements, and though there is no prospect of what may be termed abundance, holders have in some instances submitted to a slight reduction in prices.

The number of barrels in store on the 26th inst. was 8,705, against 8,755 last week and 21,548 on this date last year.

Table with 3 columns: Year (1876-7, 1875-6, 1874-5), Imports of wheat, Imports of flour, Sales of home-grown produce, Total, Exports of wheat and flour, Result, Average price of English wheat.

The number of bushels of grain in store on the 26th inst. was as follows: - Fall wheat, 80,473 bush.; spring wheat, 162,339 bush.; oats, 25,415 bush.; barley, 197,960 bush.; peas, 52,330 bush.; rye, nil; corn, 3,900 bush.

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Oats - The market is steady; Canadian sold in car lots to-day at 47c on the track; American in a similar position are worth 40c.

Barley - Has been more active at about the same wide range of prices. Sales to-day included one car of No. 1 at 55c f. o. c., one car of No. 2 at 50c on the track, and three cars of choice No. 3 at 50c f. o. c.; No. 1 has sold during the week almost daily at 76c f. o. c.

Feas - Are steady, one car of No. 1 selling to-day at 75c f. o. b.

London Market.

Grain generally steady, with a degree of firmness principally arising from the small supplies coming forward. There was a slight advance the last week in the Liverpool and Western markets, but we now perceive a slight decline in quotations.

Grain - Wheat, Deihl, per 100 lbs., \$2.30 to \$2.40; Treadwell, \$2.20 to \$2.35; Red Winter, \$2.10 to \$2.15; Spring wheat, \$2.10 to \$2.30. Barley, 90c to \$1.10. Peas, \$1.20 to \$1.35. Oats, \$1.25 to \$1.30. Corn, 90c to \$1.10. Beans, \$1 to \$1.37. Rye, \$1 to \$1.10. Buckwheat, 80c to \$1.10.

Potatoes - Not many offerings, \$1.25 to \$1.50 per bag. Apples - Plentiful and cheap, 45c to 55c per bag. Turnips - 25c per bush. Carrots, 25c. Onions, 75c to 90c. Butter - Roll, 90c to 90c per lb.; keg, 18c to 20c. Cheese, 10c to 11c. Lard, 10c to 12c.

Cattle - Per 100 lbs. live weight, \$3 to \$4. Sheep, each, \$4 to \$5. Lambs, each, \$2 to \$3. Milch cows, each, \$30 to \$40.

Lamb, per lb., 7c to 8c. Beef, per 100 lbs., \$4 to \$6. Mutton, per lb., 6c to 7c. Dressed hogs, \$6 to \$7 per cwt.

Turkeys, each, 50c to \$1.50. Geese, 40c to 50c. Ducks per brace, 50c to 60c. Chickens per pair, 45c to 75c.

Cordwood - Dry, \$3.60 to \$3.70; green, \$3.50. Bran, per ton, \$14; per cwt., 80c.

SPECIAL PRIZES FOR APRIL FOR SENDING IN ONE NEW SUBSCRIBER TO THE FARMER'S ADVOCATE.

THE OFFER.

This picture we guarantee to please every one.

We have made arrangements with reliable seedsmen to enable us to send the following choice seeds. 5 packages 5 varieties of wheat, 3 of which are for trial.

(or) New varieties of potatoes. Burbanks Seedling, Early Ohio and Snow-Flake Total 1 lb. (or) Oats - Imported Black Tarter and Australian. Total 1 lb. (or) 5 5c packages of flower seeds, and one 3 seeds of the new and beautiful double everlasting Prince Bismarck.

HORSE RAKE.

THE BRANTFORD SELF-DUMPING RAKE has the best established reputation of any Rake manufactured.

The teeth raise 12 inches above the winrow. It will make a larger winrow than any other rake. The hay will not scatter out at the ends. It can be dumped by hand. The wheels running on any elevation will not raise the teeth from the ground.

