THE FARMER'S ADVOCATE

AND HOME MAGAZINE.

VOL. XIV. LONDON, ONT., MAY, 1879. NO. 5.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

THE FARMER'S ADVOCATE
—AND—
Home Magazine.

WILLIAM WELD, - Editor and Proprietor.

The Only Illustrated Agricultural Journal Published in the Dominion.

SUBSCRIPTION:

$1.00 in advance ; $1.25 in arrears, postpaid. Single copies 10 cents each.

Subscriptions can commence with any month.

Subscriptions forwarded by Registered Letter or Post Office Order *are at our* risk.

The ADVOCATE is discontinued on notice and all arrears must first be paid.

Subscribers who desire to change their P. O. address will send both *old* and *new* address.

ADVERTISING RATES:

Twenty cents per line of nonpareil, and fifty cents per line for special notices in reading column.

Special contracts made for definite time and space.

CONDENSED ADVERTISEMENTS.

Farms wanted, for sale or to rent, under twenty words and not exceeding *four* lines, 50c. each insertion.

Live stock wanted or for sale, under twenty words and not exceeding four lines, 50c. each insertion.

Stock Breeders' Cards at $1 per line per annum, in advance.

For Commission to Agents on new subscribers, &c., address

THE FARMER'S ADVOCATE, LONDON, ONT., CANADA.

The Month.

The season is unusually late. On some farms nothing has been done to this date, April 26th; the grass has hardly shown the symptoms of life, and very little seed has been sown. We look on a late spring with much better hopes for a good harvest than an early one. The winter wheat looks well. The fruit buds are kept back. The live stock are in a better position to thrive than when let out too soon and then re-housed.

Everything betokens a good harvest at the present, as there is ample time to put in the spring crops if we now have fine weather. Should we have much rain they will not be put in in good order, as everything must be done in a hurry this spring; but most farmers have their land ready, and the machinery will soon put in the seed.

We again repeat our advice: Get and keep every good farm animal you can attend to well; we anticipate good paying prices for good meat of all kinds. One week after shearing your sheep dip the lambs and kill the ticks; this will pay in increased mutton and wool. Keep the calves thriving; a little linseed or corn-meal added to their feed when they are fit to take more or better milk than you have for them, will put cash in your pocket.

The tabular market reports in this issue deserve your particular attention. The small quantity of butter and the large quantity of cheese held in Liverpool—the low price of grain and the large stock held should tend to show the thoughtful farmer in which direction to turn his attention. We have given you our opinion in previous issues and again repeat it: Make more butter on the factory system and less by the hand churn; pay less attention to wheat and more to stock raising; more forage crops and more roots; seed to grass; keep all the young stock you can possibly attend to well; feed them better; keep them growing; do not stint them, but give them a chance to fill themselves quickly. The farmer whose cattle are seen lying in the sun in the morning and in the shade in mid-day, will buy his neighbor's farm who keeps his cattle hunting all day for a bite to eat. That man who brags about having plowed and sown two acres of wheat a day for ten days in succession, will grumble about buying his wife a new calico dress next fall; he will say he cannot afford it. We know how it has been and will be; seven or fourteen bushels of wheat per acre will not pay. Good meat, good butter and good useful horses will pay best this year. There was a time when poor butter, poor cheese and poor meat were sold and left a profit to the farmer; that day is passed in Ontario. If you cannot raise a first-class commodity now you may just as well leave this part of the Dominion and emigrate first as last. In the Western and Southern States, in sparsely settled districts, where emigrants are pouring in and provisions are scarce, or where they are not in a position to supply the epicurean tastes of the British nation, high prices may be obtained for inferior stuff; but the price of land here is such and the taste of the people is such that a third-class article is not wanted. Aim to surpass your neighbor in raising the best produce; then you may be able to leave an unencumbered farm to your heirs.

The Farmers' Representatives.

Do not put yourselves out much for the elections; better pair off and stay at home than vote for so many representatives. Look on the present state of affairs with calm thought and ask yourself if your representative is not directing his attention far more to party pilferings than to the real interest of the Dominion. You should know most about the agricultural part of legislature; that is your line. Get well posted in that; do not be led away with clap-traps that are beyond your sphere.

Canada has been pronounced the brightest gem in the British Crown. We have been blessed with a healthy climate, a productive soil, an immense domain, the finest water privileges, excellent railroad facilities, and timber and mineral wealth. Let us ask ourselves: Have they been managed to the best advantage? Is Canada in as good a position as she ought to be? Can improvements yet be made? On what grounds have we stumbled? Has it not been by grants of privileges and rights, and expenditures to purchase party influence? Should we not have money in our treasury, or invested in paying improvements, instead of having a heavy and increasing debt? We must pay our debts. Is our new tariff framed for such a purpose and without regard to party? If it is framed in the interests of individuals and private parties, we should express our disapproval; if not, we should rather aid than attempt to obstruct. We ought to judge calmly and look at both sides of the question.

It is an undeniable fact that in too many localities the smallest affairs—even to the election of pathmaster and poundkeeper—are conducted on such issues as the following: Is he a Protestant or Catholic? an Oddfellow or Mason? a Reformer or Conservative? and so forth. Thus too often a cramped, bound and trammeled man is put into power and an honest freeman is rejected; although an honest, straightforward man will not aspire for office under such circumstances. Some unprincipled person will fish for nomination to office, and supporters are easily bought and induced to support almost anybody. Thus our offices—from poundkeeper to M. P.—are filled, and because of so many cliques and such disreputable modes of carrying elections, many of the most suitable men will not accept office.

If you have a free, untrammeled, independent man in your Riding, and that person has commonsense and real, unencumbered property, prefer him to any fettered slave. No prisoner can act freely. The sums expended for education should now give us free men and men of judgment. Do not make yourself a slave; keep free and do not pledge yourself, but use your own judgment unshackled in the coming election.

Board of Agriculture and Arts.

The Board of Agriculture and Arts of Ontario recently held a meeting in Ottawa. The only work we have heard of being done was to curtail the prize list. The enormous expense of this large and cumbersome body in travelling such an unnecessarily long distance to hold their meetings makes it necessary to cut the prize list down. Why go so far? Why have so many members? If the people of Quebec paid half the expenses then the Board might with propriety hold their meetings and exhibitions on the line. We should be pleased to hear what other business was done. Where is all the money gone that the late R. L. Dennison paid to the Association. We have long since said that there was something too mysterious about its transactions. The last time that we were in the Board room a member moved that the apartment be cleared of strangers, so we took the hint, and since that day the Board has had a downward tendency. The farmers are now aware that they have paid too much for nothing. A day of reckoning is at hand.

A company has been formed in Fredericton, named the New Brunswick Sugar Company, to cultivate the early amber sugar cane, and to erect a factory to make sugar and syrups; capital, $5,000, in ten shares. Some $1,400 were subscribed at once. Farmers have already bought cane seed to plant.

Our Platform—It has been, will be, Agriculture.

POLITICS.

We have attempted to avoid the bitter and abusive plank, party lines. So strictly have we carried this plan out for the past fourteen years since we commenced the publication of this journal, that we have not recorded a vote for either party. Still, so sensitive is the feeling that even the slightest observation that might be turned against us has been used to its utmost against us by friends of either party. This journal, we feel, has an influence. We wish it to direct or bend the minds of its readers to what we and our counsellors (namely, an Englishman, an Irishman, a Scotchman and a Canadian) consider the best for the prosperity of this Dominion. Therefore we deem it proper to show our flag, the material our ship is made of, and the kind of sails that are used. Our keel is this Dominion, our ribs are her institutions, our timbers are agriculture, our figure-head is Dreadnaught, our helm is Right; the captain, officers, men and passengers are Canadian farmers. Should any of you notice a rotten spot it is your duty to give notice and aid in its removal; or if you see breakers ahead, give warning. If too many barnacles adhere to the hull clean them off; if our vessel is overburdened and a storm sets in, cast out valueless and cumbersome freight; and when a fair breeze blows hoist the sails.

Do you not think that at the present time we are carrying too much sail? A heavy strain weakens and eventually destroys any vessel. Are we not paying too much and too many officers? Are not many very weak and inefficient? Should we not reduce their pay and number? Have we not too many worms eating at our timbers—too many barnacles adhering to our keel—too much useless freight in our hold—too many and too large salaries and superannuation pensions to pay to men that have never done good to the country, that always have been suckers and always will be?

If people have nothing they must try and obtain something. As a man of straw can pay no tax he cannot feel the burden. We make the following statement without fear of confutation by any legislator, namely, that the Ontario School of Agriculture was not established by or for farmers. The farm at Mimico was purchased to make an office for a political supporter; for political purposes that land was sold and the farm at Guelph was purchased; for political purposes an American professor was engaged, and for political purposes every expenditure and every appointment has been made. If we, the farmers of this Dominion, are hoodwinked by this, how much more so are we by many important steps that we know less about. We believe it is now the time to agitate the question of reduction of expenses and an examination into the character and means of every member and elector—in fact, an elevation of the franchise. This matter will take some time to bring about; it is a reform. You may now think of it, and a few of the most independent may now begin to act on it. How to do it, is to go to the nomination, propose the most independent and honest man you know of in your county; if he is now a member for any part of your county, nominate him for your riding, and get some one to second him. Although he cannot hold two seats, never mind that. Get as many as you can to pair off and not vote for a man that is not the fittest in the county. The new voters might show their approval of such a course. It is far better not to vote at all than to have it said that you voted for an unnecessary encumbrance. Do not allow this party line cry to lead you. Vote for an independent, unpledged, unbound, unfettered, free man—one who has an independent spirit.

The Elections.

The inhabitants of Ontario will shortly be called on to record their votes for the members of the Local Legislature. You are unfortunately compelled to pay for such a large number of representatives, and therefore you may as well vote for or against some member or would-be member. It is our impression that if the vote were taken on the question, "Shall we continue to send the same number of representatives or not?" and the question fairly and honestly discussed, nine-tenths of the really independent farmers that are free from debt would vote for decrease in the number.

We wish to impress on the minds of our readers the necessity of close examination of the merits of a member before recording votes. Examinations are necessary in our schools. You, the farmers of Canada, are now to be the examiners and judges. Each one has a right to examine his candidate. You are the judges and the paymasters. Do not be satisfied with the labors of a few office-seekers who assemble at conventions to select a party man; rather avoid and try to break down this dangerous, exciting and demoralizing cry—the party. Select the most independent and the most honorable person that you have in your riding; prefer a farmer if you can get a suitable one. Give him a nomination and do not withdraw; stick to that man if you only have two votes. This year show a desire to have independent representatives. A poor man who is returned on borrowed property placed on the assessment roll cannot act independently; he is bound to the party that aids him. Such men care little about the expense of a Government; they are poor and pay nothing towards it, therefore they must gain because they cannot lose. We will suggest a few questions that you may ask any candidate. Do not be afraid to let your voice be heard, even if you cannot speak as fluently as these trained and practised speakers. Are you a practical farmer? Do you get your living from farming? Do you read any agricultural journals? What are the most dangerous stock diseases that have been in Canada. What steps have been taken to prevent the spread of such? How much has a single farmer lost from any infectious disease in stock in Canada? How much would you estimate the loss to be that might accrue to this Dominion if either of the contagious stock diseases were allowed to spread; what has been done to avoid or check such danger? Why is a special prize paid by the Board of Agriculture for the Egyptian or Eldorado wheat; of what value is this wheat?

There are scores of other questions on subjects pertaining to agriculture. If you deem it of importance to have your business and your interests looked after, you should have a member that really understands your wants, and one who is ready, willing and able to represent them, or rather have none. As agriculture must pay all expenses, it is but right that you should have representatives that know something about our agricultural affairs. Examine them, and you may depend such an examination will eventually do good. Act from your own judgment; be no longer hoodwinked. You cannot form a correct opinion by reading either of the party newspapers; you must read both sides to be enabled to judge.

We have given considerable information to enquirers about sorghum and something about sugar beets. Our opinion is asked if we think it advisable to enter extensively into either of the above branches of agriculture. We have never yet been on any of the farms where these crops have been raised. We would not like to advise or to dissuade without further knowledge. We have only given such information as we have received.

The Ontario School of Agriculture at Guelph.

The closing exercises and the awarding of prizes at this institution took place the latter part of March, at the time of our last issue.

The young men appeared in good health and good spirits, and of good average mental and physical capacity. The Principal, Mr. Johnstone, appears to be an excellent disciplinarian and good master; in fact, we think him the most efficient person that has been engaged in the establishment. But his department has nothing to do in regard to agricultural instruction.

There were very voluminous papers prepared for the examination in different departments of instruction, the most useful and practical of which might with advantage be taught in our common schools. Only a few of the questions were asked. We should judge the answers were satisfactory in general education and uncommonly good in the veterinary department; but in the plain, every-day farmers' talk we did not consider the examination satisfactory. Many farmers from the vicinity attended and they were invited to put questions to the boys, most of which were very satisfactorily answered to the majority in attendance. We asked what were the symptoms of the Foot and Mouth Disease. The class stood aghast and did not appear to know anything about it. The fact was we used a farmer's term; the veterinary instructor perceived the stumbling-block and gave the technical term, which not one of our readers would understand if printed.

The boys then gave very correct and satisfactory answers, in fact, equal to any veterinary. We draw this inference, that the boys are taught more from books than from the agriculture of the day. This instruction is more of a theoretical than a practical kind. Had they been posted in the plain, practical talks of farmers, among farmers, such as are to be seen in the agricultural periodicals, they would not require a veterinary to interpret to them the technical terms of Hog Cholera, Foot and Mouth Disease, and Pleuro-Pneumonia.

We intended to have asked two more questions at this time, but the Lieut.-Governor, Hon. E. B. Wood, and suite, entered at this moment. V. S. Smith asked a few questions, after which prizes were awarded by the Lieut.-Governor. A few sensible and appropriate remarks were made by this gentleman, among which he said he knew nothing about agriculture, and that there was only one other Government appropriation it gave him more pleasure to grant, that was to the Normal School. The Lieut.-Governor's Secretary made a few pertinent remarks. Then the Minister of Agriculture, Hon. E. B Wood, fluently addressed the meeting. Had Mr. Wood acknowledged his ignorance in regard to agriculture as openly as did the Lieut.-Governor, we would have credited him, but from remarks that he made in the House of Parliament we know he has much to learn.

A good practical farmer in Brant made this remark to us: "I believe the FARMER'S ADVOCATE has done more good for the farmers of Canada than the whole Board of Agriculture and the School of Agriculture combined." Of course one farmer's view is nothing, but we would advise the Minister of Agriculture and every other politician or would-be politician to look more after the farmers' interests and economize by reducing the many numerous and large salaries and heavy, unnecessary public expenditures, or the farmers will say as they have said before: "Make way for your betters."

About 18,253,562 bushels of grain are in store at Chicago, Detroit, Milwaukee, Toledo, Cleveland and Duluth, awaiting transportation by water, against only 4,951,700 in store a year ago.

On the Wing.

PARKDALE—RETURNING PROGRESS.

In no part of this continent that we have visited during the past ten years have we seen such signs of progression as at Parkdale, an incorporated village situated three miles from the Market Square, Toronto. It is nearly a half-mile from the new agricultural exhibition ground. The Northern R. R. has a station close to the village; the G. W. R. we hear is about to have a station near it, and the G. T. R. passes through it. The Credit Valley R. R. is expected to erect a station there. The street cars will also run to it shortly.

The Massey Manufacturing Co., of Newcastle, are erecting large machine shops near this place. This establishment is to surpass any agricultural works in Canada; 400,000 bricks, 100 ton of stone and 400,000 feet of lumber are to be used in the building alone. Three-fourths or more of the capital is owned by Americans. They intend to make the bricks on the spot from the earth taken from the excavations. This is to be completed and in working order in October. An American iron bridge company has also purchased land near here to erect machinery for constructing iron bridges. We are pleased to record American enterprise amongst us.

Forty houses have been built during the winter. Mr. John Grey had one of his nurseries here; the Credit Valley R. R. has taken one side of the nurseries. He has been fortunate enough to meet with good orders for his stock; in fact, he says his sales this spring have been much better than for many years. He has had more orders for large lots than ever before; he sells cheap for cash, and old customers and new ones write and go to him. He does send out lots of agents, as many do, but his father, who had established the business, had gained a name for honor and reliability that enables him to conduct his business at home. His father was one of the leading pioneers in all horticultural undertakings. On another part of Mr. Grey's nurseries are four new rough-cast houses; the plaster is now dry and the first coat of paint is on the houses; they will be completed and ready for occupancy in about a week. The foundation of these houses was laid this year. They are good, comfortable houses, worth about $200 each. We make these statements to show how quick they build here. Mr. Grey's father purchased some land in Parkdale ten years ago for $100 per acre; it is now worth $1,600 per acre.

One great cause of the rapid development of this place is the high taxes in Toronto. We are informed that it is in the following proportion: Property for which $60 would have to be paid for rates and taxes in Toronto would only pay $6 in Parkdale. We could wish that such a spirit of progress was evinced throughout the country. We have reason to hope that the worst stage of depression has passed. We hear that orders are coming in to dealers better than they have for many months past. We also hear that a decided improvement has already set in in the States.

In the city of Toronto there are many improvements in progress, notwithstanding that many placards of "to let" are to be seen.

In Toronto we met two gentlemen who had been in London. They informed us, to our astonishment, that the inhabitants of London could buy out Toronto many times over. One said he had ascertained this by house-hunting; forty houses had been inspected, and the rents were complained of as being too high. The replies were that they could not be had for less, because such sum was required to pay loan societies. Toronto has many advantages, but a pay day must come, and the taxes collected in that city have exceeded the legal limits and refunds must take place; and still the debts are increasing. At one time we thought of moving to Toronto, but now feel satisfied that London is the best location for our office.

A PATTERN TO FOLLOW.

Parkdale has inaugurated an Improvement Society. They have had many concerts and amusements in their Town Hall, the profits from which are to be expended this year in planting trees along the road sides through the village. Perhaps other villages and townships or school sections in other parts of the Dominion might with profit take up this plan. There is plenty of room. All need some improvements, and concerts, lectures, amusements, etc., are beneficial. The ladies, we know, would lend their aid, and no enterprising man would be against it. But we regret that there are many who have the means, and although their properties must be enhanced in value by such a course, still they would not give one cent's worth of time or money. The only way to touch their pockets is by taxation. The Councils might and should aid the planting of trees. We should try to make our school grounds pleasant to the eye and comfortable also. Our roads throughout the country are too bleak. In some sections planting has been done, and in such places has improved the value of property. Ask your councillor what steps he has taken to aid this cheap, beneficial, pleasing and health-giving plan of planting trees along the road-side. It only requires the will. Try it.

Pleuro-Pneumonia.

We much regret to notice that there are some parties in Canada who are attempting to cast a doubt over the existence of Pleuro-pneumonia, which has been to us satisfactorily established to have existed amongst cattle that have left this side of the Atlantic. We fear the motion of one of our Senators was not for the good of this Dominion, but to aid the U. S. cattle trade without regard to the injury such might inflict on the farmers of this Dominion. It has been our opinion that some one in high position in regard to agriculture in our midst has for years past been favoring United States interests and neglecting and even infringing on the rights of Canadian farmers. Every really independent British Canadian farmer will endeavor to uphold any person or party that will unflinchingly do their duty towards preventing the introduction of any dangerous disease to our stock, and stamping out any that might be found in this Dominion. To satisfy sceptics or pretending sceptics we quote the two following extracts from American exchanges:

The U. S. farmers are now awake to the disastrous losses of the Pleuro-pneumonia. A correspondent of the N. Y. *World* says that in his neighborhood they are quite alarmed. Farmers are selling off their cattle by private or auction sale. Some have lost from five to twenty head. The *Times*, in reply says:—"This disease is as well known as any, and it is far from being a new thing. It has existed in Long Island, New England, New Jersey and elsewhere adjacent, for many years, in a sporadic form, and might have been eradicated at any time, without trouble and at little cost, by slaughtering the infected cattle. It is, perhaps, the most dangerous disease known, because it may be progressing to an incurable stage during many weeks without being apparent, and in the meantime be spreading infection far and wide. Cattle that are cured are so reduced that their recovery costs more than their value. Prevention is only safe by killing and burying all diseased cattle, or by strictly preserving one's herd from all contact with others or with persons who have been in contact with diseased cattle. The disease is more prevalent now than for years past, because of conditions of the weather which have favored its spread; but if the seclusion or occlusion of diseased cattle is made general its spread will be stopped.

HOG CHOLERA.

We have so many inquiries that we are half tempted to keep a standing advertisement of our treatment.

1st. Separate the sick hogs from the well, and separate the well herd into small herds of about ten or twelve.

2nd. Disinfect the pens, after thorough cleaning, with lime, coal tar, etc.

3rd. Remove all dry corn and give a cooked food, easily digested and nutritious, not forgetting to use plenty of bran.

4th. For medicine, as a general alterative, use our ever reliable sulphur, Epsom salt, salaratus and ginger, mixed in equal parts; dose, two teaspoonfuls per day. Use for two weeks or more.

5th. Plenty of charcoal, salt and ashes.

6th. Pour a small quantity of carbolic acid into their drinking water every day, never giving too much.

7th. Watch every movement of the hogs closely and do not relax your vigilance for two months.—[American Ex.

Notes from Australia.

We have received a copy of the *Queenslander* for December, from which we extract the following, which may be interesting to our readers, as we should all like to know more about our brethren in the antipodes. We know the feeling of loyalty to our Queen, and extended unity between Britain and her colonies may yet be expected; perhaps there may be some greater confederation plan yet brought forward to unite us all together with stronger ties of commerce and fraternity.

There are several advertisements in the above-named paper that read somewhat like the following:—

FOR SALE—STORE SHEEP AND CATTLE.

29,000 wethers, 3, 4 and 5 yrs., Mitchell District.
21,000 mixed sheep, Darling Downs.
17,090 " "
15,000 ewes, 2 yrs. upwards, South Kennedy.
10,000 wethers, 4 and 5 yrs., Peak Downs.
17,050 ewes, 2 to 6 yrs., Warrego District.
1,000 mixed cattle, Maranoa District.
1,000 " Warrego "
1,000 cows, 5 yrs. and upwards, Maranoa Dis.
800 heifers, 2, 3 and 4 yrs., Wide Bay.
1,000 " 1, 2 and 3 yrs. "
850 square miles, 3,000 cattle, Warrego District.
1,000 " 2,500 " Mitchell "
1,200 " 2,500 " Gregory "

And other mobs of store cattle and sheep; also, mixed and breeding cattle, pure-bred heifers and bulls, etc., etc.,

We also find an account of a poisonous shrub, a variety of *Gastrolobium grandiflorum*. It bears a bean-shaped flower, having the color of the English Wallflower. It is more deadly when in blossom, and when springing up fresh and green. When cattle eat it they are apt to turn round and ronnd, and immediately charge on any one that approaches them. When dry it loses its active nature. It is only found in rare instances. We should think the less frequent the better; still it may be of much importance to medical men when properly understood.

Kangaroos appear to be a fearful nuisance; they eat the grass and ruin the sheep pastures. In one part of Australia it is estimated that 220,000 have been destroyed. The Government aids in their destruction, and steps are also being taken to destroy rabbits and animals called wallabys, which are about as destructive as the kangaroos.

We notice that a company is forming in Sidney to make artificial ice, the intention being to deliver fresh meat to the European markets.

From their market reports we find that good prime fat steers are worth from $30 to $50 in the best markets, and fat sheep from $2.25 to $2.75; horses from $30 to $40. Store stock at the stations are proportionately lower according to distance from seaboard, state of pastures, etc.

Should the Australians succeed in making ice cheap enough, they may enhance the value of their stock. There are graziers in that country who kill their stock for the hides and tallow; the lean meat is dried and used for fuel.

We also notice that several of the United States manufacturers are sending machinery to that colony. We fail to see our Canadian implement manufacturers' names mentioned. We hope time may bring us and our colonial brothers into nearer relationship, both commercially and socially. We seem hardly to know that Australia, New Zealand, Cape of Good Hope, India and Cyprus are part and parcel of our nation.

Beef and Mutton for England.

Liverpool, Eng., March 24.

Last week was the first for many months wherein no live-stock, either from Canada or the United States, was landed at this port. The consequence was that beef rose one halfpenny to one penny per pound in Liverpool. In London mutton rose a penny to three halfpence per pound, the top price being ninepence halfpenny. These prices are not only expected to be maintained, but will certainly rise when the few Scotch sheep which are yet to come to hand are exhausted. The outlook altogether for the Canadian sheep-trade is most encouraging. As you are aware, the Irish flocks have suffered immensely from "rot" and severe weather. In Scotland—another great sheep-producing country for the British markets—the flocks have suffered enormously owing to the severe weather and deep snows, when the food was covered and none could be conveyed to them—more so, in fact, than any period during the last thirty years. Throughout the whole of Great Britain the ewes this lambing season are in a very weak and low state, the consequence being that very heavy losses are taking place during the lambing.

