THE FARMER'S ADVOCATE.

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A farmer in Pennsylvania who thoroughly underdrained his land, says the money thus used paid him better than if he had invested in bonds, or bank, or railway stocks, as his capital is doubled every five years.

Test of Seeds.

"PERSEVERE AND SUCCEED!"

That is our motto.

We complained about the acts of the late Minister of Agriculture, which may result in profit to the country, but it has not to us. We really hoped a change would have effected some good.

A Minister of Agriculture should not be ignorant of what has been done or is doing towards the advancement of the interests of agriculturists. We well know that it requires a little time to duly consider and make arrangements, and no doubt the present Minister has had a great amount of additional labour and care since his accession to office, and many weighty matters have to be considered before descending to the practical test of seeds and noticing the tillers of the soil.

Farmers, we will have patience and follow our motto, despite this procrastination or evasion; more, it is not our intent to attempt to lead our readers to believe or place their whole trust in either political party. We have not bowed down to that idol yet, and it is not our intention to do so. We are waiting patiently and noticing what is transpiring; we will allow due time for consideration, and give you our opinion unbiassed, when the proper time arrives. We had a few moments' conversation with the Minister of Agriculture, the results of which we have not yet published. We forwarded the following letter to the Minister of Agriculture:—

London, March 11th, 1872.

To the Hon. A. McKellar, Minister of Agriculture:—

DEAR SIR,—

Could you in any way aid me in testing seeds? During the last session of Parliament I forwarded to the Hon. E. Blake commends from the Board of Agriculture and Arts, and also from the County Council of Middlesex. I should be happy to wait upon you at almost any time you may appoint, and explain my views.

Yours respectfully,
W. WELD.

This is the reply:—

Dep't of Public Works, Ont.,
Toronto, Mar. 12, 1872.

SIR,—

I have been instructed by the Commissioner to acknowledge the receipt of your communication of the 11th inst., and to say in reply that he cannot do anything in regard to testing seeds this season.

I have the honor to be, sir, your obedient servant, H. A. MACLAWRIN,
Prov. Sec.

W. WELD, ESQ., London.

NOTICE TO OUR SUBSCRIBERS.

Being unable to test seeds as fully as we would wish, we have sometimes been obliged to disseminate them without testing. We are receiving imported grasses and cereals, and some that have been raised in our own country. We ask you to aid us; one at Kingston, one at Newmarket, one at Owen Sound, one near Montreal, and one or two in Middlesex, for the purpose of testing. We will supply some of our seeds at half their cost, and if there is any profit from the result we will divide it, after allowing necessary expenses. We have not time or means to test all we would wish on our farm. Let us be united, and we can have our practical tests and useful information, without a tax of $95,000 or $500,000 annually.—We shall ask that agricultural information be allowed to be disseminated as cheaply as novels and political advertisements, and we believe we shall have it granted.

East Middlesex Agr'l Society.

A POLITICAL RUMPUS BREWING.

On Wednesday, the 20th of March, a person, name unknown, delivered to one of our assistants a letter addressed to your humble servant. We opened it and found that it contained eight pages of well written, carefully prepared matter, signed "H. Anderson, Sec'y East Middlesex Agricultural Society."

Having perused the document we found it to contain much condemnation of ourselves, tantamount to calling us a *vindictive, deceitful, insane liar!* and a laudatory account of the Western Fair and Jas. Johnson. It shows that the Board had authority given to it in 1870 to dispose of the Agricultural land in this city, and that the Board sold it for $5000; that the Board had no intention of using the money for the Western Fair. It gives a pretty sharp rap at the Provincial Board, then kindly invites it here, and promises to do all in the power of the Board to make it a success. It endeavors to show that the Western Fair was not intended to injure the Provincial Exhibition. It is highly laudatory of the Western Fair, but as to your humble servant—woe betide him!

We at once directed our clerk to write to the Secretary and enquire if it was from himself or from the Board. We also wrote to the President to ascertain if he was aware of such a document, and if it was the desire of the Board that we should publish it, offering to do so if they wished. Although we wrote immediately on receipt of the document, we have not yet had a reply from either the President or the Secretary. Therefore we do not know whether the thing is a hoax or not, having seen two of the Directors, and they know nothing about it.

We may have made erroneous statements in regard to the price received for the sale of the agricultural ground in this city, but if they were erroneous they were not intentionally so. What advantage could it be to us, in any way? Other reports state that the price received was from $3000 to $4000; we do not know which is right.

In regard to the right to sell we don't deny it, but our impression has been that it would be a wrong step to sell the land, and our opinion has always been opposed to the sale. From remarks of the President and the voice of the members at the annual meeting in 1872 we were impressed that the members of the Society did not wish it to be sold. We have considered that something has been quietly moving in regard to the land and other things for years past, and have said nothing, having had so many other things which we considered of more importance to the country to attend to. No one would be more willing to aid the Western Fair than your humble servant if we were convinced that it was not for political purposes. The Secretary, Mr. H. Anderson, was the person that gave us the information that the proceeds from the sale of the agricultural land were, if possible, to be used for the Western Fair.

We have great respect for the majority of the directors of the East Middlesex Agricultural Society, and also for Mr. Anderson, the Secretary, but before publishing such a document as the one sent in, it is right that every member of the Board should know of its contents, and have an opportunity of giving their sanction or condemnation. We write this hurriedly, having waited till the last day we can afford, the 26th, and still have no reply from the President or Secretary, and await their reply before publishing it.

The whole thing amounts to this: Can an agricultural paper be conducted independent of party politics? We have preferred independence, and rejected the politicai offers made. We have spoken openly what we believe to be correct. Have we done our duty as the farmers' *advocate* or not?

We have received a communication from Amaranth, signed "Cymro." It contains a great deal of valuable information for farmers, but at the same time it is an attack on the manufacturers. Now we cannot place our columns open for discussions of this nature, unless correspondents send their proper name and address and authorize us to publish them.

Mr. R. T. Dean, of Nissouri, informs us that he bought 1½ lbs. of Bresee's Prolifics, out of which one potato died and he gave two away. He planted one eye to each hill, on good ground, but did not use manure. The yield far exceeded his most sanguine expectations, being 3½ bushels.

Farmers' Politics.

Preparations are now being made for the elections. Many parties are about; addresses are being given and will continue to be given for some time. Lawyers and citizens are now pouring their deeply-studied speeches into your ears; some claiming to be Reformers, some Conservatives, and many of you farmers listen with gullible ears and think you are doing yourselves and the country a good service by giving your votes to a person for no other reason than because he may be on the side of politics you like best. We, as farmers, should look to our interests; we should have a policy and a platform. Our policy should be to send more agriculturists to the Houses of Parliament, men that really live from the cultivation of their land. Farmers have been compelled to pay a very heavy tax for the direct benefit of the cities; our rights and interests have been sacrificed to the interests of cities in many ways, in fact, in every way. Many farmers have not looked into these things as closely as they should. The fact is, that it never can or will be known to what an enormous extent this taxing farmers for the benefit of the cities and citizens has been carried on.

We have our just rights to obtain, and we should strive for them. Do not give up on one poor trial; if you have been conquered persevere, try again, and in time you will conquer. If you will only make one good stand others will rally round you. Let others know what you are doing or trying to do; let us raise our voices and make them heard—*more farmers to Parliament.* If you had sent one farmer there that had any influence, do you think this fourfold tax on agricultural information would ever have disgraced the 19th century? Shout aloud—Farmers' interests! farmers' rights! and send more farmers to Parliament to fight for them.

To the Hon. A. McKellar, Minister of Agriculture:—

We are pleased to notice that you have condescended to consult with the Board of Agriculture on agricultural subjects; we believe that you will use your abilities for the advancement of agricultural interests, and will be directed to some extent by the farmers of the country. We believe you have taken a judicious step in checking any further expenditures on the Mimico Farm until the subject is better ventilated and judicious plans matured, if such an institution is to be established. The Mimico establishment, if our judgment is not in error, was intended to trample down and squelch private enterprises that should happen to be conducted by parties not entirely subservient to particular political tenets. It was the intention of some parties to trample out the Board of Agriculture and to establish an annual Provincial Exhibition at Mimico, leaving each section to its own resources. The scheme was a gigantic one. In its attempt the manager was selected. Had we received the offers which were made to us if we would lend our aid to the plans, we believe we should not have acted true to our name, the FARMERS' ADVOCATE. It is our belief that the farmers of the country should know what is intended to be done for or against their interests; that this subject and all other agricultural subjects should be openly discussed through all the agricultural papers of the country. The very simplest facts in regard to the different natures of plants and cereals, are not known to one-tenth of our farmers. The profits of selling or even raising Southern Corn is known only to few dairymen, and a thousand other really useful practical and profitable hints on all kinds of farming business are comparatively unknown. Would not a very great amount of good be done by furnishing information about such things to those who are not aware of the benefit of such information? Would not the increased spread of these very small crumbs of information be of advantage? Our farmers, as a class, must be fed with such knowledge as they can understand. Elaborate and flowing technical language and terms are of little avail as yet; we are in darkness; we should be first instructed in something we understand a little about, and gradually increase the stock as the mind becomes capable of receiving it. Our aim should be to have the masses informed; we scarcely know one farmer who would read a scientific article on any subject. Our farmers have been in low positions, and many are now becoming wealthy. Knowledge should be supplied to them, and in what better way can this be done than by the encouragement of agricultural papers, agricultural clubs, libraries and lectures? Would it not be well to offer some little inducement for farmers to write articles on different subjects? We understand that some persons have been sent to the States to examine into the working of the Colleges there; should we not have reports about the results of the investigation, in short, concise forms, and have them described publicly? Perhaps a little expenditure in the above-mentioned manner might save an enormous expenditure that would have to be made annually, which the farmers would have to pay, whether the result was injurious or beneficial. Would it not be well to examine into the results of the expenditure made for a test and experimental farm many years ago in Toronto? Great expenditures were made, but we never heard of any good results.

Seeds.

M'CARLING WHEAT.

Since our last issue we have received even more favorable accounts from persons who procured this variety last season, than we ever had before, not one complaint having been made about its productiveness or quality during the past month.—Two parties, Mr. J. Cameron, of Nissouri, and Mr. Shiver, of Westminster, have called at our office, showing us wheat that resembles it very much; indeed, we cannot see any difference in the grain. One shearer had 32 bushels per acre, the other 35, and they both say it is the best spring wheat raised in their sections. Some complain about the price charged for it; undoubtedly it is high, but we paid a high price per bushel after harvest, and have had the No. 1 quality hand-picked at a cost varying from 25 cents to $1 per bushel, besides, dividing losses, and packing it in small lots, writing letters, &c., in reference to it, costs money. Still it is being now pretty widely disseminated in small quantities.—We have such confidence in it that we wish some of it to be in every township, and feel sure that it will be a public benefit. We shall present quarter of a pound of it to any one of our subscribers (who have paid their $1 for the present year), who will remit the postage, which will be three cents, and four cents for the bag, label, and expense of packing; also, we shall send a package on the same terms to the first member of each agricultural society that wishes to try it, even if they are not subscribers to the paper.

EXCELSIOR PEAS.

We also receive satisfactory accounts in regard to this variety of peas. It is our belief that they will be of advantage, and we will make the same offer in regard to them.

EARLY PROVIDENCE PEAS.

We have received some of the above peas, an English variety. It is a large, wrinkled pea, of brown colour, and is said to be an enormous cropper, yielding 10 bushels per acre more than our white varieties. The specimens we have received were raised in Newmarket, Canada. If any of our subscribers should like a 4 oz. package, we will present the peas to them, but they must remit the price of postage, one cent per oz., and four cents for the bag and packing.

POTATOES.

Orders have arrived in such numbers for some kinds of potatoes, that we believe we shall be short of some varieties before the season closes. However, we can yet fill orders for all the varieties advertised by us. We will make the same offer to our subscribers in regard to the different kinds of potatoes as we have made in regard to the McCarling wheat, that is, we will send them half a pound of any variety on payment of the postage, one cent per oz., and the cost of bag and packing. It is not our intention to give each kind to one person, but one kind to each.

OUR FIELD SEEDS.

Our new stock of field seeds has landed. We have not ordered a large lot, but merely sufficient for our readers who procure their stock from us, and we have not spared expense in trying to procure the best turnip seeds; we have one-half a pound of new turnip seed that is most highly spoken of, the cost of which half-pound alone was $6.50, or £1 6s., in England, rather a dear turnip seed it will be thought. Many will not believe that we would pay at the rate of $13 per pound for turnip seed. It was procured from H. Clark, of London, England, who stands at the head of the seed business there. Many will ask what will we do with it; no one will purchase it, for Canadians can raise their own seeds. There are persons now raising turnip seed in Canada; we have seen it raised here and believe it answers well. We shall divide this and sell some of it in small packages at 20 cents per package; we shall have some left for ourselves, which, if we cannot find any person to take care of it and raise seed, we shall sow it ourselves and try our luck at raising turnip seed. Still we would rather that one or two of our readers would undertake it, as we have so much to attend to.