A. BOWELL, Brantford P.O. Agents wanted where not yet established. dc-3

Important to Cattle Breeders & Farmers

FOR THE FINEST Permanent PASTURE GRASS SEED MIXTURE,

Apply to C. & A. SHARPE, Seed Establishment, GUELPH, ONT. dd-1

We would call the attention of our readers to the new, early grape "LADY," advertised by Mr. GEO. W. CAMPBELL, of Delaware, Ohio. Both the advertiser and the grape are reliable.

TREES advertisement with list of trees and prices.

WM RENNIE, TORONTO logo and advertisement for seeds.

SEEDS My Catalogue of Field, Garden and Flower Seeds, etc. etc., for 1877, is now ready, and will be mailed FREE to all applicants. WM. RENNIE, Toronto, Can. db-1

ONTARIO AGRICULTURAL COLLEGE logo and advertisement.

The Spring Term of the Summer Session will commence on the 18th day of April, when there will be accommodation for twenty resident pupils. For particulars as to terms of admission, subjects of study, &c., send for circulars to the undersigned. An early application will be advisable. Guelph, Feb. 20, 1877. dc-1 WM. JOHNSTON, Pres.

VICK'S FLOWER & VEGETABLE GARDEN logo and advertisement.

is the most beautiful work of the kind in the world. It contains nearly 150 pages, hundreds of fine illustrations, and six Chromo Plates of Flowers, beautifully drawn and colored from nature. Price 50 cents in paper cover; \$1.00 in elegant cloth. Printed in German and English. Vick's Floral Guide, Quarterly, 25 cents a year. Vick's Catalogue - 300 illustrations, only 2 cents. Address, JAMES VICK, Rochester, N. Y.

MITCHELL'S PERFECTED CARROT logo and advertisement.

The accompanying cut is the true shape of my new Carrot. Yield the past season 2,000 bushels per acre. Quality, the very best, either for table or stock.

Also a choice lot of my New Canada VICTOR TOMATO, and a quantity of Select Diverse Onion Seed to be sold at Wholesale Prices.

Price List of all kinds of Seeds, Plants, &c., FREE. S. H. MITCHELL, Market Gardener, Seed Grower & Florist, ST. MARYS, ONT.

Image of a carrot.

DERBY CATTLE FOOD

Produces Muscle, Nerve, Blood and Fat. It fattens in a reasonably short time. It is Tonic and Stomachic. It supplies that nourishment for winter feeding which animal nature requires for promoting a good, healthy action of the general system. It will bring out your Horses and Cattle in Spring in tip-top order. Every farmer should use it. Guaranteed by hundreds that have used it to give satisfaction. A collar box contains 300 feeds. Don't be persuaded to take any other preparation, only the "Derby." Ask your storekeeper for it. JOSEPH DILWORTH, Veterinary Druggist, Toronto, Ontario.

dc-4

**Improved Union Churns.**

(Pat. 1876.)



1st Prize at Hamilton, Provincial Exhibition, 1876.  
1st Prize at London, Western Fair, 1876.  
1st Prize at Guelph, Central Fair, 1876.  
The above Churn forwarded to any reliable farmer in Ontario on three weeks' trial. Satisfaction guaranteed, or no sale. Send for Catalogue and Price List. Agents wanted in every county in Canada.