Canadian sheep have sold at very low prices in England during the past two years; but much remains for the Canadian farmers to do in the improvement of their breeds. The Cotswolds and Lincolns have no doubt improved Canadian sheep in point of size, but complaints are not unheard of that our cross-bred sheep have too little lean meat. Thus a judicious crossing of the Southdowns would be manifestly beneficial, as our farmers will have to depend more, in the future, on their mutton than on their wool. It is anticipated by competent authorities that, unless we receive enormous supplies from Canada and the States, we are on the eve of a mutton famine in this country.

The price of German sheep has risen 15 to 20 per cent. during the last two years, and dealers who bring them to slaughter at Hull or London (Germany being a scheduled country) find their margin of profits cut very fine.

The prospect for beef is far more encouraging than it was a few weeks ago.

A great many cattle in Great Britain were held back in the hope that the rough weather, the Duke of Richmond's Bill and other influences would have a deterrent effect upon transatlantic live-stock shipments. However, with Lady-day (rent-day) fast approaching, the farmers have been compelled to bring their stock to market. After these supplies are exhausted a rise in the price of live-stock must take place. It is stated that the Irish supplies, until the grass-fed cattle come in in the autumn, are nearly exhausted; and during the months of June, July and August, the dead-meat supplies from the American continent have every year fallen off enormously. Thus Canadian farmers who have a few cattle will have an opportunity of making money. Through the prompt action of the Minister of Agriculture, notwithstanding that so many influences were brought to bear upon him, and through the warnings published by your most valuable journal, Canada has been saved from the effect of the operation of the Duke of Richmond's Cattle Bill, namely, slaughter on debarkation; and not only that, but—what was of far more consequence—the infection of her own herds. Let us hope that, with great care, we may maintain these extraordinary privileges. Several cases of "pleuro" have been detected since its discovery in the SS. Ontario shipment of the 27th of January last; so that now, with the immense influence in Parliament of the landowners, it is hardly to be expected that the Order-in-Council prohibiting the entry of live cattle from the United States will be rescinded, although it is argued by the veterinary authorities here that the American cattle which were condemned, although suffering from "pleuro," were not affected by the disease in a contagious or infectious form. Efforts no doubt will be made by the shipping interests and others to get a practical solution of this question in some reliable form or other.

Two cargoes of cattle brought by the Ontario and Brazilian have been slaughtered here. The importers, owing to a "corner" being made by the salesmen and butchers upon them, must have lost heavily. It is stated that the charges by the port authorities here for lairage and slaughtering are exorbitant; and, altogether, the chances for exporters liable to slaughter here are "blue" at present. Still, those who have an intimate knowledge of the trade are of the opinion that, with a reduction in the rates of freight by the steamship companies—which it is stated they can well afford—and when the trade has settled down into its proper grooves, the importers will not be so heavily handicapped as was at one time anticipated. If the beef cannot be brought into this country alive, it must be brought dead or slaughtered here—but this country must have it.

I have been watching the dead-meat trade very closely. The bulk of this supply comes, as you are aware, from the United States. From conversations which I have had with the most prominent shippers, and from watching the markets and the prices realized, I am forced to arrive at the conclusion that, taking it in the aggregate, very little profit, if not actual loss, has been the result of the trade up to date. Of course a fraction of a cent per pound means a large sum of money on such large transactions; but when cargo after cargo has only realized three pence or six cents per pound, the loss somewhere must have been very severe. The advantage of a live-stock trade over that in dead meat is that, whilst the shipper of dead meat may arrive in the Mersey with half the meat tainted on account of defects in the machinery, or other accidents over which he has no control, he has nothing to draw from the underwriters, as they will not insure dead meat except at almost prohibitive rates; the cattle dealers have had nearly every head insured; and if cattle are not landed alive, they are in many instances well sold. The only reason I can assign for the continuance of the dead-meat trade is that the firms interested—which have dwindled down to two or three, but which, it is stated, include some of the largest capitalists in the States—are fighting it out to the bitter end in order to recoup themselves in the future by an active monopoly of the supply of beef to this country.

One thing is certain, and that is that, notwithstanding all these importations, the consumer has received little if any benefit.

It is very gratifying to find that the butter trade is at last receiving the attention which it deserves in the Dominion. No doubt this is to a great extent owing to the repeated and valuable exhortations upon the subject by your journal during the past few years. Canadians are slow to move. It will be interesting to your readers to know that if they make their butter properly, the arrangements—both by cars in Canada and by steamships—leave little to be desired. But upon arrival here in the hot months of the summer the butter has been allowed to soften, and importers and dealers have been taunted with the charge that our manufacturers use stiffening. Let us hope they are innocent of the charge.

A Canadian, Mr. Stephenson, Victoria-street, Liverpool, has rented commodious premises for the fitting up of a cold-air store to receive Canadian produce of a perishable nature, such as butter, cheese, poultry, meat, fish, etc. The chambers have been fitted up at enormous expense, and the machinery, which has cost several thousand pounds, is, I understand, to be placed therein in a few days. The several rooms will be ready for the reception of goods on the 20th of April, and will be let out at a moderate rate. It is anticipated that this enterprise, the first of the kind in Great Britain, will prove very remunerative, and I understand that several leading butter and cheese merchants interested in the Canadian trade have secured space.

The horse trade has been exceptionally dull here of late. This is traceable, in the first instance, to the very depressed state of affairs, which not only affected tradesmen but capitalists also; and again, the London season—during the time that the upper-ten usually indulge in new "rigs out"—has been very slow owing to the unfortunate death of the Princess Alice; but it is anticipated that there will be a revival when the warm weather opens out. This much is a fact—that the dealers in London have now become thoroughly aware of the superior qualities of Canadian-bred horses, both as to soundness and hardiness, being remarkably free from coughing on being brought into the close atmosphere and stables of London—an affection to which nearly all the Irish horses are subject. With a reduction in freights I anticipate a good trade in Canadian horses during the ensuing season, especially for carriage and tramway purposes. It appears there are very few horses in Canada of the required stamp and weight for the heavy English omnibusses or for draft purposes. It is surprising to me that, with the number of Clydesdale sires you have in Canada, no animals suitable for the heavy traffic of the commercial centres in England have yet found their way to this country.

It is proposed to establish a quarterly horse-fair in Liverpool, to commence on the 2nd Monday in May. It is estimated that there are 15,000 to 20,000 horses engaged in commercial traffic in Liverpool. One Liverpool omnibus company employs upward of 2,000 horses, which have an average life of under three years. These figures will give you some idea of the demands of this port alone. The farmers of this country are quite unable to meet the demand for horseflesh, which is annually increasing. Upward of 40,000 horses of all classes were imported into Great Britain last year.

BYTOWN.

Cabbage as a Farm Crop.

There is no vegetable a more general favorite with housekeepers, or none more freely bought in the market, than the cabbage. And it is not merely a vegetable for the garden and kitchen. It may almost be considered as much a staple product of the farm as the turnip and mangold, and it is so in some countries. Some farmers set out thousands of cabbage plants every year for stock feeding. In the vicinity of large towns they are grown in large quantities for market, and it is no unusual sight to see ten to twenty acres, or more, in one market garden. But we would limit our remarks to cabbage as a farm staple for cows and swine. So great is the produce of cabbage on well prepared land, and so nutritious are its qualities, that no other food has produced better results in feeding at the same cost. For fall cabbages the seed is sown as early in May as the seed bed can be had in good condition. Were the seed bed dry and warm any earlier than May we would not postpone. When the young plants appear above the surface they require close attention, as they are liable to be attacked by a small black flea, and

they are sometimes entirely cut off. Dusting the plants at their first appearance with bone-flour, and repeating the operation after each shower, will keep off the attacks of the insects. Another remedy—a very effectual one—is to steep tobacco stems, say ten pounds, in a tub of water and when the plants appear sprinkle the beds with the tobacco; water and sprinkle lightly with air-slaked lime. This should be done when the dew is on the plants.

The land for early cabbages may be of various qualities, the only essential points being through drainage and sufficient consistency to withstand drought well. Lime is believed to be very useful, and is often used when conveniently obtained, as a dressing on land naturally deficient in lime.

Much of the success in early cabbage growing depends on good seed, which is not easily raised, and still less easily purchased. To raise seed, a special growing of seed is made in July, and the best heads selected in Fall to be wintered over and set out in Spring for seed-growing.

The land for cabbages is worked fine by plowing twice and harrowing and rolling; it is then ridged with a small plow, making the ridges three feet apart, and these ridges are raked down smooth and the wheel marker run along the middle of the ridge with pegs set to mark ten inches. A boy follows with two baskets, one filled with lettuce plants, the other with cabbage, and drops one of each, alternately, against the marks; a man follows and sets the plants by hand. The cabbages should be cultivated and hoed once a week until they are too large to admit a plow or hoe among them.

There are several insects, as well as the disease called club-root, which infest the cabbage family. Of these the cabbage maggot is, perhaps, the most common and troublesome. It is the larva of a fly which resembles the house-fly in appearance; the fly deposits its eggs upon the stalk of the plants early in May near the surface of the ground; they soon hatch and the young maggots work downwards, feeding on the tender bark till they reach the fibrous roots, which they rapidly devour, and if numerous, cause the cabbage to wilt and die. If not numerous the plant will outgrow them, and come to maturity. The best way to kill them is to wipe off the maggots by hand when they first hatch out and before they get far below the surface. By going over the field three or four times nearly all of them can be destroyed. It is no uncommon thing for whole fields to be nearly destroyed by this pest.

Another troublesome insect is the green worm of the white cabbage butterfly. They may destroyed by hand or by pouring water nearly boiling hot over them, which will not hurt the cabbage unless hotter than it is easy to apply it; or petroleum mixed with water, a spoonful to the gallon, sprinkled over them, will lay them out.

Club-root is apt to be disastrous only when cabbages are planted on the same land. For this reason it is cussomary to plant cabbages only once in three or four years upon the same land, or after turnips or cauliflowers, which are subject to the same disease. It is said by some writers that a heavy dressing of air-slaked lime applied in the drill will prevent club-root, and those who live in limestone countries say that this disease is unknown on such lands.

Contagious Diseases.

PREVENTION IS BETTER THAN CURE.

The farm stock of this Dominion is more exempt from contagious diseases of any kind than that of any other British colony or any nation in the world. Our duty is to keep it so. We have only seen two cases, and we travel about the country and among stock as much as any one. One was the Foot and Mouth Disease; this was some years ago; it was in the Township of Westminster. The other was Hog Cholera; this was in the Township of London. The first-mentioned disease we believe has died out, as we have not heard of it spreading. The last-mentioned may also disappear in the same way. Both of these diseases have been imported from the States to our country. Very little injury has been done, and very little care will prevent the possibility of any more being done. We hope to hear no more of either.

Should any of our subscribers hear of any case of a contagious character, we trust they will perform their duty by reporting to this office about it immediately. Cleanliness and a little care and prohibition will enable us to maintain our name for healthy stock. This will give us millions annually and save us from millions of annual loss.

We regret to notice that the Hon. D. Christie is endeavoring to establish a Cordon or power to act in regard to diseases in stock, to be composed of three Americans and three Canadians. We fear this is another of his steps to sacrifice Canadian interests to the United States people. We want nothing to do with the American stock; Canada has men in it capable of looking after our interests better than Americans can. We do not consider that gentleman acted judiciously in his selection of the site of the School of Agriculture, nor in the selection of officers, nor in the sale or purchase of stock, nor in the stock disease scare; and in many other things in regard to the agricultural interests of this Dominion. He has held a very high position and has ruled the Board of Agriculture rather too long. We have lost all the confidence we had in him, if ever we had any. We fear that there is too strong an interest leading eagle-ward to expect good for Canada from a Canadian and American union. We want no such policy.

Trip to Stratford.

We took a short flight to Stratford on the 29th of April. This town is situated on the G. T. R. 32 miles from London, and bids fair to be a stronger rival to London than any of the cities. It has railway connection with all points, and has sprung up rapidly. The Grand Trunk workshops are located there; the land thereabouts is of a richer quality than is generally to be found in the immediate vicinity of our towns and cities. The river Avon runs through the town. This place is a grand agricultural and business centre; the principal agricultural works of the Messrs. Sharman are there, which firm manufacture the Little Giant Thresher as their leading implement. Mr. Thos. Yeandle makes the plows that are celebrated as prize-winners at plowing-matches. A woolen-mill and large tannery are in operation. A large establishment for the construction of large threshing machines is also established there.

But the machinery in which our readers will be most interested are the extensive and commodious works of

THE THOMSON AND WILLIAMS MANFG. CO.

One hundred and fifty men are busy as bees working in the different departments. The larger number is principally employed at the present time in constructing the Johnston Wrought-iron Reaper. The demand for this machine last year was in excess of the supply. This year their first batch of 1,000 is well under way. It is quite interesting to see the molten iron poured into the sand, and the wrought-iron going throught a process of manipulation at the hands of skilled workmen, then the parts adjusted and the machine run rapidly while being tested before packing in boxes ready for shipment. These machines have gained such honors during the past year that no other manufacturers can show such a record. In the great trial near Paris, France, last year, at which the leading manufacturers of the world exhibited, the Wrought-iron Harvester gained the only prize that was awarded. There were 35 competitors. In the County of Elgin (Ont.), where a trial of implements took place, this machine did work that no other machine could do. The list of first prizes and medals obtained by this machine would weary our readers to peruse. The demand for these implements after this trial was unprecedented in that county. The offer made by the manufacturers to send a Harvester to any station in Ontario at their own expense, and to guarantee satisfaction in every case, is deserving your consideration. Messrs. Thomson & Williams have a good stake in Canada, and a guarantee is worth something from such responsible men. There are thousands of agents traveling who will guarantee anything, but what good is the guarantee of a flea to a farmer. Messrs. Thomson & Williams have the sole right to make these machines in Canada.

Many farmers are desirous of dealing without the interference of agents; they now have the opportunity of doing so and procuring the best implements direct from the manufacturers by referring to the advertising pages of this journal. Remember it is an agent's business to make money, to purchase the cheapest and sell that on which the greatest profit is obtainable. Do not depend on any statement such as this: "This is just as good as any. Be sure you are right; have the best; the best is cheapest in the end." Reliable manufacturers are never afraid of making their statements openly to the public. Some may and do have lots of agents to talk their machine into the ears of persuadeable farmers.

The Thomson & Williams Mfg. Co. make the nicest working steam engine we have seen in Canada; it is called "Brown's" Automatic Cut-off Steam Engine. It is after the principle of the Corliss engine exhibited at Philadelphia; and it is a great economizer of steam. Three machines were being constructed when we were there, an engine, 150 horse-power, for the Windsor Paper Mills, near Montreal; also one of sixty horse-power for a gristmill in Woodstock, the other 120-horse power, for the Napanee Paper Co. This firm has an order for 1,000 plows for Manitoba. They also make agricultural engines and boilers; also mill gear and mill stones. We are highly pleased to report about such enterprising establishments.

Bow Park Sale.

The sale of Shorthorns at Bow Park was well attended, despite a wet day, which, no doubt, prevented many from attending. The stock was in good condition, and realized fair prices. At all sales there are some animals better than others. We have heard of a representative of an agricultural society purchasing a bull because it was what he thought cheap, the result was he gave disatisfsction to nearly every owner of a pure-bred Shorthorn cow in the society. It is only a mockery to send a parsimonious person to get a good animal. The requirements of owners of good cattle should be consulted. The best is often the cheapest. The bull we allude to was not purchased at this sale, but we quote this fact to shew that parsimony in the purchase of a really good animal is false economy.

New Horse Disease.

In Eastern Ontario there exists a disease among animals known by the name of "grease." It is sometimes only an aggravated form of chapped heels, and is often preceded by them. At other times the appearance of the disease is ushered in by constitutional symptoms, such as feverishness, tumor of the limbs and hidebound. The first local symptom is a slight swelling of the skin of the heels and adjacent parts, which soon crack, and from the fissures there exudes an offensive discharge, which looks greasy but is really watery. Being of a serous nature it inflames every part it touches, and has a tendency to cause a spread of the eruption in all directions. The legs go on swelling to a frightful extent, and are thereby rendered stiff and sore, producing great lameness. If this stage is neglected, the whole surface ulcerates, and the discharge becomes purulent and has a nasty, foul smell, and the leg can with difficulty be bent at all, the animal evincing great pain.

Stock.

Important to Sheep-Raisers.

ONE MILLION DOLLARS ANNUALLY LOST BY OUR CANADIAN FARMERS.

I met William Donaldson, of Woodstock, Ont., last fall, and was speaking to him about the loss our farmers sustained every year by not having their lambs all castrated. Now, as I am largely interested in the sheep trade here, as well as in the welfare of our country, I can give facts and plenty of proof that the loss every year to our farmers is as much as a quarter of a million dollars from the cause above mentioned. I have seen load after load sold here last fall to feed—all wether lambs—at $5.50 to $5.75 per hundred, when you could not sell the same lambs—buck and wether mixed—for $4.75 to $4.80. And the farmer places himself in the hands of the buyer, as he cannot hold lambs over when they are all bucks, and the buyer will take all the advantage, which is natural; the butcher will not pay as much by one-quarter to one-half after the middle of August for a buck lamb as he will for a ewe or wether, and consequently the drover cannot pay so much to the farmer. Any time a man crosses here with a drove, all ewes and wethers, he has no trouble to find customers. I have been urging all the drovers to have this matter published in your paper, and Mr. Donaldson told me to write to you.

Farmers could hold their wethers over till two years old and they would bring good prices for export, and they would not place themselves in the hands of drovers. I claim that such a course would be better for all interested, and I hope this will be published in all the leading, as well as local papers, in the country. I am in a position to know whereof I speak, as I am one of the heaviest dealers in this country; we bought here on an average for the last four years over 110,000 sheep. I say it is a loss to Canada of $200,000 a year—a very low estimate, as the butchers will pay more and plenty of men here would feed them; then the drovers could pay more and would pay more. Now I know that around Paris and Galt, and through Blenheim, the farmers all have their lambs castrated, and the consequence is they sell at from $3.50 to $4 per head; I know that plenty sold to feed here last fall at $5.50 per hundred, when you could buy the same, part bucks, for $4.80 to $5 at the outside, and thus the idea of our farmers shipping so many over here. Let every farmer keep three, four, six or ten, as the case may be, of good wethers till they are two years old, instead of sending here and paying duty, and they can be sold at very remunerative prices in two or three years for export trade; it will make the supply coming here lighter, and what does come will command better prices.

I wish I had time to speak on the subject, and I could show where our farmers throw away not $200,000, but one million dollars every year. You see they give this country every fifth lamb to get here to market; now, if they held that lamb which they sell at $2.50 to $3, until two years old, they would have no trouble in getting from $6 to $8, or in some instances $10, for a good two-year-old wether for export. I shipped 3,000 last year and paid 5½ to 6c per pound in New York, and a good load of Canada wethers here to day will bring $6.50 per hundred. Putting the weight at 165 lbs., at 6½c., the load would average $10.72.

I hope I have placed it so you can handle the subject and have it spread all over the country. I think the Government should pay for the publication, as it is very important. I reside in Canada, my residence being at Tavistock, Ont. I do my business here entirely in sheep, and am well known throughout the western part of Ontario by all drovers. I hope you will give this some attention, and you will do a good service. I do not like to see our people pay so much duty. We should have our own sheep exported and save 20 per cent.

G. D. M., Buffalo, N. Y.

[Mr. G. D. M. will accept our thanks for his valuable article. We are pleased to record this fact, that we never have seen any lambs on the farms of our subscribers (and we have visited many of them) that are allowed to remain uncastrated, except those that have been selected for service. But there are hundreds of sheep-raisers that do not attend to this matter; they must bear the loss, sell their farms or improve. Your idea of the Government paying for anything for the benefit of farmers in Canada would be a departure from any step taken by them for the past fourteen years. Any expenditure by our Government has been for either one or the other of our political parties; every expenditure has been for such under the pretended name of agricultural advancement. We have some hopes that from the steps already taken by the Dominion Government to prevent the introduction of disease into our Dominion, that other steps may be taken; this is the first indication of good to be done for the farmers. We are also in hopes that this payment of 20 per cent. to the States will no longer be necessary, as our own business will be so well conducted as to enable us to supply Britain without the necessity of the Americans manipulating our sheep. With our railways and steamers, and British markets, why we should be under the necessity of paying the Americans 20 per cent. on our stock is a mystery to us.]

Necessity of Pure Water for Cattle.

CARE AND CLEANLINESS ALSO ESSENTIAL.

Mr. X. A. Willard, in a late paper before the Connecticut Farmers' Convention, discussed as follows:

Many cases of fever have been traced to the consumption of swill milk; diseases have been traced to the milk drawn from cows by the attendants of sick persons; also the impure water with which the milk-pans were washed. Cows that drink impure water give unwholesome milk. Milk becomes impure by particles of dust falling from the cow's udder, which has been gathered by passing through sloughs or mudholes.

Farmers do not as a rule appreciate this matter, but if they can dispose of their milk or butter before any great change is effected they think all responsibility is off their shoulders. The fine character of English cheese is attributed to great care in all the operations—running from the conditions of the pasture, the cleanliness from slough-holes, through the stable, the spring house, washing of pans, etc., to the production of the cheese. Cesspools or dead animals found upon the premises of English farmers are subjects of prosecution.

Putrid water is often the only kind by which the cow can slake her thirst, and yet it is productive of disease. We have a law to prevent watering milk, and yet a farmer is not prohibited from permitting his cows to quench their thirst in the most filthy and poisonous water. A case of diarrhea in a family was traced to the milk obtained from a cow confined to a stable without proper ventilation. While the cow is under a violent excitement, or in an exceedingly nervous condition, the milk becomes highly poisonous, as many cases have abundantly proved. A child fed from the milk of a cow that drank from water oozing out of a hog-pen was covered with sores and pustules.

Every factory for milk should have a schedule of questions for its patrons, covering the whole ground of cleanliness, treatment of the animals under all conditions, while in the pasture, at the stable, or in their passage from one to the other; condition of pasturage as regards grass, etc., and in every condition affecting the product of milk.

How to Train a Colt to Harness.

A writer in the English Agricultural Gazette gives the following as an easy and practical method of accustoming young colts to the restraints of the harness.

Put on him an easy collar, having a pair of reins attached, or add two pieces to lengthen the traces, and let a strong man walk behind him holding these. After a few minutes the leader may order the man to pull the traces very gently, so as to press the collar but slightly at first. In a little time he may pull tighter, while the leader keeps his eye on the colt, and if he shows any signs of flinching, let him order the traces to be slackened, and then gradually draw again until the colt is seen to lean into his collar, when the man who holds the traces may use his whole force, for a short time only. The traces must now be slackened again, and the same course often repeated, but stopping the colt occasionally to gentle him, taking care, however, to slack the traces just as he stops, and to turn a little to one side when starting each time, while the man pulls the opposite trace.

After this exercise let him be taken to the cart or other vehicle for which he is intended; allow him to smell and examine it; then push it away and draw it up to him several times, raising and lowering the shafts, until he takes no notice of its noise, or of the different appearance when raised and lowered. Now turn him around and put him between the shafts, rub them against his sides, push back and draw up the cart, striking him behind and on the sides with it, until he allows himself to be "knocked about by it," so to speak. This will do for one day's lesson. Next day let all his harness be put on, leaving chains or straps to hang and strike against him, while the whole of the previous day's lesson is gone through step by step. Same on third and fourth days. He may then be yoked or hitched to the cart, and should have at least one hour's exercise in going up and down hill, turning, etc. First start on level ground. If these directions are carried out, the colt learns that the vehicle he draws is not meant to hurt him, and he will never try to "kick it away" or "run off" from it.

Rules for training: 1. Never try to beat a colt into doing a thing, or, if nervous, he may turn out a vicious horse, and if stupid he may become stubborn. Remember that by patience and gentleness he can be got to do anything that will not hurt him.

2. When the horse shows signs of shying at an object, do not beat him, but lead him up to it, allowing him to stand and look, as he comes closer; and after he examines it a few times he will not fear anything of the kind again. In passing by hedges with a colt, throw in stones and stop him until he takes no notice of the noise.

3. Before putting on any article of harness, let your colt smell it, and then rub against his head, neck and body.

4. Always start a horse with the voice, never with the cut of a whip. In starting, turn a little to one side, and in stopping, when going up a hill, do the same.

Horse Raising in Colorado.

