

# FARMER'S ADVOCATE

AND HOME MAGAZINE.

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## THE FARMER'S ADVOCATE

Home Magazine.

WILLIAM WELD, Editor and Proprietor.

The Only Illustrated Agricultural Journal Published in the Dominion.

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### The Month.

Farmers never had a finer spring to put in their seed in good order. The land worked well; there was no hindrance on account of wet, but unfortunately the rain delayed its genial descent and a spring drouth set in. The winter wheat, instead of spreading, denuded and became thin and spindly, particularly so on the late sown and clay soils. The spring grain has come up very uneven, and in some spots failed to show itself above ground. The meadows have been kept back, and the prospects now foreshadow a light hay crop. Fruit prospects are very good.

If any of our readers are in doubt about having sufficient fodder, sow a few acres of Hungarian grass or millet, even up to the middle of June; you may get a good crop of this fodder. Attend well to the root crops. Sow more turnips, more rape. Transplant your surplus mangel wurzel plants instead of destroying them when thinning out. A good crop of roots and millet may fill the place of hay and grain. Be sure and raise enough to keep your stock thriving next winter.

### STOCK—MORE STOCK, BETTER STOCK

will pay. Do not neglect these hints. Keep the hoes and cultivators going; do not let the weeds get a start. There is only one master on any farm—either Good Management or Neglect. If the weeds are your master you may expect your farm to be owned by some other individual. If you keep down the weeds you may add some neighbor's farm to yours. Weeds and root crops both thrive on the same land; the weeds are destroyed easiest and cheapest before they are sown. Just try it; keep the ground stirred and

you will never see a weed, neither will your crops suffer so much from drouth. Dust your turnips as soon as they break the ground; road dust, lime ashes, soot, plaster, any kind of dust will keep the flies off. It is not a bad plan to sow radishes with your turnip seed; the radishes protect the young turnips and are easily destroyed afterwards. We tried this plan and were satisfied with the result.

Give the calves some ground linseed or oil cake or boiled flax seed in their milk. It will pay. Do not breed from old, ring-boned, splinted, spavined, bad-tempered, balky mares. Shoot or sell them to the greenhorns; get rid of old ewes, old cows and old hens. You cannot depend on your cows having calves if you take them to bulls that are over fat or kept in stalls without exercise. A bull that is moderately worked or allowed to run in a pasture is a surer and better stock producer than a pampered, stall-fed animal. We hear every year complaints of the barrenness of cows in different localities. The lack of exercise of the bulls is the principal cause. Bulls can be made much more profitable to the country by harnessing them in a cart and making them work. Those fat show bulls that are not allowed to move are the principal cause of the sterility of cows. This is also the reason why so many failures are reported from poultry raisers, that eggs do not hatch; the show birds are over-fed and too much confined.

Now is the time to think about killing the ticks. They will leave the ewes soon after shearing and will go into the lambs. Dip or wash the lambs; you then will have more wool and more mutton to sell next year. The surplus will doubly pay you for your cost and labor.

June is the right month to prune your trees. As soon as the leaves have attained their full size you may cut off the limbs and twigs. The wood will now heal over at once. If cut earlier the sap will flow and cause a rot; if in the winter, a bare, dead stub or spot will be seen. If you have trees that require pruning, do it this month.

You might try a little experiment at this time. Take two pieces of growing wood, cut the bark of each slightly, and tie them together closely. They may be on different trees or on the same tree. They will now unite if air is kept from the connecting points. Many pretty devices may be made in this way, and limbs that are likely to break on bearing may be held up by adopting this plan. We have not space to give you an illustration how to do it in this issue, but may in a future issue.

Experiments are being made in different parts of this Dominion to test the raising of sugar and syrup in our country. It is our impression that they may be successful, but we cannot recommend the adoption of these crops until we are better posted about them.

We have again the pleasure of calling your attention to our second letter from our Liverpool correspondent. It should be carefully perused.

Question—Would it not be a good plan to run the mowing machine over some of your old meadows that have been spindly and cannot produce a quarter crop. Although this unusual drouth has affected the early crop, we may have and most probably will have a rapid growth when we have the ground well saturated.

### Contagious Diseases.

Despite the great attempts that have been made by (may we say) designing Americans, and some Canadians, to deny the fact that contagious Pleuro-pneumonia existed on the continent, the fact that the Americans are now freely admitting it and granting money for its extirmination should cause discredit to be placed on statements made by those that denied the existence of it. It has been discovered in England in six different consignments from this continent.

Trichina has now been found to exist in hogs sent from the United States to England. All hogs from the United States are to be slaughtered on landing after the 1st of June. The time may come when this dangerous meat will be excluded from importation to that country.

The Minister of Agriculture for Ontario wrote to us to enquire where the hog cholera had existed in Canada. We gave him the exact location of two places, one of which we had visited and seen the hogs while suffering under it. A Government official was sent to examine and report it, but the report is worded in such a manner as to lead people to understand that the disease had not existed; but it does not state that the disease was or was not the disease known by farmers in the United States as hog cholera. The farmers of this country want facts, not surmises; and statements made in such plain language that they can understand them. We hope we may not have another case of either the foot and mouth disease or hog cholera to report. If we do not report any more, it will be due to the healthiness of our climate, not to judicious steps taken by our Ontario agricultural representatives.

### Hungarian Grass.

This variety of grass is coming more into use every season, as it is suited for almost any soil. It is grown extensively in the United States for a general crop, but has only been grown in Canada through the failure of other crops, or where other grasses have been killed out by the dry weather. This grass should be grown more extensively, as it can be used either as green feed or for hay. It can be sown as late as the end of June, and it has been known to be sown after a new crop of potatoes and succeeded very well. The richer the land, the more seed required, for if sown thin it grows rank and coarse. The quantity usually sown per acre is half a bushel on poor land and three pecks on rich. Millet seed is a similar grass to the above, but grows rather coarser. German or Golden Millet is comparatively a new variety, and from accounts received and appearances indicates that it will rank first. In a season when the grass crop is light Hungarian grass is of great benefit from its rapid growth. All kinds of stock relish it.

**English Letter, No. 2.**

[FROM OUR OWN CORRESPONDENT.]

Liverpool, May 10, 1879.

As the weeks pass on the gloom and despondency affecting all branches of trade in this country seem to increase and intensify. The farmers, as a class, are proverbially grumblers. It is always too wet or too dry—too hot or too cold, and crops too heavy or too light. But there can be no question that now they are suffering severely. With the burdens that they have to bear, it seems utterly hopeless for them to attempt to compete in the open market with their trans-Atlantic rivals, and unless the people of this country are content to see its agricultural interests utterly ruined, some radical change in our trade policy will have to be effected. The party in favor of a system of reciprocity is growing in numbers and weight, notwithstanding that the other night in the House of Lords a motion in its favor was negatived without a division. It seems more probable, however, that should our authorities realise the necessity of a change, it will take the form of a commercial federation with the colonies. At present the colonies have no advantage afforded them in our markets; and we cannot expect them to give us any advantage in theirs. But, if we were prepared to admit Canadian products of all kinds, for example, free into our markets, whilst we inflicted an import duty of say 20 per cent. on all foreign supplies, there can be little doubt that the Dominion would gladly afford equal advantages to our manufactures. Our devotees of Free Trade fondly imagine that we have only to stick to it long enough, and all the rest of the world will come to our way of thinking. This is hardly to be expected when the United States, for instance, reap all the advantages of a free market with us, and are allowed to protect their own industries as they choose. It is easy to imagine what a stampede a 20 per cent. handicap in favor of Canada would create throughout the States. It is, however, only what they richly deserve, and moreover, a little castigation which, in my humble opinion, it would pay British interests all round enormously well to inflict. It would substantially benefit Canada, so often described as our most loyal and flourishing colony; it would be a concession to farming interests at home; it would be in some degree a source of revenue; and it would not perceptibly increase the cost of food to the consumer. The fact is that the working classes here are now less able to pay 4d. a pound for bacon or cheese, than they were to pay double the money five years ago; and anything which tended to open markets for our manufactures, and so increase work and wages, would amply compensate them for any slight addition they might have to pay for their food. Depend upon it that, unless a change comes, and that speedily, the days of that Free Trade which is Free Trade on one side of the bargain only, are numbered.

A few days ago I visited the landings and arrangements for slaughtering cattle landed from New York and Boston, which, since the United States has been scheduled as an infected country, must be kept in strict quarantine and slaughtered within ten days of their being landed. The system is now in full operation at the Wallasey Dock, Birkenhead; further facilities are in course of preparation both at Birkenhead and at the Huskisson Dock on the Liverpool side. At Wallasey Dock there is now accommodation for 1,000 head, and these can be slaughtered at the rate of 80 to 100 head per diem. It is doubtful, however, whether even the extended accommodation, when the whole is completed, will be adequate to the demands of the trade during its height in the hot months, when the dead meat trade falls off. As

many as 3,000 head arrived in one week—equal to 4,500 in ten days—last year; and the numbers are likely to increase rather than to fall off. It is hard to see, therefore, how, even with slaughtering facilities double what they are at present, the animals can be disposed of as fast as they arrive. The ten days' limit has already played considerably into the hands of the speculators and wholesale butchers here, and to the loss of the importers. There are only a few men who can buy for cash as many as 200 to 300 head of cattle at a time, and these men, having put their heads and purses together, are enabled to get whole cargoes at pretty much their own price. Seeing that much of the meat which is bought at 5½d. to 6d. a pound in bulk, is sold retail in the London and other markets at 8d. to 1s. per pound, and seeing also that the offal pays all expenses, the middlemen are clearing heavy profits, and if there comes a glut in the supply, these men may have it still more their own way.

Canadian cattle have, of course, a great advantage in being allowed to be sent into the country alive; and this advantage will be manifestly greater should the anticipated glut be realised, because, in place of being compulsorily slaughtered within ten days of landing, they may be kept an indefinite time to await a better market.

The Spring Show of the Royal Dublin Agricultural Society has just been held. There was a fair sale for the better classes of young bulls, but at a reduction of 30 per cent. at least from the prices of previous years. For inferior animals there was no demand.

A consular report has just been published which shows that the districts in Southern Russia—from which the Mennonites hail—are not in a flourishing condition, owing, amongst other causes, to a succession of bad seasons. This appears to be more particularly the case in the District of Odessa. It appears that land there is rented at 12 to 50 cents the acre, but the taxes fall very heavily on the peasant cultivators. In some parts of the country the condition of the peasantry is stated to be so reduced that many families have not clothing sufficient for all their members, and therefore wear their garments by turns.

Much excitement was caused a few days ago in Tonnin, one of the German ports, by the arrival of the steamer Schleswig with a third consignment of lean store stock from Canada. This consisted of about 500 oxen and 390 pigs. The journals are unanimous as to the excellent condition of the stock and the remunerative nature of the undertaking. These cattle are intended for the grazing districts of Schleswig-Holstein.

At the last live-stock market at La Villette, Paris, there were 107 beasts on offer from Germany and 32 from Italy. Germany also sent 10,170 sheep to this market.

There is stated to be a marked improvement in the class of emigrants now proceeding to the Dominion, the majority of them being possessed of some means. I see it announced that Mr. Donald Shearer of London, Eng., a native of the North of Scotland, has just bought an extensive estate in Canada said to be worth £80,000.

The annual show of cart-horses took place here on the 1st instant. The streets, with the gaily caparisoned horses in long processions, neatly attired drivers, newly painted carts full of boys and girls, and crowds of sightseers, had all the appearance of a carnival. Probably no town in the world has such a magnificent display of heavy horseflesh as Liverpool. Many of the animals were real pictures. A few Canadians figured in the ranks, notably a chesnut (owned I believe by the Liverpool Corporation) which was bred in the neighborhood of Ancaster, Ont. Many of the ani-

mals were worth over £100, and some few could not have been bought for less than £150. It may, therefore, be a question with some of the Ontario farmers whether it would not pay them to breed this class of horses for the heavy work in the British and other commercial centres. These animals are always in active demand at high figures. A span of draught horses was, I understand, recently purchased here for shipment to a mercantile firm in Boston, the price paid being over \$1,000.

Several important shipments of pedigree stock have recently gone forward to Canada, the particulars of which you have no doubt already received. I am informed that other lots of Short-horns, horses, sheep and pigs, purchased in all parts of these islands from the leading stock-raisers, are to go forward the next few weeks. The furor of buyers seems to be turned mainly towards Herefords, not only for Canada but for the States. A stock-raiser from Nevada was making arrangements for the purchase and shipment of 50 of the best Hereford bulls in the country when his operations were cut short by the order of the U. S. Government prohibiting the entry of live-stock from Great Britain into the Union.

As showing the effect of the Canadian and American meat and live-stock imports on our markets, I may state that last Monday at Newcastle-on-Tyne prices receded six cents a stone for meat; at Nottingham the market ruled slow and at declined prices; less money had to be taken at Edinburgh, and a clearance could not be effected; at Birmingham the beef trade was very quiet; at Bristol trade was slow; and at London, the greatest market of all, though the supply of beasts was much shorter than the week before, the market was the worst that has been known for many years. It is anticipated, by those who are in a position to know, that very little improvement can be hoped for until the stocks which were held over last winter, in the hope of an advance in prices, have passed off; and this will of course depend upon the extent to which supplies come in from other sources, though it is expected it will have been effected by the middle of June.

Complaints are very rife in Liverpool as to the inferior quality of Canadian butter now arriving here. Dealers state that they are tired of meeting with losses on these consignments, and are determined to take such steps as will secure them from similar losses to those experienced during the past two or three years on the "grease" which has been shipped from Canada. It is a pity that the efforts of your valuable journal in warning Canadian farmers of the danger which threatens their export butter trade through the slovenly way they have of preparing the article for this country have proved futile. Perhaps the steps about to be taken by the importers to protect themselves will have a better effect.

Much loss has no doubt arisen through there not being proper places of storage for good Canadian butter on its arrival here, so that in hot weather it has gone soft. Mr. W. J. Stevenson of the Canadian Agency, Victoria-st., Liverpool, has established a very elaborate system of refrigerating chambers for the reception of butter and other perishable goods. They are rapidly approaching completion, and as they are the first enterprise of the kind—that is, letting cold storage for hire—which has been started in this country, I hope to be able to send you in my next letter a description of the place in full operation.

It is said that the wheat crop in England has been more than doubled since attention has been generally given to underdraining.

### The Ontario Board of Agriculture and Arts.

Every farmer in Ontario that owns land or pays tax should know something about this Association. The law that gave this body power was framed by some considerate person and was intended to act as an encouragement to progress and for the well-being of the farmer. But unfortunately, man's desire for ease, comfort, power and wealth is and has been in bygone ages abused; tyranny, oppression and greed have too often predominated when man has had the power to carry out his will. This Board, we much regret to say, has for a long series of years been gradually debasing the trust placed in it. This journal has often called attention to some of its duties omitted and to gross injustice done by it; we think the truth would not be exceeded were we to use the harsh words, fraud and deception. There are so many ways of perpetrating fraud and practising deceit, of cloaking the designs and acts of cunning and unprincipled people when in power that it is impossible for the public to attain the real plain facts about half the acts that Dame Rumor and visible facts imply.

The recent emergency meeting held in Toronto with closed doors should now awaken every farmer to strict enquiry. Every member of the Board should be called to account for their acts. The rumors are now so rife and numerous that we deem it proper to publish them. Every farmer in Ontario pays for the support of this Board and has a right to go to any member and ask for an explanation. It is charged:

1. That the Board would not admit the press or the public to its last meeting.
2. That some of the cash books have been destroyed.
3. That no proper accounts have been kept of receipts of cash.
4. That the cash receipts at the last Provincial Exhibition show an enormous difference from the numbers of visitors on the ground.
5. That the Secretary, through whose hands much of the money passes, was an insolvent at the time of his appointment.
6. That the Secretary obtained his position and still holds it mainly through the power of the Hon. D. Christie.
7. That the Board has altered and revised the prize list just to suit particular individuals.
8. That the large sum of between \$10,000 and \$20,000, paid into the Society by the late Col. R. L. Denison, has been entirely consumed, with interest and principal.
9. That a special prize has been awarded to the most worthless spring wheat in this Dominion, and that really valuable varieties have been entirely disregarded.

We have for some years used our influence in favor of the Board, and we now write not in the spirit of hostility, but friendship, that its members may know the charges generally brought against it, and may, if they can, offer such explanations as are necessary to maintain the usefulness of the Board, and for the country's good.

#### DARE TO DO RIGHT!

It is your duty to enquire. It is the duty of every individual member of the Board to give you a straightforward yes or no answer, without prevarication or evasion. Ask for yourselves every straightforward, upright, honest man among them, and we believe some of them are such and dare to do right. The winnowing machine is needed in the Board; there are too many in it. Doubt all who evade, hedge or prevaricate. Truth never harmed an honest man in the long run; calumny may have injured many an honest man temporarily. More truth, more honor, more honesty are wanted on this orb of ours.

### The Dairy Interest.

BY J. SEABURY.

I have been very much surprised at the way in which the visit or tour of inspection of Professor Arnold has been managed so far. When it became generally known that the Association had secured his services the coming summer every cheesemaker expressed himself satisfied and pleased with the arrangement; but I question if that satisfaction is so apparent now. Whether the committee who had the management of this thing are guilty of *bad management* or *selfishness* I am at a loss to know. From some facts which have come to my knowledge I am very much inclined to think the latter has been cropping out pretty plainly. When the arrangement was made every one thought and understood that these lessons and instructions were to be as widely diffused as possible, so as to come within the reach and range of all. To me it would appear to be of paramount importance that these lessons should have been so arranged that all the outside and smaller factories should have had equal opportunities and facilities to attend these lessons. Especially should this have been the case in the early part of the season. Every dealer and cheesemaker knows, and this committee knows or ought to know, that it is very important every factory should get a good start the early part of the season. This being the case, arrangements should have been made to have the Professor at as many points as possible, and these points as far apart as possible, during the month of May. Or in other words, every effort should have been used to have him cover the whole ground during said month of May. With a little good management, careful planning and publicity, on the part of said committee, every cheesemaker in this western section could have availed himself of being present at least one day. But instead of this he has been quietly, and unknown to the general public, to a few of the oldest and largest factories in the country, and these chiefly within a radius of 15 or 20 miles of Ingersoll—the very factories that had no need of him, and to whom his visit would be more of an experiment than anything else. Why was there not a programme made out for the month by the committee, and that programme made public through the press and by circular? so that every cheesemaker would know of his whereabouts. The entire dairy public have a right to have an equal share in the benefits to be derived from the Professor's visit. The committee, whoever they may be, are responsible for this piece of bad management or selfishness, and the dairy public have a right to some explanation for this very strange procedure. Two thousand dollars is too large a sum to fritter away or so arrange that a few favorites may get the benefit. What we want is fair play and no favors, as the source from which this money comes gives each and all the right to demand this from the Board of the Association.

### Butter and Cheese Adulteration.

The time has now arrived when the dairymen, the agricultural societies, the public and the Government should consider if fraud and deception should be allowed to continue in the present wholesale and injurious manner. The present mode of coloring butter and cheese is a fraud and a deception. The butter and cheese made from weak, thin, pale or blue milk of the Holstein and other poor milk cows is by means of this artificial coloring made to appear as rich as the butter and cheese produced from the Ayrshire, Alderney and other rich milk producers. No one pretends to claim that the arti-

ficial coloring used is in any way beneficial to the flavor; neither does it add to the keeping qualities of either, therefore any foreign substance added must be injurious. There can be no intermediate position in anything; either good or harm must result. No one claims any good, therefore it must be the reverse. England is gradually becoming more and more exacting in regard to adulteration. We do not think that Canada need follow the pattern of the United States in this matter; but if Canadians would immediately abandon the plan of using any artificial coloring in butter or cheese, and let our goods stand on their just merits, without fraud or deception, our dairymen would soon realize an advantage in the markets of Europe.

Our agricultural societies should expel all artificially colored butter and cheese from competition for prizes, and attach a heavy fine for using it. It is well known that it is the worst cheese that is now colored. An inspector of cheese and butter should brand every artificially-colored cheese or package of butter as inferior. Of course they may be interested dealers or dealers' friends, and some may profess the farmers' interest for policy; but it is our opinion that the sooner this injurious and fraudulent plan is stamped out, the better it will be for our country.

### Sheep—Sheep—More Sheep.

We frequently travel to different parts of Canada, and it has always been a surprise to us that we see so few sheep kept; in fact, there are no extensive flocks in Canada that we know of—the average lot kept is from 15 to 40; some few farmers may have a hundred or two, but they are rare. When we devoted our attention to farming we had a large flock (that is, for Canada); no one in the township bred as many, and but few in the western part of Canada. We found them profitable, and made money from them—that is more than we can say of all the branches we undertook. If we devoted our time, means and manual labor for our support, we should pay especial attention to sheep in particular, and feel satisfied that they would bring us out right. Our opinion is strengthened by reading the following, which we take from the Kentucky Live-stock Record. We think it deserving your attention:

A wether 15 months old will, in his fleece, have paid all the expense of his rearing. And a first-class wether will to-day bring as much per pound for his whole weight alive as a first-class steer will make per pound for his dressed carcass only. Thus on May 10, in the New York market, first-class wethers and lambs were worth as high as 10½ cents per pound live weight, and first-class steers only that same price for the carcass, or for live weight not above 5½ cents per pound. What a contrast! Now the food and land which, at 3 or 3½ years, will make a steer of 1,500 pounds live weight that will dress 850 pounds beef, will carry in good sheep as many in number as will make, each year, as many pounds of carcass as the steer makes in three years. And the outlay in capital will be less for the sheep than for the steer. The steer pays nothing till he goes to market, but the sheep pay their way every year by their wool. It is true that if sheep of first-class quality were produced in large numbers the price they now hold would decline, but it would never be below the price of beef, and mutton can be grown in one-third the time that beef can, and it pays its way as it goes, making far better returns.

We must produce a first-class mutton-sheep to give a great export in sheep for food in Europe. We can grow mutton cheaper than it can be grown in Europe. The same value in sheep as in beef can be shipped with less danger and at less expense than can beef. Less capital for the growth of sheep is required, and less time exacted to turn it.

To-day even the best steers are of slow sale at the present very low prices, while good wethers and lambs are brisk in sale in all the eastern markets at prices, for the best, of double the best

steers. A good ewe in the last year would have given a fleece, and a lamb which in the New York market to-day would be worth \$8 at the lowest, and more probably \$10. A yearling steer in May, 1877, that was worth ten ewes, will have produced nothing, nor will he for a year to eighteen months longer, and the ewe will have produced another \$10; in all, \$20. Now, ten ewes and their lambs will cost no more to feed than one steer, and they will have yielded \$200 in the two years. The steer in the two years will yield no more at present prices than say about \$85 in the market east, where the fleece and lambs of the ten ewes will in the same time yield \$200. Capital is less in the outlay for the ewes, and so taxes less, and land and feed will be the same—while the ewes will be left at the end of the two years and the steer gone. Here are surely inducements to grow mutton-sheep.

If we overstock our home market, England is open to us and will take all the good mutton-sheep we can breed for an indefinitely long time in the future. We can get into the production of mutton on a large scale in one-third the time that we can beef; and we have only to go into that kind to find in a foreign export all the demand we may ask for, all the supply which we may grow.

#### Politics.

You have been agitated during the past few weeks with another of our expensive and too numerous elections. It is really surprising to see how frantic—almost insane—many otherwise quiet farmers become at such times, and still more astonishing to notice the imagined and assumed knowledge displayed at such times; also to notice the falsehoods and wilfully deceptive plans that are laid to divert or befog the minds of voters.

We much regret that the press morality of our country is at such a low ebb that the truth is concealed and the minds of readers fed with only a deviation from facts. In our capacity we have, despite temptations, attempted to avoid these party issues and conduct this journal in an independent manner. So far have we carried this out as to deprive ourselves of our vote, of our voice at political meetings, and refusing to allow our name to be placed before the country as a political representative. To enable us to form an opinion of men and measures we sometimes take a seat in the audience when any noted speaker or leader is to be heard. We should not attend political gatherings but for the fact that that is the only time any of our rulers are to be heard, and therefore the only time we have an opportunity to ask questions.

Large placards had been posted up throughout this county inviting the public to hear the Hon. O. Mowat, Premier of Ontario, and Hon. Mr. Fraser, Commissioner of Public Works, at London, Ont., on 13th May. The City Hall was filled; farmers from 20 to 30 miles distant were among the audience. We listened patiently until the close of the Hon. Mr. Mowat's address. He did not say a single word about the agricultural interest of this Province. At the close of his address we asked permission to ask the Hon. speaker a few questions.

After waiting again patiently for an hour and a half, we succeeded in overcoming the obstacles thrown in the way, and obtained very clear and decisive answers from Mr. Mowat. Our questions to Mr. Mowat were:

1. Is it the intention of your Administration to attempt in any way the elevation of the elective franchise?

2. Is it your intention to attempt to raise the qualifications of our legislators?

3. What has the Ontario Government done to prevent the introduction or spread of dangerous contagious diseases among the farm stock of this Province?

Mr. Mowat replied:

1. It was not expedient to attempt the elevation of the franchise.

2. It was not necessary for Members of Parliament to own property; they did not deem it advisable to change the present system.

3. He knew nothing about infectious diseases. Hon. Mr. Fraser, the Treasurer of Ontario, a very fluent speaker, delivered a long address, in one part of which he contemptuously alluded to our asking questions. We immediately sprang to our feet and in a loud voice said twice that he dare not answer us two questions. He gave us no chance to ask. We do not believe one in one hundred of our legislators dare answer them truthfully and correctly if we ask them. They are of importance. We may yet ask them if a suitable opportunity occurs.

The Hon. E. Blake also came to this city. The City Hall was filled. Mr. B. is one of our greatest orators. Public notices had been extensively circulated through the county, and farmers flocked in from long distances. Not one word did he say about agriculture. We were allowed, with difficulty, to ask him five questions, viz.:

1. Why a person from the United States was appointed as the first Professor and Manager of the Model Farm at Guelph?

2. Why was that gentleman paid \$1,500 over his salary after his dismissal?

3. Why was the Hon. D. Christie paid between \$1,000 and \$2,000 for an animal that a farmer would not give \$100 for?

4. For what reason was the Agricultural Act altered so as to take the power from farmers of electing members to the Board of Agriculture?