**McMURRAY & FULLER,**

31 Front St. East, TORONTO.  
DB-14  
\$55 & \$77 a Week to Agents. \$10 Outfit Free.  
P. O. VICKERY, Augusta, Maine. di-12



We offer for Spring of 1877, the largest and most complete stock in the U. S. of  
**Fruit Trees, Standard and Dwarf.**  
**Ornamental Trees & Shrubs,** deciduous and evergreen  
**Roses a specialty**—all the finest sorts.  
**Green & Hot House Plants,** including best Novelties.  
Descriptive and Illustrated priced Catalogues sent prepaid to customers, free, to others on receipt of stamps as follows:  
No. 1. Fruits, with colored plate, 15c.; plain, 10c.  
No. 2. Ornamental Trees, colored plate, 25c.; plain, 15c.  
No. 3. Greenhouse, Free. No. 4. Wholesale, Free.  
No. 5. List of New Roses, Free.  
Small parcels forwarded by mail when desired.  
Address,

**ELLWANGER & BARRY, Rochester, N. Y.**



My annual Catalogue of Vegetable and Flower Seed for 1877 will be ready by January, and sent free to all who apply. Customers of last season need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Printed directions for cultivation on every package. All seed sold from my establishment warranted to be both fresh and true to name; so far, that should it prove otherwise, I will refill the order gratis. As the original introducer of the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of other new vegetables, I invite the patronage of all who are anxious to have their seed fresh, true, and of the very best strain.  
**New Vegetables a specialty.**  
JAMES J. H. GREGORY, Marblehead, Mass.  
DL-5

**HEATH & FINNEMORE,**  
WHOLESALE AND RETAIL  
**SEED MERCHANTS.**

Sole Agents for  
**McMaster & Hodgson's Celebrated Liquid Annatto Rennets.**  
SCALE BOARDS, CHEESE BANDAGES, AND ALL OTHER CHEESE FACTORY REQUISITES CONSTANTLY ON HAND.  
KING ST., MARKET SQUARE  
**LONDON, ONTARIO.**  
d-7

**TO COLOR BUTTER**

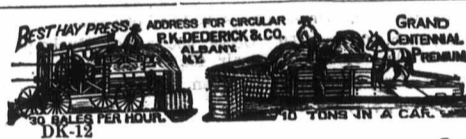
Every Dairyman should use

Wells, Richardson & Co.'s

**PERFECTED BUTTER COLOR.**

It adds five cents per pound to the value.  
It gives a pure rich dandelion color.  
It imparts no taste or smell.  
It is as harmless as salt.  
It is better than Carrots.  
It is better than Annatto.  
It is better than any other coloring.  
Foreign or domestic, liquid or solid.

A sample sufficient to color fifty pounds of butter will be sent to any address, postpaid, on receipt of ten cents. Every dairyman who wishes to realize the highest price should give it a trial now.  
An energetic man wanted to act as agent in every town. Liberal terms to the right man. For terms and territory, address at once—**WELLS, RICHARDSON & Co.,** Burlington, Vermont.  
dc-2



**General Land Office,**

WINNIPEG, MANITOBA.

Farms, improved and unimproved; Half Breed Scrip, 160 acres each; Allotments of Half Breed Minors, 240 acres each, those of age only, 3 of the whole; Winnipeg City Property, &c., &c., bought and sold. Investments procured and managed; Business Transacted with the Dominion Land Office; Taxes Paid and Property Managed for Absentees. Information respecting Investments, Locations and Values given, and all the departments of a General Land Office attended to.

A. W. BURROWS, Main St., Winnipeg.

P. S.—All communications requiring answers must enclose post-ge stamp.  
dc-tf

**Manitoba.**

Half-breed lands, near railroads and city bought for investors or settlers at from 30 to 52 cents. INVESTMENTS made on undoubted real estate security at 12 per cent. Send one stamp for circular, and eight for map.