Jesse M. Sheets, who is engaged in raising horses near Fort Elliott, gives us some particulars of the difficulties to be encountered in horse-raising on that range. It is a good country for cattle, but not for horses. The loco weed grows there in abundance, and besides it, there is a bug found on some weed or species of grass which, when eaten by a horse, kills instantly. Mr. Sheets has seen a horse break and run about 100 yards, bawling, and then drop dead, from the effect, he believed, of the bug, as it could be accounted for in no other way. Little Robe, the Cheyenne chief, who often visits Mr. Sheets' place, says it is a small green bug that stays on the bottom of the leaf of the loco weed. In describing the effects of the weed, Mr. S. says when horses begin eating it, they act like a man going on a spree. When a horse is "locoed" you cannot handle him. He will not go to water for perhaps four or five days, and it is sure death to take them to water after doing without for this period. It is better to water them but a little at a time, if you have it in your power to regulate it, which is not the case unless they are in an enclosure. If a mare with foal gets "locoed" she loses her colt. The symptoms of being "locoed" are easily perceived. Loco is a Spanish word, meaning mad, crack-brained, foolish, which describes the effects of the weed on horses.

Dairy.

Butter Changing to Tallow.

A. W. H., Hamden, N. Y., says: My make consisted of 12 firkins and 12 tubs, made on my farm during the past summer, and was shipped to New York the last of November. It has since been held, owing to a dull market, and to-day (April 16th) I find, upon inspection, that with a portion of them, upon the top and sides a layer of tallow has formed, perhaps half an inch thick, and by advice, I send you to-day a sample of the same. The packages which had this on were made in May and June. The layer of tallow comes off quite easily, and the butter underneath is perfectly sound and sweet. I understand that other lots of butter have exhibited the same phenomenon this season. I shall be glad if you can throw any light on this matter.

REPLY BY L. B. ARNOLD, PRESIDENT AMERICAN DAIRYMEN'S ASSOCIATION.

The phenomenon of butter turning to tallow is not new. It occurs every now and then when butter is permitted to stand exposed to the air. When we compare the composition of butter and tallow we need not be surprised at such a fact. Tallow is composed of three fats—stearine, the hard white fat of which candles are made; margarine (more properly palmatine), which is light colored and so soft as to melt at a little above 100°; and oleine, a still softer fat which melts below 100°, and which takes the name of oleine from its resemblance to oil. Stearine constitutes the largest part and oleine the least in tallow. In lard these proportions are reversed, and hence the stiffness of one and the softness of the other. In butter these three fats are nearer equal, and hence its consistency between lard and tallow. Fats and butter are hard according to the amount of stearine they contain.

Butter differs but little from tallow in composition. It contains the fats just named, and from two to ten per cent. of various kinds of fatty matters so soft and light as to fly off in vapor upon the application of different degrees of heat. It is these light fats which give flavor and value to butter. They are lightest and most abundant when grass is young and tender, as in early June, and hardest and in smallest proportion when cows live on well matured hay or other ripe fodder, and hence the difference between June and winter butter. If cows live upon dried grass in winter their butter would have the same consistency and flavor in January as in June.

These volatile oils are corroded (burned) at low temperature by the oxygen of the air, more or less easily, according to their volatility. When they have been thus consumed their residuum is tallow (stearine, margarine and oleine). Oils are composed of carbon, and oxygen and hydrogen in the proportions which form water. When the oxygen of the air combines with the carbon in these oils there is formed carbonic acid gas, which at once flies away, and water remains, which soon goes off in vapor, leaving behind only the tallowy part of butter, which, if the temperature is high enough, crystallizes into a soft granular tallow. The oils in summer butter will pass off in this way when those of fall or winter butter will not, and if kept cold enough such changes will not occur in either. Neither would they occur if the butter was perfectly excluded from the air. Covering butter with strong brine will protect it against changing to tallow on the surface, but will not prevent change around the sides of the package if the staves are porous enough to allow air to penetrate them. Perfect exclusion from air in wooden packages is not easily effected, as it will penetrate the pores of the wood and reach the butter through the staves unless they are saturated with salt or something else to prevent it. There is no safety in packing summer butter in such packages for long keeping, it is so liable to undergo change in them.

This liability to oxydise is least when cows are living upon wholesome food and drink, and are perfectly healthy and comfortable, and their milk is in a perfectly normal condition. It is greatest when the blood or milk of cows is feverish or in any way heated or inflamed. Changes will then go on much more rapidly and at lower temperatures than they otherwise would, and they are believed to be facilitated by breaking the grain of the butter, as in over-churning or over-working.

The safeguards against tallowy butter, therefore, begin with the food and care of the cows, and follow through the making and handling, or care of the butter. If there is anything like strong animal odor, or taint, about the milk, the butter made from it, if exposed to the air, is always liable to become tallowy by keeping. The tendency of the butter from such milk to change to tallow may, however, be overcome by heating the milk while it is new and fresh, to 100° or above, according to the intensity of the taint. Such a heat removes both the obnoxious odor and the cause of an unusual inclination to change.

The changes which occur in butter are so easy and rapid, and the causes which facilitate them are so numerous and subtle, that there is no safety in holding butter for a future market unless we are perfectly sure that all the conditions connected with the milk and manufacture and handling are just what they should be.

Milking.

In milking do not seize the teat between the thumb and forefinger and drag down until the end slips from the grasp of the digits. Do not grasp, with the hand pressing the nails into the teat, with a squeeze and a pull. Grasp the teat with the thumb partly upwards, and the fingers in their natural position when closed, next the udder, and closing the fingers in succession, force the milk downward, with a gentle pull on the udder. So proceed alternately with each hand, going farther and farther up into the udder as the flow ceases, until you have all the milk drawn. Thus you may milk easily for yourself and the cow; in fact, the cow soon comes to like the manipulation.

If a few simple rules founded upon common sense were observed in milking, instead of kicking cows and holding up of the milk, we should soon find our cows gentle to handle, and much vexation would be spared to the milkers. It should, however, be remembered that in milking cows gentleness is a cardinal virtue.—[Prairie Farmer.

Corn vs. Grass.

In discussing the question of the comparative value of corn fodder and grass, Prof. L. B. Arnold recently stated that he had taken the milk of three patrons of a cheese-factory, in October, who were feeding nothing but grass, and the milk of three others who fed nothing but corn sown broadcast. He took an equal quantity of the milk of each, and curdling it with the same amount of rennet, at the same temperature, found, after drying the curd, that the milk of the corn-fed cows gave eight and a half per cent. of curd, while that fed on grass alone gave only six and a half per cent. of curd; showing a gain of nearly thirty-three per cent. in favor of corn fodder over grass.

While our best farmers are disposed to increase their grass-crops by every possible means, they are also in favor of providing a generous supply of fodder to supplement the pasture during drought.—[American Dairyman.

Feeding Milch Cows—Soiling.

At a recent profitable meeting of the Fitchburg, N. E., Farm Institute, the following important discussion took place:

Dr. Jewett spoke of a cheese factory in a western State, where it was noticed that the cheese decomposed. The cause was finally traced to a farm where the cows drank from a brook, the headwaters of which were tainted by the carcass of a dead animal. Mr. Ellsworth related a similar instance. The milk of a cow will, if saved too soon after the cow calves, spoil cheese. If a cow is ailing from any cause whatever, her milk is not fit for butter or cheese. A milch cow is a wonderful machine, and no modern invention will compare with her. A cheese can be made so it will not be fit for use in six months, or it can be made to keep in good condition for a year. In reply to an inquiry in relation to cows troubled with garget, the speaker said "prevention is better than cure." If a cow has all the food she needs to produce milk, butter and cheese, and also for the formation of bone and muscle, she will not have the garget. Mr. Ellsworth said he mixed wood ashes with salt and plaster, and gave his cows a spoonful of the mixture, and he had never been troubled by diseased cows. The best root for cows is the globe mangold; it costs too much to raise carrots. There is no better food for cows than apples; they will eat half a bushel per day. Three-quarters of the cream can be taken from milk and still good merchantable cheese can be made from the milk. Bad odors about a barn affect the quality of milk. The odor of manure from a close cellar will destroy the varnish on a carriage or sleigh in the barn above, and if the odor is so strong it must affect the breath of the cow and cause disease.

Mr. Cheever addressed the meeting. Chemists tell us grass is a perfect food for animals. Corn fodder should be fed with oil meal rather than with innutritious food, like straw. There is much complaint among farmers about garget. In many cases the disease is caused by injuries occasioned by cows being chased by dogs, stoned by boys or hooked by other cows. Butter or milk *may* remain in foul air without taking the odor, but it is never safe to risk it as it is liable to be affected by bad air. The speaker said he once thought he could make butter by keeping the temperature right, but he once churned two days with no effect on the cream, with the temperature just right. He took the contract from a lady, who, he afterward learned, had churned it off and on, nearly two weeks. In reply to a question, the speaker said that butter never came—it went. Farmers do not come down as they should to business principles. Cows should be fed in some cheaper way than by keeping them in barren pastures.

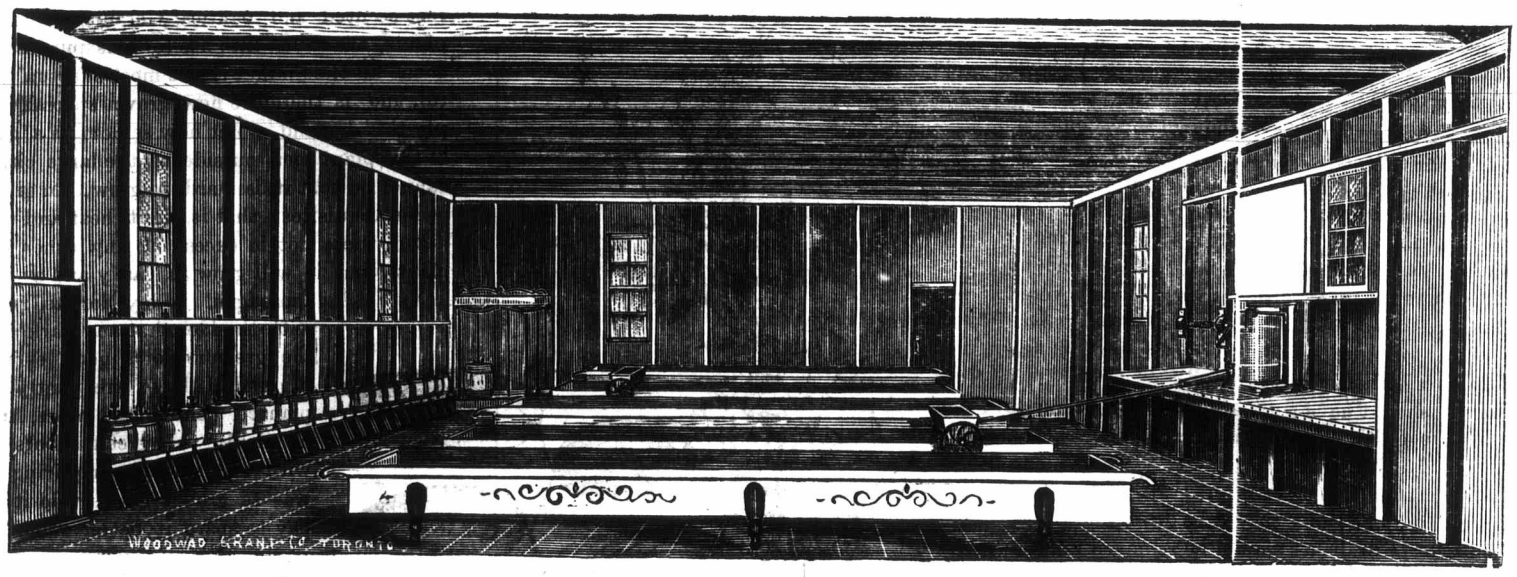
Mr. Cheever spoke of his method of soiling cows. The first food fed in the spring is winter rye sown after corn or potatoes have been harvested. It should be sown four bushels to the acre, thus making a thick growth. The next crop may be oats or barley, which should be cut before the stalk is hard and woody. Later in the season, Southern or Western corn may be sown broadcast at the rate of eight or ten bushels to the acre. If sown as late as June, much less seed should be used, and the corn should be sown in drills. There is no need of using the hoe in cultivating fodder corn. Millet should be sown later in the season. The surplus of all these crops should be cut when in blossom and cured for winter use. Green fodder should not be cut and fed in wet weather, or when there is dew or moisture on the crops.

Orchard grass and clover are specially valuable for forage crops. Last year, the speaker cut orchard grass on the 5th of June. One great advantage of the soiling system is the large amount of fertilizing material made from the animals in the stables. One field was sown with winter rye the fall previous, which was harvested by the middle of May. The land was then ploughed and sowed with oats, which were harvested the 10th of July. The land was then sown with barley, and a third crop was taken from the soil in ample time for sowing rye for the next year. Barley can be sown as late as the first of August and make a profitable crop. Farmers cannot afford to raise a single crop per year on their land. In reply to a question, the speaker said he should keep his young stock in pastures and soil his milch cows. Hay should be cut before the grass comes in bloom. This frequent cutting of grass tends to keep weeds down; they have no time to go to seed.

Mr. H. Wall's Dairy, Westminster.

The accompanying cut represents the interior of Mr. H. Wall's Dairy, Westminster. This dairy was recently constructed and is considered one of the best in this county. The main building is 34 x 36, 10 feet high in the clear. There is a projection from the side of the building 2½ feet wide and 12 feet long; in this projection may be seen the receiving can standing on the scales. The milk is poured from the delivering cans, which are raised by a hoist to the opening and emptied from the outside into the building. There is a roof over the delivering window outside, so that the wagons and horses are under shelter when delivering the milk. The windlass and chain may be seen near the open window, beside the receiving can.

When the milk is weighed it is run off into the milk vats; there are five milk vats and two curd vats. On the top of the curd vats the curd mills may be seen. The cheese presses are situated one at one side and two at one end. The building is a balloon frame set on solid posts standing five feet out of the ground, and boarded down to the ground. The water is conveyed to the vats in pipes from below the floor. There is a small addition, 18 x 24, at the end of the building, in which the engine stands. The engine is employed to pump the water, and the boiler to supply the steam to heat the milk or curd. In this dairy there are eighteen cheese presses used. The building and apparatus cost $1,000. It has a capacity of making up the milk of 1,000 cows. The dry-house cost $500; it is a very good one, and we hope to give you an illustration of it.



INTERIOR OF MR. H. WALL'S DAIRY, WESTMINSTER TOWNSHIP, ONTARIO.

Salt for Cattle.

I have been a dairyman since 1839. "Once a week" was my rule for the first five years; then twice a week for five years more; then alternate days for about ten years; then daily for the last six years. In the winter season, when my herd are in milk, and fed on coarse food, I salt three times per week. When dry, but twice. In the summer, I salt in the stalls, the first thing after stabling. I find in my animals a marked difference in their capacity, or appetite for salt. They all eat an allowance daily, with avidity—not one in my herd that will not consume three-quarters of an ounce. My best milkers require the most; one will take at least two and a half ounces. I am satisfied with my present practice. I think I get more milk, and of a richer quality, since salting daily; am troubled less with garget, and my cows seem to be healthier. Some dairymen think salting a non-essential; I do not know of any non-essential in the care of dairy cows.—[L. N. M. in Live Stock Journal.

Care of Milch Cows.

It must be apparent to every thinking person that the highest animal perfection will not insure an abundant and rich supply of milk, unless proper care is taken to furnish the cow with the kind of food best calculated to the required purpose. How often it is found that complaint is made that such a cow is a bad milker, when the same animal, transferred to other hands, has given entire satisfaction. This is easily explained by the fact that in the first case the cow has been kept on foul pasture or on improper food. It becomes therefore peculiarly necessary to pursue the manner of feeding which experience has proved to be the most advantageous for the production of milk that is rich aud sweet.

The first requisite in feeding is that the animal should have abundance of food so prepared that she can consume all she requires in as short a time as possible. She will then lie down, and have the more time to secrete her milk, and that milk to acquire richness. The pasture should be often changed, and if she is not in pasture, but soiled, she must have young succulent clover, rye, oats, fodder corn and millet. Cows feed, however, with food of too watery a nature, as are the above early in the season, rqcuire an addition of more solid food, such as meal, and a little hay. Otherwise the milk, although considerable in quantity, will be poor and thin, yielding no cream of consequence. When feeding roots they should be carefully selected, as having no symptoms of decay or rottenness, and should be mild in flavor, or the butter will be tainted. Mangel wurzels have become, from their luscious qualities, a favorite food for dairy cow and are used extensively in Europe, and to some extent in this country. I hope they will come in use here to the same extent as there. They require much care and judgment in their use, and should never be given before January, as the longer they are kept the less acidity is produced by them, and even then, in my opinion, they should always be accompanied by from four to six pounds of Indian meal to every bushel, to correct the irritation occasioned by their sole use. Many dairies of good cows have, within my own knowledge, been weakened so as to cause barrenness, for want of attending to this requisite. The best roots, in my opinion, that can be given, are carrots and mangels, succeeding each other from the time they are required till the cow returns to pasture. Brewers' grains, and mangels fed alone, are only to be used for creating a large quantity of milk in which quality is not sought. I consider brewers' grains utterly inadmissible for the dairy cow, and mangels only to be used in the manner above stated as a change of diet.

The cow and the horse can pasture well together, but no other animal should be allowed to run in the same field. Pigs and poultry spoil and taint the feed a good deal. All rank weeds must be carefully eradicated, aud garden refuse, such as weeds, kept out of the cows' reach, especially shrubs and hedge cuttings, &c. These things are often poisonous, and occasion the cow to abort. The same remark will apply to dead and putrid matter. Let the pasture be free from ponds or other dirty drinking places, where the water is fouled and rendered unwholesome by decaying matter or the drainage from the dung heaps, and from the habit which cattle have of standing and dropping their manure in it, for hours togteher. A clean tub, or tank, should be used for watering the cattle, and kept supplied with clean, sweet water, which, if pumped from a well, should be exposed to the air in summer a considerable time before use. As a principle of economy, I strongly advocate the practice of keeping milch cows in the yard or stables at nights all through the year. They spoil much grass, especially in full, strong pasture, during the night, and are not benefited by being in the dewy grass too early in the morning. The manure also would be saved in the yard, where it is valuable, instead of being dropped along some fence where it is lost, and where the cattle would naturally lie down. During the winter, when tied up in stalls, great advantage is derived from thoroughly cleaning the cattle occasionally with a brush, as they cannot then turn and lick themselves, or rub as they would in the field.—[Cor. Country Gentleman.

Weaning Calves.

The usual manner of managing calves is as much a force of habit as anything else. I once made an estimate of the value of the milk a calf would consume until weaned in the ordinary manner, and it figured up about $12, while the calf was worth about $5. Accordingly it cost $7 to induce the cow to come up nights, and she did not always come up on time either. So I concluded it would be better to raise the calf by hand, and either pasture the cow or keep a boy to drive her up. Furthermore, when I came to wean the calf and teach it to drink skimmed milk, I found it not half the trouble I expected, for as soon as this was accomplished I had no more trouble with either the cow or calf except to warm the milk; besides, I find a calf will thrive better if it has its fill of skimmed milk than on half rations by being choked off. If it is not desirable to feed a calf plenty of milk, it can soon be taught to eat. The best seed I can use is dry bran and shelled oats, or fresh grass in season. I now have a calf fifty days old that eats and thrives on such feed, and yet it gets some skimmed milk. Also, if the calf is kept out of sight of the cow, she will soon disown it and not allow it to suck; whereas, otherwise, we sometimes have trouble to get the "great booby" weaned. Commence as soon as the milk gets good. Allow the calf to suck your fingers while holding its nose in the milk, and a few lessons will suffice. A wild calf will soon become tame if so managed.—[Cor. Rural World.

KEEP YOUNG COWS.—From experiments made in Stockholm it is shown that cows that have been large milk producers are more liable to become diseased, and that the meat from such animals is not so good as from sound animals. It is also believed that such diseases may be conveyed to the human family by the use of meat or milk from cows so diseased. If this is the case, dairymen should not keep good milkers till they get old. Most dairymen keep the best milkers to the greatest age.

Garden and Orchard.

Seasonable Hints—May.

BY HORTUS.

When preparing ground for the reception of seeds, plants, etc., it is always good policy to let the soil get moderately dry before digging or plowing. Most people are impatient of delay, and barely wait for the frost to get out before they are at work. On sandy-loam soils this is all right enough, but clay ground if worked early will dry up into clods and be very unsatisfactory the whole season afterwards. We hardly think enough attention is given to the soil itself outside of questions of manure, suds, etc., and would advise planters to make haste slowly.

At this time most of the seeding and planting will be done, and there remains nothing on the planter's part but to give what care he can to best insure growth and good crops. But few yet recognize or know the value of ashes as a fertilizer. They are invaluable for sandy soils, and can be applied to the ground after the crop as a top-dressing. Particularly in the cultivation of fruit are they useful, returning to the soil in the most direct manner those ingredients that the roots of the plant or tree take from the soil for the formation of woody matter and the elaboration of large healthy foliage, with the consequent increased size of the fruit and greater brilliancy of its coloring, which tends to make it more marketable.

If not already done, have the ground between rows of raspberries and currants well forked over, and fork in at the same time a good coating of manure. Raspberries are gross feeders, and by giving plenty of manure the canes will be covered with large foliage and fine fruit; strong shoots will grow up for next sesason's fruit instead of the sickly ones hitherto grown.

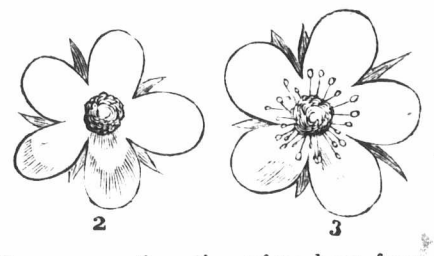
LAWNS should have a dressing of superphosphate applied liberally. Rolling frequently is necessary, particularly after rains.

Large ornamental trees require attention; dead branches and old stubs should be neatly sawn off, and the lower branches should be removed to let in the sunshine. It is not desirable or healthful to have too much shade.

CUTTINGS made in the winter should be planted, and be sure and plant deep enough—at least the whole length of the cutting. They succeed better in a nice sandy soil than if planted in stiff clay.

GRAPEVINES may be layered by making a trench six inches deep and pegging a cane down in it; leave it till the buds break and grow up to the top of the trench, when some fine soil should be filled in till the trench is level. In fig. 1 the layer is shown with young growth rooted. In the fall these are cut between the joints. They make the best of plants.

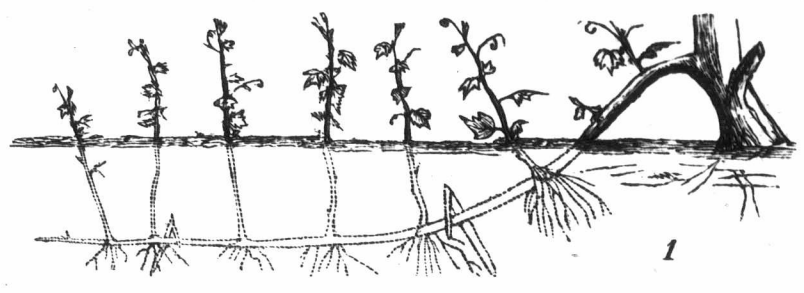
STRAWBERRY BEDS need putting into shape and new ones planted out. Mulching is necessary to have good crops and clean fruit. Nothing better



2 3

for the purpose than the refuse hops from the breweries, where they can be procured. Every person growing strawberries for market should acquaint himself with the best varieties. Pistillate varieties, like Col. Cheney and many others, should be planted near such varieties as Downer's Prolific, Wilson's Albany, and those having staminate flowers. Fig. 2 shows the pistillate blossom and fig. 3 the staminate.

BLACKBERRIES are very profitable fruit to grow, but many have an objection to them from their natural style of growth, which makes it a very uncomfortable fruit to gather. To overcome this spreading, irregular habit, as in fig. 4, all that is necessary is to give the canes when young a couple of trimmings, which will transform them into sturdy, neat plants, loaded with fruit, like fig. 5.