GRASS SEEDS AND GRAIN.

We have imported numerous small lots of the different kinds of grasses, and, knowing that we could not devote the attention to these that we should, we asked the Minister of Agriculture for aid for such a purpose, as grasses are of importance to the country. We hope some of our readers who have time to look after them will give them a fair test, and for this purpose we will present one or two of you with a small quantity, on condition that you will give them a fair trial and report to us. A very small piece of land will answer for a test, and will do quite as much good to the country as if it was imported by the ship load. We can procure more if they are found to answer.

OATS.

We have some imported Brown oats, as they are called; also a few Black and White Tartars, and we will add some of our Canadian and American varieties. We will also place them in the hands of our subscribers to test and report upon, and to supply us with seeds. The greatest difficulty is found in having so many varieties, as we cannot afford to employ the necessary labor to keep them all pure, and we find that the seeds we procure from others are too often mixed. We advertise to supply the best we can procure, but sometimes we are really ashamed of the kinds we have to send out.

NEW BRUNSWICK OATS.

We have procured a quantity of this variety of oats from Owen Sound, but they are not as good a sample as we would wish, not being as plump or as pure as they should be.

NORWAY OATS.

Some persons are well satisfied with the Norways and consider them an acquisition, while others condemn them as an arrant humbug.

We would like one person to attend to the oats, another to peas, another to spring wheat, another to grasses, another to turnips, another to fall wheat, and some to field seeds, to send reports of the success or failures of the different kinds. Remember that the reports of failures, as well as of success, are useful; the majority are willing to publish the successes, but we want both sides. If some of our readers will respond, we shall be happy to divide the costs and profits with them; there will be loss on some kinds and profit on others. It is a necessary and useful work we are engaged in, and we can, by our united efforts, have every necessary test carried out, by dividing the labor. A single test in one locality is not always sufficient; for instance, some kinds of grain, potatoes, &c., are favorably reported from some sections, and condemned in others.

Patrons of Husbandry.

To Amos Hoff, Secretary, and E. Farrington:—

GENTLEMEN,—We send you a few numbers of the FARMERS' ADVOCATE, being much pleased to notice your exertions for the benefit of farmers. We shall be happy to enroll our name as a member of one of your Granges, and we shall also feel greatly obliged if you will send us a copy of the rules or laws that govern your societies. We have labored alone for the past seven years in this Dominion to awaken the farmers to the necessity and advantage of unanimity of action. Our labors are gradually becoming appreciated, and now hundreds who at first ridiculed our ideas and plans, are our supporters. Our journal is now considered the leading agricultural paper of this Dominion.

We are much pleased to observe that the ladies are interested in your organizations.

For the Iowa Homestead.

SOMETHING NEW.

There surely must be something new,
That's pressing hard on farmers' minds,
For in our school rooms not a few
Are frequent found with lowered blinds.
A secret order—*is that so,*
That they are now in this combined?
Strange tho't; when but few days ago,
Few farmers then were thus inclined;
But if we're asked the reason why
We've made this great and sudden change,
We all with one consent reply,
We want the name of "Crystal Grange."
With this new name we feel quite proud,
Begin to stir, and say *combine,*
That we may move the lowering cloud,
That's hung long o'er the farmer's mind.
With brother Patrons everywhere,
We want to work and be as one;
With one united voice declare
Our rights, and work till them we've won.
'Tis *union,* farmers, we must have;
Come one, come all, then let us be
Combined, and hush the jeering laugh
Of those who say we can't agree.
To paddle each our own canoe,
They say we must, or downward float.
To fight alone is hard work too;
Then farmers, come, let's ride the goat.
Good times are coming; then *hurrah,*
Three cheers for Granges everywhere;
Blood suckers now must cease to draw
From us, for we've no more to spare.
The lazy hounds of whom we read
In *Homestead's* columns 'tother day,
May bark and whine till they are dead,
No more shall they upon *us* prey;
And those who seek for office too,
For what it brings within their purse,
When they come round we'll—"shoo, fly, shoo!"
My stars! but won't they buzz and furse?
To such, wher'er they may be found,
Who've drawn so largely from our veins,
We say to be combined we're bound,
And thus to break oppression's chains.
Then, farmers, come, let's all unite,
Maintain our rights and honor too;
That when these suckers on us light,
We'll only need say—"shoo, fly, shoo."

For the Iowa Homestead.

DISTRICT MEETING.

DEAR HOMESTEAD:—I send you a word of cheer from this part of the State. We now number 13 Granges in Tama county, and on Tuesday the 20th inst., large delegations from the Granges of Tama and Poweshiek counties met in council at Tama City, to the number of nearly three hundred, to take into consideration the measures that were necessary for the good of the Order in this part of the State.

There has been a strong and influential opposition to the Patrons in this place, and thus far they have defeated any attempt at the organization of a local Grange here. The denunciations of the movement as a humbug and a swindle might be heard on our street corners and in many of our places of business, mingled with wholesale defamation of the persons prominently connected with the movement in this part of the State, and loud and frequent have been the predictions of the utter failure of the whole movement; but there has been a marked change in social and business atmosphere since Tuesday last, and since that time I have not heard a "dog move his tongue against it." As the different delegations came pouring into the town, an observer might have noticed a lengthening of the physiognomies of the prominent opposers of the movement, and in some in-

stances offers of kindness and accommodation were voluntarily tendered before the adjournment of the meeting, showing that the tide had already commenced running the other way.

Brother Smedley, Overseeer of the State Grange, who happened to be present, addressed the assembled Patrons, and in his usual eloquent and happy manner gave us a chapter from the experience of the Patrons in the northern part of the State, and some sound advice to the new Granges in this part of the State, as well as solid instruction in the principles and work of the Order. He was listened to throughout with marked attention, and long and frequently applauded.

After a liberal interchange of ideas and the discussion of some topics of general and special interest, the appointment of committees looking to a permanent and local organization in this part of the State, the meeting adjourned to meet at Toledo on Tuesday, March 19th, 1872. A cordial invitation is extended to the Granges in Benton, Poweshiek and Marshall counties, to meet with us in council at that time, to devise and carry out measures for the common good in this part of the State.

The thanks of the members of the Order are hereby tendered to L. Merchant, of this place, for the free use of his hall on this and other occasions.

The meeting was in every way a decided success, and will long be remembered by those who participated. The unanimity of feeling manifested, and the determination evinced to promote the purposes of the Order, augur well for the future of the Patrons of Husbandry in Central Iowa. W.

Tama City, Feb. 24, 1872.

We insert the above extracts from the *Iowa Homestead*, to show you that our plans are, in a measure, already at work across the lines, in a different form and under a different name. We will strike hands with them, and hoist your banner, the FARMERS' ADVOCATE; we wish stronger fraternal unity among ourselves and with our cousins.

Let us unite in the one great cause—advancement of agricultural interests. We have much to contend against, but we have right on our side. Let us be united as men, and first request, secondly demand, our just, fair, and honorable rights!

National Agr'l Convention.

A National Agricultural Convention has been held in the States, at which were assembled the Presidents of all the Agricultural Colleges, and the leading agriculturists. We quote the following remark about it from a report in the N. Y. *Live Stock Journal*:—

"This is the first body of men ever convened to represent the united agricultural interest of the whole country. It was called by the Commissioner for consultation and with the hope of establishing closer relations between the Department and the Agricultural Colleges and Societies. The Commissioner has done the country more service in convening this body of men than the Department had accomplished for many years. He possibly had some pet scheme to carry out, and wished the Convention to assist him in the attitude of pupils; but he found their views too broad and comprehensive to suit the narrow scope of his mind. After receiving his first lesson they became restive, and in horse parlance, 'took the bit' and ran away with the driver."

But they appear to have been brought to time again.

This Convention is the first step that has been taken to unite the agriculturists of the States in one bond for progress, and the object appears to be to gain and give information. A greater extent of land for the Colleges was desired by the Directors.

It appears that the Germans have forty experiment stations, where all the questions relating to the cultivation of the soil, manures and their effects, breeding, rearing and management of farm stock, the dairy—effect of quantity and quality of food upon milk, the yield of different breeds of cows, the yield of milk from a given quantity of food by the various breeds; the value of different foods in the production of milk, beef, pork, mutton and wool, are all carefully worked out and published to the German farmer.

These experiments of the Germans, as those of the French, have been going on for many years, and present an accumulation of facts of the greatest value, but they have never been translated into English, and are not, therefore, available to the American farmer.

Ancient Short Horns.

(Concluded.)

During the next thirty years there are numerous cases of animals being fed at a young age to a great weight. Charles Colling's Durham Ox stands at the head of all these fat animals. He was calved in 1796, got by Favourite 252 out of a common black and white cow, bought for Charles Colling by Job Simpson at Durham Fair for £14. His firm and nice handling indicated every disposition to fatten at an early age, and at five years old his whole carcass was loaded with thick fat. Being thought so wonderful an animal, and far exceeding what had been seen before, he was purchased to be exhibited by Bulmer of Harnby, in February, 1801, for £140, his live weight being 3024 lbs. Bulmer had a carriage made to convey him, and after travelling five weeks, sold the van and the ox at Rotherham to John Day for £250. On July the 8th, Day refused £2000 for the purchase, and travelled with the ox six years through the principal parts of England and Scotland. In London, £97 was taken in one day. At Oxford, in February, 1807, he dislocated his hip bone, and was killed on the 15th April, weighing 4 qrs. 165 st. 12 lbs.; tallow, 11 st 12 lb.; hide, 10 st. 2 lbs. Day states his live weight at ten years as 34 cwt., or about 3800 lbs. His measurement at five years old was; length, horns to rump, 8ft. 4in.; height at loin, 5ft. 5in.; girth, 10ft. 2in.; and breadth over hips, 2ft. 7in. From many measurements of fat beasts, it appears that the Howick Mottled Ox at seven years old was the largest; length 9ft. 8in.; height, 5ft. 9½in.; girth, 10ft. 10in., and breadth, 2ft. 11in.

Charles and Robert Colling were originally in partnership, but afterwards separated, Robt. going to Brampton and Charles to Ketton, in 1783. Gabriel Thornton, father of Robert Thornton, of Stapleton, Yorkshire, went with Mr. Charles as farm manager, having previously lived since 1774 with Mr. Maynard, at Eryholme. Some remarks of Thornton's concerning Mr. Maynard's cattle led Mr. and Mrs. Colling to ride over to Eryholme that same year. When they arrived, a handsome cow that Miss Maynard was milking attracted their notice, and Mr. Colling offered to buy the cow and her heifer. After some haggling on each side the purchase was made, and Favourite, by R. Alcock's Bull 19, and her daughter, Young Strawberry, went to Ketton. Mr. R. Colling told Mr. Wiley that his brother's and his own cattle were never better that anybody else's until they got Maynard's two cows; and Mr. Bates wrote that Mr. Maynard gave him a long predigree of the cow Favorite, going back to the time of the Durrain (1745). The great grand dam of Cherry, lot 1, was bought at Yarm Fair by Mr. C. Colling's father. Daisy, lot 11, originally came from Mr. Waistell, of Great Burdon. Haughton, the dam of Foljambe, 263, came from Mr. Alexander Hall, of Houghton, near Darlington; her great grand dam Tripes was bred by Mr. C. Pickering, and said to be by the Studley Bull 626, out of a cow by J. Brown's Red Bull 97, and this cow was bought by Charles Colling from the Duke of Northumberland's agent in 1784, who affirmed that the tribe had been in the Duke's family over two hundred years. Mr. Robert Colling and his brother also bought stock, from which their herds came, of Mr. Millbank, of Barningham, Mr. Hill, of Blackwell, Mr. Best, Watson, and Wright, of Manfield, and Sir W. St. Quintin, of Scampston. All these were celebrated breeders of Teeswater cattle.