5. Why are the farmers of Ontario compelled to pay the expenses of holding the Provincial Exhibition in Ottawa this year?

Mr. Blake replied to the following effect:

1. He was not aware that a person from the United States had been appointed to that position.

2. That the Government had a right to expend money to remove people from office.

3. He knew nothing about the animal alluded to.

4. He knew nothing about the change in the Agricultural Act.

5. The elected had deemed it proper.

Farmers, we have not asked these questions to disturb the meetings or to affect the present elections, but to show you your duty, that is, to obtain information in regard to all questions respecting our agricultural interests from the highest authority attainable. Every lawyer that represents, or attempts to represent our interests, or obtain our confidence, should be examined by you; if he knows nothing about your interests, you may depend on it, he cares but little about you.

Last year we went to Arkansas; there peevish legislators had infested that State so that the main cry had become repudiation. The moral tone was low and debasing. We were in England last year; there no insolvent is found in the legislative halls; there honor, prosperity and contentment reigned supreme.

We as farmers should ask at a proper time and should receive respectful replies. The Hon. O. Mowat not only replied respectfully, but said he should be pleased to receive any suggestions from us. Shortly after we went to Toronto, as we wished to ascertain about the Provincial prize list and the Board of Agriculture. At the Secretary's office we learned that the supplementary grant of \$5,000 given by the Dominion is to be expended in the following manner: \$1,500 on printed matter to be sent into the Province of Quebec, and a portion or all of the balance for gold, silver and bronze medals. The gold medals are to contain about \$30 worth of gold in each, and are to be distributed as prizes. The cash from the prize list is to be cut short to the extent of \$40 for each gold medal awarded. Thus another re-

vision of the prize list is to take place, and we cannot give you the information we wished about it. Hon. Mr. Pope, Minister of Agriculture, gives a prize of \$50 on the veterinary art, and a prize of \$50 for the best horse for all purposes.

We then went to the office of the Ontario Minister of Agriculture, but he was not in the city. The old and generally respected gentleman, Mr. G. Buckland, was in his office, as he always is—hard at work, without assistance, his eyes dimmed with age. But he could not inform us about the prize list; it was not yet arranged.

The present deplorable state of the Board of Agriculture and Arts of Ontario should necessitate a Government investigation, and an entire change in the present mode of electing or appointing officers. There are too many, and dark, mysterious acts and closed doors should be opened to the public. Three gentlemen in the Finance Committee have already resigned their seats; they have evinced a desire to act justly, and their example might be followed by those who know that bad management exists, and they find themselves unable to prevent it.

We next took the liberty of calling at the Hon. O. Mowat's office. We conversed with him a short time and believe him to be desirous of doing good for the farmers and the country. We have just as much confidence in Mr. Mowat's good intentions for the welfare of this Province as we have in Mr. Meredith's. If our affairs were left in the hands of these two gentlemen we do not doubt but they would be much better administered than by the large number of M. P.'s we have to support. In our conversation we found that Mr. Mowat had depended on his information in regard to our agricultural affairs from sources that we do not deem the best attainable. The great fault with all our politicians has been that farmers have been looked on too much like chattels, and the key of the public exchequer would either repel or attract most speakers and most writers. It is oratory and the pen that rule the mind, and cash rules both.

This month's issue will not be placed in the hands of subscribers until after the Ontario election; therefore let no one suppose we attempted to use the influence of this journal for the purpose of affecting political elections. It is for the interest of all farmers this journal is published.

#### To Correspondents.

We have not space for long articles. Short, plain, decisive answers are solicited to questions, and useful information is solicited on any agricultural subject of importance. Communications have been and will be destroyed when writers do not furnish their true names and proper addresses to this office. It is not necessary for a name to be published, but we should know that writings are bona fide. If errors appear, corrections can be made in the following issue, if our attention is called to such.

If any person at any time should miss any number of the ADVOCATE, they should notify us within one month. We do not profess to keep back numbers in stock. We thank our numerous friends that have taken the trouble to introduce the ADVOCATE to the notice of others and for sending us new subscribers. We hope those that have not yet aided the circulation will try to do so. The more subscribers we have, the more money we are able to expend in improving your paper, and the more the farmers' advocates are circulated, the greater will be the prosperity of the farmer and of this Dominion.

**Danger—Glanders.**

We have recently heard that there has been some instances of this disease amongst horses during the past winter in the Province of Quebec. We see from American exchanges that it is in several parts of the States. We extract the following from the English Agricultural Gazette:

"Dr. Hardwick recently concluded an inquiry into the circumstances of the death of Emily Hulbert, aged eighteen, who, while living with her father and other members of her family over stables belonging to Mr. Bacon, Colville Mews, Kensington, was attacked with glanders, and subsequently died at St. Mary's Hospital. A sister of the deceased, an infant, had previously died of the same disease. Evidence was given respecting the horses which were from time to time brought to the stables and the manner in which they were disposed of; and also as to the nature of the disease called glanders and the possibility of its being conveyed by means of the atmosphere from horses to human beings, especially children. The jury agreed to a verdict that the deceased had died of glanders."

We have heard of the existence of this disease in Lambton. We have also heard that a diseased horse that was affected with farcy in a bad state, nearly or quite developed into glanders, was on the verge of being shipped with a lot of sound horses, but was detected in time to stay the danger. This disease is not very prevalent. There are now some laws regarding it, but we maintain that a more rigorous Act is wanted in Canada to prevent the introduction or spread of any contagious diseases. Our stock is generally healthy and free from any of the dangerous and deadly diseases so prevalent in other countries, and an ounce of prevention is worth a pound of cure. In fact, the only way to keep a good name is to guard it. We should instantly stamp out the least semblance of contagion. We have admitted two dangerous diseases to our farms. We cannot be too cautious nor too careful. Our live stock interest must be our main source to depend upon. We are only doing our duty in pointing out where danger exists.

Our spirits have been recently cast down by the visit of our great destroyer, Death. Mr. R. C. Hammond, Delaware, Ont., is now no more. He was our first intimate acquaintance in this our adopted county. We had grown up together and consulted each other on most matters. He had the rare qualities of a real gentleman in every respect. No one in this township or in this county has ever gained a higher reputation for honor and honesty from all that knew him. He was retiring in habits, and might have been an honor and pattern to our law makers. We much regret his loss. We should all attempt to attain such a name as our esteemed friend bore. An honest man is the noblest work of God.

The Oshawa *Vindicator* is of opinion that while some people desire to pay their debts some do not. A shopkeeper meeting a man out of work on the corner of the street, intimated that he had a load of wood he wished to have cut. "Well," remarked the man, "cut it." "Oh," replied the shopkeeper, "I want you to cut it." "You do," was the rejoinder, "and what will you give me?" "Why you know you owe me an account which you promised to pay me long ago; I'll allow it on that," said the storekeeper. "Ah, you will," said the man; "I don't work in that way—I work for cash, I do." The shopkeeper spoke angrily. But the debtor coolly replied: "Yes, blow away; you're mad, but I have the advantage of you; I owe you an account, and I am going to owe you. You won't get work nor money out of me." And the shopkeeper has not; neither have others who have given credit to men of that stripe. Fortunately all men are not like that; still there are enough to make "cash down" the proper method of doing business.

**GLEANINGS.**

Half gypsum and half dry wood ashes makes an excellent top dressing for grass and wheat when applied quite early in the spring at the rate of two bushels to the acre.

Use a brush and soap-suds on ivies for the scale-bug. I know of no other means for exterminating them. I had a large abutilon nearly destroyed by them, and I used the suds but once, and an entirely rid of them.

**STARTING FUCHSIAS.**—One of the new and successful ways of growing fuchsias is to take a nice thrifty leaf, place in a pot, and in two or three months it will peep out, and soon a beautiful plant will be the result.

**WHEAT HARVESTING.**—The time of cutting influences the quantity and quality of the grain. That which is cut a fortnight before it is ripe is proved to be richer in gluten, and in fact in yield, than that cut when fully ripe.

One hundred pounds of Indian meal is equal to 76 pounds of wheat, 83 of oats, 90 of rye, 111 of barley, 333 of corn stalks, 400 of oat straw, 500 of wheat straw, 666 of rye straw, 200 of timothy hay, 160 of clover hay, 500 of Irish potatoes, 625 of ruta bagas, 909 of beets, 700 of carrots, 700 of cabbages, 60 of beans, 40 of oil-cake, and 1,200 of white turnips.

In starting squashes, Mr. J. T. Chandler, Everett, Mass., places a liberal quantity of manure in a hole for each hill, adds an inch or two of fine soil, levels up with coal ashes, puts in the seed or sets the plants, and after each hoeing scatters on the surface a fresh supply of ashes. In this way, the *American Cultivator* says, his patch is "kept entirely free from grubs, while in his experience every hill planted without ashes will be destroyed."

Judge Warner recommends the Northern Spy, russet, red Canada and greening varieties for cider. He considered the russet the best of all apples for this purpose, being sub-acid, juicy and a good keeper. Apples as a rule are picked too late; they should not be permitted to become mellow. This gentleman advised a dressing of plaster for the trees after they blossom to kill worms and increase the size and quality of the fruit.

**HOW SOME ASSIGNEES MANAGE AN INSOLVENT'S AFFAIRS.**—In the estate of H. J. Vivian & Alex. McDonald, termed absconding insolvents of Thunder Bay, the stock of \$1,642 sold for \$850, and \$708 more were collected. Lawyers' and Sheriffs' fees absorbed \$461, witnesses \$240, assignee's and interim assignee's, including expenses to Toronto, \$290, and there is actually a balance of \$69 in the bank to pay two or three cents in the dollar to creditors.—[Monetary Times.

**MANUFACTURE OF STARCH FROM POTATOES.**—The manufacture of starch from potatoes is very simple. The potatoes are washed, grated fine, and the pulp is stirred in water and strained and settled. The starch falls to the bottom, while the refuse, called slump, is drawn off with the water. The starch is then gathered and washed, and dried in a kiln, when it is ready for packing in barrels for market. A bushel of potatoes produces from six to eight pounds of starch. The machinery and building necessary to work up 1,000 bushels a day costs about \$3,000.

Various estimates are given by different authorities of the manurial value of the constituents of wood ashes; allowing in these estimates the same value for the potash and phosphoric acid as we do in commercial fertilizers generally, a bushel of unleached ashes may be worth from 25 to 40 cents; that is to say, if you should buy the same quantity of potash salts and phosphates in the market as you would get in the bushel of ashes, you would have to pay for it from 25 to 40 cents, according to the quality of the ashes.

The Rural New Yorker notes that in drying corn loses one-fifth and wheat one-fourteenth. From this the estimate is made that it is more profitable for the farmer to sell unshelled corn in the fall at 75 cents, than at \$1 per bushel in the following summer, and that wheat at \$1.25 in December is equal to \$1.50 in the succeeding June. In the case of potatoes—taking those that rot and are otherwise lost, together with the shrinkage—and there is little doubt that between October and June the loss to the owner who holds them is not less than 33 per cent.

**Stock.****Breeding for Draught.**

In relation to breeding draught horses—called cart horses in England—a correspondent of the London Agricultural Gazette says:

Hitherto in the breeding of cart-horses far too little attention has been paid to the selection of sires; the chief recommendations have been a low fee and easy access. It is needless to say that close observation and considerable practical experience in the breeding of the different kinds of our domesticated animals thoroughly convince us of the value of pure blood. I like a good animal, yet I would infinitely prefer, for breeding purposes, a moderate animal of pure strain to that of the most perfectly formed mongrel. We greatly dislike all signs of weakness and effeminacy in the male; he should be wide and deep rather than high and leggy. In the draught horse, good feet and legs are of the utmost importance; the shoulders should be oblique in order that the animal may have free and safe action. The stallion should have a well-arched chest, long, lean head and clear, prominent eye. We prefer to breed from young rather than from very old animals; the produce of aged parents more early assume the characteristics of premature old age and decay. Our opinion is strongly in favor of putting the fillies to the stud at two years old, assuming that they have been well kept till this age. I have heard an objection raised to this system on account of the greater degree of risk. This is for the most part an imaginary evil; it is well known that parturition for the first time is attended with less danger in a young than a comparatively old subject, and the produce of young animals is almost invariably the most vigorous. Not the least important consideration is the saving effected; if a foal can be reared it will pay for at least a year's keep, and the mare will be worth as much at five years old as if she had not had a foal, and the work to be got out of a two-year-old is very trifling. The adult animal when in foal may, if in careful hands, be safely worked up to the date of foaling, provided she is not overdrawn, or during the latter period of gestation used much in the shafts, particularly with heavy loads; on grass farms, where little horse work is to be done during the winter, undoubtedly, a yard having an open shed and manger, with a few loose boxes, however rude their construction, if they are only watertight overhead, and afford some degree of shelter, are far more healthy than close, musty stables, to maintain an animal in a healthy state. A certain cubic area, or free breathing space is necessary for a horse; it should not be less than 600 cubic feet, on sanitary principles.

**Feeding Stallions.**

The following, from the North British Agriculturist, gives the practice there of feeding draught stallions during their season:

A cart stallion over 16½ hands high, expected to serve seventy or eighty mares—a full complement for any horse—and having probably to walk his 10 miles a day, will eat daily from fifteen to eighteen pounds of good sound heavy oats, which should be given with hay or sweet corn chaff, and had better also be bruised. Three or four pounds of white peas are a useful addition to the oats, help to maintain condition, and are less apt than beans to cause itching of the legs, to which such horses are prone. The best of fodder will of course be provided for the stud horse. He should have a little at a time, and if he clears up his corn and chaff will not eat more than fourteen pounds of hay. On Saturday nights, or an "off" day, a few handfuls of grass or clover will prove a salutary change; but vetches are to be interdicted, for neither horses or bulls, having a full supply of them, prove certain stock getters. To counteract the effect of liberal supplies of hard food, necessary to maintain the animal's condition, he should have twice or thrice a week a pound of bruised linseed cake, a few slices occasionally of carrots, swedes or mangels, and on Saturday nights a bran mash, containing an ounce each of nitre and common salt. Horses judiciously managed throughout the stud season, which does not much exceed three months, sustained through the day by a few mouthfuls of hay, a feed of corn, and frequent access to water, and helped out by a bucket of gruel, after a long or trying day, will do their duty well, and will not need any further food than those indicated.

### Breeding Mules.

The announcement recently made that the War Department had sent an agent to the United States for the purpose of purchasing 400 of the large mules used in the Southern States, should attract the attention of English stock-raisers, and induce them to pay some attention to a business which, in the near future, must be an important one. It is a well-understood maxim in warfare that battles are won as much by the thoroughness of the Transport Department as by good generalship; hence every continental nation devotes special attention to this branch of the service, and sees that it is always kept in an efficient condition—for without it no army could march and fight.

The best animals for this department have been found to be mules, and though six have no more strength than four ordinary horses, yet they excel the latter so much in endurance, steady energy, and adaptability to bear all climates, that they may be considered to have no equals for draft purposes in any army. Being able to subsist on almost anything, bearing hunger with a fortitude worthy of an Indian warrior, having a comparatively economical appetite, and possessing high intelligence, patience and perseverance, it seems to us a matter of surprise that more attention has not been paid to rearing them for military use.

The prejudice against them in England is founded on ignorance of their many excellent qualities, and even of their utility for the road and farm, but this would soon be dispelled did persons see the gaily caparisoned mules that draw the coaches of the Spanish grandees, or the nimble creatures that toil day after day over the Andes, or bring the glittering metal from the mines of Mexico over high roadless mountains to the sea-coast.

Their value for army use has been recognized in the late campaign in Afghanistan, for they have thrived on work which has killed camels by hundreds; and that they are appreciated by the authorities at the Horse Guards is evident from the order lately sent to America for 400 to be despatched to South Africa. It is supposed, and very properly, that they can stand the climate, diseases and flies of South Africa better than horses; that they can live on less and poorer food; and that they will bear an amount of hard labor which their nobler kindred cannot.

I was relegated once to the command of a mule-train in the American army for three months, and in that time I had a good opportunity of studying the characteristics of the long-eared quadrupeds; and I must say that I was pleased with them. When ordered to carry ammunition or provisions to the front I could nearly always depend on the power and speed of the mule-train animals to be up in time; but if the horses of the same line had to be relied on I found that, if the roads were bad, they could not accomplish their work; hence on many occasions men went hungry, or without ammunition, when they had to await the arrival of horses. The mules which were found to be of such value in the United States were carefully bred for their purpose, and the result was that they combined speed with power, endurance with intelligence, and unflinching perseverance with a generous yet easily-pleased appetite.

Speaking of these animals from the beginning—which we must do in order to give novices in mule-raising hints which may be useful in breeding them—we may say, generally speaking, that they have the head, ears, voice, tail, feet and temper of their sires, and the body and much of the strength of their dams. It is a peculiar fact about these hybrids that the proportion of males to females is in the ratio of two or three to one, and that while some of the first generation are prolific, all others are not. It has not yet been found, I believe, in a single instance that the offspring of a mule is capable of reproducing its species, although as perfect anatomically as any of its ancestors. What the reason is for this has been the cause of much speculation among naturalists, but I doubt if any of them have come to any other conclusion than that Nature cannot be outraged too far, and that she objects to a violation of her laws or the propagation of a species which she cannot sanction.

An odd fact in connection with mule-raising, and one which has become an axiom among mule-breeders in the Southern States, is that a mare which has once produced a mule is unfit for anything else, and that all her offspring—even if their sires are the bluest-blooded horses in the world—

will have a mulish appearance. First love is said to have such an effect on the imagination of mares that they never can forget the sight of the jack, much as they may loath him, and this is so well known in the South that dams are kept specially mule-breeding. This is a fact not generally known, I believe, and might be of use to some breeders. Even mares producing a mixed offspring do not get as good foals as if they were kept to one breed, and so well is this fact now recognized among mule-raisers that they say the third and fourth drops are far superior, as a rule, to the first and second, owing to the affinity and harmony of idea which exists between the jack and the dam if they are much together. The same result has been found with the raising of hinnies or jennies, so it would seem to teach a valuable lesson in the general breeding of animals.

The fact that mules can stand warm climates better than horses, and that they are also more hardy, sure-footed and cautious in traversing mountainous regions, has caused them to be highly appreciated in South America, Mexico, the Southern States of the Union, Spain, Savoy, Egypt, and other places. Excepting the head, which is rather long and clumsy, the Spanish mules are handsome and intelligent animals; those of Savoy are remarkable for their size; and those of Egypt for their courage and endurance, and also their ability to stand spurring and hunger. Having fewer diseases than horses, a less fastidious appetite, working to nearly double their age, being less expensive in feeding and more muscular, in proportion to weight, they might be considered the best animals known for draught purposes in any army, and to a certain extent for the farm, especially for those who have small holdings.—[London (Eng.) Live-stock Gazette.

### Treatment of Cows at Calving.

Cows in good condition should be watched carefully for any symptoms of fever; for its progress is so rapid in some cases as to afford little time for treatment. The early symptoms are, dullness, langour, red eyes, hot head and horns, a strong pulse, sometimes uneasy movements of the hind legs, the cow then lying down, placing its head on its flank, or striking its horns on the ground. Sometimes the symptoms are only fever, rapid pulse, and quick and strong breathing, with loss of power over the limbs, want of sensation, torpor of bowels and bladder. One of the best things to do in case of an attack, is to apply moderately cold water to the whole body; and this is best done by placing a woolen blanket around the cow, from udder to foreleg, and pouring water between the blanket and the body, wetting the body and blanket thoroughly, covering with a dry blanket if the weather is cool. Matting or old carpeting is good to place around the body; place it under, and bring the ends together over the back. If the cow is down, roll her over on the blanket, having first wetted it, and also the side of the cow. This wetting will produce a fermentation and gradual cooling of the whole surface of the body, modifying the fever, and usually producing relief in a short time. If it is that form of the disease in which there is great heat of the head, pour ice-cold water upon the head between the horns, at the same time that water is applied to the whole body; and as in most cases the udder is swollen and hot, this should be treated with the water bag, which is useful in garget and fever in the udder. This bag may be made of oil-cloth, or, better, india rubber, large enough to enclose the udder, coming up to the body, flaring at the top, held up by a strap over the back, and filled with soft water of a moderate temperature—say 65 degrees. This will soon allay the irritation in the udder, and the water can be changed when it becomes warm. Give at the same time copious injections of blood-warm water, which will assist in relieving the bowels and intestines. It is well to chafe the back and hips gently. We have seen these applications work well, even when the cow was unable to rise, and had passed beyond the bleeding stage.

We give this rational treatment, because it may be applied by the dairyman himself, with great success, when he cannot have the skill of the veterinarian, and will save many more cows than any attempt of the dairyman himself to apply veterinary medicines.—[National Live Stock Journal, Chicago.

Polled cattle are in demand in Australia. A bull of that breed recently sold at Melbourne for \$1,000. Six cows and two bulls from the Tillyfour herd of polled cattle were sold for \$6,000.

### Milk and Beef Together.

The *Journal* reaches such various classes of dairymen, who produce milk for such various ends, that we shall be aiding many by discussing the subject heading this article—the feasibility of producing milk and beef at the same time. It is generally believed by dairymen that this cannot be done—that a cow cannot give a remunerative yield of milk and lay on fat and flesh at the same time; but this opinion is not in accordance with well-conducted experiments, both in this country and in England. The late Mr. Horsfall—a very painstaking and careful experimenter in dairying in England—detailed his experience in the *Royal Society's Journal*, by which he proved most conclusively with his whole herd that a cow can be fed to maintain a full yield of milk and lay on flesh satisfactorily at the same time, and that he had found this the most remunerative plan of dairying. It does not follow that all dairymen would find this plan the most profitable. His market for beef was as tempting as his market for milk. But our purpose in discussing this question is not, at present, to recommend it for its profit, but to see if it is practicable to produce beef and milk at the same time. Mr. Horsfall, whilst experimenting in reference to the effect of high feeding upon milch cows, discovered that a farrow cow, fed abundantly on appropriate food for producing milk, would go on producing a remunerative yield for a long season, much past the usual time of bearing a second calf; and, taking a hint from this, instead of buying fresh cows and calves at high prices, he selected good farrow cows, discarded because they were farrow, but yet giving a fair yield of milk. These could be had at low figures; and he had found that, under his system of feeding, they could be made to increase their milk very largely, yielding the best quality, and, at the same time, making rapid progress in fattening for slaughter, drying them off only during the last month of fattening. He found his yield of cream about as much as from fresh cows, which produced him a profit; and, when the cow was ready for the butcher, he made another quite satisfactory profit on her sale.

His system was found successful in other hands, as was lately proved in an address before the London Farmers' Club, by Mr. Allender, the manager of the Aylesbury Dairy Company, at Kensington. He described his practice with the large number of cows in that establishment, of keeping all in such high condition that they were ready for beef at any time; and that this often saved loss in case of an approaching fever. This plan he found to produce the most remunerative yield of milk, and, at the same time, enabled them to dispose of their cows at a profit.

This system has many followers in this country on farms near cities, where beef is as marketable at all times as milk and butter. Mr. Horsfall was a most judicious high feeder. He always fed a portion of roots daily to his cows, with oil-cake, bran-meal, malt-combs, nicely-cured hay, and straw. He was sure to give such variety as always promoted the health of the cow, as well as a large yield of milk and flesh. High feeding in the hands of some who do not study the physiological condition of the cow, and feed too largely of such heating food as corn-meal, without emollient and sedative effects of oil-cake and roots, very often produces fevers and disease. But there can be no doubt that judicious high feeding will produce a remunerative yield of milk and fatten the cow at the same time. Every dairyman should study his own business so thoroughly as to know how and under what circumstances this can be profitably done.—[National Live-Stock Journal, Chicago.

**CURE FOR BLACK LEG.**—I notice that considerable is written about black leg in calves. My experience is quite extensive, having lost several very fine thoroughbred Devons, before learning that bleeding is an absolute remedy, and having never lost one that was bled at about 6 months old and again at about 12 months. I had two attacked at about three months old by apparently a similar disease upon the lungs. The first was thoroughbred, of the best strain of blood, and died. Bleeding saved the other one. I think it a very uncommon thing for an attack of black leg to occur before the calf is six months old, or after 18 months. I believe this remedy absolute.—[C. E. D.

An English farmer, very successful during ten years in fattening cattle and sheep, supplied a ration made as follows: Eight bushels corn soaked in ten pails water two days, then simmer for an hour; afterwards mix with fourteen pounds coarse, cheap sugar, and commingle with cut straw, hay or other fodder.

## Dairy.

## The Cold System for Raising Cream.

A NEW APPLIANCE FOR CREAMERIES.

BY PROF. X. A. WILLARD.

About the year 1864 Mr. Slaughter of Orange County, N. Y., conceived the idea of applying the associated system of dairying to butter manufacture. He erected the first butter factory on the continent, and the first, it is believed, in the world. The factory was built directly over a large spring of flowing water at a low temperature, where large vats were arranged sunk in the earth for the reception of vessels holding the milk. These vessels were deep cans 8 inches in diameter and 20 inches long, and as soon as the milk was delivered the cans were filled within two inches of the top and sunk in the water to the height of the milk. Here the milk remained, with the cold water flowing continuously about it, for the space of 24 and 36 hours, when the cans were lifted from the vats and the cream removed. The cream was much thinner than that raised in the usual way in pans, and the butter manufactured from it was of the finest description, and at once began to be sought for in market on account of its excellence and uniformity. This parent factory was visited soon after its erection by the writer, who first gave to the public a detailed description of the new method.

It was generally believed at that time, or previous to Mr. Slaughter's experiments, that cream could not rise perfectly from deep sittings of milk, and that low temperatures in milk were fatal to success in creaming.