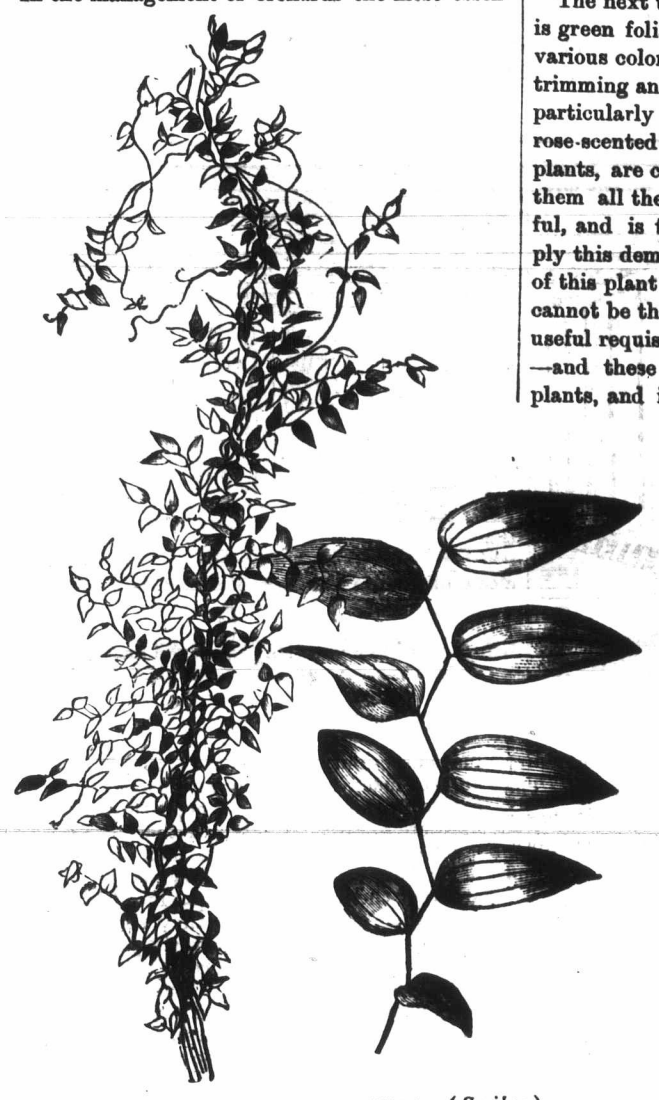


1

In the management of orchards the most essential thing to their welfare is thorough drainage. You cannot drain too much, and the more you do of it the better the trees will thrive. Next to that is mulching; do not spare the manure to feed the roots—and don't forget the ashes. Every farmer and gardener should have a large sign on his place bearing the words

HIGHEST MARKET PRICE PAID FOR ASHES.

NOTICE.—The plants, seeds, and cuttings, given to parties for sending in new subscribers to the ADVOCATE, were all mailed by the 25th April. They were all sent in good condition, and we hope they will give satisfaction. If any one has not received their parcel they should notify us at once



MYRSIPHYLLUM ASPARAGOIDES. (*Smilax.*)

Growing Smilax for Profit.

BY CHAS. SCRIM, BUFFALO, N. Y.

In the years gone by the trade of the florist consisted principally in growing plants for house cultivation and for bedding outdoors in summer. Not much attention had been paid to growing flowers more than having the plants in as much bloom as possible, merely to make them more saleable. Now, however, in many places, so much is the demand for the flowers growing amongst the people, that florists find it more profitable to devote their greenhouses principally to the growing of flowers for bouquet-making than for simply growing plants to sell. Another and the most pleasing feature in the case, and one having the most reference to our subject, is the demand for loose cut flowers; that is, parties buy assorted blooms of Carnations, Roses, Bouvardias, etc., that they may make them up themselves into bouquets, wreaths, and other ornaments that their taste and desires may dictate.

The next thing of importance after the flowers is green foliage, which relieves and sets off the various colors, and of course is indispensable for trimming and decorating. The foliage of the Fern, particularly *Adiantums cumatum* and *Farleyencii*, rose-scented and oak-leaf Geraniums, and many plants, are called into use for this purpose; but of them all the Smilax is the most effectual and useful, and is therefore now grown specially to supply this demand. Yet how seldom is a good bed of this plant seen outside of the large cities! It cannot be that it is hard to grow, for give it the useful requisites—that is, light, heat and moisture—and these not in excess of any other kind of plants, and it will grow as easily and as freely as asparagus. Many florists run away with the idea that any dark corner of the greenhouse is good enough for it, and I have frequently seen it planted behind the pipes, throwing up sickly pale-green shoots covered with red spider. Inquiring why it was so grown I was told it did not pay to spare it better room. What plant will pay if not properly grown? Smilax thrives in a night temperature of 55° Fahrenheit, and will succeed in less, but much better at 60°. The extra heat makes it grow rapidly and causes a beautiful gloss on the leaves that adds to its value.

Prepare a bed in the centre of the house, having a path on each side, 15 or 18 inches deep. For soil use nice loam having the sod well rotted; give one barrowful of old cow-manure to three of the loam, thoroughly mix and place in the bed to a depth of 8 or 10 inches. In this place the young plants that have been raised from seed some months before; they are much better than older plants, as their shoots

4 5

will have foliage from the ground upwards. You can have a crop of nice strings of Smilax for the Christmas holidays.

(*Continued on Page 109.*)

Sugar-making from Sorghum.

In reply to several inquiries made regarding sorghum we quote the following from the *Journal of Agriculture* of St. Louis, Mo., written by H. S. Close, of Kansas:

If convenient, it is best to plow the ground in the fall, and replow in the spring just before planting. Pulverize well by harrowing, then mark out with a corn-marker about 2½ or 3 inches deep; if convenient, mark north and south; then secure the best seed possible, and wash and throw away all that will float on the water. Soak about 36 hours in lukewarm water until the seeds are well sprouted, then plant by hand, dropping 4 to 5 seeds in a hill, 2½ to 3 feet apart, rowing it but one way, and cover 1 to 1½ inches deep. I plant here about the 1st of May, or at any time when it is warm enough. It will come up in about three days. I then use a one-horse four-shovel cultivator, with which I commence cultivating, without disturbing the marks in which it is planted. In a few days I cultivate again with the same cultivator, but go close enough to the row to throw some dirt around the cane. I have some person follow the cultivator, and straighten up the cane and take off the clods. I now consider the cane large enough for me to begin to use a corn-plow and two horses, throw the dirt up against the cane, and cover up the weeds with the cultivator. The cane is now in such a stage, that the crop of syrup, or the yield, depends altogether on how well it is cultivated. The more it is plowed the better will be the yield of syrup, and it will ripen sooner if well cultivated and the ground kept loose and clean. In the last plowing the dirt should be thrown up to the cane as much as possible. I now consider the crop made, or, in other words, able to take care of itself. Whenever the seeds are in the dough it is then fit to work into syrup; and as to stripping, any farmer knows how to strip cane, or ought to know.

As to manufacturing, if I have a large crop to work up I run night and day, as it is a saving of fuel, labor and time. I use a Victor Mill, No. 4. I have a railroad track about 200 or 250 feet long running from the grinder, with a car that will hold two or more wagon-loads of cane. I have the cane all piled up convenient to the track to load on the car. One man can shove the car up the track. When loaded, start it and it will run down itself, the track being down grade to the grinder. Now, if the cane is straight one man can feed fast enough, while another carries away the bagasse; but if it is poor cane, and cracked, I have two feeders to keep up a supply of juice. I use a barrel to receive the juice. From there I carry it to the house with 1¼-inch gas-pipe. This is as cheap as tin, will wear forever, never springs a leak and never becomes dented.

My house is 50 feet long, 20 wide, and 8½ feet to plate. The juice is received in a large vat 5½x6 feet, and 2½ feet high, with a partition in the centre, so I can divide the juice in doing custom-work and not interfere with the grinding. I can have on hand 200 gallons of juice in the vat if necessary, besides what is in the heating-vat and boiling apparatus. I have my juice-vat placed so that it projects over the heating-pan, and I have the juice running in the heating-pan by means of a faucet as fast as it runs into the boiling-pan. I have my heating-vat (4x4 feet) next the chimney and about five inches above the evaporator. I have a 12-foot Cook's evaporator next to the heating-pan. In front of the evaporator, and right over the fire, is a boiling-pan 8 feet long. From a sheet of galvanized iron I made the pan to suit myself. I took a 6-inch joist and rounded the corners, put on plenty of white lead and laid on double strips of canton flannel, and then put in two rows of shingle-nails, with half-inch strips on top of the iron. I now have a good boiling-pan, which I set on an 8-inch wall, with strips projecting from the wall over the fire. I have a 1-inch gas-pipe, with a slide gate attached, to run the juice into the boiling-pan at the end nearest the arch door, from the heating-pan next the chimney. I now have juice in the pans at each end of the arch. To get the juice into the evaporator I have the boiling-pan three-fourths of an inch higher than the evaporator, and have a pipe 10 inches long with two elbows, through which I run the juice into the evaporator.

I skim in the heating and boiling pans with a large skimmer 10 inches square, and I never allow any skimmings or scum to remain on the juice while boiling. In skimming the evaporator I use those that fit the sections, and keep a skimmer and a paddle in my hand all the time. I have found by experience that a good paddle (made out of a piece of siding) that will fit the sections, so as to thoroughly move the syrup, will answer the purpose well, and will let but little sediment gather on the bottom of the pan.

I now pass the syrup to the coolers, which I do by drawing it in a large tinpail, and then carry it up three steps and pour it into a cooler lined with zinc. The coolers will hold about 40 gallons each. I have a faucet to the first or upper cooler, and I start it running into a percolator, which is a foot square at top and six inches at the bottom. I then have a box 6 inches deep, with a bottom made of perforated tin, that sets on top of the hopper; and a set of frames, covered with coarse flannel, that just fit in this hopper, which I change as often as necessary. I filter all my syrup through this hopper into the second cooler, which I keep covered with muslin so that no dust or flies can get into it. I then consider the syrup ready for barreling.

I draw the syrup from the second cooler by means of a molasses faucet, and measure it into barrels or kegs by drawing it off in this way. If there should be any sediment of any kind it will settle on the bottom, and all the foam will remain in the coolers.

I wash and clean out the coolers as often as convenient. If I run steady all week I close up on Saturday evening; fill all the pans and evaporator with water, and while the water is hot I wash all the skimmers, pails, and everything that needs washing; scald out the juice-vats with hot water, take a broom and scrub off the pans and evaporator inside and out. I also do this as often as I happen to stop the mill. On Monday morning I heat up the water in the pans and evaporator, wash out the coolers clean, and feed the scum to the pigs—which, I may add, is a good preventive of hog-cholera.

As to sugar, I only let it set and it will granulate itself by leaving a vent in the barrel, or some open vessel, so it can evaporate.

I sold nearly all the syrup I had last fall at the mill at 50c per gallon, and contracted to one man all I had to spare at 45c. My customers tell me it is worth ten cents more than ordinary sorghum, because it is perfectly clear of foreign matter, makes no foam, and looks as clear as the best refined syrups. I expect to plant 20 acres on my place this coming season; besides, there will be a great deal planted by my neighbors, who frequently haul ten and twelve miles to my mill. In doing custom-work it does not yield alike; some has been well cultivated and some not, and of course the yield is in proportion to the cultivation. Last year I worked one small patch of 1¼ acres that yielded 200 gallons. I use old vinegar and whisky barrels, which I scrape out perfectly clean, otherwise the syrup would be spoiled for market.

[We will give you a cut of a mill and evaporator before you have your sorghum crop grown.]

Applying Bone Dust.

The amount of bone or phosphate to be applied to wheat will depend in the condition of the land. If in good heart or fair condition, one hundred and fifty to two hundred and fifty pounds to the acre will give good results. If the land is only fair, use two hundred and fifty to three hundred pounds to the acre, and if the land is so poor or exhausted that you fear young grass will not make a good catch, then apply three hundred to four hundred pounds to the acre. The above amounts are for fine ground raw bone and the best class of phosphates. If the bone is coarse or the phosphate poor, then much larger amounts must be used to obtain the same results. We get a fine, pure, clean raw bone fertilizer here that is all we can ask or desire. We get the best results from this bone by drilling in with the seed, for a small application. But if you want to make a heavy application, of say three hundred pounds, we drill a portion of the bone dust seprate and then go over the same way, finishing with the bone and wheat mixed in the drill together. We used to get phosphates in the East which were made of bones, but now some of them seem to have very little bone in them. We value them more for a quick start of the crop; but when we want a fertilizer that will give good present, and at the same time long-continued results, we want either bone or else a phosphate that is made out of bone. In our former discussions here, over our experience in using fertilizers, we have settled down to about this conclusion: that the farmer who is settled on his own land had better use the best raw material he can get to put into his land, and let the elements in his land do the manufacturing of his phosphate or superphosphate, as you prefer to call it.—[Cor. Ohio Farmer.

Jerusalem Artichokes.

We have received enquiries about this plant, and as opinions differ, we quote the two following conflicting accounts, the first from the *Farmer's Review*, the second from the *Country Gentleman*.

Last spring I purchased enough seeds of the Jerusalem artichoke, at a cost of $2.50 per bushel, to plant nearly an acre. The spring was very wet; I broke the ground twice, and it was too wet each time. I planted about the 10th of May, and the ground was so wet that I just "mudded" them in, in rows two and one half feet apart, tubers two feet apart in the row. The wet weather continued till the ground run together very close, and then it set it dry, and about five or six weeks after planting I plowed once with the bar next the artichokes, and broke the ground into clods from about three to eight inches in diameter. I then scraped the weeds from between the plants that had come up, and turned the crop over to Providence, and it looked like Providence gave them as poor a show as I did, for the clods were not wet through before October.

When I went to digging them, I was wonderfully surpised, for in the best spots they yielded at the rate of 500 to 600 bushels per acre.

They are a lazy man's crop; if planted, they will yield fairly, regardless of weather or cultivation, and I have no doubt about raising 1,000 to 1,500 bushels per acre on good land, with a fair season and fair cultivation.

I have been feeding them, and find stock does well on them. Milch cows do splendidly.

If planted for hogs, they should be where hogs can be turned on them about October, and they will require no other food except during frozen weather. Enough should be dug to feed during such a time.

I find I can sell all I have, and will not feed any more of them, as I am getting $1 per bushel. I am quite sure a man can make more money raising them at five cents per bushel than the best land here will cost per acre.

I planted both white and red, side by side, and I can't say which is best, but rather believe I would prefer the white.—[H. M. Kelly in Farmer's Review.

I thought that the absurdity of growing artichokes as a field crop for profit had been exploded. Twenty-two years ago it had a similar notoriety, and a furor not excelled by the growing of the *Morus multicaulis*. I have no doubt that a great many of your readers will recollect both fevers; perhaps some to their cost. I once took charge of a place at Pittsburg, Pa., and my predecessor had planted seven acres of artichokes to feed hogs and to supply the market with it to feed the people. I can safely say that after digging, washing and preparing in the best manner to catch the eye, I never sold a bushel in market. I even gave them away to create a taste, but they would not bite, and we carted them back as we sent them. Has any one ever seen any of them in Washington or other large markets? People are not fools to buy snch stuff. I have tried them on cattle and pigs, and they will eat them, but you have all your labour for your pains. If you wish something to absorb dry meal, they will answer as well as red-top strap-leaf turnips, but cost one hundred per cent. more than turnips. I have fed them for six weeks three times a day to hogs, weighing the hogs before and after. At the same time I fed another lot on strap-leaf turnips, and on the turnips they gained a little; on Jerusalem artichokes scarcely any at all.

It took me five years to exterminate them from the ground, but by so doing, it made this, and the peach trees on it, the best trees and ground, on the estate. I can eradicate five crops of Canada thistles easier than one of Jerusalem artichokes. Put them once into the ground, and rest assured they will eventually become the oldest inhabitant. I can recommend it to be grown by every dyspeptic individual, as twenty feet square of it will give him all the work he wants in trying to root it out. Farmers should avoid it as they would the plague.—[G. H., Country Gentleman.

Common prudence will dictate that no crop should be taken from the land that leaves it in a worse condition than it finds it. If these things are duly observed there need be no limit to the amount of production but the capacity of the farm.—[Conn. Farmer.

Useful Grasses.

At a recent meeting of the Institute of Science, Media, Pa., the question—"In addition to clover and timothy, what grasses are most useful to the farmer?" was answered as follows by Joel Sharpless :—

Good crops of grass are very desirable to all farmers who depend upon dairying or feeding cattle as a specialty, particularly the former, and the best and most desirable grass in addition to red clover and timothy is Kentucky blue grass. In order to have the latter in profusion, the ground, properly prepared and well manured and sown with wheat about the middle of September, should be sown with timothy at the rate of from six to ten quarts of seed per acre, and the following spring an addition of from four to six quarts of red clover seed per acre. The red clover is the greatest root fertilizer of any of our plants or grasses. What I mean by root fertilizers is the fertility given to the soil from its decaying roots, and it is the most valuable of all crops for the recuperation of the soil when sown for and properly used for that purpose. It is a biennial plant, and sown as a fertilizer, particularly for any crop, should be plowed down the second season after being sown. Some farmers in Ohio use it in this way for wheat, realizing over twenty bushels per acre, and putting their manure on their orchards. My reason for sowing more timothy than clover is that the following season after the wheat the clover is apt to smother out much of the timothy, and as the clover is so short lived, much of the ground is liable to be left vacant until the green grass and white clover come in and occupy the vacant places, which they will do in good soil, provided they are not pre-empted by the weeds. The latter grasses may be sown, but in most good soils nature provides them in due season. Although the clover is so short lived, where it has succeeded well it has left a great means of fertility in its decaying roots, on which the timothy and other grasses luxuriate, and in consequence produce more bountiful crops. The roots of a well set acre of clover contain 185 pounds of nitrogen, 240 pounds of lime, 45 magnesia, 75 potash, 19 soda, 24 sulphur, and 70 phosphoric acid, on which the timothy and other grasses are luxuriating. It would require a pretty good article of superphosphate to equal the above amount of ingredients of the same humber of pounds.

The white clover and green grass often have much company, as a great number of grasses may sometimes be found occupying the same ground. In low, moist grounds herd grass or red top, in the absence of good drainage, may be sown to advantage, and in some rare places by very rich soil, orchard grass might meet with favor if thickly sown. In order to make up for a deficiency of the hay crop the Hungarian grass is a valuable substitute. This grass, if sown in good, well prepared soil, will in about fifty days make from two to three tons per acre of excellent hay, if properly cured without rain, that will be eaten greedily by horses and cattle; but should you be so unfortunate as to have it wet a time or two, while curing, its good qualities will be very much impaired—much more so than a crop of timothy or other grasses, yet all kinds are seriously injured by being wet while having the moisture evaporated.

Culture of Celery.

Celery must be kept growing. They never recover fully if they once receive a serious check. Avoid tearing or drying off the roots. Set them out in May or June, when in three or four leaves, in a small bed of very rich soil, about three or four inches apart, and keep well watered, without fail. Shelter carefully from drying wind and hot sun when set out, if cloudy, humid weather cannot be availed of. The final trenches should be prepared as soon as early pea or onion ground is clear in July. Let the soil in the trenches be very rich, and from a surface well exposed to air. Enrich it further there with thoroughly well-aired and decayed manure. Raw manure is considered to be a chief cause of the flabbiness and pipiness so much in contrast with the crispness and almost deliquescent texture of well-grown stems. Lift the plants from the temporary beds with the ball of soil attached to the tuft of roots, and water promptly to prevent any check in growth. If shading is necessary don't continue it too long, nor cut off the essential light too completely.

The dwarfer sorts of celery are now most liked. They are easily grown, and have the most "nuttiness" of flavor. The blanching of the stems is effected by excluding light from them, while at the same time the heart of the plant and all the leaves must remain fully open. As the stems begin to spread, they are tied together just so much as to heep them nearly erect, aud to prevent their breaking if earth is used to etiolate the stems, but a wrapping of paper, bark, or even a bottomless fruit-can may be used for this purpose. Charcoal braze or coal ashes answer well, as they exclude slugs and other insects. And celery keeps well lifted and set close together on a slightly damp cellar floor, and filled between up to the leaves (most of which may be removed) with perfectly dry, clean fresh coal ashes. This is a safe and very convenient mode, and celery that has not been sufficiently blanched in the garben will be found beautifully white, tender and sweet after being stored this way for two or three months.—[Penn.

The Wire-Worm.

Upwards of sixty different varieties of these insects have been discovered by naturalists, several of which feed on our valuable cultivated crops. They do not confine themselves to any particular kind of food, but attack indiscriminately the roots of the cereals and grasses as well as esculent roots of every kind in the field or garden. They are injurious to all plants of the *brassica*, or cabbage family, and also to garden flowers.

It is said that wherever grass will grow wire-worms will live. The eggs of the parent beetle are supposed to be deposited on the roots of grass and weeds, but this point has not been clearly determined. The eggs must be very small, for when first hatched the larvæ can scarcely be detected by the naked eye. They live five years in the larval state, casting their skins several times, and committing great ravages on nearly all kinds of plants. When fully grown, the wire-worm forms a cell in the earth, in which it becomes a pupa or chrysalis, generally in July or August. This pupa remains stationary, quiescent and harmless for about three weeks, and then changes to an elater or beetle, which is at first white and tender, but in a short time gains its proper color and hardness. These beetles run with their heads down, and drop when apprehended. They fly well and are perfectly harmless, feeding only on flowers. The extent of the damage done by the wire-worm during its five years of laaval life may be estimated from the fact that a single worm has been observed to bite from fifteen to twenty plants in a short time.

When fields lie fallow the wire-worms feed on the grass and weeds, which are too frequently allowed to overrun them : whereas, if the soil was kept clean, they would either die for want of food or be compelled to move to some other place. As these larvæ invariably live beneath the surface of the soil, every plan suggested for their destruction must be founded on this consideration. Superficial applications have been frequently tried without effect. The most obvious remedy is to saturate the soil with some fluid that will destroy them, or top-dress the surface with some substance that, when dissolved by rain and carried into the soil, will be destructive to them without damaging the plants. In a fallow field no precaution need be used, as the destruction of weeds and insects are indispensable. A farmer of the island of Guernsey, whose crops were entirely destroyed by wire-worms, used a top-dressiug of salt, lime and soot, but it did not check their ravages. He was then advised to try guano ; he did so, and found that it checked their progress as soon as applied, and banished them from his fields.

A farmer in England affirms that he has frequently freed fields entirely from wire-worms by sowing a crop of white mustard-seed. The experiment he tried so frequently and in circumstances so well calculated to demonstrate its effects, that he is perfectly satisfied the remedy is efficient. "Encouraged," he says, "by the results of my former trials, I sowed a whole field of 42 acres, which had never repaid me for nineteen years, in consequence of every crop being destroyed by the wire-worm, and I am warranted in saying that not a single wire-worm could be found the following year ; and the succeeding crop of wheat was the best I had reaped for twenty-one years." It has been found by repeated experiments that soda-ash will destroy them when applied as a top-dressing at the rate of two hundred pounds per acre. Refuse gas-lime from gas-works will also banish the wire-worm from all places to which it is applied.—[G. M., in Germantown Telegraph.

Fancy Farmers.

No class of men have been ridiculed so much, and none have done so much good, as those who are denominated fancy farmers. They have been in all times and countries the benefactors of the men who have treated them with derision. They have been to farmers what inventors have been to manufacturers. They have experimented for the good of the world, while others have simply worked for their own gain. They tested theories, while others have raised crops for market. They have given a dignity and glory to the occupation of farming it never had before.

Fancy farmers have changed the wild boar into the Suffolk and Berkshire; the wild bull of Britain into the Shorthorn; the mountain sheep, with its lean body and hair fleece, into the Southdown and Merino. They have brought up the milk of cows from pints to gallons. They have lengthened the sirloin of the bullock, deepened the udder of the cow, enlarged the ham of the hog, given strength to the shoulder of the ox, rendered fine the wool of the sheep, added fleetness to the speed of the horse, and made beautiful every animal that is kept in the service of man. They have improved and hastened the development of all domestic animals till they hardly resemble the creatures from which they sprang.

Fancy farmers introduced irrigation and underdraining, grinding and cooking food for stock. They brought guano from Peru, and nitrate of soda from Chili. They introduced and domesticated all the plants we have of foreign origin. They brought out the theory of rotation of crops as a natural means of keeping up and increasing the fertility of the soil. They first ground up gypsum and bones, and treated the latter with acid to make manures of peculiar value. They first analyzed the soils as a means of determining what was wanting to increase the fertility. They introduced the most approved methods of raising and distributing water.

Fancy farmers or fancy horticulturists have given us all our varieties of fruits, vegetables and flowers. A fancy farmer a few years ago introduced the Early Rose potato, which added millions of dollars to the wealth of the country, and proved to be a most important accession in every part of the world where it was introduced. Another of the fancy men originated the Wilson strawberry, and another the Concord grape.

At the Government plowing-match dinner given near Toronto last fall one of the directors of our Provincial Board of Agriculture and Arts is said to have made a speech to the following effect : "We want no book on scientific farming. The man who can take hold of the plow and go to work is the man who does most good for his country." We much doubt if the speaker can plow a furrow, or suggest the most advantageous way to raise a crop, or even handle a crop after it is raised.

What we want is more practical, energetic men who will attempt experiments and report to the ADVOCATE any plans they have adopted that have been beneficial to them. Every one of our subscribers should be able to impart some useful information that might aid others, by having their plans, experiments and achievements recorded in this journal. Such records would show to future generations what has been done in the present stage of the development of our Dominion. Volumes of this journal are bound, and will be referred to by your successors. Any month's issue contains reports from many of the most useful and practical writers on this continent. Those desiring to direct or aid the farming interest should take pleasure in showing their plans publicly.