ARCHIBALD YOUNG,  
37 Colborne street, Toronto.  
dh-tf

**SALT! SALT!**

SALT FOR  
**AGRICULTURAL PURPOSES**

can be obtained in car lots from  
GRAY, YOUNG & SPAULDING,  
Salt Works, Seaforth P. O.  
dc-3



**WE OFFER 500,000 EVERGREENS FOR LAWNS, HEDGES SCREENS, WIND BREAKS.**  
Catalogue and Price List, Free, on application.  
As sample of prices, we quote, Norway Spruce, once to three times transplanted, 20 to 30 inches, not pruned, each 15c., 10 for \$1.00, 100 for \$8.00. Same, 3 to 4 ft., each 20c., 10 for \$1.50, 100 for \$12.00. Same, pruned stocky, 2 to 2 1/2 ft., each 25c., 10 for \$2.00, 100 for \$15.00. Same, 4 ft., fine specimens, each 40c., 10 for \$3.00, 100 for \$25.00. Arborvitae American, 4 to 6 inches, 10 for 35c., 100 for \$2.50. Same, 6 to 9 inches, 10 for 60c., 100 for \$4.00. Same, 3 ft., each 30c., 10 for \$2.50, 100 for \$20.00. All sizes of this and spruce as per trade list. The new splendid Arborvitae Pyramidalis, hardy as an oak, erect as a juniper, just the thing for lawns and cemeteries, 12 to 15 inches, each 25c., 10 for \$2.00. Same, 2 ft., very fine, each 50c., 10 for \$4.00. Over 60 varieties of Evergreens. Largest and best stock in America. Extra fine lot of Kilmarnock Weeping Willow, each 60c., 10 for \$5.00. Beautiful Cut Leaved Weeping Birch, each \$1.00. Osage Orange, half a million, 1 yr., \$2.00, 2 yrs., \$2.50, per M. Splendidly-rooted Concord Vines, each 15c., 10 for 40c., 100 for \$3.00. Martha, hardest white, great bearer, each 15c., 10 for \$1.20, 100 for \$10.00. Agawam (Rogers, No. 15), each 20c., 10 for \$1.50, 100 for \$12.00. 20 other sorts, cheap. 500,000 fruit trees, 500,000 greenhouse plants.  
STORES, HARRISON & CO., Painesville, Lake Co., O.  
dc-2

**ROYAL Agricultural Society**

—OF—  
**ENGLAND.**

**GREAT SHOW AT LIVERPOOL**

July 11th to 16th, 1877.

SPECIAL GOLD MEDAL offered for an efficient SHEAF-BINDER.  
TEN SILVER MEDALS for NEW AGRICULTURAL IMPLEMENTS.  
PRIZES for horses, cattle, sheep, pigs, butter, cheese, bacon and hams, amounting to upwards of £20,000.

All Open to General Competition.

DETAILED LISTS OF PRIZES obtainable at the offices of the Liverpool and London and Globe Insurance Company. FORMS OF ENTRY may be obtained on written application to H. M. JENKINS, Esq., 12 Hanover Square, London, England.

LAST DAY OF ENTRY for implements, May 1st, for stock and provisions, June 1st—both in London, to H. M. Jenkins, as above.  
Only one entry can be made on each form, and applicants for forms must state the breed of animal or nature of proposed exhibit, and the number of animals, &c., in each class which they wish to enter.

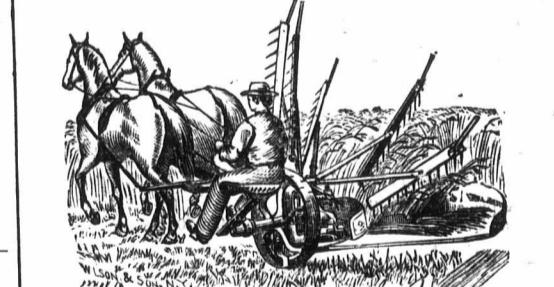
**THOMAS RIGBY, Secretary,**  
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Townhall, Liverpool, 24th February, 1877.  
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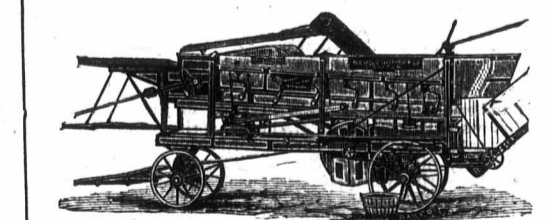
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