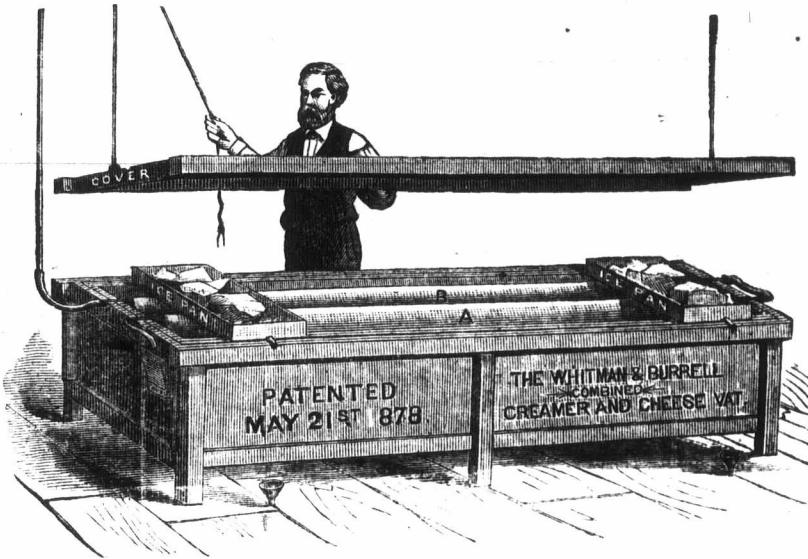
After the success of the American system had been demonstrated, the Swedes began to copy the plan and to experiment in a scientific way in regard to the most favorable temperature for getting the cream. Swarts found that by breaking up ice, and placing it thickly in the water surrounding the cans holding the milk, he could thus reduce the temperature to a low point; and, moreover, that when the milk was thus reduced the cream came up rapidly and in greater quantity than by the water-method alone. The butter made from cream treated on the ice-plan was exceedingly fine and sold for high prices in European markets; hence the "Swarts System," as it is sometimes called, began to be largely adopted, and some of the finest butter sent to the English markets is now made on this plan.

The first modification of the Swedish or Swarts system in this country was that of Mr. L. S. Hardin of Kentucky, which consisted in placing the cans of milk in refrigerators, the ice being above the milk which was reduced to a low temperature by chilling the air in the milk compartment, thus economizing greatly the quantity of ice required. As we hope hereafter to refer to Mr. Hardin's plan in connection with that of others, we need not discuss these methods further in this place. We may remark, however, that the "cold process" for setting milk is now gaining in favor not only in this country but in Europe, and it is undoubtedly the most economical of any that has been devised when the proper appliances are adopted for its practice.

FOR CREAMERIES, large or small, the new invention brought out by Whitman & Burrell of Little

Falls, N. Y., merits attention. It is a combined creamer and cheese vat, and the cut here introduced shows its general form and its use as a creamer. It is, as will be seen, the ordinary 75 or 600 gallon milk-vat, with two hollow partitions (A B) running lengthwise of the vat. These partitions are made of tin, and are about 1½ inches in thickness and of the same height as the tin vat, and divide the milk into long narrow cells or compartments about ten or twelve inches wide, eighteen inches deep, and the length of the vat whatever that may be. These hollow partitions are arranged so as to be easily removed from the vat. Now, when milk is put in the vat—there being a slight space around the end of the partitions—it rises to the same level in each compartment. Cold water is at once run around the large tin vat and also through the hollow partitions.

As soon as the milk becomes as cold as the air of the room in which the vat is standing, the cover is let down over the entire top of the vat, and it is made to fit tight so as to exclude all external air. Then when the milk becomes as cold as the water which is being run about the vat and through the hollow partitions, if it is desired to reduce the temperature still more, the cover is raised for a moment and two or three ice-pans are placed on top the vat—one in the centre and the



COMBINED CREAMER AND CHEESE VAT.

other two at the ends. Little pipes three inches long (¾ gas-pipe) extend from the bottom of each ice-pan into holes bored through the wood frame of the vat to carry off the drip from the ice-pans. A few pieces of ice are now placed in the pans, and, if extreme cold is desired, a little salt is added. The cover is again lowered and the water shut off from around the vat and through the partitions. As the cold cannot escape from under the air-tight cover, it passes through the milk, and the cream rises rapidly. When the cream is all up the cover is raised, the ice-pans removed, and the cream is then skimmed off the milk; then the hollow tin partitions are tilted up and the water which was left in them runs out, when they are quickly removed from the vat and hung up against the wall out of the way.

The covers of these combined vats are made with an air space of an inch in thickness, and the inside is lined with roofing-tin, and then the top is painted and the tin is paraffined over.

The advantages of these creamers for factories will be readily seen. They occupy little space comparatively, the covers exclude dust and flies, while the application of salt and ice in pans immediately above the milk must reduce the temperature to any desired degree. The cream is tender and delicious, and can be raised while the milk is sweet, thus making it of more value for

feeding or for other purposes than it would be if allowed to sour.

But another advantage of importance is that the vats are readily turned for the purpose of making cheese, and the arrangement of the covers makes them the best cheese-vats for retaining heat and keeping up a uniform temperature of the curds—a point of considerable importance in Cheddar-cheese making.

It often happens that a change from butter to cheese making is desirable at a factory, and with these appliances the change can be made with little or no extra cost. Of course these creameries are admirably adapted to making skim-cheese; but as we cannot advise the making of "skim-cheese," believing that it is not wanted in the markets of the world and its making will not prove remunerative, this adaptation of the creamer need not be referred to. It is sometimes desirable, however, to heat milk up to 130 degrees and then set it for cream, especially in spring or late in fall and winter. For this purpose it will be seen the creamer is admirably adapted. These creamers took the first premium at the late International Dairy Fair at New-York, and as the latest and most ingenious contrivance for a combined creamer and cheese vat adapted to various theories in the manufacture of both butter and cheese, we have thought it desirable to bring the invention to the attention of the Canadian dairymen. We understand that Pearce & Pickering of London, Ont., have lately obtained a license for manufacturing these creamers for the supply of the Canadian market.

## Loss from Bad Butter.

From an address by the President of the Vermont Dairymen's Association in the *N. E. Farmer* we take the following extracts:

If all the butter in the country was of good quality it would be a saving of a hundred million dollars per annum. What comforts, enjoyments, joys, might be purchased with this amount; and, on the other hand, what misery is imposed on the

suffering consumers condemned to wrestle three times a day with an enemy whose strength overcomes them. We do not exaggerate. Experts, whose lives are made miserable by reason of the bad butter they are compelled in the course of trade to taste or smell, assure us that a large share of the butter brought to market is classed as grease, and sells for a low price. If it were just fairly good it would bring twice what the wretched stuff brings as material for slushing down the masts of ships or filling some other plebeian purpose in the world's economy. First-class butter is wanted in large quantities, and is quickly taken up at figures which head the list in market reports, or is retailed privately at prices far in advance of those. Reports come from the butter dealers inquiring, "What can we do with the white, streaky, badly-smelling butter, to render it fit for sale? What can they do with it? Not all the spices of Araby could sweeten it. Disguise cannot cover up its iniquity. It comes in such a questionable shape, after all the vain attempts to reconstruct it, that it is suspected at once; and butter, like Caesar's wife, should be above suspicion."

The fact must be confessed that a large share of our butter is below first-class, and is disagreeable or unfit for use. A hundred million dollars slip through the farmer's fingers in consequence of bad butter. Sour, bitter cream from dirty vessels yields butter depraved from the churn. We should learn there is such a virtue as cleanliness. An increase of one-fourth in quantity and price would make a difference of nearly three millions of dollars in our dairy product of Vermont yearly, allowing 200,000 cows to be employed in the product of the dairy.

**Oleomargarine.**

The annexed engravings cannot fail to be interesting to our readers, representing as they do the difference between pure butter and oleomargarine, its counterfeit. It is to the interest of the farmer and dairyman, and not to them only, but to the purchaser and consumer of butter and cheese, that the article offered for sale be precisely what it is said to be—that pure butter should be sold as butter; and that fat—caul fat—however prepared and disguised, should be branded as such. It is but common justice that the purchaser be made aware of what the article really is that he may be induced to purchase. It is possible that a sample of oleomargarine may be manufactured from clean and healthy fat, and consequently be less deleterious than if made from unclean and unhealthy fat; and in this is the evil that we cannot guard against. We are choosing blindfolded, and (to use the words of an old proverb) "buying a pig in a poke."

Plate 1 represents pure butter as seen through a microscope of high magnifying power. The circular globules are composed of butter-fats; the other forms represent salt-crystals. The butter-fats sometimes present irregular or oval forms.

Plates 2 and 3 represent oleomargarine, two specimens, also seen through a highly-magnifying glass. They differ from each other but not to such an extent as they both differ from Plate 1. Differing as the oleomargarine plates (2 and 3) do from each other, they both have—instead of the butter globules seen in Plate 1—crystals similar to those seen by the aid of a microscope in the fats of cattle, sheep, hogs, and other animals. Pieces of animal tissue are present in Plate 2, together with salt-crystals and suspicious rounded forms of various kinds.

When Plate 3 was placed in the slide in the first place the shreds of animal tissue, salt and fat crystals and spores were seen, and also a number of peculiar forms frequently met with in foul water. Of the objects many active forms, together with fungi, were found after all the material had been boiled in water, and also after it had been dissolved in sulphuric ether. Such is oleomargarine!

In the use of oleomargarine, as well as in all rancid and putrefying butter and in unsound animal fat and meat, there is extreme danger that no preparation and no culinary art can guard against. There can be no doubt they are the cause of much disease and of many deaths. Could the gnat plague that has carried off so many thousands in Russia be traced to its source there is every probability that it would be found in impure and unsound meat. In such substances these little-known spores or eggs of trichina and other organisms are nurtured, and from them they are transmitted to human beings.

The English dairy farmers get immense returns from their grass lands by a free use of bone manure. One Cheshire farmer says that by this he can feed forty cows from land that formerly gave product sufficient to feed only twenty. English farmers believe in "boning" the grass land especially.

It is related of a Kentish farmer that he condensed his practical experience into this rule: "Feed your land before it is hungry, rest it before it is weary, and weed it before it is foul."

**Effect of Exercise and Excitement on Milk.**

The dairyman's pocket is sensibly affected by a proper understanding of this question. But there are very few, comparatively, who have discovered

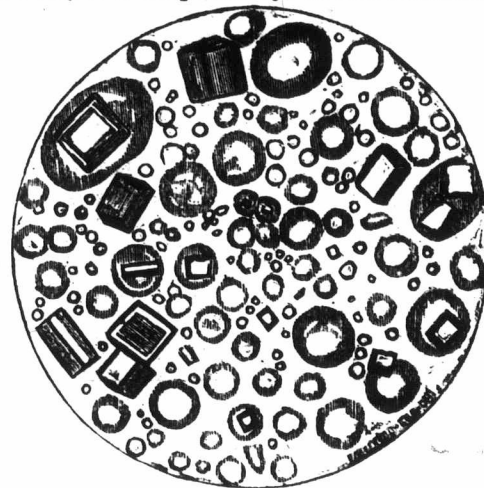


PLATE 1.

the real effect of exercise upon the milk product. Many suppose that severe exercise in the cow simply affects the quantity and not particularly the quality; and a still greater number have never

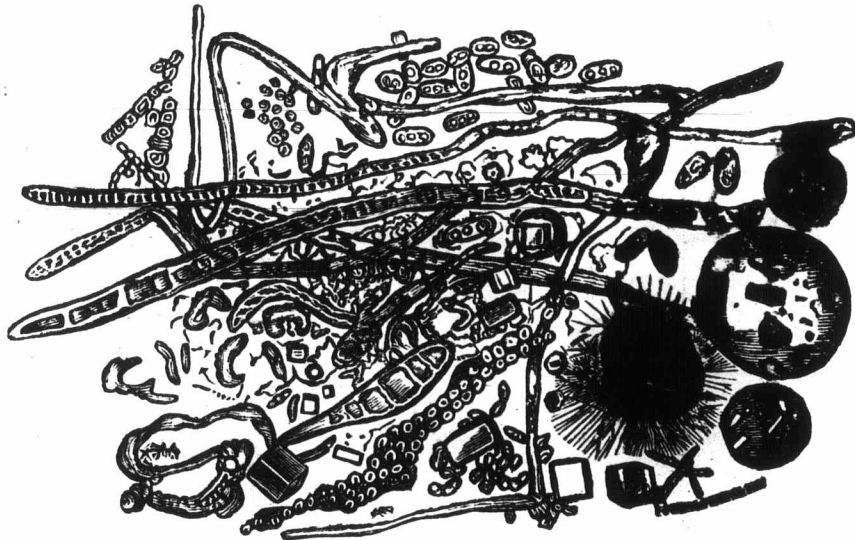


PLATE 2.

given the matter any consideration, but evidently do not think it has any bad effect, as witness those who worry their cows with dogs. Many allow their cows to be driven on a run to and from pasture, no doubt regarding this as so much gain in time. But any violent exercise has a serious effect upon the most valuable element in the milk—the butter. Liebig observed that the milk of the cow had a much larger proportion of casein when subjected to much exercise. Dr Carpenter suggested that this comes from the breaking down of the

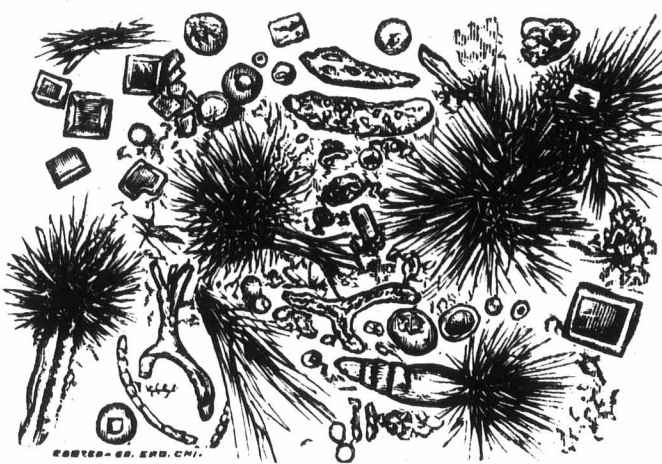


PLATE 3.

nitrogenized tissues. He also states that cows in Switzerland that pasture on the sides of steep mountains, and are obliged to use great muscular exertion, yield a very small quantity of butter, but a large proportion of cheese; yet when the same cows are stall fed the reverse is the result.

**Miscellaneous.**

**ROOTING OF CUTTINGS.**—The rooting of slips I have found a very easy matter in a double pot. I take an eight inch pot, cork up the bottom hole, and put into it enough clean sand (about four inches) to raise the top of a four inch pot to the height of an eight inch pot when placed therein. I then place the four inch pot in the centre without corking, fill around it with sand, place in a warm sunny position and fill with water by pouring into the small pot. Slips placed in the sand near the outer pot will root rapidly if kept warm and plenty of water is kept in the small pot. In the summer I place the pots on a fence in the hottest place I can find, and in winter in a south window of a warm room. As soon as rooted, the slips must be transferred to good soil. I have never found any trouble in rooting anything in this way.

In England forty bushels of wheat per acre is not an unusual yield, and fifty or sixty bushels per acre is often realized as the result of high farming. Nevertheless, England is obliged to import each year about 100,000,000 bushels in addition to her own crop to feed her people.

The sugar crop of Louisiana will amount this season to 225,000 hogsheads, or 250,000,000 lbs., worth \$14,625,000, and the yield of molasses to 300,000 barrels, worth \$3,000,000. Last year the production of sugar was less than 15,000,000 lbs., and that of molasses in proportion.

Gas-lime varies so much in composition, according to the length of time it has been made to do duty in the gas-works, that no safe opinion can be given as to its value. At the best, it would not probably be worth more than a third as much as good fresh lime, and it might not be worth more than a tenth as much. In any case it must be left exposed to the air in small piles for a few weeks for the conversion of certain poisonous compounds that it contains into harmless ones, and it may then be applied at the rate of sixty bushels to the acre. By mixing it with muck the muck might be improved by the action of the lime, but the gas-lime would be none the better for the mixture.

**MANURE** is as essential in fruit growing as it is for grain and grass. Those orchards that have received the most abundant supply of barnyard manure have yielded the largest crops of fruit. Pear trees should be manured principally with ashes, salt, bone meal and lime.

Professor Lazenby, "after numerous experiments and very careful trials," commends the following as "safe, cheap and effective applications" for the cabbage worm—using either, two or three times during the season: 1. A pound of whale-oil soap in about six gallons of water; 2. A few quarts of tar in a barrel of water.

A company is being formed in Holland for the purpose of importing American live cattle, and dead fresh meats, to Holland, and for the German markets. English capitalists furnish the steamships, and Hollanders the operating capital.

Too early planting of flower-seeds in the open ground, while it is cold and wet, is a prolific source of trouble, and it is to be avoided. Seeds thus planted are liable to fail of germination; or should they start, the plants at best grow feebly, linger along and finally drop off one by one, until another planting becomes necessary, causing much care, loss of time, and with no further advancement than if the planting had been deferred until the soil had become mellow and warm.

While the country and suburbs afford most space for gardens and the display of floricultural beauty, many flowers may be grown in the city, and the limited space afforded may be used to great advantage. Most city houses have a front plot of ground under the parlor windows, seldom containing less than two hundred square feet; and have back yard, a portion of which could be advantageously used for a flower garden.



**Fencing.**

As rails decay fences are required. The attention of many is now turned to the question of what kind of a fence are they to replace the rails with. In some sections where saw mills are running, boards are extensively used; but there are sections where even the board fences are now expensive.

In England and in the States wire fences are now preferred. On our prairie land, on lands that flood, and along roads that drift in winter, the wire fence would be preferable to any other. The cost must depend much on the value of the posts; in some parts they are very cheap. A good, solid post, well braced, is needed at each end of the fence. Small posts can be used at a distance of 8 to 16 feet apart, to support the wires and keep them a proper distance apart. It is claimed that the barbed wire is avoided by stock. One scratch from one of the barbs is sufficient for a herd. It is also claimed that it does not sag as much as the single wire does, and that it is not as much affected by the temperature; the double wire being twisted, is less affected by expansion and contraction.

The wire sells at one cent per foot in this city. It is easily put up. The accompanying cut shows the proper form of bracing the end post and the mode of tightening and stretching the wire.

Years ago we recommended the planting of the Lombardy poplar for fencing. Those that now have them growing can string the wire along on them, and have a live fence that will be a pattern to their neighbors. If you have not yet planted a row of Lombardy poplars for this purpose, make up your mind that you will do it the first opportunity you have. Full particulars about wire fencing may be found in pamphlets supplied by the Washburn & Moen Manufacturing Co., of Worcester, Mass., U. S., Dominion Barb Fence Factory, 63 College St., Montreal, P. Q., or Messrs. Reid & Son, their agents in this city.

**Corn Culture Now.**

If the soil needs stirring before the corn comes up, you can use some good harrow that will not interfere with the cornhills; if the soil is dry and inclined to be cloddy, put on the roller immediately after the corn comes up, and follow it with harrow or good two-horse corn-plow, with fenders and small shovels next the corn; we prefer the latter. Plow deep both ways; any good one-horse plow will do, but time is too precious to fool away with a one-horse plow in this day and age of the world, unless you want to farm a little for amusement. It does not matter so much what the soil is stirred with so it is stirred well and often. After the corn begins to take root don't plow so close nor deep. There is great sleight in corn-plowing. Use judgment, train your team for the business. Our agricultural societies ought to pay a large premium on best trained team to plow corn, and not quite so much on style and speed. Put some dirt on the corn at last, plowing to sustain the brace-roots; when the corn gets too large to plow with our two-horse plows, quit. If there are any stray weeds take them out.

**Australian Wheat.**

Of the competition American farmers will have to contend with in their supplying the British market with breadstuffs, the *American Cultivator* replies to a doubting correspondent in this wise:

A Monroe County (N. Y.) correspondent expresses some surprise at our statement, in a recent issue, that South Australia is likely to become one of the most important wheat-producing countries in the world. It is true that what is called the Northern Territory is tropical in its climate, and not well adapted to the growth of wheat; yet it is stated on eminent English authority that, excluding that territory, the actual area of the colony is about 246,000,000 acres, and though one-half at least of this is available for arable purposes, not more than one-hundredth part is under any cultivation. The quality of the samples which carried off the prize at the Paris Exhibition was not considered by the Australians as extraordinarily good, since the prize wheat exhibited at the Colonial agricultural shows, during the last ten years, has averaged 68 pounds per Imperial bushel. In such districts as are provided with abundant labor and mechanical appliances, the average yield of

**Drains Clogged by Clover Roots.**

Some farmers think that clover roots are not the cause of the stoppage of tile-drains. I also thought my workman mistaken when he informed me those fine fibrous roots were clover roots, and told him if he would trace them to the surface and find the clover growing at the top I would believe in his theory—which he did; the roots produced ran from the surface in a good strong tap-root, at least 30 inches, to the tile; as soon as it entered the water in the tile it branched out in small fibrous roots, running in the tile about two feet in this case. The workman took pains to follow the roots to the surface wherever he found a stoppage, and in every instance found the clover at the top of the root. A neighbor also found one of his four inch tiles stopped, caused by a socke root running down and entering the tile three feet from the surface. The root was small where it entered the tile, and branched out like the roots of the clover, dirt and sand adhering to these fine rootlets until the tile failed to carry the water. This one stoppage removed, the drain has since worked finely.—[Ohio Farmer.]



MODE OF ERECTING A WIRE FENCE.

wheat is as high as 27 bushels per acre, which, however, is far above the general yield. With a population of but 211,000, and a total area under wheat of but 1,000,000 acres, combined with a great lack of modern machinery, South Australia is not at present a formidable rival to the United States in wheat-raising; though it will be well to bear in mind that we have no monopoly in supplying Europe with wheat, and in fact, that we shall be a richer nation when we consume more wheat at home, and, in its stead, export more manufactured goods.

A patent has lately been granted in Canada and the United States for a machine to sprinkle potato vines with Paris Green, mixed with water. The machine consists of a wheelbarrow frame carrying a tub holding the liquid. India rubber tubes convey the liquid to two circular brushes revolving in cups, which are on the ends of a shaft rotated under the barrow-frame by a pulley band from the ground wheel. The shaft and brushes have adjustability, so that the liquid is thrown in a very fine spray upward under the leaves to a greater or less angle, and extensible to any width between the rows of vines. The machine is guaranteed to give satisfaction by the owners of the patent. Application for the right to manufacture should be made to Henry Grist, Solicitor of Patents, Ottawa, through whose agency the patent was obtained.

**TOMATOES IN THE GARDEN.**—As soon as the land is warm, and all danger from frost is past, tomato plants should be transplanted in good soil four feet apart each way. The land best suited for the early crop is a rather light sandy loam. Stiff, strong soil bears a productive crop, but it will mature later. A little quick and fine manure in each hill will be found of service in bringing forward the plants. To hasten the maturity of the first fruit which sets, gardeners generally pinch off the extremities of the tops and all the secondary shoots which afterwards appear above the flowers. Trellises of stakes and hoops provide a good support for the plants, but where a large crop is raised covering the ground with hay or straw is usually adopted to keep the fruit clean.

**SMOKING SEED CORN.**—A successful corn farmer says that he always smokes his seed corn. After selecting his corn, he hangs it in his smoke-house and smokes it well. At times it is black.

The result of this treatment is that the corn is not liable to rot before it sprouts, and insects do not disturb it. Where he uses smoked corn, there is no necessity of replanting. He has tested this experiment for a number of years, and has always been successful. Last year he ran out of smoked corn while planting one field, and used a small quantity of corn that was not smoked. On the portion where the unsmoked corn was he was compelled to replant the greater part.

The Australian Exhibition is to open at Sydney, in August next, and will be largely, of course, agricultural, though other departments will be amply provided for. Special buildings have been erected in Prince Albert Park, and every facility will be afforded to exhibitors. Our makers of agricultural machines and similar wares should make use of this opportunity to present their wares to the enterprising farmers of the colony, and we hope that Canadian industry will be largely represented at this exhibition, as we think it will be profitable.

The Commissioner of Agriculture is said to have already distributed 50,000 young tea plants. It is thought that tea can be raised profitably in the United States.

D. O., of Sunbury, P. O., states that he raised 10 bushels of Red Fern wheat from one peck the past season.

### Sources of Profit in Farming.

As any part of the country becomes thickly settled the rate of advance in price of farm lands will be less and less until it finally ceases. Lands purchased of the Government may quadruple their selling price in five years. Farms worth \$10 per acre may sell for \$20 in less than ten years, but no ordinary farm lands now worth \$100 an acre will soon double in value. There is a limit to the sum which can be paid for lands which are to be used for farming purposes alone, and as that limit is approached the rate of increase in price must fall.

The almost absolute certainty, in the general part of our country, that lands would advance in price has had a marked effect on our farmers in many ways. Farmers have, properly enough, desired to hold large farms. The tendency to sell farms when they had reached a fair value, and to invest the proceeds in lower-priced lands has been too strong to be resisted in very many cases. What, under other circumstances, would have been poor and careless farming has been almost inevitable. With low-priced land and high-priced labor, careful, painstaking farming was not to have been expected. With land worth ten or twenty dollars per acre better profits come from cultivating 50 acres in the ordinary modes than from receiving the largest possible crops from 40 acres by a large increase of labor and abundant manuring. The more land one had the better, so long as it doubled in value in ten years. A good investment had been made, even if the annual profits gave no direct profit.

In the future, however, in all the older-settled portions of the country the chief reliance must be on the farm crops. Lands now worth \$75 or \$100 per acre will not, as a rule, advance rapidly in price. On all such lands only good, careful, intelligent work will pay. The capital invested is too large to make it safe to run any avoidable risks. The tendency will be in the direction of better farming. This better farming will have as a prominent feature the adoption of a system by which the whole capital invested may be kept active during the greater part of the time. A lack of sufficient money-capital is probably the one great defect of farming; but coupled with this is often found a system of farming by which a large part of the capital employed is unproductive during much of the year. Whenever a field is allowed to lie idle, or to produce but half a crop, it is capital lying idle or only half employed. Whenever men and teams and tools are employed but a part of the year, there is a lack of full use of an important part of the farmer's capital. Small-grain growing, as a specialty, is almost certainly accompanied by loss from inability to make the best use of the capital. During two or three months of the year there is need of much labor, and during the rest of the year very little. During more than half of the year, in the case of spring-sown grains, neither is the land producing anything nor the crop becoming more valuable.