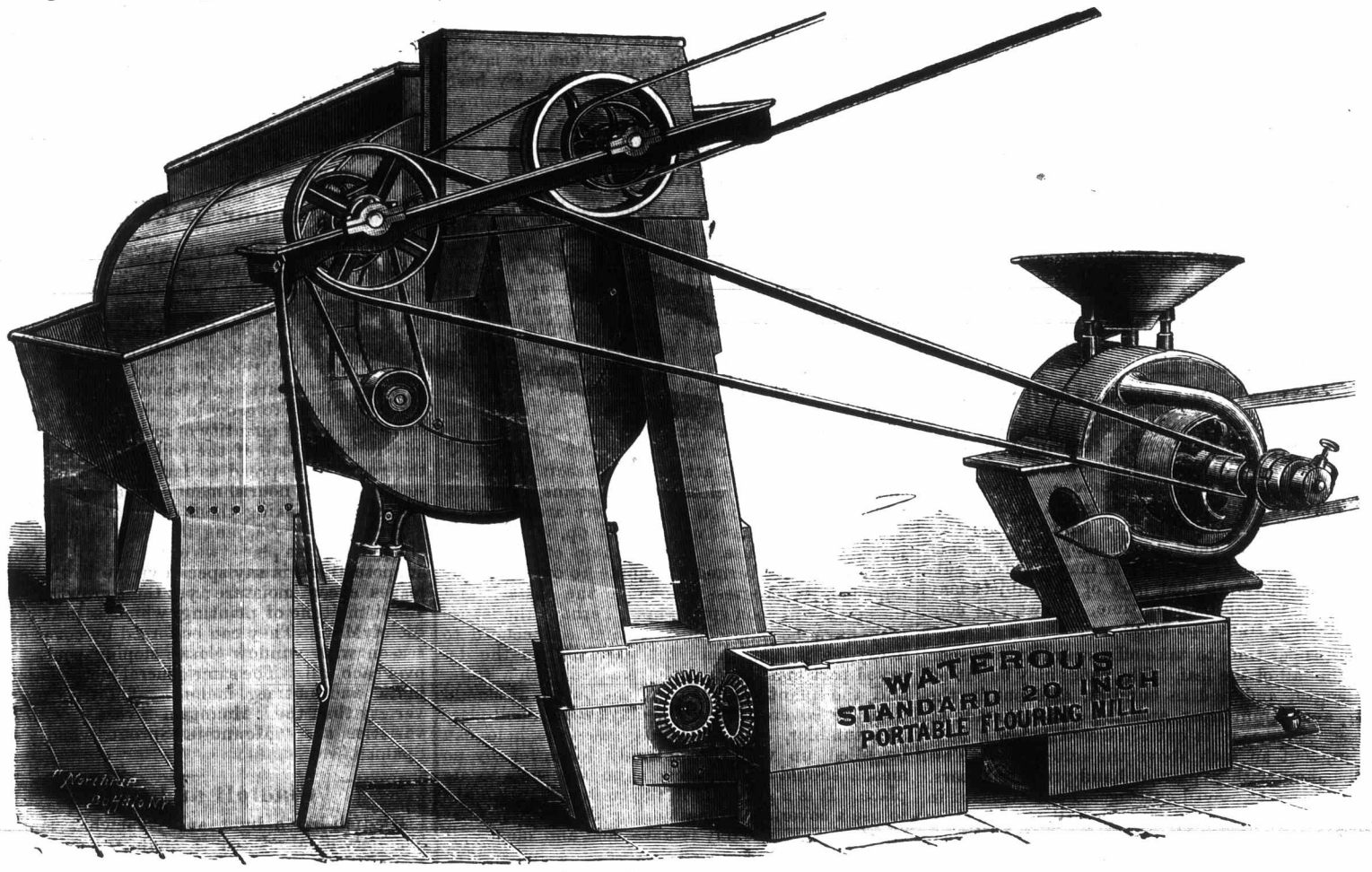
FAMINE PREDICTED IN RUSSIA.—A famine next year in Russia is predicted by Russian journals. Last year about one-third of the crop was destroyed by beetles and marmots, so that the seed has been deficient; and the cattle plague took off nearly ninety per cent. of the cattle in many places. To these things must be added the extraordinary drought of the past half year. Then in Russia there are too many holidays (about one hundred in a year). Most of the land in Russia is under mortgage to bankers, the proprietors are hardly able to pay their interest and the arrears are everywhere about twenty per cent. The grain, which is the chief article of export, and which furnishes taxes and all supplies, is devoured by parasites while growing, after being gathered and on railroads.

Portable Flour Mill.

The illustration on this page represents the new and improved flouring mill. This is a machine that we think must come into extensive use in our Great North West, where water powers are scarce and a high price must be paid for grinding. This mill may be driven by horse-power, but steam is much preferable because it is steady. It only requires a 6 to 10-horse-power to drive it; and it will grind and bolt 6 to 8 bushels of wheat per hour. We have seen it in operation, and we were surprised to see how well it ground and separated the bran, flour and shorts. We had imagined that it required a great space for bolting and large stones for grinding. It is our impression that many good, smart men, that understand their business, will do well by taking them to places where people are living long distances from large mills.

The price is $450.

A complete outfit of grist-mill, sawmill and threshing machine, each complete, and an engine on wheels, fit to drive either, will cost $2,450 at Brantford. Two cars would take it to Manitoba, at a cost of about $220 per car.



A short time ago we stepped into the office of Messrs. Waterous & Co., Brantford. There was no appointment or preparation; they did not know a spy was coming. There we met Mr. Dick, of the firm of Dick & Banning, of Winnipeg, Manitoba; he had just ordered another saw-mill (making the second) for their works in Manitoba. They now have one mill running, and are about to erect another. This looks like progression. We then stepped into the workshop. A fire had been lighted in a new agricultural boiler; every engine and boiler is tested before leaving the works. This was the hundredth engine of this pattern; although this engine has had various improvements in material and finish, there is no difference in the principle to those constructed last year.

In another department we saw a portable grist-mill that had been tested the previous day. This was sold to go near Chatham, Ont. In the yard we noticed a large boiler lying ready for shipment; this is to be shipped to Slavonia in Austria, near Turkey; $4,000 was the price to be paid; $2,300 would be the price of the engine and boiler here, but carriage, duty fees, etc., swell the price. Another engine was ready to ship to Madoc.

When we returned to the office, our Canadian Immigration Agent, Mr. Klotz, was there. He is a German from Waterloo; he looks as jolly as an Englishman, and talks English as well as any one, but he says in the German language he is more at home. This gentleman has done much to settle the North-West territory; through his exertions the Mennonites have come amongst us and are, we understand, making good, useful settlers. From what we saw of this gentleman, we should think he was the right man in the right place, but he does not give information about Canada to Russians and other countries. The Governments there try to keep the inhabitants on their own lands, and are opposed to emigration; therefore darkness reigns in Russia, and her agriculturists are worse off than were the slaves on this continent.

The Waterous Manufacturing Company, and other leading manufacturers and exporters, are developing our greatest sources of wealth, and making this Dominion known to many a nation that knew not the name of Ontario or hardly of Canada among them.

They claim to have in fair competition beat the best English and United States manufacturers, and there is a market for their machinery in Brazil, Australia and Egypt. But they are suffering under a peculiar difficulty, which we think Conservatives, Reformers, and our British Government should at once remove. Canada is under British rule, and therefore cannot appoint her Ministers in foreign countries. The present British consular agents in foreign lands have almost invariably checked Mr. Waterous in his attempts to introduce Canadian machinery. Their endeavors are to protect and forward the interests of the British manufacturers, and they do not intend to give Canada supremacy over the British, or even equal privileges. They have acted against Canadian interests; they are so haughty that only a prince or a baron can be noticed. Mr. W. says that Canada cannot appoint her own Ministers, and that our interests are not looked after. Feejee has her Ministers in foreign countries, and Canada is as a nonentity; also, the duties are less on British manufactured goods than on Canadian. This is, we think, a most important question, and the attention of every legislator should be called to it. In fact, our manufacturers and exporters should be called before a special committee of the House of Commons and examined touching all disadvantages prejudicial to Canadian manufactures or exports If our Immigration Agents have already too much to do, would it not be well to have Commercial Agents, representing Canada. Immediate action should be taken; it is important to our country if we can employ capital and make it as much of a manufacturing country as possible. Trade and commerce have enriched England, and also enriched the wealthiest nations and cities of the world.

Celery.—The fine examples of celery lately exhibited by Mr. Pragnell, of Sherborne Castle, at South Kensington and the Agricultural Hall, London, Eng., serve to show what good results may be obtained when proper provision has been made for its culture and for the prevention of worms. The celery was grown in trenches, into which had been well worked a quantity of manure prepared by having a quantity of salt and soot mixed with it some time previous to its being used. The manure is laid in a round heap and frequently turned in order to get the salt and soot thoroughly incorporated with it. It must be remembered that soil in which worms abound most is that to which unprepared raw manure has been added from time to time, and, therefore, freeing the manure from worms previous to its being used is one way of effectually keeping them from the soil. In addition to this, the salt and soot promote growth to a marvellous extent. The examples alluded to were of great weight, remarkably solid, brittle and fine flavored, and not a leaf-stalk was worm-eaten.

Growing Smilax for Profit.

(*Continued from Page 105.*)

Plants should be put in the first week in Sept. planting in rows nine inches apart and twelve inches between the rows. For training up the shoots place steel wires a few inches over the rows of young plants, fastened at each end to stout pegs; put corresponding wires over these about six feet high, then stretch directly over each plant a string of some good cord, fastening each end to the wires, making neat frames perpendicularly across the bed.

As the plants begin to grow go over them carefully each day to give the young growth a start on the cords; close the house early in the afternoon after giving the bed a good syringing. By the first of December the growth will be about six feet long; continue the syringing, but stop watering at the root, and the shoots will soon be ripe enough to cut for market. By the time the crop is cut, say four weeks from the time you begin to sell, the plants will begin to throw up a number of strong shoots and will require two strings each this time, dividing the growth equally. Give a copious watering and continue the syringing as before, and by the Easter holidays you will have another crop equal in quality and double in quantity. After this crop is cut give a good dressing of rich soil, pressing it firmly around the plants which show an inclination to get out of the ground. Treat as before, giving plenty of air in warm weather. A bed thus treated will last two years, but to have first-class strings it is better to renew the soil and replant.

Grape Vines from Cuttings and Layers.

It is supposed generally that to grow cuttings there is a deal of empiricism, and, in fact, there is: and yet the science of this operation is not well understood outside of the greenhouse. Grape cuttings may be grown from the green or the ripe wood, and it may be a question which of the two is the better plan: but I do not suppose our farmer correspondents have any idea of making green cuttings, and therefore that part of the subject may be omitted for some future time, and we will consider cuttings from ripe wood.

The proper time to take off the cuttings is soon after the fall of the leaf. The canes may be cut off any length, and tied in bundles, and put in the cellar, away from frost, and the cuttings made at leisure. The cane is cut square off below a bud, slanting out an inch above the other bud. This can be done with a pair of hand-pruning shears. This makes a two-eyed cutting. These are tied in hand bundles of about 100 each—all the short or butt ends one way. Bass matting is the best material for the tying, though other material may be used. A smooth place is made on the ground, and these little hand bundles are set on the ground, top end down, and a layer of straw is put on, and over this earth and litter, to keep out the frost. During the winter, the cuttings callous—that is, they form a small white ring about the base of the cutting, out of which comes the new roots. Early in the spring, the cuttings are put into beds, butt end down, and the tops even with the ground, and over these about half an inch of sawdust, to keep them cool and moist, and to start the roots before the leaves; for, if the leaves start first, the roots will not push. Some people put them in the beds in the fall, and cover with straw and stable litter, to keep out the frost; and this is removed about the time of early corn planting. Cuttings of this kind should be two years old before setting out in the vineyards, unless they make a vigorous growth, and then are not as good as one-year-old layers, made from old wood that has been properly cared for during the season.

Early in the spring, when the canes are tied to the stake or trellis, the extra canes, that have been reserved for layers, are pegged down on the ground along the rows, and as much out of the way of the cultivator as possible. The ground should be made smooth and mellow for the purpose. After the shoots have made three or four inches of growth, an inch or so of earth may be placed on the cane and about the base of the shoot, which will soon induce the growth of the roots. In the fall the cane is taken up, and the plants are separated for planting. This is the best plan for the farmer to pursue in order to grow his own vines. He gains at least one year, and at less labor and less risk of failure. Currant cuttings may be treated in the same manner as described for the grapes, and, in all cases, are better for being taken off in the fall.

A first-class one-year-old layer is worth about double that of two-year-old cuttings. In setting a vineyard, I should hardly be persuaded to set the plants from cuttings, though they cost only half as much. Most people let the layers go until the shoots are long enough to cover with earth; but it is far better to peg them down before the buds start, for then they make a vigorous upright growth, and the earth can be easily packed around the base of the plants; besides this, the contact with the earth has the effect of callousing the cane at the base of the shoot, and roots are at once pushed out on the application of the soil. Gardeners depend largely on green cuttings, which they find the most profitable; while the farmer, without skill, or bottom heat, or steam pipes, had better rely on layers.

If the writer of the above alludes to cuttings grown in thick beds, as they often are, we agree with him, but when a cutting makes four feet of wood (ripe at that) and roots a yard long, as we like to grow them, and just such we handled lately—we would as soon have them as the very best layers. But such as cannot be grown from cuttings must be layered.

Spring Culture of Tulips.

The bulbs on coming through the ground generally crack the surface all over the bed, for the rains have closed the compost so closely at the top that the spikes break it. The whole surface, therefore, should be carefully stirred up, and all lumps broken so that it can be laid evenly. It is of the greatest benefit to give the bulbs air, and also of service to the stems to place the soil closely to them. In some kinds of loam, from the swelling of the bulb and the progress of the spike through the earth, it will crack so much as to expose nearly the whole of the bulb and lay it open, not only to the vicissitudes of the weather but also to the attacks of insects, which, if the earth were laid closely to the stems, could not find their way through it. If there are vacancies where the bulbs have not started up, it is well to search for the cause. A hard lump of earth or a stone may have turned the spike to one side and impeded its progress. Remove the obstacle and the spike will soon spring up. Perhaps the leaves may have become connected and commenced to decay, as is sometimes the case. Then the decayed part must be entirely removed with a knife, and the plant laid bare to the bulb. It should then be covered for a few days with a bell-glass or a tumbler, and as it progresses the hole can be filled up with fresh sandy loam, for by no means should the old earth be returned to its place. It is a great aid in the culture of rare bulbs to use a covering of matting or old carpeting at night, and if the day is raw, cold and cloudy, it should not be removed. After the buds have formed in the spikes it is always desirable to protect them from the frost.

It has been said by English florists of olden times that tulips should never be watered. But they lived where the clouds dropped rain continually in the sea-girt isles of Britain. In our uncertain climate, if the spring months are devoid of moisture and the soil dry as dust, by all means give water to the famishing tulips. To be sure, they do not require much, but just look at the growth they will make after a warm shower, and then ask yourselves if—in the absence of rain—water is not required. There is no plant in the floral world which enjoys a gentle shower more than the tulip, and when it receives none for a considerable period it derives great benefit from a slight sprinkling all over the leaves and buds. It does not need a sufficient supply to drench the earth, for its roots go down for moisture, but its leaves and flowers are much finer for receiving it. The water, however, should not be given just as it is drawn from the pipes, but enough hot water should be added to make it about the same temperature as the air, or a little above it.—[N. Y. Times.

A writer in the *London Garden* drove off ants that he saw, by microscope, eating the flowers of pot-roses just coming into bloom, by sprinkling the plants with water just tainted with kerosene.

Unpruned Grape Vines.

Where there are but two or three vines to be cared for, it is often the case that other claims upon the attention will cause a postponing of the necessary pruning until it is too late to do it without being followed by "bleeding." True, the roots of the vine supply this watery flow of crude sap so abundantly that the loss of a portion seems to have no perceptible effect detrimental to growth, but the bark is injured by a long continued flow, and it is almost painfully unsightly. To prevent this, and at the same time to secure the advantageous effect of pruning, the following recourse is convenient: Having the vine tied in place on the trellis – separating the strong canes of last year as much as possible, and leaving the upper two or three feet of the trellis for their issue to clasp and climb over for support—*rub off* all small buds and all buds from small twigs, including all that should have been pruned away and all that are not likely to have full room for expansion of their leaves in full light and free air. This can be done during the latter part of April and in May in the Middle States, and a rubbing out of the superabundant blossom thyrses in June will do as much more toward securing large bunches of handsome juicy berries. Still later, any redundant shoots can be suppressed by timely rubbing out or pinching, but no healthy leaves should ever be removed. The bare shoots from which the buds were rubbed off can be pruned away at any time after the leaves of the vine have fully expanded. There will be no bleeding after that. If the leaves are healthy, they give off all redundant water.—[N. Y. Tribune.

Melon Culture in Cold Climate.

A young farmer gave me a receipt when I was a boy, which as a general guide, has been of much service. It need not be strictly followed to insure success. Select light, sandy loam soil, not liable to bake in dry weather, take the best of hog manure, at the rate of at least one-half bushel to the hill, mix it finely with the soil; plant the hills from six to eight feet apart, and leave three of the most vigorous plants to grow in each hill. It is well to spread an equal quantity of manure broadcast, and mix it in the soil if the soil is not very rich, for the roots will spread as far as the vines do, and seek the best nourishment. The seed should be sprouted by mixing them in muck from a hollow apple-tree and wrapping in skunk cabbage leaves. Keep in a warm place two or three days. We don't suppose there is any special virtue in the cabbage leaves, except moisture; yet their growth indicates about the time of planting, which is near the middle of May. They can be forced by covering for a season with window-glass, sloping south, fitted over each hill. The same general method applies to musk and nutmeg melons. There is no better variety than the "Mountain Sweet." Other good varieties are "Mountain Sprout," and "Black Spanish."

Gladioli and Oxalis.

Gladioli like a light and somewhat sandy soil. The only care needed through the summer is to keep down the weeds. Let the leaves grow as long as possible—a slight frost will not hurt the plant. As soon as the leaves show signs of withering take up the bulb; dry it in the sun and put it away for the winter in a paper bag in any dry, frost-proof place.

The summer-blooming oxalis are never-failing friends. They grow vigorously and throw out an abundance of their pretty pink and white blossoms, while at the same time their little bulbs are multiplying almost tenfold. They make a pretty edging to a flower-bed, the foliage being ornamental all the time. The flowers are profuse and last some time. The varieties are almost numberless. They need to be planted in the spring and taken up in the fall.

THE APPLE-TREE BORER should be eradicated annually—twice a season would be still better, but early in the spring at any rate. The first year he occupies in short excursions around home, and then he may be readily caught. The second year he begins taking long journeys, and he is then more difficult to dislodge. A good stout wire run into the hole will usually kill, provided the knife-blade fails to find him. Always search close to the surface of the soil, frequently about one inch below, but rarely much above. In the search for his "trail," a little bunch of reddish sawdust, in the near vicinity of a circular hole the size of a buckshot, is a pretty certain indication that the game is not far off.—[Tribune.

The Apiary.

How to Know Robber Bees.

BY C. F. D., NILE, ONT.

A robber bee, when he approaches a hive, has a sly, guilty look, and flies with his legs spread in rather an unusual way, as if he wanted to be ready to use his heels as well as wings, if required. He will move cautiously up to the entrance, and quickly dodge back as soon as he sees a bee coming toward him. If he is promptly grabbed for as soon as he attempts to go in, you need have but little fear. If a bee goes in and you do not know whether he was a robber or not, you must keep a close watch on the bees that come out. A bee in going to the fields comes out leisurely and takes wing with but little trouble, and his body is slim, for he has no honey with him; but a bee that has stolen a load is generally very plump and full, and as he comes out he has a hurried and guilty look; besides, he is almost always wiping his mouth, like a man who has just come out of a beer shop. Most of all, he finds it a little difficult to take wing, because of the weight; and he feels instinctively that he will be quite apt to tumble unless he can take wing from some elevated position, and therefore he crawls up the side of the hive, or to the extreme end of the alighting board, before he launches out. When he first takes wing he falls a little by the weight of his load before he has his wings fully under control, and therefore, instead of starting out as a bee ordinarily does, he takes a downward curve, coming quite near the ground before he rises safely and surely.

With a little practice you can tell a robber at a glance by his way of coming out of the hive. As soon as you find bees coming out of the hive loaded shut it up at once. If there are not many of them there will be but little danger of suffocation; but if the stock is strong you will have to give them ventilation. Remove the block from the entrance at sundown to allow the robbers to escape; then close it again, leaving room for one or two bees to pass at a time. When you find bees robbing, contract the entrance of each hive, and it will help them to protect their stores. If robbing is not stopped, and the work is under real headway, the honey of a strong colony will disappear in from two to twelve hours, and the bees will then starve in the hive, or go home with the pillagers, or scatter about and die. This is not all. When the passion is fully aroused they will not hesitate to attack the strongest stocks, and you will find your bees stung to death in heaps before the entrances; and at such times the robbers will attack passers-by, and sometimes venture an attack on cats, dogs or anything that comes within reach. The Italian bees will protect their hives much better, and are not as liable to rob as the common bees.

Plants for Bees.

White clover and alsike are in bloom all through June and into July. Mignonette and sweet clover are in bloom as early as June 22, the former continuing for the year and the latter for a month, and both yielding bountifully of the most delicious honey. White mustard blooms in from four to five weeks after planting, and the black mustard in from seven to eight weeks. They are both excellent, covered with bees, especially during the forenoon, through the entire season of bloom. The former continues for four weeks, the second somewhat longer. Like borage, these seem less affected by climatic condition than most plants, being thronged by bees even after heavy rains. Rape, much like white mustard, blooms in about four weeks after sowing. Borage, if planted the first of May, or self-sown, commences to bloom the middle of July and continues till frosts. Cleome, or Rocky Mountain bee-plant, if planted early or self-sown, commences the middle of July and continues for more than a month, yielding liberally of the most excellent honey. Catnip and motherwort deserve their high repute.

Poultry.

Raising Turkeys.

A correspondent writes to inquire concerning the best way to raise turkeys. While the inquiry is a little indefinite, we can state general principles, and perhaps our correspondent will be able to gather what he wants from them. In the first place the eggs should be placed under a good sitting hen, or rather a hen belonging to a breed which is noted for producing good mothers. The hen turkey herself is a good sitter, but is a wretchedly poor mother. Her disposition to wander over a wide range is a principal objection to her, as it not only worries the young turkeys, but is liable to lead them into danger, There is one noticeable peculiarity about the turkey, and that is a total lack of appreciation of distance or time. It will wander off and, wholly unlike the chicken, will pay no attention whatever to the approach of night, and when the time for going to roost does arrive, it will "lodge" wherever it happens to be. A turkey hen with a brood of turkeys for this reason, therefore, if for no other, is by no means desirable. Then again the hen turkey never scratches for her young, but leaves them to shift for themselves, and as the young turkey at the moment of its birth does not seek food or seem to know how to do it, it is liable to starve to death. The instructive instinctive scratching of a common hen, however, soon teaches the young turkey to imitate the example. About thirty days are required for the eggs to hatch. The young turkeys being very tender, they should be protected from heavy rains, morning and evening dews, and the hot suns for a month. The chicks should not be allowed to leave the coops in the morning, until the dew is off the grass. About the third day after hatching the young turkeys will need very special care, for this is a critical period in their lives. Another critical period is when they throw out the "red head," which they do when about six weeks old. At such a time their food should be more than ordinarily nutritious. Boiled eggs, bruised hemp seed, or a mush made of equal parts of cooked oat and barley meal, is suitable at this crisis. Care must be taken all the time with reference to providing the right kind of food. The recommendation of an experienced poultry writer "not to feed slop food of any kind," should be strictly regarded, although not always Sour milk boiled to a thick curd, mixed with Indian meal and occasionally seasoned with black pepper, is recommended by Lewis, and is sanctioned by practice. The feeding should be frequent, and no more should be given than the chicks will eat up clean. Always feed on the ground, so that some gravel may be taken with the food. Never feed Indian meal in an uncooked state. There is danger of it baking in the crop and causing speedy death. Give plenty of water. When young turkeys are two months old feed as you wonld any turkey, giving cracked corn, buckwheat, fresh boiled meat, boiled potatoes, etc.—[Western Rural.

Gapes in Chickens.