Hubback 319 was undoubtedly one of if not the first bull that Charles Colling used at Ketton. The mass of conflicting evidence for and against this bull, published in the *Farmer's Journal*, about 1820-1, would fill a small volume. It is difficult to get at the truth of his history. Mr. Wright says that Charles Colling, going into Darlington Market weekly, used to notice some excellent veal, and upon enquiry ascertained that the calves were got by a bull belonging to Mr. Fawcett, of Houghton Hill. This bull was Hubback 319, who was then serving cows at a shilling each. Mr. Waistell and Robert Colling bought the bull together for 10 guineas, in the spring, and in in the October or November following (accounts vary as to 1783 or 1785), Charles Colling gave 8 guineas for him. At the end of two years the bull was sold to Mr. Hubback, Northumberland, after whom he was called. He died about 1791. Hubback was said to be a small, yellow, red and white bull, and the quality of his flesh, hide, and hair, seldom equalled. He was bred by John Hunter, of Hurworth, in 1777, and got by George Snowdon's bull out of the daughter of a cow bought from Mr. Stephenson, of Ketton, from whose stock Foljambe's dam came. The sire of Snowdon's bull came from Mr. Waistell's stock of Great Burdon, and his dam, a handsome cow, remarkable for her wide hips, from Sir James Pennyman's. Hubback's dam was said to be a beautiful little shorthorned cow which was kept after Hunter had given up his farm, and ran in the lanes. She was by Banks' bull of Hurworth, "a bull with a great belly;" after calving she was taken to Darlington and sold with her calf to Mr. Basnet, and became so fat, soon afterwards that she was killed. G. Coates, who saw Hubback, mentions him as "a yellow red bull with a little white, head good, horns small and fine, breast forward, handling firm, shoulders rather upright, girth good, loins, body, and sides fair, rumps and hips extraordinary, flank and twist wonderful."

Foljambe 263 succeeded Hubback. He was by Richard Butler's bull 52, a red and white by Hill's red bull, of good size and symmetrical, rather a hard handler, the winner of a premium as a calf in 1784 at Darlington, and generally known as "Dicky Barker's blacknose;" Foljambe's dam was Mr. Hall's Houghton, before mentioned, and Charles Colling considered that Foljambe left him the best stock. He is described as a useful thick beast, handle good, wide back, dark face, and was sold by Mr. Coates to Mr. Foljambe as a yearling for 50 guineas. Another description says that he was a large strong bull, a useful big bony beast of great substance.

Favorite 252, after all, was the sire most used. He was by Bollingbroke 86 out of Phœnix by Foljambe, daughter of Mr. Maynard's cow Favourite. Mr. Coates thought him a large beast, light roan in color, with a fine bold eye, body down, low back, and other parts very good. Mr. Waistell said Favourite was a grand beast, very large and open, had a fine brisket, with a good coat, and was as good a handler as ever was felt. His dam Phœnix was a large open-boned cow, and coarser than her dam, while her son (Favourite 252) partook more of her character, and "possessed remarkably good loins, long level hind quarters, his shoulder points stood wide, and were somewhat coarse and too forward in the neck, and his horns in comparison with Hubback's were long and strong." His sire Bollingbroke 86 was by Foljambe out of Young Strawberry, the heifer bought of Mr. Maynard; in color he was a blood red with a little white, and the best bull Geo. Coates ever saw. Favourite 252 (born in 1795, died in 1809) was used indiscriminately upon his own offspring even in the third generation.

It is necessary here to give some account of what is called the alloy blood. Col. O'Callaghan lived close to Chas. Colling at Ketton. Mr. Coates bought two red-polled Galloway Scotch cows for him from David Smurthwaite, and these cows were allowed to be served by Chas. Colling's bulls upon condition that he had all the bull calves as payment. In 1792 one produced a red and white brindled bull by Bollingbreke 86, which Mr. Colling kept until a year old. Johanna, a moderate red cow, by the Lame bull, not having bred for some time, was put to this young bull, and in due course gave birth to a red and white bull calf, called Grandson of Bollingbroke 280. Phœnix, after producing Favourite 252, was barren for a length of time; as a last resource she was put to this Grandson of Bollingbroke, and in 1796 produced the red and white cow Lady, lot 7. There is no account of these alloy bulls being used to any other stock.

The importance of this subject, and the research and enquiry necessary to make a complete report of those early Shorthorns, require more than the present writer is able to bestow. For the curious, a measurement is subjoined of the cow Phœnix. Lady Fragrant, the first prize cow at Leicester, 1868, recently measured in a reduced state, is, in nearly every point, a larger animal, whilst the 850 gs. Grand Duchess 17th, in breeding condition, is nearly the same size as possible.

Phœnix's height, 56 ins., length quarter, 21 ins., girth at chine, 85 ins., width of hooks, 26¾ ins., length of back, 61½ ins., girth at neck, 38½ ins., width of loin, 19½ ins., length of space, 15½ ins., girth at shank, 7½ ins.

Good temper with the majority of mankind is dependent upon good health; good health upon good digestion; good digestion upon wholesome, well-prepared food, eaten in peace and pleasantness. Ill-cooked, untidy meals are a great cause of bad temper and many a moral worng; and a person of sensitive physique may be nursed into settled hypochondria by living in close rooms where the sweet fresh air and sunshine are determinedly shut out, and the foul air as determinedly shut in.

The Fruit Growers' Association of Ontario.

The winter meeting of this Association was held in the City Hall, Hamilton, on the 8th February, a large number of members being in attendance.

FRUIT IN MANITOBA.

Mr. Spencer, recently returned from Manitoba, where he had been largely instrumental in organizing an Agricultural Society, being present, the chairman called the attention of the meeting to the fact, and requested him to take part in the discussions. Mr. Spencer very gracefully acknowledged the compliment, and being requested to give some account of the condition of fruit culture in Manitoba, made some very interesting statements. He said that scarcely any fruit was cultivated there, but there was an abundant supply of some of the small fruits found growing in a wild state. The apple trees that had been introduced into Manitoba from more southern latitudes had all failed, and he believed the only way to secure trees sufficiently hardy to endure that climate would be to raise them from seed. There is a species of crab apple found growing there, but it is too austere to be of any use. Wild plum trees abound there, apparently of several varieties, and many of these are quite good, much better than the wild plums found growing in Ontario. Raspberries and strawberries are found growing wild in great abundance, and are of good size and excellent flavor. Wild grapes also are found there, and two varieties of cranberry, the Trailing or Marsh Cranberry, and the Highbush Cranberry; the latter in great abundance. There is also a species of hop found in a wild state, which is very fine. The vegetables that are raised there are of excellent quality, and would compare very favorably with those of Ontario. The cattle were also very fine; the grade cattle of the country were not much behind the thoroughbred of our own Province.

Some of the members suggested that a Fruit Growers' Association should be established in Manitoba, to whom this Society might send scions of the most hardy varieties of apple, &c., and expressed the hope that Manitoba might be in this way soon supplied with many valuable fruits.

OVERSTOCKING THE FRUIT MARKET.

Mr. A. M. Smith read a paper on the danger of overstocking the fruit market, for which he received the thanks of the Association, and the meeting proceeded to the discussion of that subject.

Mr. Osborne spoke of the disappointment which many had met with this season in sending fruit to England, in some cases not realizing enough to pay expenses of shipment and sale. This he believed to be owing to improper management, and remarked that good paying prices had been realized by those who put up their fruit in a proper manner, sorting it well, packing it securely, and forwarding it promptly. The fruit of Ontario was not excelled by that of any part of the apple-producing region.

Mr. Durand believed that the production of a large supply of good fruit in any part of the country would turn the attention of dealers to us, and so increase the number of purchasers that there would be a competition among the buyers that would secure to the grower good prices.

Mr. Clemens believed there was so large a part of the country but poorly adapted to the raising of fruit that the demand existing there would consume all the surplus fruit that could be grown in the fruit-raising districts.

Mr. Watson thought that his experience did not indicate any lack of demand, for when he was a boy good snow apples only sold for 12½c., which now readily brought $1.50; and, reasoning from past experience, he believed that the demand would fully keep pace with the supply.

Mr. D. Hammond thought that the quality of the fruit raised was constantly improving, and that this had a tendency to keep up the demand. In his locality there was a good fruit market.

Mr. Spencer, of Manitoba, remarked that fruit can now be sent to Winnipeg, *via* Duluth, without any land carriage. If gentlemen present thought the price obtained for apples in Glasgow to be remunerative, he would tell them that at Winnipeg, instead of selling for twenty-seven shillings and six pence, ordinary apples found ready sale at twenty dollars per barrel, and one had to be sharp to get them at that.

Sheriff Davidson stated that there was a time when at Berlin there was no sale at all for what little fruit was then raised there, but now the best prices were paid for good fruit. He mentioned also that he had found dry leaves an excellent material in which to pack apples.

Mr. Haskins complained that the Hamilton market was very poorly supplied with good fruit, that in fact the most of it looked as though the best had been taken out and sent to some other market, and expressed the hope that fruit raisers would at least be able to supply Hamilton with what fruit it needed.

Mr. Osborne exhibited to the meeting some fine bunches of Isabella grapes which he had kept, remarking that a considerable quantity of these grapes could be sold at this time, at prices varying from fifteen to twenty-five cents per pound, and said that if fruit-raisers would take the trouble to preserve those fruits that were abundant in the autumn, until this season of the year, they would secure good prices and be well repaid for their trouble. On being asked how he had preserved these grapes in such fine condition, he stated that he allowed the grapes to remain on the vine until they were perfectly ripe, then when they were quite dry he cut them from the vine, handling the clusters carefully by the stem, and laid them in shallow boxes, first placing in the bottom a layer of dry leaves, and upon these a layer of grapes. In this way he filled the box with alternate layers of grapes and leaves, closing with a layer of leaves. The boxes were then nailed up tight, and buried in the ground in a dry spot in the garden not sinking them very deep, but ridging the earth up over them. This morning he had dug them out with a pick, the ground being frozen, and found the grapes to be all in as perfect a state of preservation as those he now exhibited. He had been led to try this method from finding grapes on the ground in spring, which had been covered during the winter with leaves, in a very fair state of preservation, and thought he would try the method he had just now described, and which in this instance had been so very successful.

Mr. Grey stated that one fruit dealer in Toronto had, last fall, imported over two tons of grapes, which he thought might as well be grown in Canada. For the past thirty years prices had been good in that market, and he believed they would continue so.

Mr. Woolverton thought it might be possible to exceed the demand for summer apples, but in winter fruits there was no danger.

Dr. Cross thought there was danger of growing too many of the small fruits. He had sent strawberries to Toronto for which he realized nothing, and last year was unable to sell his Bartlett pears, the dealer in the city telegraphing to him not to send them.

Mr. Caldwell thought the demand for first-class fruits was continually on the increase; of these the supply would never be too great.

Mr. Graham said that at Fort Erie there was a constant demand for fruit, especially for apples, pears, &c., the Buffalo market taking everything they could raise. Cider apples were bought up, at very good prices, for the manufacture of vinegar.

Mr. Allen, of Kingston, would discourage the production of any but the choicest varieties of fruit, and the sending to market of any but choice samples. A gentleman near Poughkeepsie, N. Y., sent annually to Europe several thousand barrels of apples, each apple very nicely wrapped in silver paper, and for these he obtains high prices. The wrapping of each apple secures a careful examination of each, and the rejection of all that are imperfect. He believed that the very production and sending to market of choice fruit of itself created a demand, and that the more abundantly consumers were supplied with good fruit the more they would consume.

DISTANCE OF PLANTING.

The second question was taken up after recess—At what distance apart should apple and pear trees be planted?

There was a very general expression of opinion, the burden of which seemed to be that about thirty feet apart each way was a suitable distance for apple orchards, but twenty feet each way was quite sufficient for standard pear trees.

Some of the members thought that some varieties of apple, those that did not make great spreading heads, such as the Early Harvest, Duchess of Oldenburgh, Northern Spy, &c., might well be planted at twenty feet apart each way.

Mr. Caldwell remarked that it was found to be desirable to plant trees much closer together in the northern districts—say in Minto, Garafraxa, &c.—than in the Niagara district. The trees in the northern sections suffered so much from cold that it was necessary to plant with reference to the peculiarities of that climate. When planted close together, and trained low, the trees protected each other, so that while a distance of forty feet each way would be very suitable in the warmer and more southern parts, in the northward he would advise planting apple trees not more than 25 feet apart each way. From his own observation he could say that long-stemmed trees in that part of the country were not the thing, and that those who had tried the experiment of low training and close planting had been much more successful.

Mr. Grey, of Toronto, fully coincided with Mr. Caldwell. The planters in the northern sections were enquiring for low-headed trees, having become convinced of the superiority of such trees for their locality over the old-fashioned style of long trunks. It might also be well, he thought, to plant the pear trees between the rows of apples.

Mr. Morden advocated planting the trees further apart than the distance recommended by Mr. Caldwell, on the ground that when planted so near together, the roots of the trees would soon interlace and exhaust the soil of the requisite fertility. On this account he advocated planting trees at considerable distance apart. He spoke of an orchard which he had grown in the county of Hastings, where he had pursued the plan of wide planting and high training, and believed the orchard had been a success, comparing favorably with any.