It is one of the great advantages of stock-raising that, when it is made a prominent feature of the farming, nearly or quite all the land may be made useful, and the stock may be so kept as to increase in intrinsic value each day.

Another feature of the farming on high-priced lands should always be that a system is adopted by which the tendency to the exhaustion of the soil is reduced to a minimum. Hence, growing grain or hay for sale is not a suitable system in such case unless in comparatively exceptional cases. Stock-growing, with its necessary consumption of most or all of the plant-crops produced on the farm, with its adaptation to good rotations of crops and to the use of the so-called renovating crops, makes a strong appeal in this direction.

The farmer who must make his profits from his crops, if at all, will do well to remember that the selling price of farm products, as of other articles, depends very largely on the money, time, labor and skill necessary to produce or reproduce them, and that there will pretty certainly be a full supply, one year with another, of those products which can be produced with a slight money investment in a short time and with comparatively little skill. And on this point, again, he will find stock-raising, especially of good stock, offering better prospects than grain-growing as a specialty. And as to that very important point for all farmers whose final markets are not near at hand—the reduction of bulk and weight in proportion to the value—stock-rearing, especially when the products of the animals (in wool, butter or cheese) are sold rather than the animals themselves, is much in advance of grain growing. —[Ex.]

### Fertility from Clover and Thistles.

A correspondent wishes some information on the subject of green manuring, saying that he has a peach orchard that he wishes to enrich. Theoretically we might say green manuring, as it is termed (that is, to grow a crop from the soil, then while in a green state, turn it in with the plough), adds nothing to the plant-food contained in the soil, but practically it is an effective means of fertilizing and enriching land. Exhausted soils are not easily thus enriched, for there must be sufficient fertility in them to produce a fair growth of vegetation, otherwise there is but little chance for vegetable growth to return to the soil. Green manuring is beneficial in two ways: First, it improves the mechanical condition, at least of heavy soil, by enlivening and loosening it, rendering it more susceptible to atmospheric influence, whereby the organic elements of plant-food are more readily obtained; and second, by the action of the carbonic acid produced by the decay of the vegetable matter on the mineral elements in the soil, which without this acid are insolvent and not available as plant-food. A soil may contain all the inorganic elements necessary to a state of fertility, and yet be in an insoluble and unavailable condition. Vegetable matter contains in itself but a small percentage of inorganic plant-food, and yet it is of great value in rendering a soil productive.

Any crop that grows luxuriantly may be used for green manuring, but the plant that strikes deep into the earth and penetrates the subsoil is most valuable, for it draws its nutriment mainly from below the surface soil, and when ploughed in is made available to enrich the surface. Thus clover is more valuable than any annual crop, for it receives its chief support from the subsoil, and in its decomposition it produces the carbonic acid so useful as a solvent of mineral matter, and it also brings a new element of plant-food to renew the surface soil. Of annual crops for ploughing in buckwheat is, perhaps, as available as any; it grows rapidly, and may be sown at any time during summer, with a prospect of full growth, and two crops may be grown and ploughed in the same season. Other crops may be grown, but some require a longer season of growth. Indian corn on certain mellow soils will produce a large growth; peas do well, but need early sowing; Hungarian grass or German millet will bear later sowing and produce large growth. A few years ago I visited an extensive orchardist, and found his orchards grown over with Canada thistles, which were then ploughed in; he said he depended on the thistle growth to enrich his orchard land, and thought there was nothing better as a green manure; he ploughed them in twice during the season, and his orchards were very thrifty. —[P. P. Root, in N. Y. Tribune.]

### Liquid Manure.

It is generally believed that no system of enriching land for small gardens, with a view to perfection of crops, is so truly economical and so easy available as that of liquid manure. We occasionally hear of a gardener or an amateur fruit grower who has practiced enriching the crop by use of liquid manure, but it is not a common practice so to enrich our gardens and lawns, however often the advocacy of the practice has been written. The writer practiced the sprinkling of a lawn, in a dry season, with weak liquid manure water, and in the greatest heat and drought has kept it fresh and green. In the management of pot plants no course of supplying food equals that of a judicious use of liquid manure. There are in almost every family waste liquids which usually go into a sewer or drain, or possibly upon the road, where they are of no avail; but if saved by being conducted to a tank along with the wash waters of the house, would enrich a whole garden for vegetables and fruits, flower-borders, etc., and the whole, if the wash be applied regularly, and at night, after sunset in moderate quantities, would prevent the driest weather of summer from checking vegetation. If an unpleasant odor comes from the tank, a little plaster (gypsum) sprinkled in and around the tank would keep it sweet and clean. Again, the use of liquid manure need never delay planting because of manure not being on hand, but planting could proceed, and the application of manure be made at leisure. —[American Rural Home.]

A few years since some grains of wheat, taken from an Egyptian sarcophagus at Cairo, and which was of the time of Sesostrius, more than a thousand years before the days of Christ, were planted in France and produced 2,000 fold.

### Summer Culture of Hops.

Judgment and care are required in poling the hops, since the effect of using too long poles is soon manifest by a weakness of the vine, from being drawn up beyond its strength, and causing it to bear a diminished crop, while through the use of too short poles the runners entangle when they get beyond their poles and cause confusion in packing.

After poling, in dry weather, the ground should be thoroughly cultivated to free it from weeds. As soon as the vines will reach the poles they should be tied, as they become much injured by lying upon the ground and twisting together. Three of the most even vines should be selected for each pole; the very strong, rank or hollow ones being rejected, if there are enough without them; many growers also destroy the most forward vines, as the branches from these early shoots produce but little fruit, and the latter shoots are more vigorous as well as more likely to avoid insect enemies.

In lands of great fertility in English hop yards, two vines to the pole will sometimes produce a larger crop than three, and it is claimed the hops are of a better quality and come earlier to maturity. While there is too much risk in depending upon only two vines, yet more than three is decidedly objectionable.

Some growers have all superfluous vines pulled out from the hill by the tyers, yet the most approved method seems to allow the surplus vines to remain until well into June, then cut them off close to the stock of the plant, and finish by earthing up the hill. The earthing up process should be done immediately after the plantation has been carefully looked over, and all poles removed that are un-ur-nished with vines, and also smaller ones substituted in place of long poles, where the vines look weakly and not likely to run up. The large poles thus removed can be put again to the strongest neighbouring hills and furnished with two vines, one being taken from each of the two nearest poles. European cultivators earth up fully eighteen inches high, not only to preserve the crown of the hill in a growing state, but to keep back the young shoots, which would otherwise sprout out from the hill; as soon as the hops are hilled all weak plants receive an extra manuring or stimulant, generally nitrate of potash mixed with superphosphate of lime, or good guano, or some good liquid manure.

After the hilling is completed, horse or hand cultivating must commence and continue vigorously, for the ground must be kept clean of weeds; the suckers from the hills must be pulled off, since by remaining they have a tendency to produce mould; the surface of the ground must not be allowed to become crusted and should be preserved in fine deep tilth. During July some of the thrifty varieties will very often require the lower branches to be cut off three to four feet from the ground to insure a more perfect circulation of air and light, and as a precautionary measure against mould. Poles that are blown down during high winds should be resharpended and reset, or broken down poles may be tied up by rope-yarn to adjoining hills, after horse cultivation is suspended. This matter requires immediate attention, since if hops are allowed to remain upon the ground, for a few days only, they will be spoiled. —[Boston Cultivator.]

### Making Hens Eat Potato Bugs.

If we succeed in inducing our fowls to pick the bugs off the stalks we may hope to raise as good potato crops as ever. J. C. Bates has, he says in his letter to the N. E. Homestead, succeeded in the undertaking. He says: Our first experiment was to offer both larvae and beetles to the fowls, but they refused to touch them, and acted as if somewhat afraid. Next we mixed the insects with the corn and other food that was given them, but they refused even to eat the corn for a time; by-and-bye, however, they began to eat the corn, and soon lost all fear of the insects, although they still refused to eat any. After a few days, by keeping the insects in their food all the time, some of the bravest of the hens began to eat a few insects, and it was not long before the rest joined them, and in a few days more they appeared to relish the beetles about as well as the corn. Up to this time I did not observe any of the fowls eat a beetle from the potato vines, but they now began to do so, and we were obliged to put them in their food no longer. After this the beetles were so reduced in number in this garden that they did no material damage. It would seem from the above that although the beetles were naturally repugnant to the domestic fowl, yet an appetite for them may be acquired.

### Another Consideration Besides the Weight of Roots per Acre.

In crops of roots grown in competition for premiums there seems to be but one thought in the minds of exhibitors and judges, that is, the great size of the root exhibited. Its quality is entirely overlooked. The Professor's remarks in the Agricultural Gazette are well worthy of consideration. He makes "Jack at College" say:

"Although my knowledge of farming is very limited, there is one thing I have learned—that there is a good deal of difference in the quality of swedes. In some cases they are scarcely worth eating, whilst in other cases they are good sound food. I have seen our ewes at home eating as many as they could hold, and yet not able to satisfy their hunger. I have seen them at other times satisfied with a much smaller quantity, and doing well with less than half the supply of roots. Our shepherd and I have often talked the matter over, and he was satisfied from the use of swedes that some were three times as good food as others were, that is weight for weight. Chemistry, he knew, had done a great deal for good of farm crops; but for all that, he had learned that it was possible to use the whip too much, and make root crops grow too fast for them to be got of the best quality. He had also been taught that nothing was so dear as when you got too much for your money, and this was a lesson which should be more generally learned. Their experiments had been suggested by the late tutor, Mr. Nicholson, of Wrexborough, and they showed that it was quality the farmer wanted to secure in the first place, and the more he could get, without a sacrifice of quality, the better it was both for the person who farmed the land and for the person who owned it."

Prof. Armstrong, who followed, complimented Mr. John Holmes upon the correct views he had expressed and in which he fully agreed. He added:

"Speaking as I do from a professional point of view—as a veterinary surgeon—my experience has proved to me, that food of a low nutritive character is a very fertile cause of disease in all kinds of animal life. The desire for food remains unsatisfied when a fair bulk of food has been taken, and consequent upon the craving for more food—to supply the deficiency in nutriment—the system gets overloaded and deranged, and the animal is thereby predisposed for sickness and disease. For the preservation of the health of farm stock, it is clearly the farmer's first duty to grow food of the highest nutritive character, and it was also his interest to grow as much as he could grow without a sacrifice of quality."

Now that we have seen that monster roots are inferior to those of medium size for stock feeding, we need hardly say that they are much more unfit for human food. Especially is this the case with potatoes. Potatoes of moderate size and fully matured are much to be preferred to those of extraordinary size forced by heavy applications of manure.

### Drainage with Gravel.

Col. Waring, the author of "Ogden Farm Papers," says: "The most striking, and I think the most valuable suggestion that has been made in connection with drainage the past few years, comes from Professor Wilkinson, of Baltimore, Md., who recommended that the conduit be made of gravel." Mr. Wilkinson, of Harvard, Illinois, in the Prairie Farmer, says: Drainage with gravel is no ideal theory with me; but I have now had sixteen years experience with the use and efficiency of this material for drains.

It is not only economical but I have never known a drain to clog; it is impossible that any kind of injurious vermin should get access to drains; in fact, it is perfect.

The above seems well worthy of consideration and I trust will be put into practice under the proper conditions.—[Prof. Shattuck, in Drainage Journal.]

Mr. D. N. K., Pennsylvania, tells an agricultural exchange that 24 whole potatoes planted in as many hills, with a handful of bran in each, gave a yield of three pecks, and the same number right alongside of them, but without bran, yielded only half a bushel.

### Use of Salt in Preserving Hay.

I note in the late number of your paper the following quotation, with which I feel constrained to differ: "Science tells us that salt is not a preservative of hay, and hay would be much better without it." It appears to me that the above quotation is too sweeping an assertion for a fact, and needs some qualification as a fancy. All vegetable organism requires an addition of salt to render it most palatable and, of course, nutritious to animal organism. Salt renders moisture much less liable to must hay. Salt preserves moisture to hay, which it would otherwise lose. These I take to be undeniable facts. Then it follows that salt is a preservative of the best quality in, or of hay, preserving it from must and dust, which in a great degree in clover is apt to give horses the leaves. So much in point of fact. Now, as to fancy. It may be said that hay, when properly cured, needs not the foreign aid of salt as a preserver. Perhaps so, if the seeding quality is the only requisite; but if the seeding quality is also considered, then salt is a constitutional desideratum. The hay and the salt could be fed separately, but I think the animal economy would prefer it mixed. At any rate it is the rule with bread-makers and bread-eaters. Again, if the hay is to be sold, then salt has a preservative value. I think it would be generally allowed that salted hay holds its weight much better than unsalted; or, that 100 pounds of salt applied to hay will cause it to weigh out the next spring 200 pounds more than it would without the salt. This is my theory, and I think there's science in it; and if it is true "that the best of farmers use no salt, and their hay is better than those who do apply it," then I am in that most undesirable category, the misinformed.

Another writer, of acknowledged scientific ability, is reported as saying that "the best hay is that cut on the richest land." This is very apt not to be the case. I suppose that hay from land producing about one and a half ton to the acre, is of much better quality than that which will produce three tons to the acre. The former will be sweeter and also weightier, bulk for bulk; and the latter will not gain the nourishing element and value which light and air impart, and has more of the character of rowen or second crop of a later season. Then, again, the soil, whether of highland or lowland, materially affects quality; and we know that moderately low lands produce most, but not the best. Still again, land may be so rich in the productive element as to be incapable of yielding the best hay, as it forces a too succulent growth. But it is the attrition of mind upon mind, thought upon thought, which shall resolve our opinions into facts. Truth-seekers cannot be dogmatical, but must be as truthful as the well-poised vane, which will change to unerring law. Thus ideas tend to theory, theory leads to opinion, opinion develops into fact, and fact progresses to thinking and doing well.—[Cor. American Cultivator.]

### Paris Green and Potatoes.

I never believed Paris green could be absorbed by the roots of any plant, for plants do not take up through their roots anything but soluble matter, and Paris green does not dissolve in water, but floats in it for a short time. It doubtless decays in time and becomes mingled with the earth, but by that time its nature will be changed, and the poisonous effects neutralized. It is probable that this change takes place before the particles decay, or at all events they are so thinly distributed in the soil as to be harmless. This is proved by the fact that we used the baby's nut grove, where Paris green had been liberally applied to the potatoes (grown under straw), for a feeding yard for a score or more of little pigs, and they rooted it over many times seeking stray potatoes and feeding on the angle-worms which were made plenty by the covering of straw. None of the pigs were ever sick, and, in fact, we never thought about the poison until to-day. In the field the old hogs have rooted over the potato ground thoroughly with no harm to themselves, and here the poison was applied three times. We can raise good crops of potatoes by using plenty of Paris green, and without it we cannot, so long as the beetles stay with us. The vines should be gathered in heaps and burned as soon as the potatoes are dug, and then all danger is over. This is my judgment and experience, and I shall act on it, although it may be contrary to science.—F. D. C., in N. Y. Tribune.

### Level Culture.

At the beginning of farm life, in order to learn the most improved methods, I employed a first-class farmer and gardener, fresh from England.

He persisted in a mode of cultivation precisely the reverse of what I had been used to see—allowing the mangels and sugar beets, the corn, potatoes, peas, beans, cucumbers, melons, tomatoes, cabbage, etc., to go without any hilling up. The mangels and sugar beets stood high above the ground, the bulbous parts exposed to the sun, many of the mangels falling over and growing crooked. The part of the cucumbers above ground, which I insisted was rather a root than stem, and should be surrounded by earth, was left entirely exposed to the sun. I thought the sun would parch the roots and they would break or be injured, when the stem should fall from the upright to a horizontal position.

The Englishman would have his way, but agreed I should treat some of each sort of plants in my own way. So a few of all sorts were hilled up, and fully as well worked in other respects as his, during the season.

For a few weeks mine grew as well as his, and the cucumbers, peas, etc., bloomed as early. After one gathering of cucumbers, peas, etc., and the dry season set in, mine perished, while his continued to bloom and bear, and so of the melons.

My potatoes made about half a crop of small tubers, dug from dry hills; his yielded bounteously of large ones, dug from moist earth, at the same time in the same field. So with the mangels, sugar beets, etc. The hilled peas, beans, etc., fired early in the season, and succumbed to the drouth.

Without this experience, if one had said that hilling up growing plants would kill them, I should have joined in the response of a million farmers, denouncing it as false and contrary to experience because they did not perish on the day they were hilled up.

Ever since I have avoided hilling and ridging about growing plants, and cultivated the soil as levelly as possible.—[Correspondent of the American Farmer.]

### Variety in Cropping.

A mere enumeration of the topics which at the present time occupy the farmer's attention could scarcely be compressed into our opening column. We are more than ever convinced that a greater variety in the acreage devoted to roots would be to the advantage of the farmer. The old routine too often followed even by first-class business men, of swedes and turnips, with a few acres of mangels, requires to be modified. Many sound arguments may be adduced in support of this view; and, as there appears to be a disposition to continue in the old grooves, we think it advisable to marshal them on the present occasion in the hope that some of our readers may adopt a sounder system of cropping.

First, then, it is a fact that a crop which has never been before grown upon a field thrives better, and has more chances in favour of its complete development, than has a crop which has been cultivated at four years' intervals upon the same field for generations. We all know the effect of constantly growing clover, potatoes, and turnips. Their repeated cultivation is followed by sickness, scab, and anbury. In a less degree, and perhaps less evidently, the repeated growth of any crop tends to make succeeding crops of the same description less thriving.

Viewed merely as a question of root nutrition, is it not incontrovertible that a crop which takes its food from a different (a deeper or shallower) layer of the soil, which possesses a different system of roots, and which selects its food in different proportions from crops previously cultivated, must stand a better chance of succeeding than an established crop which has been preceded by hundreds of similar crops, all of which have hunted for the same sort of food, in the same sections of the soil, and in the same manner?

By growing a greater variety of crops we diminish risk from untoward seasons, as it is not often that a season is unfavorable to all crops alike. We also provide a wholesome change of food for stock, a most important consideration, as the health, and often the life of sheep, is materially affected by such changes. How often do lambs suffer by enforced continuance upon swedes? How much better would it be if a few acres, say of kohlrabi were provided for them as a change.—[Agricultural Gazette, Eng.]

## Garden and Orchard.

## Seasonable Hints—June.

BY HORTUS.

To keep ahead of the weeds from this time onward should be the determination of every person wishing to succeed. Eternal vigilance is the only price of liberty and freedom from weeds, and the necessary work of eradicating them will have the good result of loosening the ground and assisting the growth of the crops. So much rain fell last year that it prevented people from keeping their ground clean, and so the weeds got such a start that it was impossible almost to catch up to the work. Let the first hoeing be done thoroughly—no slipping over—and have the weeds all raked off and burnt. If thrown into the manure pile, salt and lime should be scattered through them to destroy the seeds, otherwise they will go back to the land in the manure, making the land dirtier than ever.

Newly planted trees, if not mulched, should be done at once. If the ground is very dry, water well before laying on the mulch. It is immaterial what you use for mulching, whether leaves, manure, chips, in fact anything will do that's handy, so long as it retains the moisture, and anything is better than none at all. Staking is next in order, and must not be neglected. Use bands of straw, well twisted, or old rags for tying the tree, to prevent chafing. Let your newly-planted trees look like Fig. 2, and they will look as if they had received proper care. Many persons, after planting out a young orchard, are in doubt as to what cultivation would be best. We say put the ground in potatoes or roots, but do not, under any consideration, put in grain crops, not for a few years at least. If you desire to seed down to grass, give the trees four or five years' loose cultivation of the soil before so doing. Keep a sharp look out for insects. Have powdered hellebore, or pyrethrum convenient. Whale oil soap, sulphur and Paris green swear vengeance against slugs, grubs and bugs.

The past winter has been severe on the raspberries. Franconia suffered particularly. In some sections the canes are killed down to the ground. The reason of this is not so much the winter, although it was excessively cold, as the fact that the canes were not well ripened; so much rain kept the canes growing and full of sap right up to cold weather. If, when the canes are growing, they were nipped to about four feet in height they would throw out a lateral growth like Fig. 1. This would have the threefold effect of hardening them, increasing the fruit-bearing branches, and making the plant stalky and able to bear up the fruit.

It will pay plum growers to look after the curculio. No remedy yet known is better than shaking the tree early in the morning and killing the insects.

Newly planted strawberry plants will make better stools for fruit by having the runners pinched or hoed off as they push out.

Good care is everything this month. Do not let a tree or plant suffer for a pail of water. See that grafts put in last month are not choked out with suckers. Keep the hoe and cultivator going amongst the rows of trees and bushes.

## Four General Favorites in the Flower Garden.

The lily of the valley is one of my especial favorites; this delightful flower should be planted near the house, where it can be seen from the window. It is not showy, but it is the most beautiful of all spring flowers. The best bulb for summer flowering is the gladiolus. Planted in deep, rich soil in June, they will bloom in August, and by a judicious selection of early and late kinds, they can be had in flower for two months. I prefer to set half-a-dozen together, thinking the effect much finer than when a less number is planted in one place. The flower-stalks should be tied to small stakes as they grow up, or high winds will blow them down. A good, strong bulb will produce from three to five spikes of flowers, and a clump of forty or fifty stems of these brilliant blossoms is a sight worth seeing. They ask for rich, mellow soil, and perhaps a little water in a very dry season—nothing more, and no other flower can give so much in return for so little required.

The dahlia is a general favorite, but I know of no other flower which occasions so much disappointment annually, as this one does. If the season is a wet one, success is moderately certain, provided the plants were started in good season, but if it is a dry one, your dahlias will be poor, miserable things. The secret of dahlia culture is a deep, rich soil, and plenty of water. It is a good plan to start the tubers into growth in the house in March or April; they cannot be planted in the open ground before June with any safety, as the slightest frost will be the death of the young plant. But good, strong plants put out in a rich soil in June, and kept well supplied with water,



FIGURE 1.

will blossom by the last of July, and continue to do so until frost. It is always advisable to give them a watering once a week after blooming begins, with some kind of manure water. Mulching the ground about their roots with coarse straw is a good thing. Dahlias must be well staked, as they are so brittle of stalk that a slight wind often does



FIGURE 2.

considerable damage when they are heavy with blossoms. The varieties are so numerous that the tastes of all can be satisfied so far as color is concerned.

The tuberose is one of our most beautiful fall flowers, and can be made to flower successfully in

our gardens if it is started quite early in the house, and forced into rapid development after being put in the open ground, by a liberal use of fertilizers. They are the most fragrant of all flowers, and their long spikes of waxen white blossoms are among the most delightful of all garden ornaments during the late September days when so few other flowers are in season.

## The Old Orchards.

It is the same old story, the same that was told last week, says the Michigan Farmer, by the Farmers' Club of R. "Our orchards are not in a satisfactory condition," "our orchards are unproductive," "our trees are decaying," "our fruit is scabby and wormy." This is the song of the orchardist.

But, says the Club, we believe that cultivation will change all this. Cultivation is the panacea, and cultivation of the decayed orchards is what?

1. It is breaking up of the crust, and a loosening of the hide-bound earth. It is fall plowing, a practice highly recommended. It is an occasional planting to crops; though this may be held by some as heterodox orchard culture, we dare to recommend it. We have not been the friend of raising two crops at one time from the same piece of land, believing that it is enough for an orchard to bear a crop of fruit; but the more we observe and think about it, the more we favor the cultivating of orchards by an occasional planting and cropping. We had rather see an orchard cropped than to see it hide-bound. One of the best orchardists in the State crops and feeds, feeds and crops, and he has fruit, and his trees flourish. He does not rob, but gives restitution. It is better to crop an orchard and fertilize it than not to crop at all. Cultivation is the opposite of neglect. Indian corn is one of the best crops for an old orchard. It will then get plowed and turned over; it will be cultivated by plow and hoe. Some hoed crops are strongly recommended—such as potatoes, ruta bagas, beets, carrots, beans, or any crop that requires a lifting and stirring of the soil. But it must be remembered that such are exhaustive of potash, the very food of trees and fruit. Sown crops are not recommended, because they forbid a mellowing of the soil, and grass is for the same reason to be avoided, unless pastured with swine.

2. Cultivation of orchards is manuring them, and thereby giving them plant food and something to live on. Lime, and especially wood ashes, are prime fertilizers, and indispensable; while a compost of turf ashes and stable manure is of the first consequence.

3. Cultivation of orchards is mulching them, or covering the ground about the tree with coarse litter and straw; leaves from the woods and sawdust are occasionally put in service.

At a meeting of the Potomac fruit-growers Hiram Pitts, Virginia, said that a lack of drainage is liable to induce blight in pear-trees. He also recommended that the trees be allowed to form low branches so as to protect the trunks from exposure to the direct rays of the sun. In regard to pruning he said his plan has been, when nature indicated a disposition to form handsome tops, to let the trees alone and only interfere when necessity dictated. Much may be done if necessary, when the tree is young, by pinching off undesirable shoots and shaping them without any heavy pruning, which causes the tree to put forth additional suckers. The best time is when the tree is at rest. Any unsuccessful putting out of small shoots from the limbs ought to be pinched off at once. Wood-ashes make an excellent fertilizer. I have applied ashes from wood and coal mixed with great advantage. Ground bones are good for the pear and other fruit-trees—better than fermenting manures. It is all-important to prevent the tree from overbearing; this should be done as soon as the young fruit has ceased dropping. There is no benefit to be derived from crowding the tree in planting; the standards should be at least 20 feet apart and dwarfs 12 feet,

**About Grafting.**

The cause of most failures in getting grafts to grow is not in the setting, but in the time of cutting and subsequent care of the scions. The selection of those should never be made later than February to ensure certainty of growth. My way of preserving them is to cut them on a day when the ground is thawed, at least on the surface, and after tying them in bunches with the butts even, and labelling them as I would fruit trees, stick the cut ends into the soft earth on the north side of some building or wall, where they will be always in the shade. If prepared thus and properly set, ninety-five per centum of apples should grow. Pears are rather more uncertain—stone fruit much more so. I find the greatest difficulty in getting cherry grafts to succeed on small stocks, owing to the tendency of the wood to spring apart; on stocks of from one to one and a half to three inches there is little difficulty. These small stems of cherry, peach and plum are better budded. Budding is a more simple and expeditious method yet than grafting, but requires a later season. Grafting-wax or salve for covering the wounds is made mostly of resin, bees-wax and tallow, in the proportion of three, two and one parts in the order named. Linseed-oil, substituted for the tallow, in a rather small proportion, is an improvement, as the object is to get a pliable substance, with as little grease as possible. I have set many hundred grafts for myself and my neighbors, and my only failures, in about the proportion above named, were when the scions had been badly preserved. Some which I have been asked to set were just about in the proper condition for kindling wood.