I do not like to see little chicks afflicted in that way, neither do I know anything to cure them. It is a disease that can be prevented, and that is better. I would never keep a chicken that ever had the gapes. I would change my whole flock first. They should have a chance to scratch and wallow in earth and ashes through the winter, to free them from lice. Some think that lice have something to do with the gapes. I do not know as to that, but I do not like to have poultry of any kind get lousy. I sprinkle a little fine salt in the feed for my young turkeys and chickens two or three times a week, being careful not to feed too much. I never allow them around the house, ready to run in every time the door is opened. They should be encouraged to ramble away in the field, where they will catch insects. I keep a little trough a few yards away from the house in warm weather, and about twice a day I put in a few quarts of sour milk. All my poultry, old and young, come there and drink, and appear to enjoy it, and then go away to catch grasshoppers. I have raised several broods of chickens that were never fed, and they appear to do quite as well by letting the hen have her way, and ramble as much as she pleased. The chickens that hang around the buildings, and are always under foot, are those which have the gapes.

Disease among Fowls.

Mr. Allen Bogue, the well-known breeder of different kinds of choice fowls, of London, Ont., has lost nearly all his birds lately by an infectious throat disease called canker. The malady is very fatal, and terminates in a few days. His yard has been so depleted that he was unable to exhibit at the late show in Guelph.

A simple and effective remedy for this is chloride of lime in solution, and the throat swabbed with a piece of sponge on the end of a pliable stick; chloride of potash diluted will answer the same purpose, and is a sure cure. Both ingredients are cheap, and can be obtained of any druggist. Chloride of lime can be bought by the measure. As "Labaraque Solution," dissolve a pint of solution in a pint of water and you have it fit for use.

The egg crop was never more promising than this spring, doubtless owing to the mild season; and the hitherto stiff prices, like the eggs, are being broken.

The North British *Agriculturist* charges that there are no veterinary surgeons in the United States. Hold on a moment; don't be so rash in your statements. A party in Iowa, writing to a contemporary on "Cattle Plague," signs himself "Thos. D. Hulmer, M. R. C. V. S. L. F. V. M, A. L., England." Now if he is not a good broad-gauged alphabetically-qualified veterinary surgeon, we would like to have our contemporary inform us what he is. That abbreviated title covers the whole thing, and if Western live stock only get an inkling that we have such an everlastingly long-titled individual among us, they will take good care not to fall sick. Who knows but what it may be the means of stamping out every indication of pleuro-pneumonia should such disease ever develop here. Give a sick animal a few quarts of this alphabetical feed, and it will cure him forever.—[Prairie Farmer.

BACON.—The principal firms of Wiltshire bacon curers have issued a circular calling the attention of farmers and others to the public aversion to fat and heavy bacon, and stating that as Irish feeders are now turning out well finished pigs of light weight, small bone, and full of lean, they have daily evidence that if English feeders do not take some decisive step to meet the requirements of consumers by introducing a breed of pigs yielding more lean and less fat than the present "Berkshires," the demand for English bacon will be very much curtailed, and the value depreciated.

The toad as an insect destroyer is becoming quite popular in Europe. Once a week a "toad market" is held regularly in Paris, to which these little animals are brought, carefully assorted, according to their strength and size, and packed by the hundred in baskets of damp moss. The market is never overstocked, and those of moderate size find ready purchasers at prices ranging from seventy-five to eighty francs per hundred. The majority of them are bought up for the use of English market gardens, and it is stated that orders are on hand for the purchase, at those rates, of every basketful that reaches the market.

When phosphates fail at the root of the plant, grain fails at the mill; and when, from waste at the mill, phosphates fail in the bread, the bones and the teeth fail in growing bodies. The improvidence that leaves excretory phosphates to be washed away to the salt sea, farther from the reach of life than they were in the primitive rocks, is an improvidence that prepares an inheritance of poverty for after generations; and the ruthlessness that permits the purveyors of food to sift phosphates from the food of men, does its part to enfeeble the present generation.

A French agricultural journal says that the damage done to potted plants and flowers by worms getting into the mold, can be avoided by using for irrigating the plants water to which one-tenth part of grated horse-chestnut has been added. Under this treatment the worms must either fly or die.

A Western gardener says he has saved every one of his cucumber, melon and cabbage plants, during the past five years, and also repelled the potato beetle, by sprinkling with water impregnated with gas tar, repeating the application if washed off by rain.

NOTICE TO CORRESPONDENTS.—1. Please write on one side of the paper only. 2. Give full name, Post-Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. 3. Do not expect anonymous communications to be noticed. 4. Mark letters "Printers' Manuscript," leave open, and postage will be only 1c. per ½ ounce.

In the communication on page 87 in last month's issue, on the "Western Fair," read $8,000 instead of $800.

Lice on Stock.

SIR,—Will you kindly let me have in your valuable paper some practical advice on lice on farm animals—on the cause and treatment of them, and oblige. X., Collingwood, Ont.

[In some localities animals are more liable to be infested with lice than in others. It sometimes proceeds from local causes, but often from neglect of stock and from bad, ill-saved food. All affected with the epizootic influenza are liable to be affected with lice. A live stock journal on this subject says :—

"Such stock as cattle and colts that have been poorly wintered and allowed to become impoverished are more than likely to be preyed upon by the blood-sucking species, and in a majority of cases it is not noticed until the animals have half denuded themselves of hair in their frantic endeavors to relieve their itching by scratching on everything they come in contact with. There is little positive information as to how these pestiferous vermin originate, though the most generally accepted idea is that their ova or eggs, floating in the atmosphere, come in contact with the skin of animals which at certain times and under certain conditions forms a suitable hatching ground. My observations of these pests have not prepared me to endorse this theory, and I have doubts about the average egg of the cattle, horse or hog louse floating in the atmosphere to any great extent. Like that of cholera in hogs and murrain in cattle, I think their origin is as yet one of those mysteries which 'no fellow can find out.'

"An excellent tonic and corrective to be kept accessible to stock is salt and hardwood ashes in equal parts; and if into a bushel of this two or three pounds of sulphur is mixed, so much the better. Mr. S. G. Livermore, Iowa, reports that he is very successful in keeping lice away from his stock by giving in each animal's food, twice a week, a heaped tablespoonful of powdered saltpetre. The beneficial effects of this probably arise from the tonic properties and its improving digestion. Though animals in thrifty condition are sometimes very lousy, it is more common that the poorest in a herd are the ones on which lice are first discovered, and in greatest numbers; and I think it is on these that they increase and multiply most rapidly, afterwards finding their way to the others.

"Almost any form of grease is destructive to this species of vermin, lard of even the poorest qualities being excellent, and perhaps as readily and cheaply obtained by farmers as anything answering the purpose. For horses, cattle and poultry, it may be applied clear, along the backbone, sides, neck and shoulders, and rubbed well into the coat. If the weather is cold, a pleasant day should be selected, and the lard applied warm, mixed with one-third its quantity of common kerosene, which causes it to spread better and penetrate to all the wrinkles and out-of-the-way places where the lice love to congregate. Any animal well greased will soon be abandoned by them. If an animal is compelled to herd with others that are probably lousy, a second application, after fifteen or twenty days, would be advisable, and serve to destroy such as might hatch after the first application or were not reached by it. Kerosene alone will destroy the lice; but when so used it is somewhat irritating to the skin, and in a very few days causes the hair, scurf, lice and all to come off, much as if the creature has been scalded. When using lard it is common to mix a portion of sulphur with it, and it is especially good where a scurfy condition of the skin exists."]

Evergreens.

SIR,—Is it too late to transplant evergreens in May? What are the best varieties for a windbreak? What are the best for a lawn?

A. B., Embro, Ont.

[There is no better time for planting evergreens in this climate than May. The ground has seldom, if ever, sufficient warmth at an earlier time, and no planting should be done till there is a warmth in the soil. The best time for transplanting evergreens is when the buds begin to swell prior to the bursting out of the leaves. With careful removing from the nursery at this season, and equally careful transplanting, there is seldom a failure. Failures are often to be attributed to the drying of the roots before planting.

A good selection of evergreens for wind-breaks can easily be made out of the native trees of our woods. They are hardy, indigenous to the soil, and in every respect well adapted for the purpose. Such are the Canadian balsam—a rapid grower of dark rich color and one of our healthiest trees; the common white pine—a general favorite; the American cedar, whose only fault is its dull rusty color; the hemlock—a most graceful evergreen, with its light waving boughs. These are some of the most easily produced and good shade trees. They not only ward off the winter winds, but also communicate a perceptible degree of warmth to the atmosphere in their vicinity.

For planting in a lawn or ornamental ground, we must make our selections from a nursery. Of the juniper there are several varieties, all suitable for such places. The Irish juniper is of a dense upright growth, handsome shape, and not growing more than eight to ten feet in height; it is of a handsome bluish green color. Siberian juniper—not so formal as the former, but bright colored and very handsome. European Savin, when properly trained, is a very pleasing object in a pleasure ground, where it is frequently met with; it holds its color well during the severest winter. Of the Arbor Vitæ there are several varieties beside the common American. Of these the most valuable is the Siberian variety. It grows more compact than the others, and is of a brighter green throughout the winter. The box tree and the several varieties of laurel have not been found hardy enough for our climate. Norway Spruce is an excellent tree for hedge-rows or wind-breaks. It is hardy, handsome and a free grower, but we have purposely omitted it and the Scotch and Australian pines, and others that are to be procured from the nurseries; those we have enumerated for wind-breaks can be got in our woods at the sole expense of removal.]

Jerseys, Guernseys and Alderneys.

SIR,—Please inform me through the medium of your paper if there is any marked difference between the cows of the Channel Islands—Jersey, Guernsey and Alderney, and if there is a difference, what it is. It is said by some that they are one and the same family. C. B., Orangeville, Ont.

[Between Guernsey and Alderney there has always been free trade in cows, though the Jersey breed is rigorously excluded. The consequence is that there is a great deal of Alderney blood in all Guernsey cows, and *vice versa*, and the attempt which some persons assume to make, to distinguish the one from the other, is vain. Extreme cases may be discriminated, but a mixture of blood which has been going on for many generations defies the utmost skill to trace its finer gradations. The pure Guernsey colors include black as well as shades of red or yellow, and white, consequently we find undoubted Guernseys sometimes with black points, sometimes mouse-colored, sometimes brindled. English dealers and exhibitors occasionally try to depreciate an animal on account of its showing some shade of black, but such an idea has no countenance at the island exhibitions, where the prizes are given for form, quality and breeding, irrespective of colors.]

Hay Tedders.

SIR,—Would you or any of the numerous readers of the ADVOCATE inform me, through its columns if there are any hay tedders made in this Canada of ours, stating price, etc.

W. C. S., New Hamburg, Ont.

[We do not know. You might inquire of J. B. Lane, Dorchester Station.]

From Nova Scotia.

SIR,—Yours received with pleasure, and contents noted. The ADVOCATE has a well-indorsed character—Ontario appears to be sound on the goose. Don't you think it would be a good idea to get some certificates of character from New Brunswick or Nova Scotia (South)? I live down south, and I suppose that is the reason I have not seen your paper for 14 year—or less. But I see it now, and the longer I look at it the better I see-m to like it. I shouldn't wonder if it wouldn't be just the paper that farmers without intelligence should read! "Intelligent" farmers don't generally care about agricultural advocates who pretend to know more than they themselves do. It isn't considered just the thing down in our section to know more than your neighbors do, or to keep any farm implement that they don't keep. It's a good plan; just you try it—it saves a wonderful sight of borrowing.

I notice "On the Wing;" that, I suppose, means a bird of passage of some kind. Does it migrate south as far as Nova Scotia or the Gulf Stream? (I suppose you know the Gulf Stream is our southern boundary-line! It don't always stay in one place; sometimes it comes close up to our back-yards, and then it is ever-so-warm—especially in the winter-time. When that occurs all hands go to plowing.) I think your passenger bird would find good pickings 'round our diggings—I mean our potato diggings. I presume you know—and if you don't you ought to—that our folks are stunners on potatoes. We have a regular ro-tator-y system; it is called a seven-years' course—that is, the ground is manured once in seven years; for instance, potatoes and manure one year, and potatoes without manure six years. It works beautiful.

It is a grand country for corn, if you are particular in raising your own seed and don't plant too soon. But our farmers are mostly all above corn—potatoes bring corn and wheat.

They say this is—no chaffing—one of the greatest countries out for wheat. But there is only one man raises it that I know of, and it is said he grows it just to annoy his neighbors. I don't think it a neighborly trick to grow strange crops or keep anything to annoy one's neighbors—do you? Perhaps it is kind of irritating—when all hands are hard at work planting potatoes, hoeing potatoes, digging potatoes and talking potatoes—to have a fellow pointing to his field of wheat as a contrast to your potato patch. Tuber sure, only a man of straw would do so. But never mind—we can, if so minded, grow peaches and grapes and tomatoes in quantities, but we prefer to have our smart cousins over the border put those things up for us in nice tins beautifully labeled.

There are lots of thing that would be interesting to write about, but time presses. If your passenger bird comes this way, label him with your trade-mark that we may know the animal, and tell him to call on one

PETER PRINCE, Wolfville, N. S. (South.)

Too Much Taxation.

SIR,—I like your articles well, particularly on the expenses of Government, but I think the tone is hardly firm enough. Farmers cannot live and pay the enormous taxes direct and indirect. The Local Government or the County Councils should be abolished; the number of representatives in all should be largely diminished, and the amount of remuneration should also be largely reduced. These gents claim it as an honor to represent the people, and yet the very dullest can see that to make money is the object. Us farmers are duped, and it serves us right, too, when we don't take a proper way of looking after our own interests; of course we know also where the difficulties lie. As a body the farmers have no time to devote to Governmental affairs. Hoping you will speak out on these subjeces, I remain, &c.,

AARON KELLS, Peel.

SIR,—I am a subscriber, and want to know if a mail-carrier is justifiable in reading the contents of a postal-card to another person.

J. W. G., Coverdale, Albert Co., N. B.

[Decidedly not. Report to the P. O. Inspector at Halifax.]

How to Apply Superphosphate.

SIR,—Please inform me how phosphate of lime should be applied to wheat and roots, such as mangles, carrots and sugar beets. I got some this season for the first time. I tried to grow Swedish turnips for two or three years past, but they came to nothing. It is by reading the ADVOCATE that I know anything about fertilizers. I would like to know if salt and plaster would injure the effect on wheat by sowing after the wheat is above ground.

G. M., Ormiston.

[The following are the directions for applying superphosphate to crops: For wheat use 300 to 400 lbs. to the acre, sowed broadcast with the seed. It is sometimes applied as a top-dressing, as, for instance, superphosphate was applied by sowing broadcast at about the rate of 300 lbs. to the acre when the grain (peas and oats) was about ten inches high, and the result is said to have been a very heavy crop. For potatoes apply about 400 to 500 lbs. to the acre. If planted in drills, having dropped the potatoes, cover lightly with a hoe; then sow a large handful of superphosphate to about a yard of drill, well scattered in the centre, letting a portion go to the sides of the drill; then cover with the plow as usual. Salt and plaster would have no injurious effect on wheat, but are generally found profitable.]

Experiment in Turnip-feeding.

SIR,—According to promise I now give you my own experience in feeding turnips. In the spring of 1878 I commenced feeding half a bushel to each cow daily, and the result was that the milk, cream and butter were perfectly sweet and had not the least taste or smell of turnip.

I increased the feed to three pecks daily, with the same result as before.

I then increased to a bushel, and the result was that the milk, cream and butter had both a taste and smell of the turnip.

In each case I fed for two weeks, immediately after milking, and churned twice a week. I gave the feeding a fair trial, and think you need not be afraid of recommending the feeding of turnips, if the above rule be followed.

W. M., Brownsville.

SIR,—The great fault of the new tariff lately introduced in the Dominion Parliament is that the taxes on the poor man's necessaries are increased, while those on the rich man's luxuries are not increased in the same proportion. There are, besides, too many exemptions from taxations—a question with which our present rulers seem to be afraid to meddle. The Black Knot Act passed at the request of the Ontario Fruit-Growers' Association was shamefully curtailed in Committee. The clause respecting the yellows in peach-trees was struck out on the supposition that the disease was unknown in Canada, although the researches of the committee specially appointed last year to examine the extensive peach orchards in the townships of Beamsville, Grimsby and Winona, disclosed the fact that a few trees were affected by the yellows, and in every case these trees were imported from the States. This importation should be prohibited, and further legislation on the subjec may be enforced ere long. If the Grangers would attend to such matters they might do more good than by endeavoring to increase the duty on oats and pork.

SARAWAK.

SIR,—Be so kind as to answer the following:

1. Where can I obtain pigs of the small Yorkshire breed?

2. Will it injure corn, mangel or turnip seed, if I sow superphosphate of lime with the seed, on the top of the hill or otherwise?

3. Is it an advantage to sow either of these after the plants have come up?

4. How would artichokes answer in Huron Co.?

5. Where can I get a few plants of prickly comfrey?

SUBSCRIBER.

[1. See Breeders' Directory on last page of cover

2. Do not allow all the superphosphate to come in contact with the seed, but cover with mellow earth.

3. Yes. 4. Yes; they will yield a heavy crop, but are condemned by some as being difficult to exterminate, as they are likely to overrun the ground.

5. At the Agricultural Emporium, London, and seed-stores generally.

Sheep Ticks.

SIR,—Could you give a good remedy to wash sheep and lambs with at the time of shearing, as they are infested with ticks? S. S. C.

[It is our impression that Douglas's tick destroyer stand at the head of the list, but as there appears to be very little profit in its sale dealers do not import much of it. There are several kinds made in Canada, all giving more or less satisfaction. Briggs's tick destroyer we have heard most favorably spoken of as being the cheapest and most efficient of our home-made destroyers; 30 cents worth is sufficient to kill all ticks on twenty sheep. In a recent issue we gave a good receipt to make a tick destroyer; it was given us by an old English shepherd who had handled many thousands of sheep.]

Binder Wanted.

SIR,—Quite a number of the readers of the ADVOCATE expressed a wish that I would write you for a little information about a grain-binding machine, not combined with a reaper, but one drawn by a horse after the reaper. We have heard of such a machine being in use in the United States. We want the name and address of the manufacturer, and any other information you can give us on the subject, which will be thankfully received by a number of subscribers.

W. D., Clinton.

[Mr. John Watson, of Ayr, exhibited a grain-binding machine last autumn. He was about making some alterations in it, and we have not yet heard of it being completed.]

SIR,—Would you be kind enough to answer the following questions:

1. I saw in your last month's issue about soaking seed in pickle. How strong must the pickle be, and what good does it do seed wheat?

2. What would the cost of the wire fence (that appeared in the last number) be per rod?

We have a very late spring.

YOUNG SUBSCRIBER.

[1. The value of the future crop depends to a considerable degree on the preparation of the seed. All light and infected grains should be, as far as possible, separated from the good seed. Upon immersing the grain in water the light and infected grains float, and on being poured or skimmed off, none but good sound ones remain. But to detach the fungi, and thereby prevent to a certain extent the attacks of smut and rust, mere water is not enough. For this purpose some use lime, and others sulphate of copper; common pot ash is also employed with advantage. Either answer the purpose, but we always preferred a brine strong enough to float an egg, and when the grain was in the brine a few hours we mixed it with fresh-slaked lime to dry before sowing.

2. Some of our readers can doubtless tell you the cost of the fence referred to.]

SIR,—The Ameliasburgh Township Agricultural Society are adding two acres more land to their grounds, which will make six acres. The ground is enclosed by a seven-foot fence, and has a driving track one-third of a mile in length, which latter is expected to add greatly to the attractions on Dominion and Exhibition Days. The coming Fall Exhibition will doubtless excel that of any former year, and will be held on Saturday, 11th October, it bing the second Saturday in the month—the day upon which the Exhibition has been held for the last fifteen years.

Members received by the Secretary up to July 1 for $1, which includes the FARMER'S ADVOCATE for one year and privileges of the Fall Exhibition and Dominion Day celebration.

E. ROBLIN, Sec.-Treas.

SIR,—Kindly let me know how best to sow superphosphate, guano and soda without a drill, my land being too stumpy for one; and the quantity per acre. A. J. W., Lakefield, Ont.

[Broadcast by hand, then harrow it in; 200 lbs.

SIR,—How many crosses from a native cow and a thoroughbred bull will produce a pure-bred; if four will not, what are the reasons?

SUBSCRIBER.

[Perhaps some of our readers may reply.]

Premium for Sugar-making.

SIR,—Is there a law passed in the Dominion offering a premium to any person who should establish a successful manufactory of beet-root sugar or sugar from sorghum in Canada? If so I would like to obtain a copy of such act.

A. C. K., Janesville, Wis., U.S.

[We are not aware of any offer being made by our Government for such a purpose in Ontario. We believe there is some inducement offered in Quebec. Perhaps some of our readers might inform you. But we are rather afraid that such grants are made for individual or local favors, under the name of public benefactions.]

SIR,—A new life seems to have come to us Nova Scotians. We are determined to be independent of our American neighbors for our breadstuffs. We can and will raise wheat, at least, enough for our own consumption. At one time we raised plenty for our own use, but the weevil came and we became disheartened. The weevil has done as much evil in other countries, and the farmers tried again and are now large exporters of wheat and flour. A writer in the *Annapolis Journal* expresses the feeling of our people when he says,—"We can and must raise our own bread." The cost of breadstuffs imported into this province last year was about $400,000. We can raise as good crops of wheat here as in the States that supply us. The average produce of our country for different years is from 11 to 15 bushels to the acre. The average of the State of Ohio (the great agricultural state) for ten years was but 10 bushels. Our farmers need to read such agricultural papers as the FARMERS' ADVOCATE more than they do.

SIR,—Can you in one of your numbers, say May, give the proper rotation of crops, as a help to all young men going into farming?

W.H.S. LaP., Elora.

[The rotation of crops suitable for a farm must depend greatly on circumstances, nature of the soil, etc. The Norfolk or four-year rotation is: hoed crops (as potatoes, turnips, etc.), grain crops, clover or other soiling-crop, grain. In this rotation one-fourth of the land is under manured crops, one-half grain, and one-fourth clover. This can be easily extended into a five-year course by causing a year's pasture to succeed the clover. In a future number we purpose entering into the subject more fully.]

SIR,—I have a valuable horse rising six years old. He is sick, and I don't know what ails him. He eats well and seemingly feels well, but he does not pass his water freely, and has no command of his tail. He is also very costive, and passes his excrement with great difficulty. I will feel much obliged by you telling me what his ailment is and how to treat him. The tail hangs quite loose and the excrement can be seen at any time.

R B., Dawn Mills.

[The horse must have received an injury of the spinal cord from a stroke or a fall. Keep his bowels open by gentle food, and give him exercise every day.]

G. T., Bright P. O., asks for information regarding pearl millet, its cultivation, etc. Pearl millet requires to be sown thin in good soil, in drills thirty to thirty-six inches apart, and to be kept free from weeds. It requires a long season to ripen its seed; however, seed may be procured any year from a more southern climate than that of Canada. It grows eight feet and upwards, and tillers greatly, hence the good policy of thin seeding. A single head sometimes produces as many as twenty leafy, short-jointed stalks. It is also called catmillet, from a resemblance of the heads to cats' tails, close, stiff spikes.

To J. C., Carsonby.—Your letter of enquiry was received too late for a reply in our April issue, and reply now would be useless. However, lime would produce no effect on the crop in the land you write of. Lime makes organic elements in the soil applicable for plant food, and of those elements your land is deficient.

SIR,—How can I keep ants out of a sugar-barrel?

SUBSCRIBER.

[Place the barrel on a bench, and the legs of the bench in tins of water. The ants cannot get across the water.]

The Family Circle.

"Home, Sweet Home."

UPS AND DOWNS;

OR, SCENES FROM LIFE.

"I shall be very happy—won't you?—when we have a little money laid by," said Philip Clayton's pretty wife, as she poured out tea for him in their cheerful little parlor, through whose open window stole the soft breath of summer, laden with the fragrance of the sweet-briar that fringed the grass-plot, and the honey-suckle that draperied the rustic porch.

"I am very happy now," replied Clayton, smiling, as he glanced from the fair face that looked on him to the laughing boy who was romping with a spaniel on the grass.

"Well, and so am I,' said Mrs. Clayton, smiling also; it would have been strange if she was not happy, with a husband who loved her devotedly, and no sorrow or danger glooming on the sunny horizon of her life. "But you know what I mean—it will be a great comfort and satisfaction when we are able to lay up something as a provision for the future. And think what a pleasure it will be to find the interest coming in at once to help us!"

"No, no!" laughed Clayton; "to carry out the thing properly, we must not spend the interest, but lay that up to accumulate into a large fortune by the time we are three or four score years old. But come, Hetty, let us not concern ourselves so much about a future that may never come. If it does come, God will, I trust, enable us to provide for it; but the blessings of the present are ours to enjoy and be thankful for. So give me another cup, and then let me hear that song you sang me yesterday; it has been echoing in my ears all day; and every line I wrote seemed to be accommodating itself to the tune."

So the song was sung, and others followed, drawing the child dancing in from his gambols to hear the music; and the evening passed pleasantly as it was wont to do, making Mrs. Clayton forget, in the happiness of the present, her anxiety for the future.