Mr. Morse was partial to the quincunx form, planting the trees in rows thirty-three or forty feet apart each way, and then planting an intervening row by placing a tree in the centre of each square formed by four trees. He thought that in this way the desired protection was secured, while at the same time the distance was so increased between the individual trees that no evil effects would arise from interlacing of roots or branches.

Some remarks were made upon the correspondence existing between the form of the top and the form of the root, some maintaining that those trees which formed a broad spreading top also threw out wide-spreading roots; while those having a fastigiate top sent their roots more perpendicularly into the earth. To this it was replied that as our trees were grafted upon some seedling stock, it was probable that the roots would assume the style of growth natural to the seedling stock, and not that of the inserted grafts. This led to some discussion upon the influence which the scion exerted upon the growth of the stock. Some instances were mentioned where it was manifest that the root growth was affected by the scion, but the instances that are well authenticated did not seem to be sufficiently numerous to admit of any general conclusions on this point.

PLANTS FOR DISTRIBUTION.

The meeting having been asked to state what trees or plants the members desired should be sent out for trial, it was suggested by Mr. Ball, of Niagara, that it would be well to give some nut-bearing trees a trial, such as the Filbert, which he believed had done well in some localities.

The President remarked that he had succeeded in raising them in Hamilton.

Mr. C. Arnold, of Paris, stated that he had grown the English walnut (*Juglans Regia*) and that last year they ripened nicely.

Other members remarked that they had succeeded in growing the tree, but not the nuts.

The President then announced that any suggestions with regard to the kind of tree to be distributed hereafter would be acceptable from any member, and that suggestions might be addressed either to the President at Hamilton, or to the Secretary at St. Catharines.

MEETINGS.

The places of holding the succeeding general meetings of the Association for this year were then discussed, and it was decided that the summer meeting should be held in Guelph, at the call of the Secretary, and the fall meeting at Toronto. The annual meeting for the election of officers, &c., will be held in the city of Hamilton during the week of the Provincial Exhibition.

FORMING HEADS FOR ORCHARD TREES.

The third question was taken up—At what distance from the ground should orchard trees be made to branch?

Mr. Martin favored low heads. He thought these shielded the trunks of the trees from the heat of the sun in summer, and that on such heads the fruit ripened earlier and was more easily gathered.

Mr. R. N. Ball thought that six feet from the ground was a very suitable height, answering well for all purposes. The ground could be cultivated under such trees, the fruit could be conveniently gathered, and when the trees acquired size they sheltered each other sufficiently.

Mr. Caldwell advocated low heads as necessary in the colder sections, and thought that ploughing and deep cultivating in the orchard was very injurious to the roots; also that when the trees branch low the weeds are unable to make any luxuriant growth, being too densely shaded by the tree tops.

Mr. Morden was opposed to low heads; he believed that in practice it only amounted to growing three or more trunks instead of one. He thought, from his own experience in the county of Hastings, that there was nothing gained by training trees low.

Other gentlemen stated their views, the majority of whom were in favour of forming the head at about six feet from the ground. If the branches came out lower than this, the weight of fruit and leaf soon bent them to the ground, so that great inconvenience was experienced from these pendant branches sweeping the ground. There is a just meaning in this matter, which may be varied by the habit of growth of the particular variety, or by the peculiarities of climate and exposure to winds.

The discussion was enlivened at this stage by the reading of a carefully-prepared paper by A. Macallum, M.A., on "Some of the meteorological conditions that obtain at Hamilton." His essay was received with thanks, and referred to the Committee on Publication.

CROPPING ORCHARDS.

The fourth question was then considered namely—Should any crops be grown in the orchard?

Mr. R. N. Ball thought it was well to cultivate the orchard while young with crops which did not exhaust the soil, as peas, beans, &c.; but that after the trees have come fairly into bearing, no crop whatever should be grown in the orchard.

A large number of members expressed their opinions, but the prevalent opinion was strongly in favour of growing only such crops as those mentioned by Mr. Ball, or other hoed crops, as turnips, &c., while the trees are young; and that in no case should crops of grain, as rye, wheat, &c., be grown in the orchard.

VARIETIES OF APPLE—WHAT PROPORTION?

The fifth subject was—In planting orchards, what should be the proportion of summer, fall, and winter apples, in every hundred trees?

Mr. R. N. Ball would plant all winter fruit, if planting for market. Would plant no more summer and fall fruit than was needed for home use.

Mr. Arnold thought that some summer fruit might be safely planted for market such as the Benoni and Summer Strawberry. There was but little demand for fall apples. At that time grapes, pears, and sometimes peaches, filled the markets, and when these could be had in abundance the demand for apples would be light.

Mr. Allen thought that by far the larger part should be winter sorts.

Mr. Caldwell advised that two-thirds of the apple orchard be of winter varieties, the other third to be made up of summer and fall sorts. This arrangement was about what each required for family use, and would meet the requirements of the market.

Mr. Watson remarked that for six weeks in the fall, after the early apples were gone, there were no good table apples to be had in the Toronto market at any price, and that good dessert apples would there command a ready sale.

Mr. Smith thought that orchardists had made a great mistake in confining their planting so exclusively to winter varieties; that there was a considerable demand for summer apples, much greater than the present supply.

Mr. McGill would plant one quarter of his orchard with summer apples.

DECAY OF BARK ON APPLE TREES.

Mr. Morden enquired what was the *cause* of the loosening and decay of the bark on apple trees? He said that this decay of the bark occurred on the trunk and main branches, and generally on the south-west side of them. It sometimes extended for a considerable length on the trunk of the tree, and even below the snow line. After a time the bark becomes discolored at the affected place, gradually becoming dry, dead and black, quite down to the wood.

Mr. Beadle remarked that he had noticed this disease in his own part of the Province. It was usually in the form of a black spot, of variable size, sometimes on the trunk of the tree, sometimes on the large branches, and always on the south and south-west side, where the surface was exposed to the direct rays of the sun. When the tree inclined to the north-east, or the branches extended horizontally to the north or north-east, and were exposed to the full power of the sun, there these injuries to the bark were found. He had never seen them on those branches which extended southward, or that grew nearly upright, nor on the trunk of a tree that stood perpendicularly, or that leaned towards the south or south-west. When the branch of the tree or the trunk inclined so that the sun's rays fel on them at right angles to their surface, or nearly so, then these black spots appeared. He believed they were due to the action of the sun, perhaps the joint result of frost and sun-heat. It might be that the mischief was done in the later days of winter, when the sun has acquired considerable power, and the nights are very cold with severe freezing, and the air remaining frosty during most or all of the day, while the unclouded sun is shining with full power on the bark of this tree. He had never seen any such injury on any other side of the tree, nor on any trunk of a tree not thus inclined, nor on any where the trunk or limbs were screened from the sun's rays. An examination of the injured spot revealed no cause, but presented an appearance as though the injury had begun in the inner bark, next to the wood of the tree. He suspected that a careful examination of the trees spoken of by Mr. Morden would show that they were thus exposed to the action of the sun, and that the only remedy was protection in some way from the sun's rays. The fact mentioned by Mr. Morden that he had never seen the Northern Spy thus affected, strengthened Mr. Beadle's views, as this tree is remarkable for its perpendicular habit of growth, in both trunk and branches.

Mr. Allen was of the opinion that this affection was due to solar heat. It was well known by woodmen in the neighbourhood of Kingston that forest trees decay chiefly on the south side.

The President had seen this disease, but never where the trunks of the trees were shaded. Apricots and nectarines will thrive well on the shaded side of the house, but fail when planted the sunny side.

Mr. Bagwell had caused a new wood to form over these injured spots by carefully cutting all the dead parts away, quite down to the wood.

The President had also succeeded in causing such a growth, and believed it had been greatly promoted by covering the wound with a thick plaster of mingled clay and cow-dung, which had shielded the injured part from sun and air.

Considerable discussion ensued as to the action of frost and sun upon the cells when filled with sap. Intense frost, crystallizing the sap, and so causing it to expand, might rupture the cells in which it was contained. And perhaps when not ruptured by the crystallization of the sap, but considerably distended by this cause, the sudden increase of heat from the sun's rays might so expand the air contained in the cell, before it had melted the sap, as to rupture the walls of the cell, and in this way cause the destruction of the tissue.

SUBJECTS FOR DISCUSSION AT NEXT MEETING.

The following subjects were suggested for discussion at a future meeting:—

What system of drainage should be adopted for orchards?

What is the cause of trees being raised out of the ground during winter?

Is mulching beneficial?

What is the best time for pruning?

Is it profitable to the country to raise grapes for wine?

What is the best method of cultivating indoor grapes?

DISPLAY OF FRUIT.

There was a very considerable collection of fruit, principally apples, but including some

nice pears and well kept grapes, laid upon the table. The Committee on Fruits made a careful examination of them, and reported thereon to the meeting. This report will be published in the annual transactions of the Association.

The meeting broke up at a late hour of the evening. Due notice will be given to members, by circular, of the time of holding the summer meeting at Guelph.

Western Corn.

No seed that we have yet sent out appears to have given greater satisfaction than this. It yields such an enormous amount of really first-class feed that every person that we have heard of, after trying it once, has sent again for it. But very few farmers know of its real value as yet. We have a good quality, and can supply it at a lower rate than formerly, as we have purchased more extensively. When you send for seeds, take a little of it, should it only be a peck. Sow it on good rich land at the rate of about three bushels per acre, either in drills or broadcast, and cut it just before the frost nips it. Sow about planting time, so as to avoid spring frost. If you require feed, this will give it to you.

To Our Friends.

We sincerely thank you for your continued aid and encouragement, and kind letters, which constantly nerve us to continue our undertaking. Some of you may think we have slighted or used you with disrespect or meanness. We have but to say that as we are in receipt of so many letters daily, some of them taking considerable time to read, and having the seed and implement department to attend to besides the paper, we hope you will let us know of any omission on our part. We will do our best to satisfy every one of you. State your complaint if you feel in any way aggrieved. If we have not sent any one of you prizes for getting up Clubs for the paper, let us know, and we will do our best to satisfy all by sending the best kinds of new and approved seeds.

We have a good supply of cereals—field seeds, roots, flower seeds and bulbs, and are ready and willing to supply you. No one shall have a just cause of complaint against us if we can possibly avoid it. We have the best cereals Canada has produced. Our field seeds have just arrived fresh per steamship "Germany;" also, we have received a choice supply of flower seed from Vick, of Rochester. Our lillies and bulbs are yet to arrive from Holland. See our next issue, and refer also to last catalogue, make your selection, and order what you desire.

Caution.

There was a recipe for botts published in a previous number of this journal, clipped from Chase's Recipes. One of our subscribers informs us that he has tried it and the result was the most disastrous. We are unable to test every recipe we may publish.

Live Stock Journals.

The *Live Stock Journal*, published in New York, and the *National Live Stock Journal*, published in Chicago, are two excellent and handsome journals. They are well deserving of the attention of our Canadian breeders. The price of the first-named is $1.50 per annum, and the second is $2 per annum. They are both in their third volume, and we think the last numbers are about the best that have yet been issued.

Those persons who gained eggs by getting up clubs for the ADVOCATE will have them sent the middle of this month or later, as they desire. State whether you wish them sent with seeds or by express, and whether you want Dorkings, Black Spanish, Brahmas, or Aylesbury or Rouen ducks, from choice stock.

—Leave well alone is a good rule, but leave ill alone is better.

To Advertisers & Correspond'ts.

Advertisements and communications, to secure insertion, should be sent so as to reach us by the 20th of the month. If sent later, they *may* be in time, but will *probably* be too late.

NOTICE!—The $13 per pound turnip seed mentioned in another part of the paper is an error, on account of our aid reading the invoice erroneously. Consequently, that seed will not be sent out.

☞ Elwanger & Barry, of Rochester, N. Y., employ 250 men in their establishment. They have 650 acres devoted to the nursery business.

From exchange papers we see that from 35 to 40 per cent. of the stock in many parts of Texas have died from cold and storms during the past winter.

HINTS FOR THE MONTH OF APRIL.

SIR,—Do not expect to find here a monitor for the whole routine of business for this season. 'Perhaps thou art unacquainted with it; observe thy industrious neighbor, or let the fields and meadows be thy monitors,' when I have collected the fragments of your business and flung them before you that they might not grow to a heavy burden if suffered to lag behind.—While the ground is soft and the grass tender do not let your cattle tread up the roots or impede their growth by too early grazing. Give your pastures several weeks' credit in the spring; they will pay you interest and principal in the summer. Attend well to your fences this month: repair the old and put new where they are wanted. Good fences are the Magna Charta of farmers' rights. And when you are employed in this business remember that a piece of work well finished once is better than but half done a dozen times.—Poor fences and short feed make lean cattle and ill-natured neighbors. Let your orchards be attended to; in-graft scions of the best fruit into those trees that produce bad, and the trouble and expense will be small compared with the utility. When you set your trees remember it is with them as with horses—it costs no more to rear a good one than a bad one. If you wish for plenty of apples in the fall and winter, spare no pains in keeping off the worms and caterpillars in the spring.