**Insects Injurious to Fruit-trees.**

The insects most troublesome to fruit-trees are the green and black small soft ones that appear suddenly in immense quantities on the young shoots of the trees, which suck their juices and thereby arrest their growth. They multiply with wonderful rapidity. It is estimated that one individual may be in five generations the progenitor of six thousand million. There are many ways of accomplishing their destruction. P. Barry, the well-known pomologist of Rochester, N. Y., prepares a barrel of tobacco-juice by steeping stems for several days until the juice is dark-brown, like strong beer; this he mixes with soap-suds. A vessel is filled with this, and the ends of the shoots where the insects are assembled are brought down and dipped into the liquid. One dip is enough. Such parts of the tree as cannot be dipped are sprinkled with the liquid. It can be applied to the head of large trees by means of a hand or garden syringe. Both dipping and sprinkling are best done in the evening. Repeat the operation as often as the plant-lice make their appearance. The dry weather of midsummer is generally the most favorable time for them. If the liquid is too strong it will injure the foliage; therefore it is well, in using it for the first time, to test it on one or two small branches before applying it extensively.

**THE WILLOW AS A PREVENTIVE OF MALARIA.**—Mr. Von Lennep, Swedish consul, writes from "Mahazik, near Smyrna," to the London Times as follows: "Before the eucalyptus was ever heard of in Asia Minor, I had seen the bark of the willow used as a febrifuge. I had remarked the easy and inexpensive reproduction of this tree, its quick growth in damp places, its excellent qualities for fuel and for agricultural implements, and its great advantage for strengthening the banks of capricious streams, and had thence taken every opportunity after the winter floods to stick willow cuttings along the banks of streams and other damp places in my property; also to scatter the plane tree seeds in marshy spots. The result has been that, whereas twenty years ago the full grown trees in this neighborhood might have been counted, a luxuriant growth of willows and plane trees marks my place, fuel is abundant, fever is steadily decreasing, the meandering propensities of the streams are checked, my neighbors have come to me for agricultural implements, and I have not far to go for timber for rough purposes."

J. C., Delaware, who was a large and successful peach grower, found lime the best manure he ever applied to peach trees. He scraped the dirt off and applied from three to a dozen shovelfuls of lime fresh from the kiln to the naked roots. It killed the grubs and favored the growth of fruit.

**Do Bees Injure Fruit?**

At a meeting of bee-keepers, of Missouri, held at Kansas City on the 5th ult., Mr. Slocum stated that his last crop of peaches and grapes was nearly destroyed by bees. This information was drawn out in the discussion, "Do bees injure fruit?" After looking at this matter from all points, and hearing the experience of prominent horticulturists, we have come to the conclusion that the gentleman is in error in attributing the destruction of his fruit to the work of bees. After an apple, pear, grape, or any other fruit having a skin protection, is once formed, it is a physical impossibility for a bee to make any impression whatever upon it. If Mr. S. had examined his fruit carefully he would have found that the apples and grapes upon which he noticed bees at work had been previously injured, if not by rot or being bruised, by a far more destructive insect than a bee. The bees were gathering a harvest from holes in the fruit made before their first visit.

We would be pleased to hear from any other bee-keeper or horticulturist on this subject.

**Good Points in Peach Culture.**

At the annual meeting of the Western New York Horticultural Society, Mr. Youngblood advised cutting back peach trees in the early spring to induce a strong growth of new wood for the next year's fruiting. He also advocated thinning out the fruit. His plan is to thin out when the fruit is about the size of cherries, leaving the peaches five or six inches apart on the limbs. This rigorous thinning, he contended, not only largely increases the size of the fruit, but entirely transforms its character, making it rich, juicy and melting. An equally important result is the greater vigor of the tree. The pulp of the fruit does not exhaust the vitality of the trees nearly so much as the production of a number of half-formed specimens of little value. Thinning peaches he considered a preventive of rot in such varieties as Hale's Early. The thinning should be done before the stone is formed, or the fruit will have drawn largely upon the vitality of the tree. Early varieties as a rule require the most thinning. A few kinds do not need thinning, the Late Crawford, for instance, which generally thins itself sufficiently.

**Strange Effect of Girdling Grape-Vines**

Among the experiments with the grape-vine at Amherst Agricultural College, girdling has produced some remarkable results, both in the quantity of the fruit and the period of development. The vines were girdled about the first week in August, when the free acid of the Concord grape had reached the highest state, and the grape-sugar had begun to increase. Experiments were made with whole vines and with branches. Two incisions were made through the bark and cambium layers from one-quarter to one-eighth of an inch in width, and the substance between removed. The fruit on the girdled vines matured fully two weeks in advance of the un-girdled vines. Prof. Goessman picked fully-matured fruit from a girdled vine at his residence fully three weeks in advance of fruit on un-girdled branches of the same vine. The vines that were girdled a year ago were in fine condition this season, and although in most instances fully healed over, the girdlings seemed to produce the same effect on the fruit as the first year.—[Amherst (Mass.) Transcript.]

Mr. Jas. Spence, of the village of Garmouth, is the happy owner of what the English *Journal of Forestry* describes at length as "the largest and most prolific pear tree of its kind in Great Britain." Age, more than 100 years; height, 40 feet; circumference of trunk 5 feet; diameter of space underneath the spread, 126 feet. The huge branches are supported by planks running along the top of eleven immense wooden pillars. The fruit—called Golden Knot, or Golden Ball—is not large, but very sweet, and hangs in clusters like grapes, one of which numbered no less than 300. The product in 1876 was 28,600, by actual count, and this year "considerably over 50,000."

A Michigan lady writes that to kill insects she uses one teaspoonful of kerosene to a gallon of water, and sprinkles it on the plants with a hand-broom. It destroys green flies, currant worms and other pests, and was used without injury on fuchsias, geraniums, callas and other plants. Kerosene on corn-cobs hung on plum trees is said to be bad for curculios.

**Salsify.**

Salsify is often called Oyster-plant. We wish it was not, for many who live far inland do not like oysters, and the name prejudices these persons against one of the greatest delicacies of the garden. It is indeed a choice vegetable, and one within the reach of every one, as it requires no more cultivation than a parsnip. Its requirements are precisely those of the parsnip—a deep, rich soil and early sowing of fresh seed, the seed being quite uncertain if not the growth of the previous season. Make the rows fifteen inches apart and sow as soon as the soil is dry enough to work; the seed being long is not readily sown in a machine, and it is safer to sow by hand. The root is rarely over an inch through; to get the largest ones possible, thin to three or four inches, and keep free of weeds.

Scorzoneria or Black Salsify is a related plant, grown in the same manner and for the same use; the root has a darker exterior. By some the flavor of this is preferred. Both are hardy, and if desired a part of the crop may be left in the ground until spring, the winter's supply being left in the ground like other roots.

Use.—The roots are to be scraped and thrown into water at once, else they turn dark. They are cut into small pieces, stewed, and served with a sauce of butter thickened with flour; they are boiled whole until soft, then dipped into batter and fried, or are mashed after boiling, made into cakes which are dipped in batter and fried. They are also frequently used to make a soup. It is surprising that so excellent a vegetable should be so little known, and we are quite sure that those who try it for the first time will thank us for bringing it to their notice, and will not be without it thereafter.—[American Agriculturist.]

**Flowers Around English Homes.**

To an American the cosy and flower-encircled homes of the lower classes in England are objects of great interest. No home, outside of the pent-up alleys of cities, is so humble or so poor as not to have sweet flowers in profusion about it. Yesterday I was at a conservatory and watched with wonder the orders given by poor people for the spring plants. Really, it was surprising to see a man, evidently a day laborer, order five shillings' worth of plants to set "about the 'ouse." I happened to know that during the winter charity was called upon to help support his family, and yet when the sun came out bright and warm, and he had secured work, the first thought was about the flowers to make a poor home look cheerful. Evidently, no prince or peer derives more pleasure from flowers than does this farm laborer. After all, it is not the wealth that one has that brings happiness and makes life enjoyable, but the "sweet content" that pervades heart and home.—[Am. Paper.]

**Gas Tar for Curculio.**

It is well known that the curculio have very delicate olfactories. Plums are raised annually by setting the trees close to places emitting offensive odors. Gas tar emits a thick, dense, offensive smoke, and if applied to trees often enough, and at proper times, we have no doubt it will keep away the curculio. The smoking should be begun as soon as the plums can be seen, even before they are as big as peas, for the "little turk" takes time by the forelock. It should be continued twice a week, beginning on the side of the orchard that the wind is blowing upon, working with the wind in all cases, and the smoke will be carried a considerable distance. A rain would wash off all scent of the fumigation, and hence the orchard should be refumigated as soon as the rain is over. If you have ignited charcoal with a skillet over it to heat the tar, but not so hot that it will ignite, it makes the best smoke. We think this will prove a cheaper way of saving plums and peaches than the tarring process.—[Rural World.]

**REPOTTING PLANTS.**—If the roots become pot-bound of plants that have been blossoming all winter in the house, it will become necessary to re-pot them in the spring, and the best time to do so will be during the months of April and May. Or, if you wish, you may put them out in the ground, trimming them up, and they will soon sprout again, making nice plants. The branches trimmed off will make good slips and fine blooming fall plants for next autumn.

**Closely Planted Orchards.**

I had no idea when I offered as a lesson for fruit growers the example of the Hudson orchard of 30,000 trees planted on 300 acres, that that example could be made so much of as it has turned out. The more I consider the facts of the case and the criticisms which have been offered in the columns of the Country Gentleman, the more I perceive the great value of the lesson that may be learned from it. The object of planting gardens and orchards is not only that the planters may eat the fruits thereof, but that profit may be made from them. Now, let us look at this question of close planting so far as regards profit, and it will be seen, I think, that McKinstry's method is of the greatest value. An acre may be made to hold 108 trees at 20 feet apart, and only 27 at 40 feet apart. It may be taken for granted that for the first 25 years of bearing there will be no trouble from interlacing or crowding of the trees, and if there should be trouble, that may be easily avoided by proper pruning. Mr. McKinstry has this year gathered from some of his trees planted 20 feet apart 8 barrels of apples per tree. This would make a yield of 864 barrels per acre. At 40 feet apart, the yield at this rate would be only 216 barrels per acre; and few orchardists can boast of more than 8 barrels per tree even at 40 feet apart. Some of my own trees which are 40 feet apart, although loaded until the branches reached the ground, produced less than 8 barrels each, including a considerable proportion which were blown off by high winds and spoiled, while some others at 24 feet apart bore equally well.

Those of my trees which are 40 feet apart are more subject to injury from storms than those of Mr. McKinstry at 20 feet apart, for these mutually protect each other. So far as to the question of profit; now as to some other points. Young trees need protection, and at 20 feet apart this is gained without any drawback for 20 or 25 years at least. After that time, if necessary or desirable, every alternate tree may be grubbed out, and a new one planted to take the place of the old one, and renew the orchard when those that are left shall be worn out, and themselves need removal. Again, at 20 feet apart, and with more than 100 trees on an acre, the labor of attending to them is greatly reduced in proportion. The objection in regard to this so-called close planting would be reduced at once if those who object could but see an orchard so planted. Part of Mr. McKinstry's orchard is planted with apples and peaches alternately, and this gives ample space for the apples, and secures protection for the more tender peaches, and those at 10 feet apart are intended for shelter and protection, and may be thinned out when fully grown. On the whole, the discussion which has grown out of my first communication has doubtless furnished what I hoped and thought it would, viz., a valuable lesson for fruit growers, and this lesson, I am sure, may be studied, and the example be followed with profit.—[Cor. Country Gentleman.

**Woodpecker vs. Apple Worm.**

If woodpeckers are plenty in the orchard, they will take care of the apple worm, even when cuddled up under the paper bands, dreaming of wings, and do away with the necessity of examining the bands every week or two. At first I thought the codling moth had hatched in advance of our bi-weekly visit, and escaped the rub of the smoothing-iron by boring through the bands instead of escaping from under them; but the rattling stroke of the red-headed woodpecker a few trees off, and the similar peck of his industrious little white and black-backed downy cousin (*Picus pubescens*) told the story of the holes, and promised that just in proportion as their little crops were filled, the apple crop would prosper. From some bands every larva and pupa had been dislodged by our thorny-tongued benefactor; and if any were present where he had been, they had evidently come since his departure and before his return. A barrel of apples for every one is a small valuation. If swine and sheep can be kept in the orchard, so much the better, but in any event I mean to try to keep in the woodpeckers and keep out the gunners, and ask and expect that every tree will cease to be a wormy nuisance, and "comfort me with apples" fit for other uses than vinegar and the still.—[N. Y. Tribune.

Mr. Door, of Lenawee Co., Mich., says that he has found peas and clover the best crop to raise in an orchard, provided plenty of gypsum (land plaster) is used on the clover.

**The War with Cabbage Pests.**

In old soils especially the cabbage has a tendency to form club-roots or (as this well-known disease is sometimes termed) fingers and toes. It is a veritable plague, and not only occasions wide gaps in the fields, but often destroys an entire crop. The generally-accepted belief is that club-root is due to the attacks of the cabbage-grub. By others the disease is said to be produced by a microscopic parasite which develops with greater rapidity in moist than in dry soils. Burning the affected roots and changing the crop for a few years is the recommended remedy.

Farmers in this country have experienced relief from grubs at the roots by loosening the earth close to the roots with a hoe and pouring in about the root, in near contact with the plant, a gill of soft-soap and water two or three times during the season. The solution consists of one part of soft-soap to twelve parts of water. Weaker suds poured on the top is claimed by some gardeners to destroy the green worm.

A good method of preventing the inroads of the cabbage-grub is to make each plant unpalatable to the grub. According to the Kansas Times this is done as follows: In the spring procure some fresh-burned lime, let it become air-slaked, then mix it with an equal quantity of soot. In planting the holes are made with a trowel in the usual way, each plant is dropped into its place and an inch of soil put over the roots; a good watering is given first, then a moderate handful of the soot-and-lime mixture thrown in and the hole filled up with the remaining soil. Equal parts of soot and fine garden-soil mixed with water to the consistency of thin mortar, with the plants dipped into the mixture up to the base of the leaves previous to planting, is also advised as a preventive to clubbing. Wood-ashes mixed with water and poured into the holes has been tried with success.

For cabbage-worms Professor Riley recommends hot water judiciously applied from a watering-pot. This must be done with caution, as it is liable in careless hands to do more harm than good. The Professor also advises, for the same purpose, applying repeatedly a solution of whale-oil soap and water in the proportion of one pound of soap to six gallons of water. Pieces of boards raised an inch above the surface of the ground afford an opportunity of examining and destroying the transforming larva under them once or twice a week.—[N. Y. World.

**Coal Tar for Insects.**

An enquirer asks, "in using coal tar for insects on apple trees, how long and how often do I burn? Will it affect the codling moth?"

In answer to this I will state that I never made it my special business to smoke apple trees, but smoking curculio out of plum trees has been my special effort and object in using coal tar, and in this I have been entirely successful, and in passing among my apple trees, to reach the plum trees, I smoked about a dozen apple trees that were loaded with fruit, and the apples from these trees were free from the codling moth, while all my apple crop, with these exceptions, were terribly infested with these worms.

I would say, for the benefit of the enquirer, procure some tar from a gas house. Put a part of it into a pan; to this fasten a wooden handle, so as to get four feet away from the smoke. Take a shaving and a match, and he will soon have a dense smoke. With this pass under the tree, and my word for it, no insect that he ever saw will stay in the tree five seconds to breathe such an atmosphere. The stench of the smoke will remain in the foliage and limbs of the trees for two or three days, unless washed off by rains, and so long as it does remain no insects will return. One or two minutes' smoking under each tree is quite sufficient. Hold the pan low enough so as not to burn the lower limbs, and carry it so as to smoke the entire tree.

I will leave entomologists to tell at what period the various insects are likely to enter the trees to commence their depredations, and that is the time to commence to smoke them out.

I do earnestly hope that many orchardists will try this remedy, and if it proves as successful with others as it has with me, let us make it as widely known as possible.—D. W. K., in Prairie Farmer.

The curculio commences to puncture fruit soon after it is formed, and attention should be paid to their destruction until the fruit is nearly full grown.

**The Yellows in the Peach-tree.**

The important subject of yellows in the peach was introduced at the annual meeting of the Michigan State Pomological Society by A. G. Gulley of South Haven, who had been appointed Commissioner to examine the disease and report all information gained in relation to it. He was convinced that as yet no remedy had been discovered for this mysterious trouble, the very nature of which remains unknown, and whose attacks have baffled the experiments of all pomologists. He thought it evident that the yellows is transmitted by insects, and the seeds of the disease carried to the flower of the peach affect the fruit; also that a sick tree will communicate its disease to other trees until whole orchards are affected. Young and old trees suffer alike, and there is no remedy except extermination and the digging up and burning of the trees affected.

All present admitted that the yellows is contagious in a most remarkable degree; but a few believed in it being an epidemic or that it is likely to pass off after having exhausted its energies.

Mr. Hanford of Indiana had tried applications of pure linseed oil on pear-trees affected with blight, and found it all that it was claimed to be. As there is much in the blight of the pear that is similar to the yellows in the peach the suggestion was made to experiment with linseed oil on peach-trees.

The summary destruction of trees affected, whenever and wherever found, is undoubtedly the only means of arresting the yellows when once it has made its unwelcome appearance. Its prevention lies mainly in the propagation of trees only which are in perfect health and vigor. Observation has proved that the yellows most frequently appears in orchards that have been neglected in their cultivation. - It is liable to exhibit itself particularly in a yellow, sickly foliage, feeble shoots and small fruits prematurely ripened.

**The Black Knot.**

This disease, which has done so much injury to plum and cherry trees throughout America, was the subject of a communication from M. B. Bateman to the Cincinnati Horticultural Society. Our readers will no doubt read with interest the following extract therefrom:

It is very important that all owners of plum and Morello cherry trees should be informed of the nature and appearance of the disease, and as soon as a particle of it is discovered cut it away and burn the affected branches. The disease is well known to be contagious, is not caused by insects, but found to be the work of a fungus which is propagated by spores or seeds, and spreads in the young wood by its thread-like roots. These do not work rapidly up and down the branches, but cause warty excrescences several inches in length on the sides of the branches. These swellings are greenish and soft during the early part of summer, and so juicy as to attract the curculio to deposit its eggs therein, especially when stone-fruit is scarce. Other kinds of larva have also at times been found in these green knots, and this has given rise to the opinion that insects are the cause of the mischief; but in hundreds of cases no vestiges of insect work could be discovered in the knots, as it was found that the first stage of the disease began under the bark where no insects had access.

The spores of this fungus are said to ripen on the diseased trees during winter, and as this season is the best time for discovering the knots or swellings, all who have any suspicions of the disease being in their trees should search for it at once and apply the knife.

In many parts of Germany burnt earth is much employed for horticulture. It there often usurps the place of loam, the use of which is not generally so well known as in this country. The refuse of the garden clay, rotten wood, lawn-sweepings, etc.—is all thrown together and slowly burnt in the summer. Many kinds of plants root freely in the soil thus prepared, and it is very serviceable for seed-sowing, being free from weeds. It is the custom of most establishments to annually burn a large quantity, as it is credited with stronger renovating powers, even when merely applied to enrich the garden, than rubbish applied in a decayed state.



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### Black Knot.

SIR.—The Black Knot is affecting my plum-trees. I am afraid I shall lose them. Can you give information of any plan that will save them?  
W. M., Gladstone, Ont.

[We know of no infallible remedy as yet. Several plans have been tried with various results. We copy the following from the Hamilton Spectator. If any of our readers should try this or any other commended plan, and find any benefit, we should be pleased to publish the results.]

"A PREVENTIVE FOR BLACK KNOT.—Mr. M. Brubacher, farmer, of Woolwich, says he has tried the following on fruit-trees affected with the so-called Black Knot, and found it a sure preventive: Take a sponge or rag saturated with turpentine and rub the joints on the trunk and limbs of the trees. This should be done early in the spring before the sap rises and the leaves begin to form. Mr. B. says he applied this remedy on some plum and cherry trees three years ago and found it to be a great success, none of the trees being the least affected with the disease since then. Although very simple, he considers it a sure cure, and hopes his brother farmers will give it a trial and test its efficacy."

From American papers we see cutting badly-affected trees down recommended, as they are pretty sure to affect healthy ones if left standing.

Mr. W. Saunders, the President of the Ontario Entomological Society and an extensive fruit-grower, recommends cutting out any affected spots and washing the place with carbolic acid.

We look on it as a duty we owe to our subscribers to give publicity to anything that is or that we presume might be of benefit to the cultivators of the soil. We thank our friends who have kindly sent us useful information. It is our opinion that a duty has sometimes been omitted by recipients of public money for public services—that they have neglected to furnish as much useful information to the ADVOCATE as they should have done. A neglect of duty is as great an error as doing improper acts.]

### Collar Boils in Horses—Sore Shoulders

SIR.—Will you be so kind as to answer the following questions: 1—How to prevent collar boils in horses? 2—How to cure sore shoulders?  
FARMER, Chippewa, Ont.

[For the cure of a sore shoulder several remedies have been made use of. We have known an old plowman use the ashes of burned leather made into an ointment with lard, and anoint the sore with it. Collar boils may be successfully treated before they have fully grown by bathing them with a mixture of salt and pure vinegar, applied as hot as it can be borne. If from neglecting the boils a sore be formed, the difficulty of healing is much increased; they are treated with frequent applications of astringent lotions. A good lotion is prepared as follows: Alum or sulphate of zinc, one drachm, to one pint of fresh rain-water. Dissolve the alum in the water and apply it with a sponge. Another remedy is an infusion of white-oak bark and water; this has a tendency to harden the skin and prevent collar boils or sores on the shoulder or back. It is better to steep the bark in cold water for a few days, than to make the lotion by boiling; then strain off the bark liquid, and to each gallon of it put in a half pound of alum. Apply it with a sponge three times a day. Sore shoulders are often the result of carelessness in allowing the perspiration to remain on the collar not dried or cleaned off.]

### Farmers and Politicians.

SIR.—As a subscriber, I desire to congratulate the ADVOCATE upon the very excellent advice it tenders to farmers from a political standpoint, in its issue for April, and would at the same time beg to supplement it with a remark or two. I certainly am of opinion that it would neither enhance the prestige nor respectability of the farming community to see it adopt the *role* of squabbling politicians, especially as it—unfortunately or otherwise—has no properly organized association calculated to control or influence political affairs. It is much to be regretted that agriculturists whose interests must be identical, should, when public questions come up for discussion, be so widely divergent in opinion. Perhaps this lack of unanimity among farmers afforded the inspiration to a leading journal, with its usual audacity, to designate them as "pig-headed and of pliant gullibility."

To wipe out such implied stolidity, we (farmers) should be careful to record a well-considered, intelligent vote, and make it a rule to spurn the candidate whose policy necessitates begging the popular voice. It may be conceded the average farmer's individuality is impotent to sway election contests, but it involves no reason why he should not come more frequently to the front, boldly and decisively asserting his opinions in local affairs, and not—as I fear it too often happens—meekly deferring to such village celebrities as the store-keeper, publican, or proverbially honest miller; and by such self-assertion establish or maintain that social status which so honorable an occupation as that of agriculture confers.

A SMALL FARMER, East Zorra, Ont.

### Flesh Wounds in Animals.

SIR.—The following application for flesh wounds in animals will be found very valuable. I have been using it for some time. It is very simple and easily procured. It is coal tar, that can be bought for \$2 a barrel. Coal tar, when applied to a flesh-cut, shuts out the air and thus stops the smarting; it will also keep off the flies; it is very healing, and it is antiseptic, that is, cleansing, and will prevent the growth of proud flesh. It is the cheapest, most healing and best application we have ever used, and every farmer ought to have it at hand to use on all castrated animals. When a lamb's tail is cut off, put it on. It will stick the wool together on the end, and make a complete protection. I have tested this remedy for several years on all sorts of cuts and sores with the most gratifying and successful results. It is an excellent paint for trees where a limb has been broken off or where the bark has been peeled.

E. C., Chatham, Ont.

### Wild Oats.

SIR.—Last year I had a fine ten-acre field infested with wild oats. I summer-fallowed five acres, and put in five acres with peas and oats, which I cured like hay. I sowed wheat this spring with the drill, expecting a clean crop at least, if not a paying one. But in going over it recently in some places I cannot distinguish the drills for the growth of wild oats. Your advice as to what would be best to do with it in the June number will be thankfully received by

A SUBSCRIBER, Seaforth, Ont.

[We would be pleased to hear from any of our readers who have had experience in the treatment of wild oats, especially as they are on our Seaforth correspondent's farm.]

A Tyrconnell farmer writes to say that his horse, a valuable young animal, is subject to attacks of colic, and wishes to know some effectual remedy.

Some horses are constitutionally subject to colic. A change of food, sudden cooling after hard exercise and excessive sweating, drinking freely when heated, are apt to bring on an attack of colic. In such cases, as in many others, prevention is better. Predisposing causes should be guarded against. Pay proper attention to feeding, watering and grooming. The necessity of keeping the stable comfortable and well ventilated we have before now written of. Let this be, in such a case as that of your horse, be more than ever seen to. Use hay and oats of the best quality, and saved in the best manner, and lightly salted. Give his regular quantity of provender, and that regularly. An overdose of oats sometimes brings on an attack of colic. By these means you may prevent the return of the disease, an important point, as the frequency of its attacks renders a horse more subject to its spasmodic returns.