Years passed by, and found and left as great and yet greater happiness at the little flower-wreathed cottage—for other childish voices made its walls resound with merriment, and not one blessing had been recalled to leave a shadow on remembrance. Moreover, the cherished wish of Henrietta seemed on the point of being realized; for the first hundred pounds were nearly amassed by their care and frugality out of Philip's salary from the bank where he was a clerk; and already his over-anxious wife reckoned the five per cent. interest in those days given, as the small yet welcome addition to their income which should enable the second hundred to be more quickly collected.

Even Philip knew not how great a hold the desire of providing against contingencies had on the mind of his pretty and amiable Henrietta. His own nature was generous and hopeful; and, beyond doing everything for the best, he did not much ponder over what might be the freight of the coming years, cheerfully trusting that if they brought him misfortune, they would bring him the means and the strength to struggle against it, or endure. He had at the outset insured his life, which secured some provision for his family, should he be taken from them, and he saw no cause for doubt that his exertions would maintain them comfortably while he lived; and pleasant were his thoughts as evening after evening he walked a mile through quiet lanes, where the trees met and the birds sang sweetly above his head, to the little village where he dwelt among scenes so different from the large town where his occupation lay.

On the other side of the clear stream which glided quietly through the village, stood a house whose inmates had known far less of prosperity than was the portion of the Claytons. Yet there had come a brightness over their prospects; and after many misfortunes, Richard Allen thought that the clouds had passed at length, and the long delayed sunshine was gleaming forth; for a situation as manager of a brewery promised him not merely a competence, but the means of setting his son, a fine boy of fifteen, forward in the world. He had been but six months in his situation, and twice that time in the neighborhood, where he was, of course, but little known, though that little was calculated to win respect; and of all, Clayton perhaps knew and liked him best.

One evening they were leaning over the bridge that spanned the stream, watching Frank Allen as he altered, and worked at, and launched, and guided on its course the little boat which Harry Clayton—six years his junior—was unable to make sail down the stream, and they smiled to see how the child clapped his hands with delight, and how pleased Frank was to aid the ignorance and awkwardness of his little companion.

"Strange," said Allen, "that as men we should lose the feelings which seem inherent in us in childhood and in boyhood, In those years our first impulse is to help those who are weaker or more inexperienced than ourselves. But as time passes, these feelings die away and are forgotten; and how seldom it is that we find men pleased and eager to extend a helping hand to those who are less fortunate than themselves!"

"There are exceptions," replied Clayton, "and I would wish to think they are numerous."

"So would I," said Allen, "and they ought to be numerous; for surely every year of our lives shows us more and more how dependent men are on their fellow-creatures in some shape or another."

"I suspect we need only look into our own hearts to own the truth of that," said Clayton, smiling. "But here comes Mrs. Allen, and I know my good little housewife has been impatiently waiting for us this hour past."

And so she had been; for with all her prudence and frugality, Mrs. Clayton was very proud of her cakes and her preserves, and the Allens were at all times among her most welcome guests. There were but themselves this evening; and long was it remembered at the cottage, and often in after days Henrietta would tell how, when they were going away, Mrs. Allen went back to kiss the children a second time as they slept, and how Mr. Allen said, as he shook her hand, "What a very, very happy evening we have passed!"

She and Philip stood at the door until their friends crossed the little bridge homewards; they watched the crescent moon sink behind the distant hills; and then, closing the door upon the dimmer light which gleamed in starry rays on bough and stream, there soon was rest and silence in the cottage, as everywhere around.

It might have been two hours after when the loud barking of a dog awakened Clayton. His first idea was that it was broad daylight, so bright a light was shining through the window. But in another moment he was conscious that the glow was redder than that of the reddest morning. And springing to the window, he saw flames bursting from the Allens' house.

Clayton hurried to the spot. A crowd was beginning to gather around the house, but its inmates still slept. Efforts were made to arouse them to a knowledge of their danger, which became every instant more imminent, so rapidly the flames spread and strengthened, and the door was forced open at the same moment that a wild shriek rose from within; but suffocating smoke rolled through the doorway, and flames darted their forked tongues round the staircase, and nobody dared to enter.

Mrs. Allen was speedily seen at a window.

"A ladder!—a ladder!" was loudly called for; but there was none at hand; and while some ran off to the nearest place to get one, the unhappy woman cast herself down upon the gravelled walk to escape the fiery death she dreaded. She was taken up insensible, and carried to the Claytons' cottage, which she had quitted in health and happiness so few hours previously. In another minute Allen, who had gone to arouse his son, came with him to another window. The ladder had arrived, and was quickly planted at it, and he was observed desiring Frank to descend.

"Allen! Allen! save yourself; your wife has escaped!" cried Clayton.

The last words never reached the ear they were addressed to, but were lost in Allen's answering cry of "No, no!—my wife, my wife!" as he disappeared to seek the partner of his many years' wanderings and misfortunes.

"Allen! Allen!" was echoed in twenty voices to call him back. But a crash followed—some part of the flooring had fallen in—and he was never seen again.

Wildly the flames rose and fell, despite the quantities of water from the stream which had been so lavishly cast upon them, flickering, and dancing, and soaring up towards the sky, whose stars were now invisible; and casting a broad, red radiance on the crowd, the wide, smooth meadows, and the waters of the quiet stream. Young Frank Allen sat on the grass, gazing on the fiery mass, which blazed. and hissed, and crackled above the form he had so loved and honored. Just old enough to feel to its full extent the anguish of that moment, without the capability of endurance which added years might have imparted, he watched the remorseless flames with an intensity of grief which forbade all attempts at consolation, and resisted every endeavor to withdraw him from the spot.

The night passed, the fire began to die out, and the rising sun found a heap of smouldering ruins where he had left a happy dwelling; while beneath them lay what had then been a living and breathing form, in full health, and all the strength and energy of manhood's prime. Then Clayton led away the sorrowing boy to his own home, where, for the first time, he learned that his mother, whom he had thought safe and well, was suffering greatly—it soon proved, dying—beneath the same roof; and the dawn of another day found Frank Allen alone—an orphan and destitute, without a relative or a friend from whom he had a right to claim protection or assistance.

But this thought did not at first come to grieve him, for all considerations of self were lost in deep and overwhelming sorrow; and he alone was careless of his future lot, while the whole village was busy talking over it, and wondering what it would be. There had been some doubt, too, about the funeral, when it was known that the Allens left nothing; but Clayton set that at rest at once by charging himself with the expenses; and when that day was over, Frank Allen's fate was the undivided subject of conversation.

Several of the most prosperous inhabitants were talking together on the subject. None of them were rich, but all were capable of spending a good many pounds on anything they chose, without much caring if it were wisely done or not; yet not one, while wondering what should be done with the boy, ever spoke of doing anything for him beyond the merest trifle.

"I wonder what he is fit for," observed one.

"I think his father spoke of sending him to sea," said another.

"And the best thing that could be done with him," added a third; "I dare say we could collect money enough to fit him out; I should not mind a few shillings myself towards it, and I should think the parish might do a little."

"Ah, his father thought of sending him in a very different manner," said the first speaker, pityingly. "But all that's one now, and Frank must be content to get his living as he can."

Philip Clayton stood by in silence. He could not join in those remarks—their tone and manner jarred upon his feelings; and as he walked alone along the streamlet's bank, he thought of Allen's words on the last evening of his life. Truly they seemed soon verified; a few pounds from each of those men. and Frank might be given the power of working his way up in the world.

"But poor Allen was right," sighed Clayton; "the impulses of our maturer years are not to aid the weak and helpless."

It was a long walk which Philip Clayton took that night. When he returned, he found Frank Allen still watching the heap of ruins with which he thought all the happiness of his life had fallen for ever. And even so Clayton mused; his own Harry, yet younger and more helpless, might have mourned over the desolation of his home, and been cast upon the coldness and the charity of strangers. But his mind had been made up fully during that long and solitary walk, though indeed the purpose had been gathering there stronger and stronger all the while.

Yet he feared to tell his gentle, loving Henrietta, for he knew that though she had tended Mrs. Allen as though she had been a sister, and wept with Frank, and strove to soothe and comfort his grief with all a woman's tenderness and softness, still money was too dear to her to be easily parted with, even for the sake of one whom she pitied and sympathized with so deeply. But Philip was resolved; and though on hearing that he was going to pay fifty pounds as an apprentice-fee for Frank, to secure for him proper instruction in the line for which his father destined him, his wife shed more tears than words of his had ever caused her to shed before, and reproached him bitterly with throwing away the money they had so slowly gathered, he still was firm; for the memory of Allen's words came as a bitter reproach to human nature in which he could not bear to share

"You ought to think of your children!" said Henrietta, pressing the youngest to her bosom, as if to guard it from some evil which his father's act was drawing down upon it.

"I do think of my children," replied Philip, with much emotion, as he took the other little one in his arms, and glanced out at the field opposite, where Harry was vainly striving to draw Frank from his sorrowful contemplation of the sad, dark spot before them. "I do think of my children; and that, if there were nothing else, would bid me act as I am doing. For I think, Hetty, that one of our beloved ones might have been left desolate as Frank has been. And I think also, Hetty, that we know not how much they may yet be dependent on the kindness and bounty of others. And this thought alone would make me do to Frank as I would should be done unto my own children."

"But this will only make them poorer and more likely to be so dependent," urged Mrs. Clayton, in a tone of feebler remonstrance.

"Oh, Hetty," said her husband, "I wonder that with so much of love there can be such devotion to Mammon in that kind little heart! Do you forget that poverty and riches depend on a mightier will than ours?"

"Then I suppose it must be so," sighed Henrietta. "But it must be a long while yet before we can lay any money out at interest."

Clayton did not answer; but he had learned to know this was indeed a bitter disappointment. However, the letters were written, inquiries were made, and by using every exertion, he got Frank most advantageously placed on board a ship trading to the East.

Five or six months after Clayton received a letter by some encountered vessel, full of the outpourings of a young heart's gratitude; and a year after there came another, but it was the last. In another year Clayton wrote to the owners, when he heard that the ship had been chartered and employed in going from one part of India to another, and had not returned; but no accident to Frank Allen had been reported. So as his own letters to Frank remained unanswered, Clayton supposed that his young charge had grown weary of gratitude.

Yet, though Henrietta sometimes drily intimated that it was an unmerited return for all his kindness, Philip never regretted the part which he had acted, for he wanted not gratitude and thanks, but merely the consciousness of doing right, and the approval of his own heart. This was pleasanter to him than the gratification of her darling wish—the having money out at interest, which had been at last attained—was to his pretty, gentle and amiable, but anxious and calculating wife.

How quickly years glide away, and how soon people are forgotten when they are no longer seen! It took little time for Frank to pass from every one's remembrance but the Claytons'. And then Clayton moved to a distant sea-port town, where a higher salary was given him by another bank, and he and his were soon forgotten.

(To be Continued)

BEAUTY.—Lord Byron observed, justly, that the best part of beauty is that which a picture cannot express. Lord Shaftesbury asserts that all beauty is truth. True features make the beauty of the face, and true proportions the beauty of architecture, as true measure the harmony and music. In poetry which is all fable, truth is still the perfection. Fontenelle thus daintily compliments the sex when he compares women and clocks—the latter serve to point out the hours, the former to make us forget them. There is a magic power in beauty that all confess—a strange witchery that enchants us with a potency as irresistible as that of the magnet. It is to the moral world what gravitation is to the physical. It is easier to write about beauty in women, and its all-pervading influence, than to define what it is. Women are the poetry of the world, in the same sense as the stars are the poetry of heaven. Clear, light-giving, harmonious, they are the terrestrial planets that rule the destinies of mankind.

VIRTUE is not a mushroom that springeth up of itself in one night, when we are asleep or regard it not; but a delicate plant that groweth slowly and tenderly, needing much pains to cultivate it, much care to guard it, much time to mature it. Neither is vice a spirit that will be conjured away with a charm, slain by a single blow, or despatched by one stab. Who, then, will be so foolish as to leave the eradicating of vice, and the planting in of virtue into its place, to a few years or weeks? Yet he who procrastinates his repentance and amendment, grossly does so; with his eyes open, he abridges the time allotted for the longest and most important work he has to perform; he willingly avoids the possession of the most durable and satisfying pleasure accessible to human kind—a pure mind, scorning vice in all its forms and loving virtue under all conditions; he is a fool.

SUSPENSE.—I believe that, to the young, suspense is the most intolerable suffering. Active misery always brings with it its own power of endurance. What a common expression it is to hear: "Well, if I had known what I had to go through beforehand I never should have believed it possible that I could have done it." But it is a dreadful thing to be left alone with your imagination—to have to fancy the worst, and yet not know what the worst may be; and this in early youth has a degree of acute anguish that after years cannot know. As we advance in life we find all things here too utterly worthless to grieve over them as we once could grieve; we grow cold and careless; the dust to which we are hastening has entered into our hearts.—*Miss Landon.*

Minnie May's Department.

My Dear Nieces,—Do you always study economy of time in doing your household duties. The details of good housekeeping must be included in thorough female education, and it is very desirable that they should be acquired when young, and so practised as to become easy to be performed dexterously and expeditiously; for, important as they are, they must not be allowed to consume too much time. The ready wit and ingenuity of a woman cannot be turned to better account than in devising methods of expediating household affairs, and produce the best effect with the least expense of labor and time.

The habit of setting yourself to work quietly, promptly and resolutely helps in the business of the day wonderfully. I have seen one sister half through a task that was not agreeable to either whilst the other was lamenting the necessity of doing it, and considering how to get through it with least trouble. Those who talk most of what they do, or going to do, are not those who accomplish the most. I cannot comprehend how a woman of method and activity can have her whole attention engrossed by domestic affairs, let her household be considerable as it may; for supposing it is great, there are more persons to take part of them off her hands, with a proper distribution of employments and a small share of vigilance. The mistress of a family should superintend every thing herself. By good management every intelligent person will seek time for reading and cultivating the mind, without neglecting their little house duties. As a good means of improving time, we would advise our young nieces whatever they do to do it heartily, and to give their whole attention to it. If from any circumstance they find their mind incapable of fixed application to a book which they are reading, or a translation they are making, or a new piece they are learning, they should not sit over the task in vain, but immediately change the occupation for something they can attend to, and when they have succeeded in fixing their attention on any task however light they have managed their mind and economised time better than reading the profoundest work with wandering thoughts. I do not call pleasure's time lost or idleness; on the contrary, a certain portion of your time employed in recreation is very useful. Pray, do you be as attentive to your pleasures as to your studies. In the latter observe and reflect upon all you read; be watchful and attentive to all you see and hear, and never have it to say, as many do, of things that were said and done before their face, "That, truly, they did not mind them, because they were thinking of something else." Why were they thinking of something else? and if they were, why did they come there? The truth is, they were thinking of nothing. Remember, dear nieces, do well what you are about, be that what it will, it is either worth doing well or not at all.

Minnie May.

To Maggie M.—A good wash for rose bushes is made with whale-oil soap, or with carbolic acid; pulverized charcoal is also very good.

Prejudices, it is well-known, are the most difficult to eradicate from the heart whose soil has never been loosened or fertilized by education; they grow there as firm as weeds among rocks.

We are never so well inclined to believe in a stroke of good fortune as when one has just been dealt to us.

Like as a master ought to pay the whole wages, so likewise the servant ought to do his whole work.

RECIPES.

TO CURE IVY POISON.

Poison occasioned by the running ivy may be cured by first bathing the afflicted part thoroughly with a strong solution of salt and water, and then anointing two or three times a day with sweet oil, till a cure is effected.

FOR SEA-SICKNESS.

A California paper gives this remedy for sea-sickness, which it declares "perfectly efficacious." Make a mild decoction of the bark of the wild cherry, about the strength of breakfast tea, and take a wine-glass full before every meal for three days before going to sea; on the last day take a mild aperient.

SIMPLE, BUT SURE WORM MEDICINE.

Two tablespoonfuls of pumpkin seeds peeled and pulverized, or give to a child who will chew fine. The seed does not kill, but stupefies the worm. The next day give castor oil or any other cathartic, and if worms are present in the system they will pass off.

RATAFIA BISCUITS.

Ratafia biscuits, usually served at dessert, are made as follows: Take four ounces of bitter almonds; blanch and pound them fine; add the whites of four eggs, one at a time as they are broken; then mix the mass together with sifted sugar into a light paste; roll it out and cut in shape; line tin plates with buttered paper and lay the biscuit thereon and bake in a hot oven. The paste is to be made so light that it can be taken up with a spoon.

FURS.

Lay aside your furs in the spring before the moth millers deposit their eggs. Take them in the open air and beat or whip them thoroughly with a light rod or cane to get out all the dust. Then place in their respective boxes with a small quantity of camphor-gum dropped in each. Inclose these in thick paper sacks; new flour sacks are excellent for this purpose, as the paper of which they are made is free from holes. Tie up tightly, or better still, paste the top edges of the bags together.

RINGWORMS.

Oil of paper, made by burning a sheet of ordinary writing paper upon a plate, will cure a ringworm, which is caused by contagion or some impurity in the blood. The oil will be seen after the paper is burned in the form of a yellow spot; this applied with the finger twice a day will in a very short time cure the worst of ringworms.

MUSTARD PLASTERS.

1. Mustard for plasters should be mixed with the white of an egg, and it will not raise a blister.
2. Take a tablespoonful molasses, more or less as desired; stir thick with mustard and having spread it on a cloth, apply it directly to the skin; it will not blister even if kept on for an hour.

VEGETABLE PIE.

It should be made of the cold remains of vegetables. Have something substantial, such as haricot beans, peas or maccaroni, some potatoes, and either greens, or carrots, or celery, or something of that kind; then put the substantial thing in the middle of the pie dish and across it, and put in the other things between. Moisten with melted butter or onion sauce, and cover with a crust either of potato mashed with egg, or with bread crumbs with little bits of butter on the top. Add pepper and salt to taste. Tapioca or rice soaked in milk and water, and seasoned with pepper, salt and mustard, may be used to fill up the spaces; a little goes a long way if well soaked. The pie should be baked till a golden brown color, and will be found very savory.

Home-baked Bread.

Most families used to bake their own bread, but now scarcely one. I consider this one of the greatest errors that agriculturists or other persons having families can commit. I have often thought so, and wondered at it years ago. Is it because they do not know how, or because it is too much trouble, or both? I believe laziness has a very strong hold of it, or it may be they are more refined in these last few years, and would rather buy than make their own—spend more to do less work, not considering the loss they incur. An article in an agricultural paper, which has called forth these remarks, speaks of bread being baked once a week, but I say once a fortnight. I bake once in two weeks, more or less, according to the number in the family; bake one bushel of flour at a time, and the bread we are now using is over a fortnight old, as good as it was at three days. I do not use the best flour except as a change. Baker's bread is very well when fresh, but dry when a day or two old, requiring something extra to get it down—so I don't know how it would be if kept for two weeks. Bake your own bread, and save the extra expense and loss, besides having something substantial upon which to perform a good day's work.—[J. S. C.

Keep the Children Happy.

Invent every possible amusement to keep your boys happy at home evenings. Never mind if they do scatter books and pictures, coats, hats and boots! Never mind if they do make a noise around you with their whistling and hurrahing! We would stand aghast if we could have a vision of the young men gone to utter destruction for the very reason that, having cold, disagreeable, dull, stiff firesides at home they sought amusement elsewhere. The influence of a loving mother or sister is incalculable. Like the circle formed by casting a stone into the water, it goes on and on through a man's whole life. Circumstances and worldly pleasure may weaken the remembrance for a time, but each touch upon a chord of memory will awaken the old time music, and her face, her voice, and her loving words will come up before him like a revelation.

The time will come, before you think, when you would give the world to have your house tumbled by the dear hands of those very boys; when your heart shall long for their noisy steps in the hall, and their ruddy cheeks laid up to yours; when you would rather have their jolly whistle than the music of Thomas or the songs of Neilsson; when you would gladly have dirty carpets—aye, live without carpets at all—but to have their bright, strong forms beside you once more. Then play with and pet them. Praise Johnny's drawing, Betty's music and baby's first attempt at writing his name. Encourage Tom to chop off his stick of wood, and Dick to persevere in making his hen-coop. If one shows a talent for figures, tell him he is your famous mathematician; and if another loves geography, tell him he will be sure to make a good traveler, or a foreign minister.

House Decoration.

Some years ago I was in a very large, elegantly furnished parlor. Carpets, pictures, mirrors, sofas, chairs, were all in exquisite taste. In front of one of the mirrors was a graceful statuette, and lightly twined around it (not, however, hiding its beauty) was an ivy spray. It was the only bit of foliage in the room, and nothing else seemed so attractive. The contrast between the pure white marble and the dark glossy green of the fern leaves over it was very pleasing. Glaring colors are not in good taste; but few of us know how the appropriate blending of harmonious tints refreshes the eye. Traveling round Quebec in the villages where French peasants live, you are astonished to find five or six different shades of color used in the outside decoration of a cottage, however poor or plain. But the tints are almost always very soft and pleasing, and the eye rests on them, both in the midst of winter snows and summer heat, with satisfaction. We are learning that glaring white paint or red brick do not please the eye. It seems almost impossible to give a furnished look to a room with walls of dead white; in winter they are especially bare and cold. Nor will plants look as well over them as if running over the soft tints of kalsomine. The glare of the sun over pure white is bad for the sight; nor will pictures and statuettes look as well over it. The decoration of houses within and without, and the blending of colors in harmony, is every year receiving more and more attention. In Louisville, Ky., on one of the main streets, is a doctor's office, the roof of which is a mass of green plants in floral boxes. In front, on the eaves, is a long box two feet wide going across the entire width. This box was a mass of portulaccas and verbenas, while from the corners long drooping vines float down to the lower windows. On the roof was a staging of successive strips with pots of flowers, and here and there were large pots or boxes in which grew the stately Ricinus, giving a thoroughly tropical appearance to the whole. In one tub a pumpkin seed had been planted, and the vine made a rustic arbor. Water was pumped up from below and the plants watered with hose. Many persons have only small yards, wholly paved; but if they have never tried growing plants in boxes, they have no idea of the beauty and bloom they may have around them. A green vine within, growing over a softly-tinted wall, may give the eye constant refreshment and pleasure.

Uncle Tom's Department.

My Dear Nephews and Nieces,—How beautiful are the rosy footsteps of May? Less showery and changeful than April, and not so heated and burdensome as June, she stands a gentle mediator between the two, gradually leading us forward to the season when all is sunshine and verdure and fruition start into new life at her approach. She scatters in her path the sweetest flowers of nature, and everywhere breathes fragrance and joyousness. The birds of the air are carolling her welcome, and even the mute beasts of the field seem happier at her coming. In times of yore the first morning of May was ushered in with music and songs and merrymakings. What cheerful hearts our brave forefathers must have had? The young maidens rose with the first dawing of the May-day morn, and went to bathe their cheeks in May dew, and the men and boys to gather green boughs and wild flowers wherewith to deck their homes for the summer festival. The tallest tree was reared as a Maypole on the village green, around which the lads and lasses danced and sang till sunset.

This May-day celebration, they say, was but a relic of an old Pagan festival. May-day cannot be celebrated with any satisfaction by our boys and girls. The flowers are not abundant enough, and the weather is apt to be unpropitious. We think a floral festival can be much better enjoyed on the last day of May than on the first. Still if May-day itself must be given up the woods can be enjoyed during the month; they will soon be bright with foliage, and how delightful to see the bright sun peeping through their branches, as if to seek some lonely though loved flower. Not with but a wise purpose does nature thus yearly renew her youth and clothe everything with verdure and flowers. Among the early flowers we will see the violet, crocus, buttercup, daisy, field hyacinth, blue bell, the brilliant tulip, the rich peony, with many other beautiful flowering plants, roots, and shrubs.

Which of my nephews or nieces will have the most and nicest to write and tell your old Uncle Tom about.

Uncle Tom.

PUZZLES.

45—EASY CHARADES.

I.

My first gave us early support,
My next is a virtuous lass,
To the fields if at eve you resort,
My whole you will probably pass.

II.

My first is a native of the ground,
In English countries much prevails,
My next in every county found,
My whole was never out of Wales.

III.

My first if you do you won't hit,
My next if you won't leave it,
My whole if you do you won't guess it.

IV.

My first makes all nature appear with one face,
At my second is music and beauty and grace,
And if this charade is not easily said
My whole you deserve to have thrown at your head.

46.—SQUARE WORDS.

1—A thought; loved; to win; an Italian river.
2—Quiet; an answer; exhibition; an inhabited place.
3—An open space; a plant; wander to; sharp.
4—Birds; a response; improve; finals.

47—AN ENIGMA.