Now is the time for the girls to look after their flowers and seeds. If any of them have not the kinds they would wish, perhaps some of their big brothers or some other young man, I won't say who, will get them some. A. ADAMS.

Bury's Green, March 11, 1872.

HOW TO DRAIN WHEAT FIELDS.

A correspondent of the *Country Gentleman* tells how a farmer surface-drains his wheat fields so as not to interfere with the reaper.—He commences by plowing two furrows each way, which are so arranged that the last one leaves an open or dead furrow. Then he gives those furrows a thorough harrowing, making all fine and smooth; this of course partly fills up the dead furrow, which is then cleaned out by a plank furrow cleaner, that takes a sweep of some six feet—three each way—and spreads and smooths off all taken from the dead furrow. This is done before the wheat is drilled in.—*Carolina Farmer.*

RECIPES.

To Cook a Beef-Steak or Mutton-Chop.—Cut thin and place between two plates on a hot stove or in the oven. The upper plate keeps in the steam and the meat is more juicy than when cooked in a frying pan. This mode is especially suited for venison, as it preserves the fine game flavour. Salt herrings may be cooked in the same way, but they should be steeped in fresh water a couple of days to draw the salt out of them.

To Cook Red Herrings.—Pour some proof whiskey into a soup plate; lay two or three slips of wood across, place your herrings upon them, and set fire to the whiskey. Turn them once, and by the time the whiskey is all burnt they will be done.

[The above are two contributed recipes by one of our readers, and we insert them hoping others may send us some. We think the herring cooking would be a rather expensive and dangerous operation in some instances, as the fuel might be consumed before the dinner was cooked and evil consequences might follow.]

BOTS.

I saw in your journal an article from "A Subscriber," in relation to the cure of bots in horses. I have made the horse a study for years, and take issue with him in regard to their origin. He is mistaken about the nit fly depositing its eggs to produce them. They are natural in the horse, and it seems to be necessary for horses to have them to aid in the digestion of their food. You may take a colt as soon as it is foaled, cut it open, and you will find them; and I believe all works on the horse, and his treatment, will sustain this view of the nature and origin of the bots. True, horses are often killed by them. When the horse eats something that disagrees with him, his stomach becomes sour, which causes the bot to leave that organ for the maw, where they produce inflammation, which, if not corrected, results in death often. My remedy is one ounce of chloroform, and one pint of linseed oil, in a pint of warm water, used as a drench. The chloroform will diffuse itself through the system and stupefy the bots, causing them to let go their hold on the maw; then the oil acts as a cathartic, and heals the wounded places. I have never known this remedy to fail in a single case. I will also give you a cure for colic in horses, as follows:—One ounce sulp. ether, one ounce laudanum, two tablespoonfuls of soda; mix in one pint of warm water, and drench. The bots and colic affect the horse very much in the same manner; still there is a difference, as in bots the nostrils are expanded, the breathing fast and hard, and the extremities warm. In colic, the nostrils are contracted and the extremities cold.—"B.," in *Southern Farmer.*

Another correspondent in the same periodical says:—"I have cured many horses said to have the bots, though I believe it is all colic, and I have been reading everything on 'bots' since about 1831 that I found in print before and since that date. I am an unbeliever in bots killing the horse, and for twenty years I treated for colic. I use only chloroform, say half an ounce in tepid water, or whiskey and tepid water; if relief is not given in fifteen minutes, repeat. I had only lost one animal since I used chloroform, and she, Sally P., the best Canadian for gentleness, docility and speed I ever saw—a three minute under saddle or in harness. I would not hesitate to use one ounce, and it was the dose recommended me about 1845 to 1850; but I found generally half an ounce was enough."

A correspondent of the *Prairie Farmer* communicates the following facts:—On the 24th of October he put up 20 hogs, and killed them at the end of ten weeks. They weighed on being penned 4070 lbs; were first fed on dry shelled corn, and in four weeks had gained 837 lbs., at a cost of 83 bushels, being 10.08 lbs. of meat to each bushel of corn consumed. They were then put on dry meal for two weeks, and gained 553 lbs. on 47 bushels, equivalent to 11.76 lbs. per bushel. Lastly, they were fed two weeks on mush, and from 46½ bushels of corn, 696 lbs. of meat was gained, equal to 14.96 lbs. per bushel. Put the pork at 10c. per lb., and it will be seen that the corn fed was sold as follows:—Dry shelled, per bushel, $1; ground, dry, per bush., $1.17; ground, wet, per bush., $1.31; in mush, per bushel, $1.46. Or, reversing the mode of putting the case, it will be found that 60 lbs. corn fed as mush is equal to 107 lbs. fed in the natural raw state. We are prepared to show that if every man in the South should act on the above facts we would save more than ten millions of dollars annually—equal to the 25th part of the cotton crop. That would be a wise legislature which would make it a penalty for a man to waste his substance.—*Practical Farmer.*

Horticultural.

A FEW HINTS ON PLANTING TREES.

It seems a very simple thing to plant a tree, and almost every farmer thinks he knows how to do it, but it is seldom well done. It is a more important operation than is generally supposed, for the life of the tree and all its future health and fruitfulness are directly dependent upon it. Right planting is the foundation and corner-stone of all successful horticulture; for if a man commences his life and experiences by building up from this small element, the probabilities are that he will be sure to understand and master thoroughly the knowledge of all the subsequent arts to produce the vigorous trees and abundance of fruit.

It has seemed to me reasonable to throw out a few hints in a condensed form, which shall prove a help to beginners, for there are many every year, and also to assist those who are among the afflicted already.

1. Plant *young* trees, both in your orchards and your gardens. They cost less in actual price, in freight, and in planting, than older trees. They are surer to grow, have more and better small fibrous roots, will adapt themselves quicker to the soil and location, and with equal watching and care will grow so vigorously as to excel older trees both in abundance of fruit, size, health, and earliness of bearing. Never choose standard apples, pears, plums, or cherries more than two years, and dwarf trees one year old.

2. Be careful, where a choice is allowed you, in your choice of *soils*. A sandy soil is leachy, contains no moisture, and is liable to drought. A very heavy, clayey soil is directly the opposite—too wet, tough, and adhesive. A gravelly soil is hardly more desirable; but a deep, loamy, or alluvial soil may always form a good choice.

3. Let the land be well *drained*. Never plant where there is the remotest chance for water to settle and stand near the surface. It will surely ruin the tree and blight all hope for fruit.

4. When you are ready to plant, hitch up two teams. Let the first plow to the depth of one foot, a strip six feet or more wide. Let the second follow with the subsoil lifter, and stir to the depth of two feet; cross-plow in the same manner a strip of same width; then dig holes one foot or more deep, three feet in diameter; place the tree at the same depth as when removed from its former place; replace the earth, taking care not to bend or cram the rootlets of the tree, and always allow abundance of lateral room for the growth of the roots. Many inexperienced persons lose their trees from too deep setting. *No tree should be set lower in the earth than its original position.* Where the ground has not been plowed and subsoiled, the planter must invariably dig his holes two feet deep and four or more wide.

5. Mix with the earth, before it is returned to the hole and is placed around the roots of the tree, a good compost of ashes, well rotted stable manure, and chip manure mixed together. Leaf mould, muck, and lime may all form part of the compost. Let a large portion of the compost be placed beneath, but not in contact with the roots of the tree, and the remainder on the surface of the ground, to act as a mulch. The quantity will vary, according to the size of the tree, from a half bushel upward.

6. If any of the roots are mutilated or bruised, pare them off with a sharp knife to prevent decay; cut back on the under side until you reach the sound wood. Nearly all the trees that come from the nurseries have lost some of their roots, and their branches must be shortened in the same proportion.—At the time of planting, prune all branches back to three or four buds from the base of each branch.

7. *Mulching* is almost indispensable. The earth should rise like a small mound toward the trunk of the tree, and over this should be a mulch two inches deep of hay, half decomposed manure, sawdust or tan-bark. It not only saves the labor of cultivation, but prevents the moisture of the soil from evaporation, renders the temperature more uniform, and prevents injurious effects from frost. The mulch should extend beyond the tips of the roots.—*Horticulturist.*

A REMEDY FOR CUT-WORMS AND WIRE-WORMS.

Conversing with an old farmer a few years ago on this subject, he told me that he was in the habit of soaking his seed corn in strong brine—meat pickle would answer—and that corn thus treated was never injured by worms. I think he said he soaked his seed in the pickle about twenty-four hours. I expressed some apprehension that steeping corn in brine would injure the germinating principle, but he assured me that such was not the case, as it all came up well. He said he once farmed a place to the shares, and intended pursuing this plan with his seed-corn, but his landlord objected, thinking it would ruin the seed; he, however, after much persuasion, consented that a portion of it should be thus treated, and the result was that the corn from the pickled seed came up well, and grew on undisturbed by worms, while that from the dry seed was almost totally destroyed by them.

I remember of hearing my father tell once of some peach trees he once had in his yard, and which were badly injured by the borer.—In order to destroy the worms he poured a quantity of fish pickle about the roots. The trees bore a plentiful crop of peaches, but the fruit was so salty as to be unfit for use. It would appear from this that the saline particles were taken up in the circulation of the tree, and thus disseminated to the fruit, and this may account for the efficacy of the salting process in the case of seed corn, the saline matter being taken into the plant, and thus preventing the ravages of worms.—L. D. LINVILL, *in Practical Farmer.*

Correspondence.

WATER FOR SHEEP.

Some time ago I read a letter published in your excellent paper, in which your correspondent asserted that sheep both could and would live without water. I have been breeding sheep for the last 13 or 14 years, and beg to offer to the public my experience on this subject. In winter, when there is two-third or three-fourth inches of snow on the ground, no doubt sheep will manage tolerably well without water. Some winters ago the ground was left quite bare for several days. I had a number of sheep, and from their bleating, and the way they were rubbing against the bars, induced me to think that they required water. I immediately got a trough, which held about five pails of water, and I can assure you that did not last many minutes. I have heard of sheep drinking at an ice hole as regularly as cattle, but my experience is very different.—Sheep are very timid about going on ice, and must be badly in want of water before they will venture; neither will they drink out of an ordinary pail. The best plan is to accustom them to the trough, or, if you have not one, dig a hole in the field and fill it with water; they will rush to that immediately. In summer, when the dew is heavy, they will get along better; but by far the best plan, and the one that ought to be adopted by every humane farmer, is to water his stock regularly. B. E.

Rosedene, March, 1872.

FARMERS' CLUB.

Our farmers' club is getting on very well. We hold meetings every week, and every two weeks we have a debate on some subjects principally about agriculture, and every second week we have a general discussion on farm subjects. We thought it best to alternate the subjects, as the debate keeps up the interest of the meetings. We had a very good discussion the other evening on the subject of manures, and I for one learnt many things I did not know before. Most of the members, among whom are some of the best and most successful farmers in this neighborhood, think that the manure from the cattle stable, pretty well rotted but not too much heated, is the best manure for the general purposes of a farm. They also agreed that it should not be ploughed in too deep, and some advocated not covering more than two inches, others from three to five, according to the nature of the soil; on light soil not more than two inches, and increase the depth as the soil increases in stiffness. They all agreed that plaster is one of the most remunerative manures we have got, some going so far as to say that it increased the clover crop fully a half. Salt as a manure was also brought up, and received the favorable opinion of most of the members. Salt has not been used on account of the cost, but now when we can get the refuse from the wells in the west at $4 per ton, I think it will come into more general favor. This was the opinion of the majority of the members. The superphosphates of lime was tried by some of the gentlemen, but they agreed that it did not pay. One member who used a good deal one year on turnips, potatoes and other crops, considered that it did not pay him for the labor of applying it, without taking the first cost into consideration. We had also a discussion on the clover crop and plant, the best time and the best crop to seed with, the amount of seed per acre, and also the difficulty of raising now to what it was when the land was new, principally on account of heaving out in the winter. Most of the members advocated putting on about two bushels of mixed seeds per acre. Say one bushel of common red clover, one peck of Alsike clover, and three pecks of timothy. The advantage claimed by mixing the seeds is that there is more surety of a crop, as it is not likely that all kinds will fail, or if one fails there will be enough of the other two to make a crop. Again, we all agreed that barley or spring wheat were the best grains to seed down with, as there was more chance of the seed germinating than if sowed on winter wheat in the spring. Last summer most of the grass crops that were sowed in this vicinity failed, and nearly all the fields have to be broken up again. The plants seemed to grow until the dry weather we had about May, and some of the fields were a pretty good catch till the grain crops were taken off, then the dry, hot weather killed nearly every field about here. I only know of two or three pieces that will be left for a crop. I tell you, sir, it is a great loss to lose your whole seeding; I would very nearly as soon lose my wheat crop, as when the clover fails, it throws the whole farm out of rotation of crops, besides showing a poor chance for the next winter's feed.