### Granges.

SIR.—Some time ago I proposed writing on Granges, but owing to lack of time have as yet omitted doing so, but now purpose briefly to make a few statements. I will endeavor to express myself plainly, yet I would not presume to dispute with those who may know much more than me on this and kindred subjects, and who will, perhaps, hereafter air their ideas in the columns of your journal. After saying my say I will even then be quite open to conviction. The majority of granges, then, I believe to be not only useless but injurious: useless because they fail to accomplish anything good; injurious because they stand in the way of other and better organizations. Speaking of better organizations, my ideal club, association, grange, or whatever it would be named, would operate on a platform somewhat as follows: Having organized and started with the necessary members, funds, talent and support with which to make a hopeful commencement, let the aim be,

1st.—To secure at the meetings the attendance, attention and co-operation of all the respectable people in the neighborhood, farming people of course.

2nd.—To contribute materially in the way of enabling the members to have themselves and families not only trained to great heights of knowledge in the line of agricultural lore and experience, but also duly educated in other branches.

3rd.—To raise no hostile feelings or ill will between themselves as farmers and those who pursue a different calling.

Now, without enlarging further, we may ask: Do granges now do much in the way indicated? I think not. Granges are secret bodies, therefore they cannot effect our first, because certain steady men will everywhere be found who wisely refuse to go it blind any length, and judging that because secrecy has done and is doing much to injure many societies besides those of the farmer, they conclude that it will injure those of the farmer also. Therefore these men refuse to aid what they consider as an unnecessary combination of mystical foolery.

In the way of securing our 2nd much might be done by the members establishing mutual-improvement classes in their meetings. By this means, after a few years training, those who had ability among the youths might secure good positions, and would then be able to proudly trace their progress and thank and acknowledge the help of the fostering grange, which enabled them to progress. To secure our third it will be imperative that the grange should not meddle in business such as mercantile, trade, &c., to any extent whatever, for, apart from the lunacy of trying to do away with the "middleman," it is notorious that the man who is partly merchant, partly agent and partly farmer is invariably poor. The reason for this is easy to be found, and the rule holds good respecting societies as well as individuals.

My plea, then, against granges is simply that their constitution cannot become popular; they do little in the way of mental improvement; they tend to augment an antagonism with other classes.

D. McH., Megantic, Que.

### Farmers' Clubs.

SIR.—As you are the farmer's friend, and are willing to do all you can for his benefit, I thought I would write to you for information about the Farmers' Club. We wish to form one here, and want instructions how to get it up. If you will be kind enough to give us the necessary information, or direct us to some one that can, you will much oblige.

J. S., Armow, Ont.

[We are pleased to see that more of the farmers of the Dominion are about instituting Farmers' Clubs—a step we have been long advising. Let Mr. S. bring together some of his neighboring farmers, and having resolved to form a Club, let them appoint a President, a Secretary and a Treasurer. It would then be well to call a larger meeting of farmers to get an increase of members. The rules for the Club may be few and business-like. Had the Board of Agriculture and the Government expended one-tenth of the money they expended otherwise, on the encouragement of Farmers' Clubs, it would be much more profitable for the country than all they have accomplished in that department under the name of agricultural expenditures.]

**Puslinch Farmer's Club.**

SIR,—An adjourned meeting of this Club was held in the Town Hall, Aberfoyle, on May 9th. There was a large attendance of farmers present. The President, Mr. Buchanan, occupied the chair.

Mr. Charles Sharp, Guelph, read a very practical and comprehensive paper on the varieties of grasses, their nature and cultivation, dealing more particularly with the nature and cultivation of the permanent grasses, the value of which, for grazing, is so little known to the Canadian farmer, and showing that if the production of Canadian beef for the English market is to attain the proportions which the natural resources of the country warrant us in anticipating, we must cultivate other grasses than timothy and red clover, the former of which is utterly useless for grazing purposes, and the latter, although valuable as a fertilizer, yet remains in the ground only from one to three years, according to the nature of the soil, and is unfit for many of our best pasture lands.

An interesting discussion followed the reading of Mr. Sharp's essay, eliciting a great deal of practical information.

The next regular meeting will take place on the 30th May, when the question of artificial manures will be considered. P. M., Sec.

[We would willingly make place in the ADVOCATE for the essay on "Grasses," and any other practical essays from farmers' clubs. Such are the articles that would be useful to our readers. The essayist or secretary might furnish us with a copy.]

**Agriculture in New Brunswick.**

SIR,—I have received the ADVOCATE for some time, for which I am obliged. I have ordered the Agriculturist to be sent to you regularly. You will be able to see from it what we are doing. I will also send you a few of my last reports. They may not interest you much, but they are all I have to give.

This Department is making an effort to introduce the sugar beet, with the view of ultimately manufacturing sugar. Our soil and climate are favorable to all kinds of root crops, and there is no doubt the sugar beet can be raised to any extent, and should we not turn them into sugar, I think it can be made a paying crop for feeding stock, which is receiving a good deal of attention from our farmers, who will, ere long, be in a position to join in the export of cattle in which Ontario is doing so much. Our stock is not generally up to the shipping requirements, although in some districts we have good animals. The large importations made by this Department from the Upper Provinces is doing good. We got some fine animals from the Bow Park herd. Last fall we imported a large number of fine sheep from Britain, which will renew the blood.—J. L. L., Fredericton, New Brunswick.

SIR,—I lately took possession of a farm that has in some respects been neglected. The ground about the dwelling-house has been entirely neglected—no trees and no shrubs; and the house itself has a very bare appearance. I wish to plant some trees, and especially some creepers, to give an appearance of thrift and comfort by covering dead-walls and producing ornamentation in general. Is there any I could sow with any prospect of growing so late in the season?

A. B., Teeswater, Ont.

[The Virginia Creeper will do well even now if planted carefully. There is no more valuable creeper; it is very hardy and so rapid in its growth that it very soon covers dead walls completely. It is very handsome; the foliage a rich green, changing to crimson-scarlet in the autumn, and covered with a profusion of clusters of berries that the birds eat greedily in the winter. For covering the trunks of trees, for verandas, walls, and in short any object that it is desirable to have covered with handsome and luxuriant foliage, we have no creeper here equal to it. It is very easily propagated by planting suckers taken from the old roots, and we have grown it successfully from cuttings. It also grows from seed.]

SIR,—Can you or any of your subscribers, through your valuable paper, inform me of any remedy for a valuable cow that is hard to milk. Are there tubes or anything that can be used, and where can they be got. A. S., Grand Pre, N. S.

[There is no milking machine that we have heard of that would be of any service. There is nothing equal to the human hand for extracting from the cow.]

**United States or Canada, Which?**

SIR,—This is the second year since I became a subscriber of the ADVOCATE, and the more I read it the better I like it. I am a ravenous reader of agricultural matter in whatever shape I find it. I read constantly the Rural New Yorker and American Agriculturist, and hosts of others. I devour with greed all books and papers on farming that come within my reach. I was just now looking over the last Montreal Witness. I like the Witness. I noticed an inquiry by an Englishman about purchasing a farm, &c. To inquiry No. 4, in which he asks, "What publication, complete or periodical, would you refer me to for instructions specially on these points on which the Canadian differs from the English system of Agriculture?" They answer to the above 4th inquiry by mentioning first C. E. Whitcombe's, then the Weekly Globe and Canada Farmer, the Witness, the Canadian Farmer and Grange Record, and finally settles down on the Country Gentleman, but not a word about the ADVOCATE, which, to my mind, is equal to the best and far above the most of them.

If you look after the Canadian farmer's interest as you have done, and urge upon the authorities the necessity of keeping diseased stock of all kinds out of the country, and inquire more fully into the management of our Provincial Fairs, and expose clearly their doings to the light without fear or favor (why should there be any necessity to have Director's meetings with closed doors?), and advocating equal rights to all, we, the farmers, shall feel that we have a general able to command and lead us to victory.

J. S., Box 1,100, Toronto.

**The Globe Agricultural Works.**

The new works are situated in the city of London. They were erected in 1873. They occupy a space 450 x 550 feet. Various kinds of agricultural implements are made here; the principal implements made at the present time are the I X L reaping and mowing machines.

They claim that they make the only purely Canadian reaper and mower in this Dominion, the plans and patents for their machine having been originated and patented first in Canada and then in the States. The frame-work is of wrought iron and the machine is very strongly made and more durable than many other machines. It has as light a draught as any, and will cut and has cut grass and grain that other machines could not cut. Among the advantages claimed for their machines is their patent rake, the teeth of which are lengthened or shortened as required. The long, tangled and lodged crops require long teeth to gather them properly. When the rake teeth are made long they will not gather the short grain well; thus their length can be reduced or increased to suit the grain required to be gathered.

They have had an increasing demand every year for these machines wherever they have been used, and at trials in the field they stand unsurpassed; therefore they have named their machine the "I X L." In Devonshire, in England, they have driven the American machines off the ground. In Australia they have also a high record. In Canada their list of honors is as great as any; they are prepared to reap or mow against any machines that challenge them; also to show that their machines will stand a larger number of years in good order than most machines found in the country. One hundred men are employed at the foundry and machine shops. This year they make one thousand machines, two hundred of which are for Manitoba. They have also sent machines to British Columbia, Nova Scotia and P. E. Island. Messrs. J. F. & J. A. Mahon are the proprietors of these works. They are deserving and responsible men. You might send to them and procure their catalogue, and compare with others.

NOTICE.—It is in contemplation to publish two journals instead of one, namely, the FARMERS' ADVOCATE and the HOME MAGAZINE, one strictly for farmers, the other for the ladies and the household, to publish them alternately, one every two weeks. Notice will be given if a change is made.

**The Apiary.****Transferring Bees.**

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

Transferring bees from the box hive to movable frame hives is an easy matter to perform, even by the novice, and if we wish to realize good returns from our bees we must have them in good movable frame hives. Transferring can be done at any time when honey can be gathered, but when fruit trees are in bloom is considered the best time. Proceed thus: blow smoke in at the entrance of the hive until the bees start a loud humming; then carry the hive a short distance from the stand; invert it, and place an empty box of same dimension over it. Then drum on the sides of the hive with a stick, and the bees will go up into the empty box in about twenty minutes. Then lift off the box carefully with the bees, and place them in a cool place. If bees are coming in from the fields place a decoy hive on the stand to catch them. Now place the hive containing the comb on a table and cut the combs loose from the sides with a knife; then pry one side of the hive off, and proceed to remove the combs, one at a time, and place them on a table; then lay your frames on top of the combs, and cut the combs a little larger than the frames; spring the frame over the comb and tie two thin strips of wood on each side, letting the ends project  $\frac{1}{2}$  inch at the top and bottom for tying together, or they may be tied in with thread—fine spool cotton is best. Fasten one end and wind it round the frame both ways; then raise the frame up and hang it in the hive. When you have all the frames in shake the bees on top of the frames. Close the hive and they will be all right in a few hours. The bees will fasten the combs securely in the frames in about 48 hours. The strips of wood must then be removed, but the bees will cut the thread and take it to the entrance of the hive themselves. If the combs are not large enough to fill the frames, pieces may be cut and fitted in. If there is very much drone comb you had better reject it and replace it with frames of artificial comb.

**INTRODUCING.**

Any time from May to October will do to introduce queens, but they are more easily introduced when honey is plentiful.

There are several methods, but we shall give one which we have practiced extensively, and therefore recommend it to all. As the cage we use in shipping queens answers nicely for introducing, we shall give directions for it. If queens come from a distance there is a body-guard accompanying her majesty. When she arrives take the cage into a room, close the doors, and open the cage before a window, and let the bees all out of the cage; then return the queen to the cage without the bees, as it is better to introduce her without the bees. Have the black queen removed, and be sure that there are no queen cells in the hive. They are readily known by their size and shape. They hang in a vertical shape from the combs, and are near one inch in length, and are built anywhere in the hive. Now place the cage containing the Italian queen on top of the frames, or suspend it in the hive between two cards of comb near the centre of the hive, so the bees may cluster on it. Close the hive and do not disturb it for 48 hours; then open the hive, using a little smoke if required to keep the bees quiet. Remove the cage, open the slide door, and place a piece of comb honey in the hole, just sufficient to keep the queen in; then hang the cage as it was and close the hive. The bees will cut the comb and release the queen. Do not disturb them for three days, then remove the cage. This method is extensively practiced through the United States.





### The Family Circle.

"Home, Sweet Home."

#### UPS AND DOWNS;

OR, SCENES FROM LIFE.

(Concluded).

The fleeting years were pleasant to the Claytons. Their children grew up fair and promising. Already Harry was in a solicitor's office, an articled clerk, the younger boy, William, was to be a medical man; and the little Violet was as lovely and modest as her name-flower. And Henrietta had another happiness—they had laid by many hundreds now; and it was not merely the usual interest that was received for them, for Clayton had been admitted to a share, though a very trifling one, in the concern; and the sum, small as it was, that he invested, returned him a percentage far larger than that given to depositors.

But sunshine cannot last for ever. The first cloud was a change in Clayton's health. A severe illness, followed by a stroke of paralysis, left him with his powers of mind unimpaired, but so infirm as to preclude all hope of future exertion. Then what comfort it was that they had so well guarded against an evil day. And what a satisfaction that Clayton had obtained the small share in the banking concern, now that he could do nothing to make an income; and the mere interest of their savings would have been very little for their support. But within a couple of years the bank broke, and all was lost, the trifling share which had seemed such a blessing only serving to make ruin more complete; for he was involved in the liabilities, and the policy of insurance, which had always rendered his mind easy on his wife's account, was taken from them.

Still there were their sons—Harry two-and-twenty and William seventeen—who were eager to exert themselves for their parents and sister. The younger's prospects of course were altered; but a situation in the Custom House was obtained, enabling him to be at once an assistance to the family. And Harry was in high hopes that he should get into practice as a solicitor, for which he was now qualified. He appeared to be doing so for a few months; when an election came on, during which a portion of the hustings fell, and Harry Clayton was carried home, living indeed, but with a spinal injury with which he might linger on for years, but only to grieve over the thought of being a burthen to those he hoped to have supported.

William's small salary was now their only resource. To add to it, Violet went out as a morning governess, though her youth made her reward but trifling. So passed another year, and still Harry, at nearly four-and-twenty, lay a dead weight on the struggling efforts of his young brother and sister, without a hope of recovery or—he would often have said, but for fear of grieving those who loved him—even a hope of death. Clayton retained much of his former cheerfulness, and strove to support the spirits and courage of his son under this painful trial; while for his sake also the fond mother checked her own repinings, and strove to give to their humble dwelling the comfort and the home-look which it formerly wore.

One day the captain of a ship at the Custom House quay came into the Long-Room, as it was called, where William was writing. The captain was transacting some business concerning his ship, and while thus engaged, the clerk he was speaking to asked Clayton by name for a paper that was required.

"Clayton!" repeated the captain. "It is a long time since I heard that name, though I know and like it well. I hope you won't think it curiosity if I ask your father's name?"

"It is Philip Clayton," replied the youth.

"It must be the same—and you are William!" exclaimed the sailor, grasping his hand. "Tell me only that all are well."

A shade came over William's face.

"My father is not in good health, and my brother is ill," he answered, sadly.

The joyful look of the sailor was dimmed also.

"You will take me to see them," he said. "I have often longed for an opportunity; and hoped if ever this hour arrived, I should find no sorrow with those I have always remembered as being so happy."

In half an hour William's duties were over, and they left the Custom House together. Young Clayton did not ask his companion's name, nor did the sailor tell it; though before their walk was ended, his anxiety to know all about his old friends had gleaned almost their entire history from William's ingenuousness. Yet though somewhat prepared, it was a tremulous shock when Mr. Clayton stood before him weak and tremulous, stricken with age before his time; and he saw Harry, the once merry and light-hearted, lying powerless and motionless on a couch, with the light of youth fading from his eye, and its spirit dying out of his bosom.

"An old friend?" repeated Clayton inquiringly, as he gazed intently on the face of his visitor.

"Yes; an obliged and deeply indebted one, and a grateful one too, Mr. Clayton," replied the sailor. "Have you quite forgotten Frank Allen, who owes everything to your kindness?"

"A feeling came over me at first that it could be no other," said Clayton, giving him a cordial welcome, which was warmly echoed round.

An hour swept away all the clouds which appeared to hang over Frank's conduct to his old friends; for he had often written, but receiving no answer, had fancied that Clayton never wished to hear from him; and when, years after, he

returned to the village, he learned that they had left it, and and could gain no further tidings. His own fortunes had been prosperous during the fifteen years which had elapsed since Philip Clayton acted so kind a part to him—for talent and diligence had won for him the favour of all he sailed with; and so he had risen until, two years before, he obtained the command of a ship.

"And now I will not call it chance that brought me to this port," he said; "it was some higher influence guided me here, and told me at once when I heard the name to-day that one of my old friends was near me—though it certainly was not William that I thought of seeing."

"Ah, you would think of me," observed Harry, with a mournful smile. "But my father and mother have but one son to work for them."

"No, Harry," replied Allen, crossing over to the friend of his boyhood, and taking his hand; "they shall have two sons to work for them; and in good time I trust you may join us as the third. But all I owe to your father's generosity—he acted towards me as a father; and deeply grieved shall I be if he will not allow me to be as a son to him. Surely—surely, Mr. Clayton," he continued, earnestly, "you will not refuse to the boy whom you protected—whom your bounty placed in the way of winning far more than a competency—you will not refuse to him the power of proving his gratitude for all you have done for him! To be a son to you and Mrs. Clayton, and a brother to your children—this is all I wish, and it would indeed be to me a happiness."

It was the truest gratitude that prompted the desire, and bade him exert all his eloquence to win, as he did, the privilege of devoting himself as a son to the protector of his boyhood. For Henry especially, his heart was grieved; to see him, young and gifted, wearing away the spring-time of his life in suffering and sorrow, pained him deeply; and he earnestly sought other and better advice upon his case than the Claytons' means had enabled them to command. At length a hope was given that a partial recovery at least might be attained.

With this hope, and the blessings of his early friends, Frank Allen, at the end of some weeks, went on his voyage, happy in the consciousness that he had left lighter hearts than he had found. And when, months after, he returned, there were bright smiles to greet him back, and something of the old light beginning to beam in Harry's eye, for the dreary period of hopelessness was past, and he had the prospect that in another year he might once more tread the green turf and look upon the sparkling streams; and, above all, essay again to support himself, at least, instead of remaining in the helpless and child-like dependence which had so weighed upon his spirit.

The prospect was not deceptive, and before Frank left them next, its promise was in part fulfilled, and young Clayton was able to move about with assistance.

"Philip," said Mrs. Clayton to her husband, as they watched from the window Harry leaning on the arm of the friend to whose aid his recovery was so greatly owing, since it had involved expenses which they themselves could not have met.—"Philip, your fifty pounds were put out for far better interest than all the other money we ever saved; the rest is gone, but this remains to bless us. Little thought I when I so opposed you how rich a return your generosity would one day receive!"

"Nor I either," answered Clayton; "I never thought of nor sought return. But it has come to cheer us in the hour it was most needed; and now, as I look on these two, how it brings back that last evening when Allen and I stood watching our boys; now, as then, his was the helper of mine; and I could almost think the very smile of old, with all boyhood's cloudless joy, was on their faces."

He guessed not yet the cause of those smiles, nor that Frank had just told Harry how his own deep, true love had won that of Violet, and that ere long he fervently hoped to claim by right the titles of son and brother in the family of his adoption.

THE END.

#### Mr. Brown's Offer.

"I do think it's too bad for anything! The idea of a man I've never seen having the insolence to write to Uncle Josiah that he is coming all the way from out West to ask me to marry him!"

Kitty Clover's blue eyes flashed, and something very suspiciously like angry tears were glimmering on her long, curling brown lashes. Her cheeks were flushed, and her lovely mouth dimpled into a look of scorn and rage that did not at all suit Aunt Susan's view of the case, as she looked over her spectacle rims and took Kitty quite sharply to task.

"I can't see what there is so terrible about it. Brother Josiah and I have known Archie Brown ever since he was knee-high to a grasshopper, and a nicer boy and a nicer man you'll never find than he was and is now. He's good-looking and rich and he wants a wife; and he's seen your picture and fallen in love with you, and he's written to know if Brother Josiah has any objection to his coming to ask you to marry him. We take it as a great compliment, and a streak of luck you wouldn't come across twice in your life, and here you must set up contrary to it and consider yourself almost insulted. Kitty, I'm ashamed of you."

Miss Susan Clover jerked the needle so emphatically that the strong thread snapped viciously. Kitty, perched in the wide, shady window seat, pouted her red lips.

"Well, I don't care—it's a shame! And Mr. Archie Brown needn't think I'll be bought and sold like a cow or pig, just because he happens to have the cash. And I won't have anything to do

with it—now! I know I'll just hate him—yes, I hate him already. When he comes you can tell him my opinion of him."

And then, after she had flounced out of the pleasant sitting-room, her wavy brown hair all a tumble over her low, white brow, her pretty blue eyes all agleam with genuine girlish indignation, her white, dimpled fingers playing furious havoc with her ruffled apron, and Aunt Susan sat chewing away almost as vexed as Kitty herself, thinking what silly fools the young of to-day were.

Kitty went up to her room, and went directly to her dressing-glass and took a long, eager survey of herself.

"Yes, I am pretty, and I don't wonder this horrid Mr. Brown—ah! what a name, Brown! I don't really feel surprised that he has fallen in love with my photograph, and Uncle Joe and Aunt Sue both say he is good-looking—but for all that I perfectly despise him. I've a good mind to just fix myself up as irresistibly as possible and see him when he comes at 8 o'clock, and then pay him for his impudence by completely crushing him. Yes—I will!"

The anger was all gone from the blue eyes now, and the scorn from the luscious scarlet lips, and instead there were gleams of merry mischief and dimpling smiles at prospect of the glorious triumph so near at hand.

"Archie Brown! the idea! but she would be revenged. Oh, is he here already?"

For the one maid-servant of all work in the Clover family was handing Kitty a card, and on it she had read a name that sent warm flushes to her cheeks despite her determination.

"Tell Mr. 'A. Brown' that Miss Clover sends her compliments and will see him presently."

Then she turned to her glass for a parting critical survey, and saw a very satisfactory reflection of a slender, graceful girl, with a fresh, sweet face and blue eyes that were half roguish, half indignant, and a saucy mouth that struggled between the expressions of cold contempt and haughty indifference—a lovely, lovable girl, in a dark blue silk costume, whom it was little wonder Archie Brown, away out in Kansas, had come all the way back to win, if he could.

And he was down stairs—come to bargain with her, come to buy her as he would a load of hay. The thought sent flushes of suppressed indignation to her eyes, and more beautiful flushes to her cheeks, as she went slowly down stairs and into the parlor, her train rustling after in a sort of eloquent protest—to see standing in the bay window, curiously examining a luxurious pot of smilax, a little dumpy gentleman, with a bald shiny spot on the back of his head, and wearing a suit of clothes that were neither especially new nor well-fitting.

Kitty gave a little silent gasp, as she took her rapid survey, with the thought that for this horrid-looking man she had taken so much trouble to dress, so she might have the delightful triumph she planned. This odious, vulgar "A. Brown."

As her train rustled over the carpet Mr. Brown turned suddenly around, showing Kitty a good-humored, middle-aged face, small twinkling eyes behind eye-glasses, and a little bristling tuft of beard on a fat double chin.

"Is this Miss Clover? Ah, yes!"

Kitty bowed friendly.

"I am Mr. Brown."

"So I presume. Will you sit down, or—"

She was about to suggest that Uncle Joe be sent for, but Mr. Brown acted so suddenly on her suggestion, and took a chair so near her, that she was momentarily dumbfounded.

"I dare say you were looking for me!"

Kitty flushed almost painfully at having to admit she had been expecting this, but she was as brave as could be.

"Oh, that is, I thought it very probable you'd come."

"Just so; and when anybody makes an appointment they cannot be too prompt in keeping it. So I'm here, and—excuse me—but I suppose you've your answer ready for me?"

Kitty almost shrieked. An answer for this man! Whatever could Uncle Joe and Aunt Sue mean to have exposed her to such cruel degradation?

"I don't know what you mean," she flashed at him, almost beside herself.

"You don't! Well, now, that's strange. Why, old Mr. Clover understands it all, and he agreed

to tell you the offer I made you—the offer I made you through him."

Mr. Brown's matter-of-factness almost overcame Kitty. Her words of hot indignation stuck in her throat, and yet this odious fellow sat there placid, at ease, as he went on:

"I will say I am disappointed—agreeably disappointed—in your appearance, Miss Clover; for I expected to see quite a—different—quite an elderly lady!"

"Indeed!" she flashed out tartly. "Then it seems we are both surprised—although I am sorry I cannot be so complimentary as yourself, seeing that I had expected a very much younger man."

Her language, her manner, did not seem to annoy him in the least.

"Oh, well, age and looks don't count for much if there's hard cash to back them. Come, Miss Clover, what is it to be—yes or no? I won't deny I've come quite a way to have you answer, and now I'm here I'd like it settled at once. You'd better agree to it here and now, for if I say it who shouldn't, I don't believe you'll ever get such another chance."

Then Kitty jumped up from her chair, raging at his cool, calm impudence.

"How dare you speak so to me, sir? As if any man in possession of even half his senses would not know there could be but one answer! No, a thousand times no!"

She fairly shrieked it at him as he stood staring at her.

Then as she hurriedly rushed from the room he frowned inquiringly at her strange conduct, and then slowly gathered his hat, gloves and walking-stick together and went out perfectly astonished, nonplussed.

Kitty tore up stairs to her room, which so lately she had left in mischievous, half-indignant triumph—her cheeks crimson with fury, her eyes so full of disgusted tears she could scarcely see what she was doing, as she almost frantically tore off her laces, her ribbons, her lovely dress, tossing them angrily on the bed.