My first is in goose, but not in hen,
My second is in yard, but not in pen,
My third is in cat, but not in dog,
My fourth is in snow, but not in fog,
My fifth is in war, but not in fight,
My sixth is in day, but not in night,
My last is in hail, but not in rain,
My whole is a city built in Spain.

Minnie Gould.

48—DROP LETTER PUZZLE.

The answer is an adage very pleasant to remember when work is done. Every other letter is omitted:

a - l - o - k - n - n - p - a - m - k - s - a - k - d - l - b - y -

49—EASY SYNCOPATIONS AND CENTRAL ACROSTIC.

1. Syncopate a thread-like substance and leave to shoot. 2. Syncopate the shore and leave expense. 3. Syncopate the name of a wise Greek and leave shortly. 4. Syncopate a part of a flower and leave a loud sound. 5. Syncopate tumult and leave part of the face. 6. Syncopate a round roof and leave an animal. 7. Syncopate to languish and leave to fall. 8. Syncopate a kind of play and leave part of the head. 9. Syncopate a relative and leave a city of Lombardy. The syncopated letters read in order name an American city.

Lucy Niles.

50—DIAMOND PUZZLE.

1. A consonant. 2. A plural verb. 3. Part of the human frame. 4. To turn from the truth. 5. An emigrant. 6. Often a pitiable result. 7. A consonant. The perpendicular letters are the same as the fifth item.

H. Clark.

51—ILLUSTRATED REBUS.

52—BEHEADINGS.

Behead a vessel and leave a grain.
Behead a story and leave a liquor.
Behead a shrub and leave space.
Behead an animal and leave part of the head.
Behead a kind of fish and leave to listen.
Behead to cry and leave part of the head.
Behead learned and leave anything.
Behead an animal and leave another animal.

Maggie S. McLaren.

53—NUMERICAL ENIGMA.

I am composed of 22 letters.
My 17, 7, 14, 15, is an officer.
My 19, 5, 4, 13, is an actor.
My 16, 20, 21, 11, is a tube.
My 6, 8, 18, 11, 22, an edentate animal.
My 10, 2, 9, 1, 3, 12, 5, is a country in Africa.
M whole is good advice.

54—ENIGMAS.

I.

I've seen you where you never were,
And where you will never be,
And yet within that very place
You shall be seen by me.

II.

In spring I am gay in my attire; in summer I wear more clothing than in spring; in winter I am naked.

III.

In camps about the centre I appear,
In smiling meadows seen throughout the year;
The silent angler views me in the streams,
And all must trace me in their morning dreams.
First in each mob conspicuous I stand,
Proud of the lead and ever in command.
Without my power no mercy can be shown,
Or soft compassion in their hearts be known;
Each sees me in himself, yet all agree
Their hearts and persons have no charm for me;
The chemist proves my virtue upon ore,
For touched by me he changes it to more.

Answers to April Puzzles.

38—Seal.
39—"Full many a flower is born to blush unseen."
40—Duck, Upon, Code, Knee.
41—1 Ploughshare. 2 Headstrong. 3 Winchester. 4 Assistant.
42—Grave, Rave, Ave, V.
43—Women.
44—Bismarck, Irritate, Slovenly, Meanness, Abundant, Ruth, Hero, Complain, Keystone.

Names of Those Who Sent Correct Answers to April Puzzles.

Minnie Gould, Maggie S McLaren, G McLaren, Ettie N. N Barney, T G Blackwood, C. Dawson, M E Gardner, Francis Mernn, Thos Butler, R J Gibson, Bessie Barker, Geo Taylor, Noah Bayley, Edwin West, Sarah J Dutton, Henry Frankfort, Jessie Curry, Maud Kinnon, Henry Marling, E Anderson, Niven Cox, Jane Taylor, Theo Summers, J E Freshman, Susan Jones, A J Williard, John Scott, Ellen Burroughs, Susan Shore, Rosie Philips, Geo Trevail, Alex McKay, Henry Thomas, M A Lyons, Octavus Crane, C L Leamington, Mary Weekes, James McIntyre, William Craw, Annie Fleming, Minnie Flood, J E Cowan, Chas Brown, Ailly Mercer,

Honorable mention is made of J Taylor, having answered the greatest number of puzzles correctly.

HUMOROUS.

A gentleman being once asked why he talked to himself, candidly answered, "Because I like to converse with a man of sense.

Professor (looking at his watch)—"As we have a few minutes, I should like to have any one ask questions, if so disposed." Student—"What time is it, please?"

Rector: "Those pigs of yours are in a fine condition, Jarvis: "Yes, sur, they be. Ah, sur, if we was all on us on'y as fit to die as them are we'd do!"

Smart Sophomore—"What fruit would you most resemble when riding on a jackass!" Innocent-Looking Freshman—"Give it up," S.S.—"A beautiful pear." I. L. F.—All right come; outside and I'll try it."

"One day," writes our correspondent, "I was compounding a simple cough remedy for my little three-year-old, who had a severe cold. He stood watching the process, and asked if it was "good." On letting him taste, he exclaimed: "It's awful good, mamma. Let's keep it all for papa!"

It was a colored preacher who said to his flock last Christmas day: "We have a collection to make this morning, and for de glory of Heaben, whichever of you stole Mr. Jones' turkeys, don't put anything on the plate." One who was there says, "Every blessed niggah in de church came down with the rocks."

How They Shop.

[*Written by a Fatigued Dry Goods Clerk*]

A woman enters a dry goods store,
Steps to a clerk who stands near the door,
Asks him to show her the latest style,
And she pulls over the goods meanwhile.
Says she: "I want a dress for my niece,
Will you please show me that under piece?
Oh? I didn't see 'twas a polka spot,
That is too near the one she's got,
That piece with stripes would just suit me,
It's just as pretty as it can be;
But she wants a better covered ground,
With a sort of vine running all around.
She don't want too dark nor yet very light,
Nor a striped piece nor yet very bright,
I think she'd like what you showed me last,
But do you think the colors are fast?
Cut off a bit, before I decide
I'll take the piece home and have it tried.
I had a dress like that last fall,
And the colors did not wash at all,
I like those patterns there on the end,
I'll take a few samples for a friend;
Now one of this if you'll be so kind,
And a bit of that if you don't mind;
They're the nicest styles I've seen this year;
I most always do my trading here.
I've got a piece that came from here
I've forgot the price—'twas pretty dear,
It's a sort of dark plain stuff;
I want to match it, I've not enough,
Do you think you have any in the store?
The dress is spoiled if I can't get more.
Will you put these samples in the bill?
I'll know where I got them if you will,
I'll take them home; if she thinks they'll do,
You'll see me back in a day or two."

Commercial.

FARMER'S ADVOCATE OFFICE,
London, April 28, 1879.

The early part of this month found the roads in an almost impassable state, and since they have settled down the fine weather has put the land in a state for cultivation, and farmers have been busy with seeding. Trade in general has been quiet, and as is usual with this season of the year, little doing.

WHEAT.

Prices have given way somewhat the past ten days, and this coupled with the very low freights now offering, has enabled shippers to fill some orders at the limits they have been able to get, which have been low. The movement of grain from the west since the 1st of January has been very large, amounting to some 19,400,000 bushels. The stocks in the west are still large, and there is a good deal still in farmers' hands.

Keene and his co-operators have arranged to carry their wheat into June. This has the effect of keeping prices steady for the time, and prevents legitimate business being done. Should the crop reports and crop prospects continue favorable up to that time, we imagine their feelings and situation will not be at all enviable. Stocks in this country are not very heavy, holders having learned a lesson last spring they will not very soon forget. We are of the opinion there is still a good deal in the hands of farmers, and would not be surprised to see some free deliveries after they are well through with their seeding. Should everything look as favorable as it does now, we think they will do well to clean out their granaries.

PEAS

Are about done for this season, and what few remain are so scattered and such small lots that they are troublesome to get together.

BUTTER.

The wind-up of the butter trade this year has been bad, and not at all pleasant for the owners. Butter that cost from 12c. to 15c. on this side has been sold in Liverpool at from 22s. to 50s. per cwt. This is most disastrous, and will show that if farmers have been getting low prices it has not been at their expense, as very many of them think.

We note the advent of a goodly number of butter factories the coming season, and we hope their success will demonstrate clearly to the mind of every butter-maker in the land the importance of falling in with this system. Our farmers and dairymen must cultivate the habit of seeking the market, and not wait for the market to seek them. Another thing they must do, and that is make their goods to suit the tastes and markets.

CHEESE.

The bottom seems completely gone out of the cheese market. We have never in our recollection seen cheese as low at this season of the year. The stocks of old cheese are very heavy, some 100,000 boxes more than this time last year, and it is estimated there is still enough to come forward to meet all the requirements of the trade.

The same remarks on butter will apply to cheese, and the wind-up will be quite as calamitous. We know of some large lots from this section that have lately gone forward, and, which had they been sold in their proper time, would have brought 7c to 8c, but we don't believe they will now nett the owners more than 4c. Prices are certainly going to stand low, and we hope that this being the case it will give the trade a steadiness and tone which it has not had for some time.

The early make will be a long way short of last year. The season is much later, and all who can are keeping back and by so doing will do something towards helping matters by having as little hay cheese as possible. Factorymen cannot be too particular about the class of goods they make, and we think the fact of making choice goods and marketing them quickly has been pretty clearly demonstrated both by observation and experience to most of salesmen and factorymen throughout the country, and we hope they will act on this principle the coming season.

Little Falls Cheese and Butter Market.

Reported for the FARMERS' ADVOCATE by PROF. X. A. WILLARD.

LITTLE FALLS, N. Y., April 26, 1879.

Canadian dairymen, I believe, have generally kept clear of skim-cheese manufacture, and those who have done so *this year* have been fortunate, as the goods when they arrive in market will scarcely sell for enough to pay freight and commission. "Skims" have been reported in New York at from 1c to 2c per pound. At this market during April new skims have been difficult to sell at any price; and they have for the most part been sent forward on commission, and when sold the producer received but little above the cost of making and boxing. During the past month all old cheese that was back in producers' hands has been sent forward, and sold at prices ranging, for fair to good lots, from 5c to 6½c. New cheese began to come forward in small quantities during the first part of the month, but the delivery was not general until the 21st, when offerings were made from a considerable number of factories. The market all through April may be characterised as *weak*. Buyers have been present in good force at this market, but they have been cautious in their selections and have bought *sparingly*, preferring to take goods on commission. Good full milk cheese from our best factories have sold at 6c, while every day cheese—the cream taken from the night's milk only—brought from 4c to 5c. Where sales have been effected, they have, for the most part, been made to parties who bought to fill orders for the home trade. Farm dairy cheese, when *meaty and of good flavor*, has ranged from 5c to 5½c. All low grades and inferior sorts, whether of farm or factory make, have been hard to sell, and the prices bid have been so low that salesmen generally have preferred to send forward the goods on commission and take the chances as to price.

Butter has been in brisk demand during April, the range of prices the first part of the month running from 16c to 22c, but during the last half of the month prices dropped to from 14c to 16c for fair to good lots. There has been a large weekly delivery of butter from "farm dairies," and sales have been quick and the market active during the entire month.

It is too early in the season to forcast trade in the new crop; but leading buyers and those well acquainted with the markets, agree in the opinion that prices, the coming season, must rule lower than last year—except in case of drouth or other causes to cut off production. New York dairymen will sell all goods as fast as they are ready for market, as this plan, for a series of years, has proved most remunerative.

Late advices from London, England, state that English cheese is unprecedentedly slow. Dutch cheese is quiet. There is an extra demand for American cheese at the reduction of 2s to 3s per cwt. Prices are as follows: American faultless, 50s to 52s; fine, 46s to 48s; good, 36s to 42s; common grades, 20s to 30s per cwt. English Cheddar, 70s to 78s; Scotch, 44s to 56s; Cheshire medium, 46s to 56s per cwt.

BUTTER.

For all sorts of secondary butter there is no sale. Dorsets bring 160s, Jersey 90s to 112s, Danish 130s, American and Canadian 40s to 90s, and creamery 80s to 100s per cwt.

London Markets.

London, May 1, 1879.

GRAIN.

	Per 100 lbs		Per 100 lbs
White Wheat	$1 60 to 1 67	Peas	85 to 95
Treadwell	1 60 to 1 67	Oats	1 05 to 1 15
Clawson	1 60 to 1 67	Rye	00 to 00
Red	1 56 to 1 62	Buckwheat	75 to 85
Spring	1 25 to 1 35	Corn	90 to 1 00
Barley	80 to 1 30	Beans	1 00 to 1 75

PRODUCE.

Eggs, retail	10 to 12	Cheese, lb	7 to 8
Butter	18 to 20	Timothy seed	$1 25 to 1 50
Potatoes, bag	1 20 to 1 30	Clover seed	3 40 to 3 75
Apples, per bush	40 to 60	Hay per ton	10 00
Cornmeal			$1 50 to $1 75

MEATS.

Beef, per qr	$3 50 to $5 00	Mutton, lb	5c to 6c
Pork, per 100 lbs	5 50 to 5 75	Lamb, per lb	5c to 7c

Montreal Markets.

Montreal, May 1.

The market quiet, prices favoring buyers. Flour from $4.65, the highest price fer Superiors, to $3.25; the highest price for fine pollards, $2.60 to $2.80; out bags, $2.10 to $2.16; city bags, $2.30. Grain and provisions unchanged.

Toronto Markets.

Toronto, May 1.

Barley	40 to 60	Cheese	5 to 8½
Spring wheat	85 to 92	Butter	10 to 15
R. Winter	90 to 95	Eggs	16 to 20
Treadwell	90 to 97	Poultry	50 to 60
Deihl	90 to 1 00	Flour	$3 70 to 3 95
Oats	36 to 38	Beef	4 00 to 6 55
Peas	60 to 66	Pork	5 50 to 6 00
Corn	40 to 42	Mutton	5 00 to 6 00
Potatoes, per bu.	1 00 to	Apples, per brl	1 25 to 2 00

Liverpool Markets.

Liverpool, April 28.

	s	d	s	d		s	d	s	
Flour	8	6	to 10	0	Barley	5	3	to 0	0
Wheat, spring	7	6	to 8	0	Pork	47	0	to 0	0
R. Winter	8	10	to 9	2	Lard	32	0	to 0	0
White	8	8	to 9	1	Bacon	26	0	to 26	0
Club	9	1	to 9	4	Cheese	41	0	to 00	0
Corn..cental	4	5	to 4	5	Tallow	36	6	to 00	0
Oats	5	4	to 5	6	Beef	74	6	to 00	0
Peas	6	4	to 6	4					

Chicago Markets.

Chicago, May 1.

Wheat, No. 2 spring, 90c to 91c; Corn, 33½c to 34c; Oats, 25c; Rye, 48c; Barley, 64c to 65c; Pork, $9.43 to $9.45; Hogs, $3.40 to $3.65.

New York Markets.

New York, May 1.

Wheat moderately active; No. 2 Red at $1.13; Rye, No. 2 Western, 56c; Corn, 42c to 44c; Barley dull, nominally unchanged; Oats firm, 31c to 33c; Barley, malt, $1.30; Pork, $10.38.

Comparative Stocks in Liverpool, 31st March, last 5 years.

	Beef. Tierces.	Pork. Barrels.	Bacon. Boxes.	Hams. Boxes.	Cheese. Boxes.	Butter. Pkgs.
1879	1,078	1,683	49,628	10,892	140,116	18,924
1878	5,230	6,915	49,447	10,831	34,727	20,378
1877	4,359	8,906	31,265	7,379	50,238	17,911
1876	11,868	3,392	25,410	3,205	47,866	2,737
1875	19,913	8,791	24,488	3,084	37,937	9,697

COMPARATIVE HIGHEST PRICES PER CWT., 31st MARCH, LAST 5 YEARS.

	Beef. Per 304 lbs.	Pork. Per 200 lbs.	Bacon. Lg. clear.	Hams.	Cheese.	Butter.
1879	91/3	55/	27/6	44/	44/	90/
1878	115/	62/6	28/	41/	66/	115/
1877	97/6	75/	39/6	52/6	73/	120/
1876	125/	95/	..	66/	63/	130/
1875	122/6	85/	..	60/	74/	106/

FAIRS FOR 1879.—TIME AND PLACE WANTED.—Several announcements of fairs and premium lists have already come to hand, and we make our usual request to the secretaries, or executive officers of the various societies, to inform us of the fair as soon as its date is determined. We would suggest to societies the importan e of fixing upon the date early in the season and issuing the schedule of prizes; if this is left until within a few weeks of the fair, the work is often hurriedly done, and those who would compete for those premiums that require preparations in advance, are deprived of the opportunity for doing so.

The Winnipeg *Free Press* says that an excursion of leading Ontario business men will be organized in Toronto to visit Manitoba during May or June.

Stock Notes.

Bow Park Sale.

Among the sales of the day were the following: Sixth Baron Acomb, six months' pure Bates' calf, Mr. A. Whitman, North Leominster, Mass., at a high figure. Waterloo Duke, a ten-months' calf, Mr. A. Macpherson, banker, Michigan, for $600. Mr. Andrew Anderson, of Burns, county of Perth, Ont., secured a superb twelve-months' old calf, Earl of Airdrie 3rd. Mr. Robert Clark, of Griersville, St. Vincent township, Ont., a grand yearling Knightley bull, Baron Fawsley, for $205. Mr. Thomas Stock, of Waterdown, the pure Sanspareil twelve-months' calf Gauntlet 3rd, for $120. Mr. Peter Roy, Brantford township, the beautiful eight months' calf Bolivar 5th, for $195. Fifth Famosa Chief, a fine yearling bull, was secured by Mr. George Hackney, of South Huron, Ont., for $200. Mr. John Hadden, of Moore, county of Lambton, Ont., bought a capital yearling bull, 2nd Baron Rosamond. Earl of Cambridge 7th goes to a gentleman in Michigan for $175. Baron Gano 2nd, a beautiful yearling, was secured by Mr. John Warnica, of Barrie, Ont., at $180. Mr. George Cormack, of West Zorra, Ont., a prize yearling Princess bull, Suleiman Pasha, for $170. Mr. Wm. Campbell, of Leamington, county of Essex, Ont., bought Earl of Cambridge 8th for $180. Mr. Ashworth, for the Indian Institute, Brantford township, became the purchaser of Baron Sharon 6th for $140. Mr. H. Glazebrook, of Simcoe, county of Norfolk, carried off two beautiful heifers, Souvenir of Thorndale 4th and Isabella 31. Mr. Thomas Birkett, of Dover Mills, Base Lake, Michigan, got Countess of Dufferin 2nd. Mr. Belton Snarey, of Florence, county of Bothwell, got a fine young cow Plumwood Elf 4th, at $150. Mr. John White, of Halton, Countess of Brant 8th for $145, and Second Duke of Woodhill much under his value. Among the other purchasers of the day were Mr. John Smith, of Barrie, Ont.; Mr. Thos. Holmes, of Chatham, Ont.; Mr. Richard Coad, of Komoka; Mr. Robt. Thompson, township of Brantford; Mr. Wm. McElroy; Mr. Thomas Blade; Mr. Thomas H. Taylor; Mr. T. B. Fellowes, of Cayuga Co., N.Y.

Geo. Thomson, of Bright, Ont., writes:—"My Ayrshires are doing very well. The calves got by 'Arthur Mars' are coming a good color, are fine, and appear to be just what is wanted. I have sold the two-year-old bull 'Joe' to Mr. Woodcock, of Haysville, and another two-year-old, 'Young Tarbolton,' to Mr. Lawrence Lowell, of Wroxeter; also 'Dandy Jim' to Mr. Anthony Whitehead, of Richwood, Blenheim, and two cows, 'Beauty 2nd' and 'Violet,' to Mr. T. Woodcock, Haysville. Would like to sell some more, as I have a large stock yet—twenty-seven head—and the gold medal cow, 'Mermaid,' to calve yet. 'Arthur Mars' is doing well; he has grown well of late, and I think will hold his own."

The celebrated farmer, J. J. Mechi, of Tiptree Hall, has but six acres of permanent pasture, and yet manages to keep as an average 200 sheep, and from 15 to 20 head of cattle. All food is cut up, no roaming at large is allowed, and supplemental food is invariable given. The sheep are always within iron-hurdled folds, removed morning and evening.

Jardine & Sons, of Vine Vale Farm, Hamilton, Ont., write:—Ayrshires looking well; bull calves in good demand; shipped one to Ormiston Bros., Cuba, also a heifer last January to A. W. Smith, of same place, at fair prices. The spring is very backward here. Fall wheat looks well.

It is stated that the St. Louis Fair Association has determined to place both the Holstein and the Ayrshire cattle on the same footing in regard to premiums as Shorthorns, Herefords, Jerseys, and Devons, at its next fair.

To G. M., Brantford.—Mr. John Gearey, of this city, has a good blood stallion. He is well proportioned and has just the stepping action required for commanding a high price in England. He is the best stallion of his class in this county.

Mr. Simon Beattie is importing by SS. Quebec pedigree stock, viz.: Clydesdale and Percheron horses; Shorthorn and Hereford horn stock; Cotswold rams, and Oxford Downs, Southwold and Lincoln sheep.

PROLIFIC.—On the 5th April last, a cow belonging to Mr. R. A. Roe, of Clarence, Ont., produced three bull calves, alike in size and color. All doing well.

ADDITIONAL CORRESPONDENCE.

SIR,—I send enclosed some grains of millet seed. As it is new in this locality, I would like to know a few particulars about it. 1st—Can you tell from the sample of the seed the kind? 2nd—When should it be sown; quantity to the acre, and on what soil does it answer best; can it be cut more than once? A few remarks on millet in your next issue, that will answer the foregoing questions, will much oblige. H. McD., Clarence.

[The seed you sent is Hungarian grass, not millet. The growth of each are similar, the Hungarian grass growing finer and makes rather better hay. They can be sown any time from 1st to the 20th of June, and grow well on any soil, but like almost everything else, the richer the soil the better the growth. You can only cut it once. Where soil is not very rich one-half bushel per acre is sufficient, but on rich land it requires the three pecks per acre; this prevents it growing too coarse.]

SIR,—I promised my son a gold watch of the value of $100 if he adhered to the principle he adopted—not to touch any intoxicating liquor. He will be 21 years old in June next, and has kept his promise—not even touching the so-called temperance drinks. My object in writing is to ascertain whether a Russell or Waltham watch would be best, and the address of a reliable watchmaker to purchase from. ESIMORPEEK.

[This is out of our line, but to oblige a subscriber would say we recommend the Russell watch; and W. D. McGloghlon, jeweler of this city, we believe, has as good a reputation as any in Canada.]

SIR,—I take the liberty of asking you which you consider the most suitable place to emigrate to—Kansas or Manitoba. I can command $3,000, and wish to get more land. J. M., Askin P. O.

[We have been to Kansas, and cannot advise you to go there. It was bad enough when we saw it, but now the negroes are swarming to it, we should think it would not be as desirable a place to settle in as it was before their migration. From what we have read and heard, we should prefer prospecting in Manitoba. It is our impression that many will do well there.]

PREMIUMS AT FAIRS.—In a large number of cases it is not the money value of the premium that gratifies the recipient; it is the fact that a premium was given at all. Now that Fair schedules are being—or should be—considered, and published, we would suggest to those having the matter in charge, that a number of societies offer as premiums a year's subscriptions to the FARMERS' ADVOCATE AND HOME MAGAZINE, and that those which have done this in a small way at first, have found it so satisfactory that they have added to the number of premiums of this kind and that this custom is increasing. Such premiums do vastly more to promote the objects of the society than mere money prizes. Aside from the fact that one can not fail to be greatly benefited by the teaching of the FARMERS' ADVOCATE AND HOME MAGAZINE, its regular coming once a month is a frequent reminder of the Society and its Fair, and thus the interest of the recipient of the prize in the fair at which it was given is kept alive the whole year. If the officers who have yet to arrange their premium lists will think of this matter, they will see that they can in no other way make the money at their disposal go so far, and at the same time do as much good, as to award a large share of it in the manner suggested.

READ THE ADVERTISING COLUMNS.—Letters are daily received by the editor, asking where stock, fowls, seeds, fertilizers, machinery, etc., can be procured. Information of this kind is given in the advertising pages, if those needing anything will only look there; and often we cannot find room to repeat what is already plainly told elsewhere. Every page of the ADVOCATE, including the covers, is interesting reading, and should be carefully examined every month. In addition to looking after what one may want, the reading of what others have to say, in offering their wares, etc., starts up some new idea in the mind of the reader.

WHAT DOES THIS MEAN?

ONE CENT AN ACRE.—Three hundred and sixty thousand acres of white oak and mineral lands in McDowell County, West Virginia, were sold at at auction last week in New York city, in lots of 1000 acres or more, to suit purchasers. One-half of the tract sold at half a cent per acre, while the balance was sold mostly to Germans, in lots of from 1000 to 10,000 acres, at from one-half a cent to a cent and a half per acre.

New Advertisements.