Now, my dear sir, I will have to close this letter, as it is quite long enough, and if you find anything in it worth publishing, you are welcome to it. If other sections should get up farmer's clubs, I have no doubt the members would find mutual benefit from them. Please acknowledge receipt, and let me know about the wheat. Thos. A. Good.

Brantford, March 6, 1872.

PLANTING TREES.

Sir,—As you invite communications on any subject pertaining to agricultural interests, I venture to write a few lines about planting forest trees. I saw an enquiry in the last Advocate as to the best plan of transplanting them, so I will give my plan, as it does first rate; I have planted somewhere in the vicinity of one hundred. First, I take a spade and cut all round the tree a distance of from three to four feet in diameter; then, I climb up into the top until I can swing it over and pull it down to the ground; then cut the top off from ten to fifteen feet high, leaving only a few little twigs. Then rear it up and pull it down on the other side, when the roots are all loosened. I tie a rope to some of the roots near the trunk and to a hand-spike, and lift it into a wheel barrow or spring waggon, according to the distance they are to be moved, taking as much earth as will hold on. Dig the hole large enough to set it in without crowding the roots; have a pail of water at hand to put a little on as you put them in the soil, taking care to have it as good as possible, and work it well in among the roots, shaking the tree up and down a little; trample the soil down solid, and it is done. It is best to put a few stones around it to keep it solid.

The sizes I have planted are from one and a half inches to three inches thick, and they have done well. Sugar maple are to be preferred.

It is wonderful how a few nice trees improve the appearance of a place. I have heard the remark passed more than once that my place would sell for a thousand dollars more since I planted my trees. If any person would offer me five dollars a-piece to have them removed I would not take it. Let every reader of the Advocate plant a few trees this spring, and you will be well pleased that you did so, if you do it well. If the summer be dry it will be necessary to water them sometimes. I have some that have made shoots over two feet long the first season. Plant; it will pay.

TIMELY HINT.

See to it that your implements are all mended if they require it, before they are needed. Get a stock of firewood cut ready for summer, so as not to have to do it when you want to do something else. Try and make your calculations beforehand. Drive your work; don't let your work drive you.

M'CARLING WHEAT.

The peck of McCarling Wheat which I got from you did very well; it yielded seven bushels of good, plump wheat. I like it very well

SEED HOPPER.

I have had a sowing Hopper made this winter, which is a thing a great many farmers have not got. It is made of the best tin, and cost one dollar and a half. The bottom is ten inches wide by two feet long, rounded at the ends. The sides are ten inches deep and dished a little at the ends and one side. A good stiff wire is put in the top, and the side that is dished is bent inwards so as to make a rounding hollow to lie against the belly. A piece is put across the centre to strengthen it and serve for a handle. Two holes are made half way between the middle and ends, to fasten the strap to, which should be crossed behind the shoulders.

This is my first attempt to write for the press. If it is of no service throw it in the waste basket. I like your paper much, and wish you every success. Progression.

Rothsay, March, 1872.

No, sir! Such communications as this are not thrown in the waste basket. It is really useful and practical information, just the kind we are in search of. Never mind about the polish, the facts are here. The above article will do more good to the farmers of the country than the $95,000 already expended at Mimico, or ten times that sum expended in issuing blue books filled with abstruse, long-drawn, technical orations. We say this article is worth hundreds of thousands of dollars to the country. What nonsense! some will be saying. Take your pen and estimate it if you can. First, a practical farmer commences by noticing that the real requirements of farmers are oppressed by both political parties as they gain the ascendancy, which induces the really practical men to give their experience and publish to the world their practice without aid.—But the reverse shows the great advance in the value of property by the mere planting of a few trees. Our correspondent has increased the value of 100 acres $1000, and how many hundred acres can be similarly increased in value. Is rain to be obtained for our crops; is shade to be had for our stock; is beauty, harmony, and pleasantness to adorn our country? Where is comfort, refinement and prosperity? where trees are, or where they are not? What has been done by our Government to encourage the protection of our trees, and what has been done to have the poor settlers' land denuded of timber? We speak with knowledge, feeling heavily the loss of timber taken from us. This article by "Progression" is right; it is what the country requires. Trees, trees, trees, to fill the naked waste. The Government robbed us of our timber that we had nurtured and protected for our life, and from the immense surplus they now have on hand, derived from this kind of robbery, they have not yet had the honor to pay the settler his just and honorable dues. Never mind; the day will come, and that before long, when the farmers will be heard, when the destruction of timber must cease, when planting trees must be done, not only in a small way for ornament, but to save our country from famine, occasioned by lack of moisture for our crops. Go through our desolate tracts of country where once noble forests stood, where settlers could raise crops, if protected by trees. See the poor sheep seeking in vain for shade; the parched, wilted, starvation crops, not half the average they were. Still the trees are destroyed, and who plants or protects them? Is it our laws? no! it is progress that has to do it.

Write again; you have caused us to make this comment on your short letter.—The Advocate is open to you or to any one else. Let our voices be heard; the country in reality belongs to us. Let us rule it!

"YOUNG CANADIAN" SPEAKS.

Sir,—Your correspondent "Rustic" pitches into "Young Canadian" for not following up his prelude, and showing the reason why "farming as a general thing is not made to pay."

Well, I suppose *he* will admit that the greater number of those engaged in agricultural pursuits do not realize six per cent. on the capital invested, besides paying for themselves. They may have done it in years gone by, when the land was new and in good heart, and when they took no thought for the future, but the question is: is it done now?

They have no regular system or proper rotation of cropping, but keep on in the same ruts that their fathers made. If a field raised a good crop of wheat this year, there is no reason why it will not do the same next, and so raising the same crop year after year till their land is so run out that it will not raise half what it used to, and of poor quality at that. Then they raise the cry that the grain is run out, when in reality it is the soil. They try some of the new varieties, with little or no difference in the yield, and then the "Agricultural Emporium" and its seeds are pronounced a humbug. They never clover any except what is used for meadow, which is mowed as long as any can be taken off, none being pastured except what cannot be put under the plough.—Cattle are turned on the highways to do or die, and in the winter they are required to go nearly a mile after water, where the best part of the poor manure is lost. Implements are left where they were last used; a plough is left where it will be necessary to have a winter road, and in the spring it is minus a handle; a harrow is left in the same path, and the best horse rendered useless by the teeth. But it is not necessary to enlarge on this, for it has been seen over and over again, and none of those will see this for they do not read agricultural papers.

Here is another proof that the general run of farmers do not make farming pay: Not one-fifth of the farmers of Canada ever see an agricultural paper. If you ask them to subscribe, they refuse, being "penny wise and pound foolish," and they think you are going to make a fortune if you manage to squeeze a dollar out of them. Of course there are honorable exceptions to all this, such as "Rustic," but there is also vast room for improvement, and a great many more, like him, must make up their minds to be the "*best farmers* in their respective townships," before farming as a "general thing is made to pay," as it ought to.

Perhaps "Rustic" will give practical ideas that will be of benefit to others besides Young Canadian.

March, 1872.

BORROWING MONEY, ETC.

Sir,—Your number for March has just reached me, and perhaps you will allow me space for a few remarks. First, with regard to your article headed "Cheap Money" I cannot quite agree with you. As a rule, a steady, industrious, saving man will get on very well, though perhaps not so fast, without borrowing, and a man who does not possess these qualities is pretty sure to lose his farm. In some instances an active man might gain independence sooner by borrowing at a low rate of interest for a few years, but an unfavorablh season or two might render him unable to meet his payments, and unless he had a merciful creditor he would lose his farm. The only two things which would justify a farmer in borrowing money for are draining and manure. Building and planting trees yield no direct return, unless in the case of fruit trees, and then you must wait several years for your money, and an unusually severe winter or the attacks of mice would nip your expectations in the bud. So the surest and safest way is not to borrow at all; besides a borrower might be tempted to speculate, and perhaps lose all.

I was rather surprised at Mr. Vick's remarks respecting the consumption of fruit in England. The climate has nothing to do with it, for up to the time I left, in 1830, we always used fruit *ad libitum*, when we could get it, strawberries and apples especially. However, the cholera did not appear in England till 1832, and I acknowledge that a prejudice against fruit was manifested at that time, and I suppose has continued since.

I would like to know the cause of smut in wheat. Smutty seed may sometimes cause it, but not always. I have known fall wheat to be sown here so late, owing to continued wet weather, that the ground was covered with snow before it was all up; it escaped winter-killing, and in the month of June following looked as well as any wheat in the county, but when it headed out the smut appeared and destroyed about a third of the crop. The man who sowed the wheat used smutty seed, and treated it with pickle, but no lime. On the other hand, a few years afterwards my next neighbor summer fallowed a 22 acre field, part of which had not been broken up for about 15 years.—He used smutty seed, but having no faith in steeps, sowed it dry about the 20th of September. The fall was favorable, and it was about a foot high when the snow came; it stood the winter well, and he had a good crop with no smut in it. I have always been in the habit of pickling and liming both fall and spring wheat and barley, although I believe the Glasgow wheat is not liable to smut. But the steeping makes the wheat swell and it comes up sooner. The fall before last I used perfectly clean seed, pickled and limed, but, nevertheless, last harvest we found a few ears of smut in one corner, although the ground was as dry and clean

there as anywhere else, but a neighbor to whom I sold some seed and who sowed it about the same time, without steeping it, had more smut in his wheat than I had in mine. Some other cause, therefore, must tend to produce smut, besides smutty seed.

So many farmers had their land burnt last year that perhaps some would like to know how to manage it. I am sorry to say I have had some experience with that kind of land, and shall now have more than ever in consequence of the extensive fires in the woods last year. But I must defer this subject till another time.

CHARLES JULYAN.

Sarawak, Co. Grey, March, 1872.

We have frequently asked for criticism, and have said through the paper that we would admit articles, should they either condemn or differ with us. We want open and fair discussions on any subject pertaining to the farmer's interest. "C. J." may differ with us in regard to the farmers having cheap money, but we do not see the reason why farmers should be compelled to pay 20 or 40 per cent., which we know has been done, and they would have to pay it again, if a pressure occurred in the money market. The farmers are the first drawn on and the last accommodated. No doubt Mr. Vick saw England with American eyes, and circumstances differ in different parts and among different classes in England. We hope some of our subscribers will treat on the smut question.—The smut in one corner of the field might have been occasioned by putting wheat in a flour bag. We know of no better remedy than brining and liming the wheat.

GOOD WORDS.

AN AGRICULTURAL JOURNAL.

SIR,—Will you kindly allow me space to say a few words in your valuable paper. I have frequently heard remarks favorable to the FARMERS' ADVOCATE in this neighborhood, and, having subscribed for a copy (what every farmer should do,) I find that it is all and more than I expected. A farmers' journal conducted without fear or favor, and open to all to express their views in, is, as a medium of communication and intelligence, a valuable boon to the Dominion of Canada, and ought to be largely supported by the agricultural community. We, as farmers, don't so much want high-flown, professional theories as we want practical, useful suggestions and information. We urgently need and must have variety and change in seeds and stock. What, then, is better than for farmers to have a journal accessible to them, all giving information on these very topics? Learned discussions on flies, bats, etc., are all very well in their way, but we have not time to attend to such things, before we have gained time by first attending to the more urgent necessities of the farm and the farmer's life. I would therefore suggest that the farmers should liberally sustain such a paper as the ADVOCATE, and it will repay them a thousand-fold.

The paper is very popular here, and would be still more extensively read if some one would start clubs, or if a travelling agent visited these townships. For myself, I intend to take it and do what I can for its circulation.

J. E.

Howard Township, March, 1872.

FARMERS' RIGHTS.

SIR,—I admire your unflinching advocacy of the agricultural interests of our country. Your editorials have the right ring. The farmers of this country do not occupy the position in the Government they ought to, and they are very much to blame themselves, for they, as a general thing, educate their brightest sons for doctors or lawyers, thinking that those who are to be farmers require but little education aside from what they get on the farm.

I believe this is a great mistake. Every farmer who is in circumstances to do it should fit his sons for holding the best offices in the gift of the people, and then make agriculturists of them, for I assure you we will never get our rights as farmers until we get control of the Government of the country. Why, sir, the fact is, we have always been ruled by a class of men who have had no interest in common with ours, men who have legislated to a great extent for their own personal interests. I think these men have ruled the country long enough, and I would advise every agricultural constituency to select from among themselves some good, honest farmer who is competent to represent them in parliament; then, and not till then, will we get our rights.