"To think I really thought of trying to fascinate him—oh, oh! A nasty, stumpy, greasy, impudent, intolerant old man! To think he dare come trying to make love to me! I'll plaster my hair down to my face, and wear the most horrid calico wrapper I can find, and do penance for the insult I have permitted myself to receive. Oh, Mr. Brown, how I hate you!"

And this haughty, wilful heroine of mine sat down in her favorite rocking-chair and cried until her eyes were all red and swollen, and her nose almost as bad; so that when Aunt Susan called her to come down for a moment she was as sorry a sight to see as ever a girl was before.

But she went down, too angry and miserable to care for Aunt Susan's remarks or Uncle Josiah's quizzical looks—went down in her wrapper, with her swelled eyes and nose, and occasional sobs welling defiantly up from her chest—went down to the parlor to meet a tall, elegant gentleman, dressed just as a handsome, graceful fellow should dress—a gentleman whose splendid gray eyes looked not a little astonished at the sight of her—a gentleman who came easily forward to respond to Uncle Joe's introduction, while Aunt Sue gave a little scream of horrified surprise at the girl's appearance.

"Why, Kitty!"

"Kitty, here is our friend Archie. Miss Clover, Mr. Brown."

Poor Kitty Clover! She wondered if she were dreaming or crazy. Archie Brown? This Archie Brown—this splendid fellow that the most fastidious girl would not have failed to almost fall in love with at first sight? Who then, what then, where then was that horrid man?

Great banners of scarlet shame were hanging out like signals of distress on her cheeks as she extended her dimpled hand to the gentleman—such a fair, shapely dimpled hand he noticed, as he took it, with a smile that was sweetness itself.

"I am afraid there is somebody for me to fight, Miss Kitty—some one has been annoying you."

Kitty flashed him a grateful look from her swollen eyes.

"I—I cannot quite understand it! There was a horrid old man here, and—he was—awful. And his name was Brown—A. Brown; and—and I thought it was—you. There he goes past the window now!"

Just then Aunt Susan craned her neck inquisitively, sprang from her chair, and rushed to the door.

"It's old Andy Brown, come up to buy my house-lot down by the timber-land. I told his folks to send him to close his offer for it. Hi, there, Mr. Brown!"

And then while Uncle Josiah and Aunt Susan were arranging for the "offer" poor mistaken Kitty had supposed was an offer of marriage for herself, she and the genuine Mr. Brown had a remarkably confidential fifteen minutes' interview, and after the old people had come back, and were enjoying a hearty laugh with Archie over the blunder, Kitty stole back up stairs to don her toilet again, and came down to show Mr. Brown what a really pretty girl she was.

And she succeeded to perfection—not only in convincing him of that fact, but also that, with all her little human faults of temper and disposition, she was just the girl he wanted for his wife; and when he returned to his plentiful, promising Western home, three months later, Kitty went with him, his happy wife.

#### Blushing to Redness before a Beggar Girl.

A touching begging story with a good moral is told by the *Pittsburg Telegraph*. A young man who had been on a three-days' debauch wandered into the reading-room of a hotel, where he was well known, sat down, and stared moodily into the street. Presently a little girl of about ten years came in and looked timidly around the room. She was dressed in rags, but she had a sweet, intelligent face that could scarcely fail to excite sympathy. There were five persons in the room, and she went to each begging. One gentleman gave her a five-cent piece, and she then went to the gentleman spoken of and asked him for a penny, adding, "I haven't had anything to eat for a whole day." The gentleman was out of humor, and he said crossly: "Don't bother me: go away! I haven't had anything to eat for three days." The child opened her eyes in shy wonder and stared at him for a moment, and then slowly walked toward the door. She turned the knob, and then after hesitating a few seconds, walked up to him, and gently laying the five cents she had received on his knee, said with a tone of true girlish pity in her voice: "If you haven't had anything to eat for three days, you take this and go and buy some bread. Perhaps I can get some more somewhere." The young fellow blushed to the roots of his hair, and lifting the Sister of Charity in his arms, kissed her two or three times in delight. Then he took her to the persons in the room, and to those in the corridors and the office, and told the story and asked contributions, giving himself all the money he had with him. He succeeded in raising over \$40 and sent the little one on her way rejoicing.

#### Growing English Ivy.

I have heard people complain that they could not keep English ivies, because they grew so slowly, and that they could not afford to wait for a small vine to grow to any considerable size. While visiting my old home, the past summer, I made many calls, and among them one upon a lady who is noted throughout the village for the beauty of her ivies. I never saw any more lovely. Though comparatively young plants, they were stately, while the leaves were of that glossy green which is seldom seen outside the greenhouse. I asked her, after having admired the plants sufficiently, "What is the secret of your success?" She assured me that it was no secret, adding, "I put a piece of beef-steak at the roots every spring and fall, and this is the result." "But does not the odor of the decaying beef annoy you?" "It never has, and why should it? Won't people fill the pots half full of stable richness, and never think of offensive odors?" On my return to Worcester I put some steak, a piece perhaps two inches square, under the roots of the ivy, and in a week or two it began to run, and has grown very rapidly ever since. Now, perhaps other decaying matter would do as well, but I can truly recommend the steak as having been tried. Many say too much richness will kill the plant, but I know from experience that vines, all kinds of ivies, air plants and Madeiras cannot have too much. Use mixed dressing, such as has been made ready for the garden, two-thirds of this and one of common earth, and your vines will grow rank and beautiful, astonishing you with large leaves and stout stems.—[N. A. M. Roe, *American Cultivator*.

#### Bound to Have Her.

The old man Bendigo keeps a pretty sharp eye on his daughter Mary, and many a would-be lover has taken a walk after a few minutes' conversation with the hard-hearted parent. The old chap is struck this time, however, and cards are out for a wedding. After the lucky young man had been sparking Mary for six months, the old gentleman stepped in as usual, requested a private confab, and led off with:

"You seem a nice young man, an' perhaps you are in love with Mary?"

"Yes, I am," was the honest reply.

"Haven't said anything to her yet, have you?"

"Well, no; but I think she reciprocates my affection."

"Does, eh? Well, let me tell you something. Her mother died a lunatic, and there's no doubt that Mary has inherited her insanity."

"I'm willing to take the chances," replied the lover.

"Yes, but you see Mary has a terrible temper. She has twice drawn a knife on me with intent to commit murder."

"I am used to that—got a sister just like her," was the answer.

"And you know that I have sworn a solemn oath not to give Mary a cent of my property," continued the father.

"Well, I'd rather start poor and build up. There's more romance in it."

The old man had one more shot in his carbine, and he said:

"Perhaps I ought to tell you that Mary's mother ran away from home with a butcher, and that all her relations died in the poorhouse. These things might be thrown up in after years, and I now warn you."

"Mr. Bendigo," replied the lover, "I've heard all this before, and also that you were on trial for forgery, had to jump to Chicago for bigamy, and served a year in State Prison for cattle-stealing. I'm going to marry into your family to give you a decent reputation. There—no thanks—good-bye!"

Mr. Bendigo looked after the young man, with his mouth wide open, and when he could get his jaws together he said:

"Some hyena has gone and given me away on my dodge!"—[Defroit Free Press.

When I used to tend store on Queen street the old man came round one day, and, says he?

"Boys, the one that sells the most 'twixt now and Christmas gets a vest pattern as a present."

Maybe we didn't work for that vest pattern! I tell you there was some tall stories told in praise of goods just about that time, but the tallest talker and the one who had more cheek than any of us was a certain Jonah Squires, who roomed with me. He would talk a dollar out of a man's pocket when the man only intended to spend a sixpence; and the women—Lord bless you—they just handed over their pocket books to him, and let him lay out what he liked for them.

One night Jonah woke me with:

"By Jo, old fellow, if you think that ere's got any cotton in it, I'll bring down the sheep that it was cut from, and make him swear to his own wool! 'Twon't wear out either—wore a pair of pants of that stuff for five years, and they're as good now as when I first put 'em on! Take it as thirty cents and I'll say you don't owe me anything. Eh? too dear? Well call it twenty-eight cents. What do you say? Shall I tear it? All right, its a bargain."

I could feel Jonah's hand playing about the bedclothes for an instant, then rip? tear went something or another, and I hid my head under the blanket, perfectly convulsed with laughter, and sure that Jonah had torn the sheet from the top to the bottom. When I woke up in the morning, I found—alas! unkindest cut of all—that the back of my night-shirt was split from tail to collar.

A young lady was sitting with a gallant captain in a charmingly-decorated recess. On her knee was a diminutive niece, placed there *pour les convenances*. In the adjoining room, with the door open, were the rest of the company. Says the little niece, in a jealous and very audible voice, "Auntie, kiss me too." Any one can imagine what had just happened. "You should say twice, Ethel dear; two is not grammar," was the immediate rejoinder. Clever girl, that!

## Minnie May's Department.

MY DEAR NIECES,—Just a few words with you this month about cooking vegetables. Half of the vegetables that we see cooked are spoiled—some too much cooked and others not sufficiently. Hard potatoes, stringy squash, woody beets and tough onions exasperate anybody who cares for good food. These delicious vegetables are utterly detestable if not properly cooked. Asparagus spinach, peas, beans and cabbage should all be boiled quickly. Have your water boiling before you put your vegetables in; add a tablespoonful of salt (some like a pinch of soda to soften the water); none of them should be boiled longer than twenty minutes or half an hour. Potatoes of average size should be boiled fully in half an hour. When done, pour the water off and set the pot back on the top of the stove until the moisture has evaporated and the potatoes have grown dry and mealy. If you want to mash them add salt butter and a little cream to make them rich and smooth. Be sure to beat them sufficiently to make them snowy white and light. That most delicious of vegetables, squash, is often spoiled by not drying it properly. Do not allow squash to come to the table "mushy" and stringy. When you cook peas, leave a little of the liquor in which they are boiled and season with butter, pepper and salt. In spite of French cooks, peas are not nearly so good when dry as when cooked in this manner. Tomatoes cooked with a little butter and soda crackers or bread crumbs stirred in to thicken, are wholesome and nice; but tomatoes in their perfection are raw. Peel them and cut in thin slices; eat with pepper, salt and vinegar, or some prefer with sugar.

MINNIE MAY.

## RECIPES.

## MILK ROLLS.

These rolls can be served hot or cold. They are made with one pound of flour, one ounce of butter, one ounce of sugar, a full teaspoonful of baking powder, about a pint of milk and a pinch of salt. To the flour add the salt, sugar and butter, and mix well by working with the fingers. Then introduce the baking powder and the milk and knead quickly. Cut the lump of dough into six or eight pieces; form into rolls, cut each roll over the top twice and place on a lightly-floured pan and bake for fifteen minutes in a very hot oven. When done brush the top with the white of an egg or milk, sprinkle with fine sugar and place in the oven for one minute.

## PICKLED VEAL.

Take a piece of cold veal that has been thoroughly boiled; chop it fine, sprinkle salt, pepper and a little cloves over it; pour over it enough vinegar to wet the meat thoroughly; then set it over the fire until well heated through, when you can put it in a mold; as soon as it is cold it can be sliced for the table.

## PINE-APPLE PIE.

Pare and grate one good sized pine-apple; cream, one cup of sugar, and a third of a cup of butter; beat the yolks and whites of five eggs separately. To the cream, butter and sugar add the yolks, then the apple, and lastly the whites. Bake in open shells of paste. Eat cold.

## PEACH CORDIAL.

Make a rich syrup of one quart of peach juice and one pound of white sugar; when cold add a half pint of the best brandy; for a drink, dilute with water at time of using.

## TO CLEAN SILK.

A few potatoes, sliced, and boiling water poured over them, make an excellent preparation for cleansing and stiffening old rusty black silks. Green tea is also excellent for this purpose. It should be boiled in iron, nearly a cupful to three quarts. The silk should not be wrung, and should be ironed damp.

## SLEEP.

To promote sleep there is nothing like open air exercise and plenty of it. Sleep will follow regularly and naturally, without any narcotics.

## HORSE-RADISH SAUCE.

Grate as much horse-radish as will fill a breakfast cup, mix with it two teaspoonfuls of powdered white sugar, and one each of salt and pepper, a dessert spoonful of made mustard, and enough vinegar to make the whole as thick as rich cream; a small cupful of cream is also a great improvement. To use with roast beef the sauce is heated by being placed in a jar in the oven till warm, but it must not boil; and it is very good cold to eat with various cold meats. Double this quantity may be made at a time, and it will keep for some weeks if bottled.

## FILLETS OF BEEF AND DUTCH SAUCE.

One and a quarter pound fillet of beef sliced about one inch thick; grease slightly a tin broiler; place the beef on it and place broiler under the flame, allowing beef to broil for about seven minutes, turning it once. For Dutch sauce take half a tablespoonful of cream, half a tablespoonful of water, the yolks of two eggs, a little pepper and salt, an ounce of butter, and the juice of half a lemon. Put the water in a small saucepan, and with the yolks of eggs, butter, pepper and salt; place it over a very hot fire till it thickens, but don't allow it to boil. Having taken the fillets of beef from the broiler, after broiling several minutes, place them in a dish and pour the Dutch sauce around it, ready for use.

## WHAT SHALL WE HAVE FOR DESSERT?

Let me suggest to your readers a few ways of varying the dessert at dinner—changes from the inevitable pie. They may not be new, yet I never see them at any table besides my own: Make a dough as for biscuit, roll thin and spread with currants, cherries or any kind of berries; raspberries are especially good. Roll it up like jelly cake and steam it till done. To be eaten with sweetened cream.

Another is: To one pint of sour milk add one teaspoonful of soda, flour to make a batter, and a handful of dried cherries or currants. Pour it into a basin and steam till done. To be eaten with sweetened cream.

## TO KEEP HAMS.

There are a number of modes given to keep hams through the warm season free from the attacks of insects. Some bag them and whitewash the bags, which is troublesome and somewhat expensive; some cover them with dry wood ashes and pack them in barrels; some pack them in barrels and cover thoroughly with pine shavings; but we think the best plan of all, and certainly the least expensive with all who have a smoke-house, and every farmer should have a good one, is to keep the hams hung up in the smoke-house, which should be kept perfectly dark at all times. We have eaten hams so kept two years old, and they were among the very best we ever tasted. Uniform darkness is a complete protection against the attack of insects.

## HOW TO MAKE COLOGNE WATER.

With no trouble at all, any one can make in her own storeroom a better article of cologne than that which is usually bought, by thoroughly dissolving a fluid drachm of the oils of bergamot, orange and rosemary, each with a half a drachm of neroli and a pint of rectified spirits. As good as can be made out of cologne itself, however, is also prepared by mixing with one pint of rectified spirits two fluid drachms each of the oils of bergamot and lemon, one of the oil of orange, and half as much of that of rosemary, together with three quarters of a drachm of neroli and four drops each of the essence of ambergris and musk. If this is subsequently distilled, it makes what may be called a perfect cologne, but it becomes exceedingly fine by being kept tightly stopped for two or three months to ripen and mellow before use.

## PRESERVING EGGS.

The following recipe for preserving eggs is recommended very highly.—To four gallons of boiling water add half a peck of new lime, stirring it some little time. When cold remove any hard lumps with a coarse sieve, add ten ounces of salt, three ounces cream of tartar, and mix thoroughly. The mixture is then to stand a fortnight before using. The eggs are to be packed as closely as possible and to be kept closely covered up. If put in when new-laid they will keep nine months.

## Conversation.

Nature weighs our talents and gives to us unequal shares of sensibility, judgment, and moral perception. With the diversity of intellect as a basis of argument, many remain silent, crowding the storehouse of the mind until they shall have amassed a fabulous array of mental riches, maintaining that conversational power is a gift inherent, and not an art dependent on sowing or culture. They are few, however, who will persistently deny that the wedge of meditation becomes thin and moth-eaten when thought finds no expression, and that all the finest impulses of the soul are corroded by a holding back of the sympathy of words. Talking is not always conversing. Parrots have learned to rehearse fine phrases and sentences without the least show of harmony or pretension to interchange of thought by language. As the bird is supposed to be destitute of the various mental faculties belonging to man, and its dialect merely an imitation of the human voice, so inarticulate sounds formed by the organs of speech belonging to the human species too often prove a toy with which to while away the hours.

Take some trifle of your acquaintance for an example. Watch his conversation through a single day; collect all the marrow thereof, find its solid worth, put in the balance against a fly, and if it weighs more the scales are false. Since for every idle word we shall give an account in the day of judgment, we should guard against talking too much for fear of saying too little. It is doubtful whether slanderers, gossips, and busybodies in other men's matters, ought to receive the appropriation of a Christian name; and when hoary hairs are guilty of the vices above named, their presence becomes as disgusting to the lovers of the good and truly beautiful as the odour of a vault in contrast to the perfume of June roses.

Some take an unaccountable liking to positive affirmation, and in every story, true or false, which they relate, make your case hopeless as to contradiction. They tell you that it is true, and that it is not false, until you are forced to believe their earnestness nothing more than a cloak for the deceit which at first emanated from the devil. It is said that "opinions gather strength from opposition;" but preserve us, from that which has been very properly termed "the duel of debate," especially when either of the opponents is an exemplification of vociferated logic. He is always in the right, of course; and the best, and, indeed, the only alternative is, to fall back in one's chair and pretend to be exceedingly interested in everything he has to advance, replying discreetly in monosyllables, and taking care to get them in the right place. If the one-sided argument has been successfully maintained in your own home, the gentleman will take his leave with a still more flattering idea of his own intellectual strength, smiling as he thinks of the similar castigation which you are to receive when he shall have accepted your very pressing invitation to call again.

There is another sort of person who belongs to the class of "mighty good kind of men." Catch him committing himself if you can! He would not dare to assert in a positive tone that the nose on his face belonged to him. With an admirable hesitation he "presumes" it may be so, he "hopes" it is—so we do! His evidence, in point of law would do more towards hanging an honest man than imprisoning a thief. Another class shows plainly lack of brain and culture in the long invention of a longer tongue, embellished now and then—and oftener—with "He said," "So said I," "Goodness gracious!" "Dear me!" and "You know."

Then there is the cautious speaker, who loves dearly to whisper in the face of his neighbour, as though each phiz had been drawn towards the other by the attraction of a magnet. His communication proves to be nearly as important as the charge of a popgun or the contents of an empty barrel. Others employ their health in telling how often they have been ill—how it seemed at times as if the disease must triumph, in spite of the physician's skill—then, when nature rallied, and they were almost themselves again, how they happened to put on a damp nightcap, which caused a relapse, and then they thought they should die, they suffered so!

Poetry may be able to paint the constraint under which many individuals suffer in society, but we are sure that colours could not do justice to the matter. Conversation, no matter what may be the chosen theme, should "flow like music after summer showers," leaving no room for monotony, grilling, slanders, conceit, shallow-mindedness, exaggerations, regrets, or embarrassments.

**Passion Flower (*Passiflora*).**

When in Rochester, N. Y., last year, no flower attracted our admiration so much as the beautiful festoons of this, what we may term the Queen of Beauties of climbing flowers. It was to be seen climbing about the houses and arbors of the wealthy. We have not seen them growing anywhere in Canada—that is, such perfect beauties for size, color and delicacy, as in Rochester. Our climate is almost the same as in Rochester. All we require is the care and the taste to have the best. We hope these few lines will create a desire on the part of some of the ladies who can well afford it, to set a pattern, and that these flowers may yet be seen by Canadians that have not yet had the pleasure of admiring them.

This flower is supposed to represent the Crucifixion of Christ, and thence its name. There are a great many varieties of Passion vines. The one in the accompanying cut represents the Blue Passion Flower (*P. cerulea*). It is cultivated in cool greenhouses and treated as a bedding plant. If planted out in warm weather it grows very rapidly and produces a profusion of its handsome flowers, which are very pale blue with a purple centre and a blue crown, which has a white band in the middle. Passion Flowers are increased with the greatest ease from cuttings of the young wood, and they may also be raised from seeds. When wanted for in-door culture, they should be put in large boxes, as the roots require much room.

We have received from O. Ditson & Co., Boston, U. S., some sheet music, in which we find the bright "Marquis of Lorne Galop," "Hymn of Nuns," "Love is at the Helm," "Reminiscence of Pompeii," and "On the Meadow," for which please accept our thanks.

One of the highest compliments a man can receive is to hear a friend say to him: "The very sight of your pleasant face is enough to drive away the blues."—*Crystal*. But the satisfaction with which one hears such speeches is marred by anticipation of the remarks that are almost certain to ensue—"By the way you haven't got two dollars that you," &c.

A Frenchman said to an Englishman, "Tare is von word in your language I do not comprehend, and all ze time I hear it. Tattletoo, tattletoo, vat you means by tattletoo?" The Englishman insisted that no such word existed in English. While he was saying so, his servant came up to put coals on the fire, when he said, "There, John, that'll do." The Frenchman jumped up, exclaiming, "Tare, tattletoo!—you say him yourself, sare; vat means tattletoo?"

Passenger (in second class)—"I think I've got into the wrong carriage." Ticket inspector (sternly)—"The difference must be paid!" Passenger (triumphantly)—"Oh, just so! Then I'll trouble you for three shillings; I've a first-class ticket."

A man with a tremendous large mouth went to a dentist to have a tooth extracted. On opening his ponderous jaws, the doctor remarked that "he needn't do it so wide, as he preferred standing outside to preform the operation."

**Settling a Knotty Account.**

A merchant once had a dispute with a Quaker respecting the settlement of an account. The merchant was determined to bring the matter into court, a proceeding which the Quaker very earnestly deprecated, using every argument in his power to convince him of his error; but he was inflexible. Desirous to make a last effort, the Quaker called at his house one morning, and inquired of the servant if his master was at home. The merchant hearing the inquiry, and knowing the voice, called out from the top of the stairs. "Tell that rascal I am not home." The Quaker, quietly looking up at him, calmly said, "Well friend, the Lord put thee in a better mind."

The merchant, struck afterwards with the meekness of the reply, and having more deliberately investigated the matter, became convinced that the Quaker was right and himself wrong. He requested to see him, and on acknowledging his error, he said, "I have one question to ask you—how were you able, with such patience, on various occasions, to bear my abuse?" "Friend," replied



PASSIFLORA CERULEA. (PASSION VINE.)

the Quaker, "I will tell thee. I was naturally as hot and violent as thou art. I knew that to indulge this temper was sinful, and I also found it was unprofitable. I observed that men in a passion always speak loud; and I thought that if I could control my voice, I should repress my passion. I have therefore made it a rule never to let my voice rise above a certain key, and by a careful observance of this rule, I have, by the blessing of God, entirely mastered my natural tongue."

Such good, frank philosophy was not lost upon the merchant in after years.

"Are you lost, my little fellow?" asked a gentleman of a four-year-old boy one day, who was crying for his mother. "No, sir," sobbed the boy; but my mother is."

Somebody, describing the absurd appearance of a man dancing the polka, says:—"He looks as though he had a hole in his pocket, and was trying to shake a coin down the leg of his trousers."

**Papa's Letter.**

I was sitting in my study,  
Writing letters, when I heard,  
"Please, dear mamma, Mary told me  
Mamma musn't be 'sturbed."

"But I's tired of the kitty;  
Want some ozzer fing to do;  
Writing letters, is 'ou, mamma?  
Tan't I write a letter, too?"

"Not now, darling, mamma's busy;  
Run and play with kitty now."  
"No, no, mamma, me write letters—  
Tan if 'ou will show me how."

I would paint my darling's portrait,  
As his sweet eyes searched my face—  
Hair of gold and eyes of azure,  
Form of childish, witching grace.

But the eager face was clouded,  
As I slowly shook my head,  
Till I said, "I'll make a letter  
Of you, darling boy, instead."

So I parted back the tresses  
From his forehead high and white,  
And a stamp in sport I pasted  
'Mid its waves of golden light.

Then I said, "Now, little letter,  
Go away and bear good news;"  
And I smiled as down the staircase  
Clattered loud the little shoes.

Leaving me, the darling hurried  
Down to Mary in his glee;  
"Mamma's writing lots of letters—  
I's a letter, Mary—see!"

No one heard the little prattler  
As once more he climbed the stair,  
Reaching his little cap and tippet,  
Standing on the entry stair;

No one heard the front door open,  
No one saw the golden hair,  
As it floated o'er his shoulders  
In the crisp October air.

Down the street the baby hastened,  
Till he reached the office door;  
"I's a letter, Mr. Postman;  
Is there room for any more?"

"Tause dis letter's doin' to papa;  
Papa lives with God, 'ou know,  
Mamma sent me for a letter;  
Does 'ou fink 'at I tan go?"

But the clerk in wonder answered:  
"Not to-day, my little man."  
"Den I'll find anozzer office;  
"Tause I must go if I tan."

Fain the clerk would have detained  
him,  
But the pleading face was gone,  
And the little feet were hastening,  
By the busy crowd swept on.

Suddenly the crowd was parted,  
People fled to left and right,  
As a pair of maddened horses  
At that moment dashed in sight.

No one saw the baby figure—  
No one saw the golden hair,  
Till a voice of frightened sweetness  
Rang out on the autumn air.

'Twas too late—a moment only  
Stood the beautiful vision there;  
Then the little face lay lifeless,  
Covered o'er with golden hair.

Reverently they raised my darling,  
Brushed away the curls of gold,  
Saw the stamp upon the forehead,  
(Growing now so icy cold.

Nor a mark the face disfigured,  
Showing where a foot had trod;  
But the little life was ended—  
"Papa's letter" was with God.

—[Burlington Hawkeye.

A Yankee boy had a whole cheese set before him by a waggish friend, who, however, gave him no knife. "This is a funny cheese, Uncle Joe; but where shall I cut it?" "Oh," said the grinning friend "cut it where you like." "Very well," said the Yankee, coolly putting it under his arm; "I'll cut it at home."

**Uncle Tom's Department.**

MY DEAR NEPHEWS AND NIECES,—Is it not strange that we do not know the reason why several of the months are called by the names we daily use for them? Some say June was named after Juno, one of the ancient goddesses, others that it was named in honor of Junius Brutus, the Roman Consul, but the best reason of all is that it is dedicated to the young men who in Latin are called juniors. But there is no good reason why it should mean young men and not young women; and then young men and women may be very young. Here's a discovery! June for juniors is the young folks' month! Hurrah for June, the youngster's month! It is the pleasantest of all; it is bright and fresh and gay, and full of life and sweetness, as I hope all my nephews and nieces are or should be. Yes, dear ones, be good natured if you can, for there is no attraction so great, no charm so admirable. A face that is full of expression of amiability is always beautiful. Therefore cultivate good nature; it is better than "apples of gold set in pictures of silver," for gold will take to itself wings and fly away. Silver will tarnish in time—and both when abundant lose their comparative value—but good nature never loses its worth, or its hold on the esteem of the world.

UNCLE TOM.

**PUZZLES.**

**55—CHARADE.**

A well-known country in this you will view;  
A nation lately at war next 'tis true;  
A christian name this is surely, I'll own;  
A black liquid substance very well known;  
An American town now please to put down;  
And my last is a nation of great renown.  
The initials rightly read will show quite plain,  
A well-known sunny nation's name.

THOMAS ATKINSON.

**56—**

If you are but a boy, perhaps you'll live my whole to be,  
But before you have obtained it, you are cast upon life's sea,  
To struggle on with might and main, through the merciless world;  
And when my whole is reached the youthful standard is unfurled.  
Decapitate for me, and then a new head please return.  
And what it then explains no doubt you'll quickly learn;  
To the cook it's indispensable, and what I say is true,  
And when you've solved the subject, it will come before your view.  
Before my muse retires, my 'cute reader I implore,  
To strike off my present head, and return afresh once more,  
And I then shall name what the horse has done when the winning post is passed.  
And now, ingenious reader, I may say farewell at last.

T. ATKINSON.

**57—DIAMOND PUZZLE.**

A consonant: an implement used in fishing; essential; one who governs in place of a king; to reach too far; one of Marryatt's novels; coldness; that by which we learn to speak correctly; a tree; a fairy; a vowel or pronoun. The centrals, read downwards and across, give one of Captain Marryatt's novels.

F. POWELL.

**58—**

Beneath a green and bushy hedge  
Of early May my whole is found;  
You oft may see my homely first  
Strayed from the fields unto the pound.  
Often my first, my second does,  
Falling with speed upon the ground,  
Eager always the grass to eat.  
Near which my yellow whole is found,  
Good and pleasant is the wine which  
Lovely wholes have helped to make;  
And many a tippler likes it too well,  
Never refusing the cup to take.  
Dear riddling friends, my whole please tell.

**59—**

- 1—Syncopate a vehicle and leave a domestic pet.
- 2—Syncopate gloomy or sullen, and leave an animal of the deer kind.
- 3—Syncopate the voice of a rooster and leave a useful farm animal.
- 4—Syncopate a shepherd's staff, and leave a preparer of food for the table.
- 5—Syncopate smitten and leave gummed tightly together.

**60—EASY REVERSALS.**

- Reverse a circular band and get an expression of contempt.
- Reverse a part of a watch or clock, and get set down.
- Reverse clothing and get to boast.
- Reverse clubs and get a wound with a sharp-pointed weapon.
- Reverse a place defended from the wind, and get a fish.
- Reverse recompense and get part of a clothes press.
- Reverse eatable fruit and get a pleasant month.

**61—DECAPITATIONS.**

Complete I'm the home of black, brown or gray;  
Behold me, I'm seen in the house every day;  
Again, and I've power to obey.

Complete I may cause you to stumble and fall;  
Behold I am strength to the bodies of all;  
Again, I'm a number remarkably small.

As a whole I am said to keep off the foe;  
Behold, what that foe likes to do I now show;  
Again, and you're furnished with what brings him low.

T. M. T.

**62—SQUARE WORDS.**

- 1.—Black, a weapon, valient, an armor, pitchers.
- 2.—A Hebrew letter, a country in Europe, one who creates, a gum, instruments of music.

**Answers to May Puzzles.**

45—1, Milk-maid. 2, Flint-shire. 3, Miss-take. 4, Snow-ball.

46— 1—Idea. 2—Rest. Echo. Show. Town.  
Dear. Earn. Arno.  
3—Park. 4—Game. Amen. Mend. Ends.  
Aloc. Rove. Keen.

47—Granada.  
48—All work and no play makes a dull boy.  
49—1, FIRE, Fire. 2, Coast, Cost. 3, SoLon, Scon. 4, PeTal, Peal. 5, Noise, Nosc. 6, DoMe, Doc. 7, DrOop, Drop. 8, FaRec, Face. 9, NiEcc, Nicc. Baltimore.

50— M  
S I T  
B O S O M  
M I S L E A D  
G U E S T  
W A R  
D

51—As the old cock crows the young one learns.  
52—B, oat; T, ale; B, room; B, ear; S, hark; B, ear; T, aught; F, ox.  
53—Promise little and do much.  
54—In the looking glass. 2, Trees. 3, The letter M.

**Names of Those Who Sent Correct Answers to May Puzzles.**

John West, Herbert Kitchen, G L O'Callaghan, Minnie Gould, Ellen Burroughs, Henry Thomas, Rosie Shore, Sarah J Dutton, Alex McKay, Octavus Crane, Minnie Flood, J C Cowan, Theo Summers, Noah Bayly, Geo Trevaill, Lucie Hammond, Jessie Garden, Wm Cummings, David Paterson, Alley Mercer, John Scott, Mary Weekes, Thomas M A Lyons, Edwin West, Henry Marling, Frank Ellis, Edward Curtis, Mary J C Carter, T W Weston, Emily Ball, J Taylor, Eliza Leach, Robert Reid, Jas Anderson, Jane Sharman, C W Roberts, R Birrell, Carrie Flemming, John Malone, Elizabeth Elliott, Kate A M Lamplior.  
Honorable mention is made of Minnie Hyde, having answered all the puzzles correctly.

Science is a good piece of furniture for a man to have in an upper chamber, provided he has common sense on the ground floor.

A woman may not be able to sharpen a pencil or throw a stone at a hen, but she can pack more articles into a trunk than a man can in a one-horse wagon.

Patrick—"And, Biddy, darlint, they've been tellin' me there's too many of us in the worrld. Now, if you and me get the praste to make us two wan, troth won't there be wan the less?"

**Stock Notes.**

Mr. C. T. Todd, of Milltown, New Brunswick, a breeder of Hereford cattle, recently shipped several head to Ontario.

The London Oil Refining Co. shipped for Liverpool on the 26th ult., via the Grand Trunk, 15 car loads of cattle—13 from London and 2 from Mitchell—a total of 250 head.

Cattle to the number of seventy head, bought around Sackville, N. B., have been forwarded to Quebec for shipment to Great Britain. Several of them weighed 2,200 lbs. each.

Lt.-Col. Tyrwhitt, of Bradford, has purchased from Messrs. J. & R. Watt, of Salem, the prize Shorthorn bull, Bramton Senator, by imp. Royal Bramton; dam, Queen of Beauty, imp.; he weighed 1,600 lbs. at 2 yrs. old.

Mr. Edward Jeffs, Bond Head, has sold seven young Shorthorn bulls since last October at fair prices, considering the hard times.

HEREFORD IMPORTATION.—Mr. F. W. Stone, of Guelph, has imported about 40 head more of this fine class of beef animals. From accounts we hear of the demand for Herefords, there is at present much more profit in them for breeders than in the Shorthorns. Americans have been making large importations of this breed, and the highest prize was awarded this class at the last Royal Exhibition in England. Mr. Stone's name as a breeder of stock stands high in the estimation of Canadians and Americans.

An order for 64,000 bushels of Canada white wheat has been received from Antwerp, Belgium, per cable.

Forty-two thousand pounds of eggs passed through Ottawa on Tuesday last for the Montreal market.

The Toronto Reaper & Mower Co. have orders for eight car loads of their Whitely reapers and mowers to go to Prince Edward Island and to Nova Scotia.

The Thomson & Williams Manufacturing Co., of Stratford, Ont., last week filled an order for a car load of their wrought-iron harvesters, to go to New Westminster, British Columbia.

Our Australian correspondents inform us that they have had a hot dry summer—three months without rain. Wheat will only yield about five bushels per acre. It is now the winter season with them.

ON THE WING.—We hope to be in Manitoba the latter part of this month. We go untrammelled, and shall attempt to give you information about that country from an untrammelled and disinterested standpoint.

John Elliot & Son, of the Phoenix Foundry, city, have shipped this season 292 reaping and mowing machines to localities outside of Ontario. The largest number go to France; some to Scotland, some to Australia, and others to British Columbia. Mr. Elliot makes a good machine, and we hope these may be only the pioneers for a large business in our country.

BEE NOTES.—Dodd's circular and price list giving full particulars regarding Bee Hives, Italian Queens, and other apiary matter is received, and is deserving of attention by all engaged in that most delightful and profitable occupation—bee keeping. Mr. C. F. Dodd is an enterprising young man, and enthusiastic on bees. See advertisement.

"PLYMOUTH ROCKS."—Though a recent breed of fowls, the Plymouth Rocks have already attained sufficient importance to have a work devoted to their history, characteristics, etc. Mr. F. A. Corbin, of Newington, Ct., tells the story in a neat volume of nearly 100 pages, which also gives designs for poultry-houses, and useful hints upon poultry management in general.

Kansas must be a pleasant place for Canadians to settle in. Negroes are swarming to that state. Tornados are plentiful. They have commenced early this year. In May numerous houses were blown to atoms, and over 20 people killed. Drouth, insect pests, and a lawless, demoralized population, with laws that are winked at, are among the attractions. Dissatisfied and ignorant Canadians may go there, but even those that can return will do so as sick of Kansas as did \_\_\_\_\_, whose description appeared in this journal years ago.

**Commercial.**

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

Since our last report the aspect of affairs has considerably changed, some for better and some for worse. The prices of some articles have materially improved, and we hope will continue so, or at least remain steady.

**WHEAT.**

With the unfavorable crop reports and light deliveries prices have very much improved, and the ideas of holders for the past ten days have been far above what Liverpool prices will warrant. Part of the improvement is due to the extremely low freights which have been freely offered for some time. We think that lower freights have been obtained the past month than have ever been given before in our recollection. Farmers will thus see that even if prices have been against them, freights have been in their favor. For just as soon as freights begin to tumble, up goes the price of grain in the same proportion, if from no other cause.

We find there has been a good deal of old wheat, the crop of 1877, brought into market the past month. We heard of one farmer who brought a load of old wheat into a neighboring market the other day, was offered 98c. per bushel for it, but took it home again because he could not get the dollar.

Another farmer that we were conversing with the other day told us that he had kept a record of his sales for twenty years, and during that time only missed twice by selling his wheat early.

The future value of wheat will, for the next two months, depend entirely upon the crop prospects in Europe and America.

**BUTTER.**

With plenty of grass, butter becomes more plentiful, and prices are very much easier. The future in this article depends very much the same as wheat on the favorable or unfavorable of the weather. The early make is much short of last year, and we are of the opinion that it will be somewhat less, even under favorable circumstances. Still, with the very large proportion of the make of medium and inferior quality, we cannot but look for low prices.

**CHEESE.**

There can be no question that at the present time, notwithstanding the extremely low prices, there is a more favorable outlook than might have been anticipated two or three months ago. The backwardness of the season has made a very marked decrease in the yield of milk. To this may be added the decrease in cows in some sections, which is very marked, together with the growing dispositions to raise more young stock, which has caused a large number of calves to be raised, even in the largest and oldest dairy sections.

To the above a leading American dairy paper adds that the great length of the producing season last year has drawn very heavily on the milk resources of our dairies, which ought to have been supplemented or renewed by extra care and attention during the winter, and that dairymen with them have not taken the care nor given their cows the feed they should have done. From what we can learn there is a good deal of truth in these remarks, and they are applicable to this side of the lines. At all events we are getting very much less cheese than last year, and we shall not be surprised to see a falling off through the entire season. The extent of this will be governed largely by the weather for the next three or four months.

Below is a table of comparisons for last week in New York.

	Rec.	Ex.	Cable.	Top price
May 19, 1877	12,941	35,994	728	15c
May 18, 1878	17,612	43,985	495	10 1/2
May 17, 1879	17,309	32,290	415	7 1/2

**Little Falls Cheese and Butter Market.**

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

LITTLE FALLS, N. Y., May 24, 1879.

During the earlier part of the month the cheese market here had a gloomy aspect. Buyers were hard to please, and did not care to handle any sort of cheese except "full milk," and even that was cautiously taken in small lots and at low prices. Skims of fair quality went at from 2c to 4c, and the best grades of full milk brought from 5c to 6 1/2c, the larger share of the offerings being sent forward on commission. These prices continued (the market being dull and depressed) until the middle of the month, when a better class of goods began to come forward and prices improved. For the week ending 17th of May the offerings were about 5,000 boxes, and prices ranged from 5c to 7 1/2c, one lot going at 7 3/4c. Nearly 1,800 boxes were sent forward to be sold on commission. At Utica 7c was the highest quotations for this week's sales, the offerings being about the same as at Little Falls.

During the week ending May 24th a good many buyers were present and sales were more brisk than at any time during the season. Prices did not advance above 7 1/2c, but a large proportion of the 6,000 boxes offered went at from 7c to 7 1/4c, which showed a decided improvement in the market, corresponding with the improved quality of the goods offered. There was comparatively little low grade cheese on the market, but this went at from 2c to 3c, thus plainly showing that there is no inducement to manufacture "poor stuff," and that better profits would have resulted if the milk made into such cheese had been fed to domestic animals. The dairy readers of the FARMER'S ADVOCATE cannot be urged too strongly that especial pains must be taken this year to send forward nothing but fine cheese. It is the only grade that can possibly pay the cost of production.

The weather in New York is extremely dry and the season is backward. The crop of cheese thus made in the State is not much, if any, more than half that of last year up to June. The less yield this year will doubtless act favorably on prices, and it is anticipated that 8c will be reached for best grades. Butter has come forward freely, and prices ranged during the first part of the month for fair to good lots from 15c to 17c. Prices declined the latter part of the month to from 12c to 14c, while the delivery fell off, and is now quite light.

Latest advices from England report transactions large in American cheese, with prices firmer all round. In London American faultless brings 50s to 51s; firm, 48s to 49s; good, 36s to 44s; and low grades, 10s to 34s per cwt. English cheddar is quoted at from 70s to 78s; Cheshire medium, 50s to 56s; fine, 64s to 74s, and Scotch 46s to 56s per cwt.

The demand for butter is nearly confined to finest European and American. American butter ranges from 28s to 30s; Guernsey, 80s to 115s, and Canadian, 32s to 90s per cwt. English Dorsets bring 140s; Danish, 120s to 126s, and Swedish, 110s to 114s per cwt.

**London Markets.**

Per 100 lbs.		Per 100 lbs.	
Deihl Wheat	\$1 65 to 1 70	Peas	80 to 1 00
Treadwell	1 65 to 1 70	Oats	115 to 1 22
Clayson	1 65 to 1 70	Rye	90 to 90
Red	1 65 to 1 70	Corn	90 to 1 05
Spring	1 50 to 1 40	Beans	90 to 90
Barley	90 to 1 25	Blackwheat	90 to 90

**Montreal Markets.**

Montreal, May 31.  
Flour from \$3.50 to \$4.50 for June; \$4.75 for Superior extras. Oatmeal \$1.20 to \$1.25. Cornmeal \$2.50. Wheat \$1.00 to \$1.95. Corn shell, 15c to 40c. Peas 80c to \$1c per 65 lbs. 00c to 20c per 32 lbs.

**Toronto Markets.**

Toronto, May 31.	
Barley	40 to 50
R. Winter	90 to 97
Deihl	90 to 1 00
Peas	60 to 65
Flour	\$3 75 to 5 45
Spring wheat	91 to 96
Treadwell	90 to 98
Oats	38 to 40
Pork	\$5 00 to \$5 50
Butter	7 to 10

**Chicago Markets.**

Chicago, May 31.  
Wheat, 98 1/2c; Corn, 36c; Chicago Wheat, \$1.00; Oats, 29c; Barley, 65c to 67c; Pork, \$6.00 to \$6.62 1/2.

**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 subscription to the FARMER'S 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 FARMER'S 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.

**The Hambletonian Trotting Stallion**

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Will make the Season of 1879 at the following places, commencing May 5th:  
Mondays and Thursdays at his own stables, east York Street, London East.  
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Terms, \$15.00 to insure.  
All accidents at risk of owners.  
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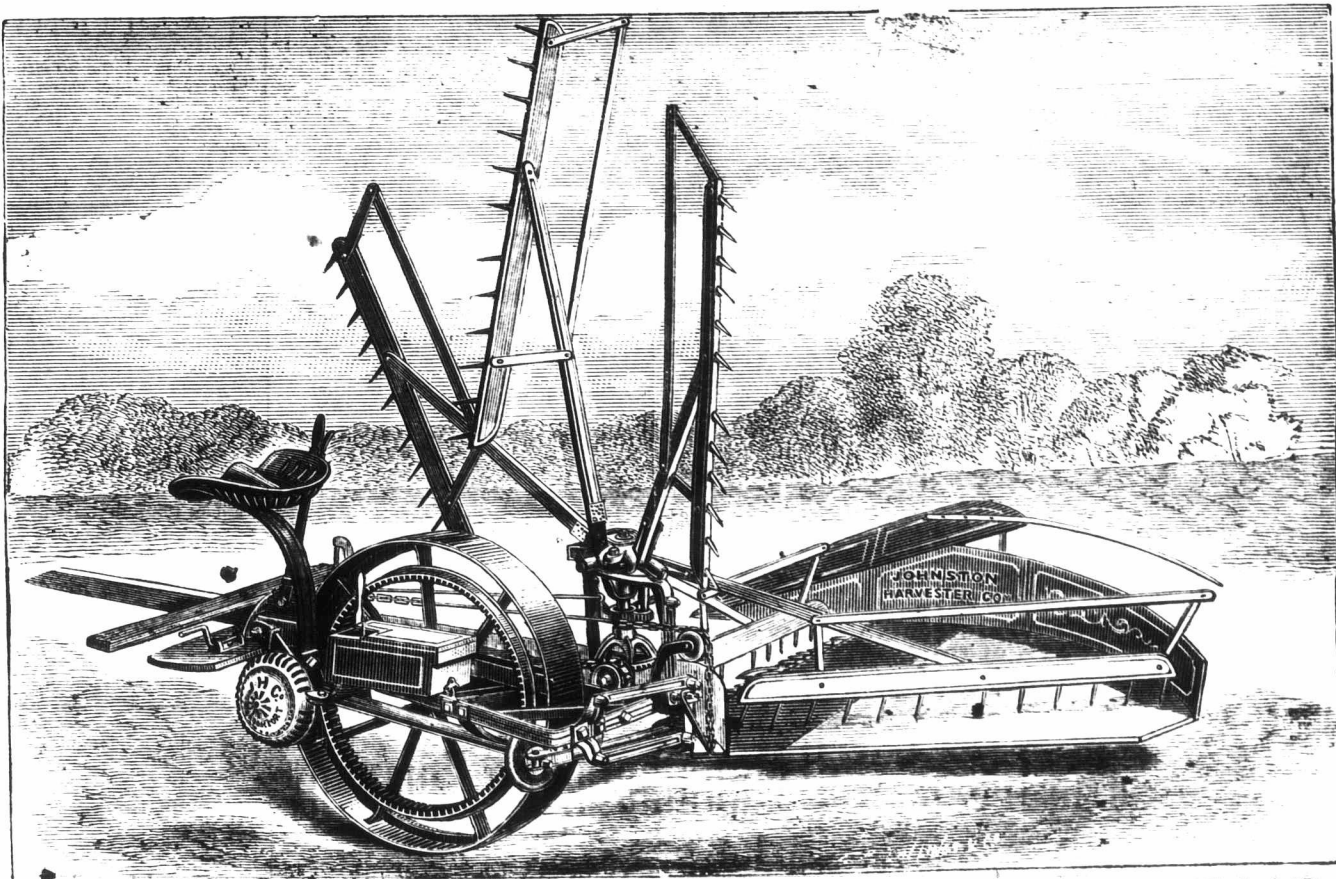
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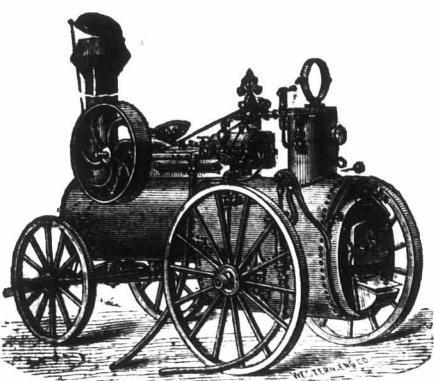
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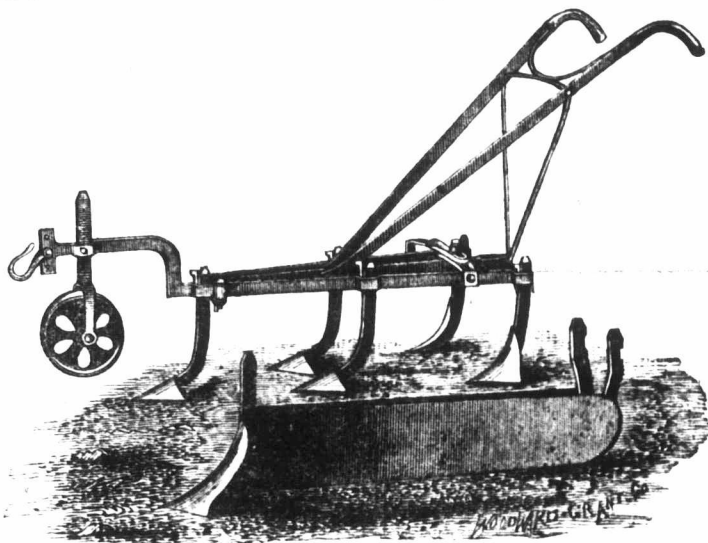
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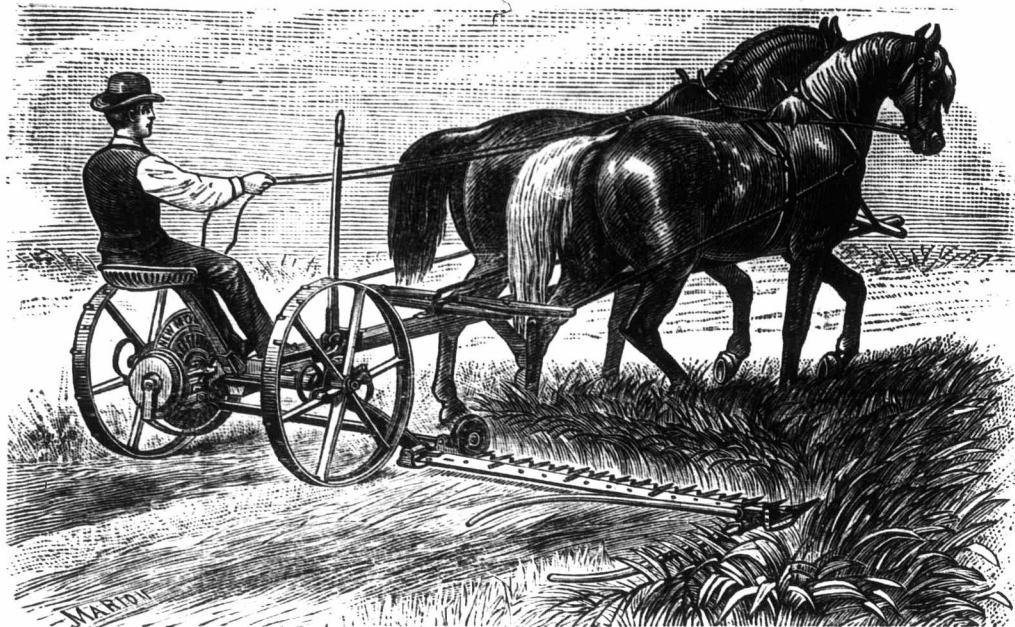
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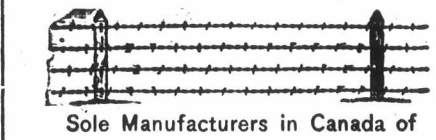
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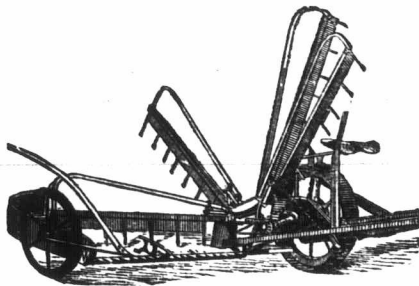
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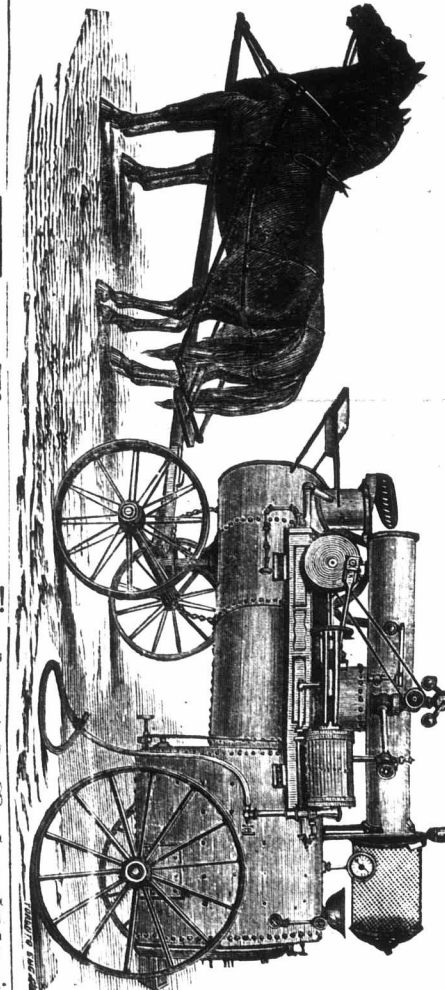
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