Yours, &c., J. B. CARPENTER.

Simcoe, March 9, 1872.

HORTICULTURE.

PLANTING TREES.

If I am not taking up too much of your valuable space, I would like to say a few words on the best manner of planting trees, evergreens, &c., as I am what is called a lucky man in this respect. Many persons take up young trees by force, dig a hole, swing them in, then fill up with chunks of earth and tread down with their feet, expecting the tree to live, and wondering what has caused it to die. This will not do. I look upon a tree as a thing endowed with life, just in the same way that many look upon the horse and cow—the only difference being, the one is vegetable life, the other animal. If we wish to see a tree thrive, we must attend to its requirements in the same manner that we would to any other living thing.

My plan of transplanting is this:—As soon as the ground will allow (the earlier the better), I take a sharp axe and cut a circle around the trees varying from 1½ ft. to 3 ft. in drill, according to size; if the ground is frozen to a depth of 3 or 4 inches, all the better, as the soil will then adhere closer to the roots. I then take a strong, sharp spade, and drive down as far as possible, so as to cut the under-roots off clean; I next take them out by means of a lever. All mangled and split roots should be cut away, so as to leave the wounds small. Take carefully on a sleigh to holes dug to receive them; the holes should be deep and wide, and partly filled with rich mould; a little manure, perfectly rotted, is very well; some use rotten wood and decayed leaves, but I prefer a rich mould. To set them properly requires two persons—one to hold the tree erect, and the other to get his hands underneath the bulb and place every root and fibre in as near their original position as he can, all in, being careful to pack the earth about the roots; if the earth is very dry, use a little water. Tramping down with the foot, as a general rule, is quite needless, and often tends to stop the growth. Many desolate-looking homes here may be made not only less desolate, but really attractive, by the addition of a few trees, evergreens and flowers. I know many will say that there is no profit attached to this sort of planting, and others that they are going to sell out in a few years. My answer to this is, that they amply repay for any time or expense bestowed upon them, either in making the home cheerful and attractive, or in raising the value when you may wish to sell out, as a well-planned homestead will always command a greater price than a desolate one.

E. E.

Rosedene, March, 1872.

APIARY.

SPRING MANAGEMENT OF BEES.

The past season has been very unfortunate to the apiarian. The constant drought throughout Canada has placed the bee-keeper in an unfavorable position for the coming season, stocks being so weak, they will require extra care, and many will perish for want of stores. The time has now arrived to examine all stocks and ascertain their condition; they will require a thorough cleaning out of all dead bees, &c. If their supply of honey is short, they should be supplied by taking refined sugar, three pounds to one quart of water, making a syrup of the consistency of honey, which can be fed either by taking out a card of comb and trickling it into the cells and replacing it, or by feeding it at the top of the hive, which is preferable. There are many fixtures for feeding bees, and two kinds of material are used, metal and cloth. The Harrison Bee-feeder is made with cotton attached to a cup, like a strainer; these feeders do not answer in a cold or damp place. I use one which is an improvement on the original, being made of zinc, in the form of a cup, and perforated like a grater, let down into the hole in the honey-board in reach of the bees. This is the only safe and convenient feeder in use. By feeding in small quantities and often you keep the bees supplied until the season opens. Box hives can be fed by inverting them and trickling the feed around the cluster of bees; care should be taken not to smear them as the bee is a puny insect that cannot stand the cold when damp. To assist bees at this season of the year it is sometimes necessary to take cards with honey from the outside and place them in the centre of the hive, where they may get at it. By so doing stocks may be saved that would perish if left to their own fate until stores could be gathered. Spring feeding stimulates early broods, which is very necessary in all cases. Rye meal may be put where bees can get at it, in a dry place, to advantage. Care should be taken to close all top ventilation, in order to get all the accumulated heat for the raising of brood

B. LOSEE.

Cobourg, March, 15, 1872.

SEEDS.

NEW SEEDS.

SIR.—In the January number of the ADVOCATE you put some questions to me which I feel pleasure in answering.

Your enquiries had reference to new varieties of seed grain, samples of which I had previously sent you, and I may here add that all were grown in West Gwillimbury, from seed I received from England late in April last, and that I did not start on equal terms with neighbors who had their grain up before mine arrived.

Of all wheat known, the April Wheat makes the most rapid growth; Scotch Wheat, if planted two weeks before it, will be one behind at harvest, and the former will be bushels an acre ahead of the latter in most seasons. It was so in all cases that came under notice last year, and I look for the same result in this. 1871 was a most untoward season for imported seeds, being too dry and hot for grain that had to acclimatize itself. April wheat, when first planted in England, was brown and thin; two years later it had become bright and plump, and much liked by millers. One more sowing will effect all that can be desired, and constitute it a favorite. I am no novice in growing wheats or grain, Mr. Editor. Upwards of 40 firsts have fallen to me in England and Canada. Scientific farming will always beat scowl-of-brow in the matter of growing prize wheat, and it is as simple a thing to make up a field that will grow the finest quality of wheat, as to fix or mix a plum pudding. Numerous trials created this opinion.

The Golden Mellon barley I introduced into Canada in order that the best two-rowed sort known should have a trial. It succeeded admirably, and will be found the most valuable of all barleys, and as the climate suits barley so well, I think a short time only will elapse before good runs of two-rowed will find a ready sale in England. Fine qualities there command 4c. per quart, or $1.36 per bushel.

The Early Providence is a grey, feed pea, and the greatest cropper I have ever known. They are scarcely ever below 40, but often yield from 50 to 60 bushels per acre. Land too rich would not be the best for them; they grow about enough straw anywhere else, nothing excessive, and almost any kind of soil suit them.

The Horse Beans are Canadian grown too. I have a high opinion of their prospects in this country. They require, previous to planting, deep cultivation, to be sowed in drills about 12 inches apart, and once to be hoed when 3 or 4 inches high. Land may be over-rich for them, but that is not often the case. A keen, sandy, or rocky soil is not suitable, almost any other will do. The Horse Beans are the most useful of all grain for stock, and cannot be excelled as feed for calves.

Yours truly,

J. A. HOLLINGS.

Bondhead, Ont., Feb. 27, 1872.

THE EXCELSIOR PEAS.

SIR,—The Excelsior Peas I purchased from you did uncommonly well last season, yielding me 33 bushels per acre, while the old variety that I had only produced about 22 bushels per acre.

D. S. ROBERTSON.

Wanstead, Mar. 6, 1872.

THE POTATO.

SIR,—There are so many theories afloat regarding potato culture, that perhaps anything more on that subject may be thought superfluous; however, I would like to have my say with the rest, and what I have to say has reference to the kind of seed to plant. I have heard some say that small potatoes were as good for seed as large ones; but I don't believe it. I believe that the potato has been taken from a wild state, in which it was no more than palatable, and improved by careful cultivation, until it has been brought to its present state of perfection (having no rival as an article of vegetable food, bread alone excepted), and if left to itself its natural tendency is to degenerate to the original wild state; and in order to prevent it from so degenerating, it is necessary not only to carefully select the most perfect tubers for seed, but also to change the seed frequently, either by getting new varieties or changing the same variety to different localities. In selecting seed, I would select not only the largest but the most perfectly-shaped and sound tubers, cut to single eyes, as too many eyes cause the tops to grow spindly, and you will have a great many small ones. If you must plant whole potatoes, cut off the seed end and throw it away.

RUSTIC.

Fenelon Falls, March, 1872.

THE FARM.

LEAKAGE IN THE YARD.

SIR,—I have been much impressed this winter with a source of waste which extends to almost every farm that I know in a greater or less degree—viz.: the leakage from our yards. In my own case, and in many others which have been observed, the liquid manure—which is the most valuable—and a large portion of the soluble parts of the solid excrements, find their way, more or less directly, to a creek or swale, and are either entirely or in a great measure lost. It is generally believed that these contain the substances most suitable for the nourishment and growth of plants. A dung-heap, thoroughly leached, though still valuable, has lost its real strength, and is comparatively worthless; the leaching process is seldom quite complete, but there is no doubt that the aggregate loss is immense. Compost heaps and the use of dry earth and other absorbents would be of much value; but it is very difficult to compost in our climate in the winter, and when spring opens seed time and harvest follow one another so rapidly that we have little time to attend to such things; the high price of labor and the low price of produce are also against improvement in this and in other directions. There is often much loss also from the escape of the volatile portions of manure. This, I think, may be prevented, at least in part, by the use of gypsum. About six weeks ago my manure heap was giving off dense clouds of gas, with an unpleasantly strong odour; I procured a couple of barrels of gypsum, and scattered about half a bushel over the heaps and yard; next morning there was no sensible escape of any kind. I have used a little more than a barrel since, in the yard and stables, with the best results, as far as I can judge.

G. M.

Adelaide, March, 1872.

WHAT ENGLISH CART-HORSES SELL FOR.

Perhaps many of your readers would like to hear of the prices working cart-horses sell at in England. I yesterday attended, in Liverpool, the sale of forty-nine such horses. They were the property of the late Mr Tipping, an extensive "cartowner," who did an extensive business as such on the Liverpool docks. The stock consisted, with one exception, of geldings and mares, and were bought for workers. Mr. Tipping died a few weeks since, and the sale was entirely without reserve by order of the administrators of his estate. The average price of the forty-nine horses sold was $336 per head.

The whole lot were in fine order, and of great size. They would average seventeen hands in height, and probably 2,000 pounds each in weight; and a finer collection of sound, great, muscular horses, just from hard work, have probably never been collected at one sale. Almost every one of them showed fine style and action.

It is especially worthy of notice that the above were not fancy prices for breeding animals, (nearly all of them were geldings,) but every horse was purchased for work. Another item should also be noted. With horses at such prices, drayage is done in Liverpool for one-third the price that it is in New York, and is at that a very good business. Any two of the above horses could draw ten or twelve tons along the streets of Liverpool with ease.—JNO. W. CRIZER *in Turf*.

Hog hair is recommended for hens' nests by a correspondent of the *World*. He says hens sitting in these nests have never been infested with lice. Hen lice in hog's hair won't stay. These nests we select for hatching our own chickens.

WINTER FARMING.

Sir,—Viewed from an English standpoint there is much in Canadian agriculture justly entitled to high commendation. Foremost must be placed the indefatigable industry of the farmers themselves, which, I am bound to state, surpasses that of similar communities in every country I have visited. And there is much also connected with grain-growing, land, culture, and dairying, worthy of laudable mention, which I must pass in order to arrive at the subject of the following remarks.

As I understand, Winter Farming consists in the production of roots, the tending of stock, and the conversion of straw into manure; with the object of making money beyond what may be needed to pay the *chorer*. When roots are not grown, there is no Winter Farming, no money made, and what I regret to notice as being consolatory to numbers, no expenses incurred. Many pursue this course through the notion that to feed better would not pay, while others do the same their fathers did, —at any rate there is a conflict of opinion —the consequence of which is that poor young animals have to get a living at a meagre straw stack, and the rigor of winter contracts their growth, as it does that of the pocket. This, Mr. Editor, is the weak feature in Canadian farming. It resembles a man fighting with one arm tied, and however well grain may have told in, profits diminish during winter, through not receiving a proportionate return from live stock. The evil does not rest here. Your beef will not find a foreign market, nor command a remunerative price, where this wretched wintering is practised. There is no quality about it. Contrast the beef from a steer turned out to grass in nice thrifty condition, with one turned out a bag of bones. The one is fit to kill in the fall, the other requires a winter's feeding. And no roots being grown, it is sold, another feeds and gets all the profit. Turnip growing is comparatively inexpensive in this country, as it can be done without purchasing artificial manures. The soil is admirably suitable, the climate fair enough, and the quality for fattening excellent.—This is not all, straw goes further with than without roots. The manure is vastly improved, gives greater returns of grain, and lasts much longer. The farm yearly increases in richness, all crops present greater bulk, and instead of the produce becoming less year by year, it is steadily on the increase. So much for the land.

Let us consider the stock. It does not pay to keep cattle on straw, inasmuch as the slight growth made during winter is not equivalent to the loss of flesh. And farther than this, a beast is only paying well when, in addition to growth, the flesh increases too. Mere growth is not sufficient, weight must be added to at the same time. The farmer then has two sources of profit progressing. Turnips, or roots, are the sheet anchor of agriculture: the secret of Winter Farming.

To any man with 100 acres I would say, grow 3 or 4 acres of roots, and have a variety in this fashion: 1 acre of white or common turnips for early fall use; 2 acres Swedish turnip, main winter crop; and 1 acre of mangel for spring use; a few carrots, and sow all early. Common turnips are invaluable for early use—through October and November—and should be fed to stock so as to prevent their losing a pound of flesh—which is the case when pastures begin to fail. When they are consumed Swedes are ready; and these being gone, Mangels are fit. Hogs account well for the latter.

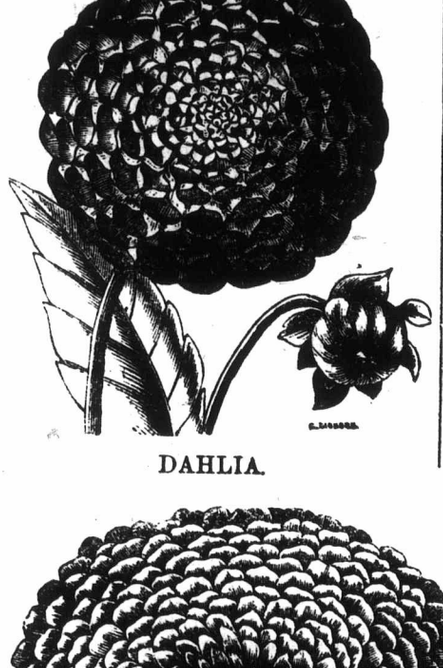
I see you have excellent varieties of Farm Seeds, Mr. Editor, which are worthy of trial.

Turnips properly fed return a profit of $50 per acre. I have seen more done this season. Three acres cleared $200. What pays as well? This proves that money can be made during winter. Far better do that than nothing. It shows that some at least are winter farmers.

Yours, J. A. HOLLINGS.

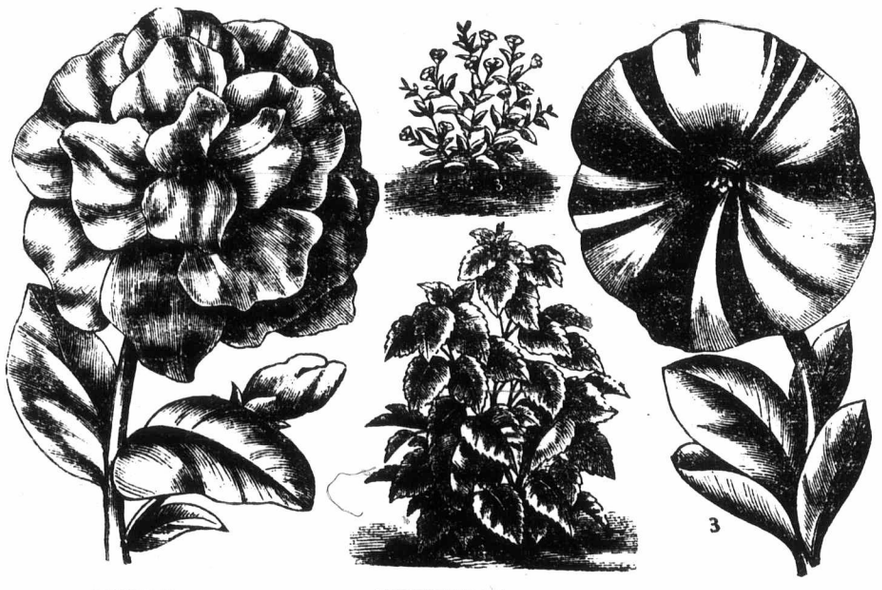
Flowers.

Many of our agricultural friends have not as yet been able to devote attention to flowers, and some in distant parts seldom see one. We give this month a few illustrations kindly forwarded to us by Mr. J. Vick.



DAHLIA.

ASTERS.



DOUBLE, PETUNIAS. BLOTCHED AND STRIPED.

The Dahlia is a beautiful flower, but requires more care than the majority of farmers can afford, as the bulbs have to be taken up and stored away in the fall.—Those that can take care of them will highly prize them.

The Asters are now attaining such perfection as to almost rival the Dahlias.—They can be raised by any one in the open air. We illustrate a choice flower and the whole plant. For early flowers, plant in a box in the house, if you have not a hot-bed, and very few farmers have. They should be planted out about 6 inches apart in the flower bed.

The Petunia is one of the most durable flowers. It will fill a garden with flowers when others are gone—at least it has filled ours. It makes a very nice box plant to train on a small trellis, and place in a window, Some of the new varieties are very beautiful.

These engravings will call your attention to the class of Seeds we believe will please you most.

HOT BEDS.

Hot beds facilitate germination, protect the plants, and prevent failures; as cold damp weather may destroy the vitality of good seed, and a slight frost often destroys a whole garden of seeds, if sown too early in the open air. The safest and best way is to raise them in hot beds. By being protected at the sides and ends with boards, and covered with glass, they confine the moisture which arises from the earth, and thus the atmosphere is kept humid and the surface moist, and the plants are not subjected to changes of temperature, as a uniform state can be maintained, no matter what the weather may be. The bottom heat of the hot-bed warms the soil, and enables the grower to put in his seed early, and obtain plants of good size before the soil outside is warm enough to receive the seed. Care, however, is required to prevent scorching the young plants. In bright days the heat is intense inside the frame. and unless air is freely given, or some course taken to obstruct the rays of the sun, most likely a great portion of the plants will be ruined. When the sun gets pretty warm, give the glass a thin coat of whitewash. This gives a little shade, and with some air on bright days will make all safe. The hot-bed is made by forming a pile of horse manure with the straw used for bedding, or leaves, some three feet in height.—Shake all together so that straw and manure will be equally mixed. It may be sunk in the ground a foot or eighteen inches, or made on the surface. On this place about five inches of good mellow soil. Then set the frame and keep it closed until fermentation takes place and the soil is quite warm. It is better to wait a day or two after this, and then sow the seeds. The principal advantages of a hot-bed can be secured by what is called a cold-frame. This is simply a hot-bed frame, with sash, placed upon a bed of fine, mellow earth, in some sheltered place in the garden. By the exclusion of air and the admission of sun the earth becomes warm, and the moisture is confined, as in the hot-bed. After the frame is secured in its place, a couple of inches of fine earth should be placed inside, and the frame closed up for a day or two before the seeds are planted. As the cold-frame depends upon the sun for its warmth, it must not be started as soon as the hot-bed, and in this latitude the latter part of April is soon enough. Plants will then be large enough for transplanting to the open ground as soon as danger from frost is over, and, as a general thing, they will be hardier and better able to endure the shock of transplanting, than if grown in a hot-bed. A frame of this kind any one can manage. Watering occasionally will be necessary; and air must be given on bright, warm days. Shade also is necessary. These frames, when so small as to be conveniently moved by the hand, are called hand-glasses. A simple frame or box, with a couple of lights of glass on the top, will answer a very good purpose, though when small it would be better to have the front of glass. A very good hand-glass is made of a square frame, with a light of glass at each side and on the top. These contrivances, though so simple as to be made by any one handy with tools, are exceedingly useful, as they prevent the drying of the surface of the ground, and afford the plants shelter from sudden changes of the temperature, cold storms and frosty nights.

THE SOIL AND ITS PREPARATION.

The best soil for most flowers, and especially for young plants, and for seed-beds, is a mellow loam, containing so much sand that it will not bake after hard showers. If we have not such a soil, we must, of course, use the best we have. A stiff clay soil can be much improved by a little sand, or ashes and manure, and by pretty constant working. It must not, however, be handled when too wet. Always drain the flower garden so that no water will be on or near the surface.—Don't try to grow good flowers in a poor soil. Always have a little pile of manure in some outer corner. It is as convenient as money in the purse. Those who keep a cow or horse, will, of course, have manure enough; but those who have no such opportunity can get a load of sods from some meadow or the sides of the road, lay them in a pile to rot, and give them a soaking with soap-suds on washing days. When the leaves fall, get all you can handily and throw them upon the pile, and no one will be able to boast of better flower-food; in fact, this is the very poetry of manure.

Suggested Items—No. 3.

FRIEND ADVOCATE,—I have just finished reading "What I Know of Farming," by the "Hon. Horace Greeley," and I must say, let him be wild on politics or Canadian annexation, he is sound on farming, especially on farmers making their dullest and slowest sons farmers, thinking that anything in the shape of a man is good enough for the farm. I do believe that the time is not far distant when farmers and farmers' sons will rise to the position that their honorable calling bids them fill—when the Farmer will stand at the head of the class instead of the foot, when we shall have an agriculture worthy the name; and as the Farmer is the bone and muscle of Canada, as much and I think more than most other nations, they should be the smartest and the best men of thy family. And to the parents I would say, do not think that money or time are

misspent in educating your boys for the farm. It is a source of regret to myself (though possessing a common education) that I have so poor an education; for I do hold that every farmer should understand the nature of soils, and of plants, and of supplying to each what they require. I would not say that no man but an educated man will succeed in farming, but I do say he works at a great disadvantage.

Now, brother farmers, perhaps I have said enough on education. One thing is certain: we do not use what we have as well as we might. I can speak for myself. I do not, at any rate, but intend using it better. One blessing is, that when we use our own experience, or the experience of others, it is none the worse for using, nor we for the using of these faculties of judgment. I could wish every farmer would tell us a little of his experience in farming; I mean practical farming. I will, at least, tell some of mine.

The clover that I spoke of in my last turned out better than I expected. I had 6½ bushels of very nice seed (not a big yield, I admit), off about 6 acres; but I fully thought, the season being so very dry, that there would have been scarcely any good seed. I had a clover machine; it cost $5 for thrashing, and I sold 5 bushels for $6 per bushel. Now let us see if it was worth the trouble. To cut it, I paid a man $2 for two days' work; the raking and hauling to the barn, say $3; threshing, and board of two teams and three men one half day, say $6.50; total cost $11.50. 6½ bushels at $6 per bushel, $39; subtract the cost, and there is left $28.50.

I am a believer in new seeds. Accordingly, in the fall of 1870, I bought a bushel of Arnold's Cross-bred wheat from Mr. C. Arnold, of Paris, which cost me $10. I took a peck of different numbers, 1, 7, 8, 9. Of No. 9 I sold 5 pounds to a neighbor, leaving 10 pounds. Off the 55 pounds we thrashed 40 bushels. We were careful, and kept each number pure. No. 9—I planted 10 lbs., got 9½ bush.; No. 1—planted 15 lbs., got 12½ bush.; No. 8—planted 15 lbs., got 10½ bush.; No. 7—planted 15 lbs., got 7½ bush. We did not sow it on extra good ground; used about ten loads of barn-yard manure. We sowed it over 1¼ acres. In the fall of 1871 I sold 10 bushels for $2 per bushel. It was too cheap; but it is hard to get the worth of anything new. It stood the winter well, lying flat to the ground, having a dark green colour. Its chief merit is stooling out. We found one stool with 48 perfect heads. It is a bold variety, with straw about like Treadwell. We sowed it on 10th September, and cut it 15th July. It was a better sample of wheat than the seed we bought. I have sowed 17 acres of it; sowed a little over a bushel to the acre. The ground being dry, and the wheat late sowed, it is not very thick-looking. If it turns out as well this year as last, I will consider its merit as fairly tested. I will give a full account of it by-and-by.

March came in like a lamb, but it is now like a lion. But I like a stormy March better than a stormy May.

Rockton, March 29. HORACE.

CONVERSION OF FARM BUILDINGS.

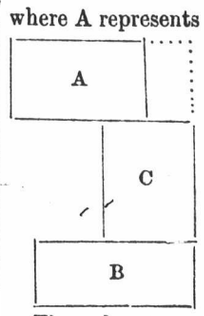
Continued from February Number.

At the conclusion of my last I promised to give a description of the advantages arising from the conversion of grain barns. Before doing so allow me to give another mode of arrangement which embodies a few more advantages than any yet given.

Farmers who have regular driving barns very often find that they are not exactly the place to cram all the tools of the farm into; also, farmers having no tool house of any kind lose sadly every year by wintering their implements in the snow-drift.

By the proposed arrangement a very convenient tool house is also formed.

Instead of having the ends of the barn and shed and one side of the cellar in line, as shown in Fig. 3 in my last article, arrange the building as in the annexed plan, where A represents the barn, B the shed, and C the cellar.



The corner (enclosed by dotted lines in diagram) thus formed by the end of the barn and one-half the end of the cellar, would make the tool house by simply enclosing it, and extending the roof of the cellar over it.

The advantages gained by the conversion of buildings must now be considered.

1st. We have comfortable stabling for all our cattle. [The stable should be battened on the outside, and also lined inside on the sides or ends exposed to either the north, east or west winds.] This is very important, and those who have tried both ways of wintering cattle, viz.: letting them run around a straw stack in an open yard, and feeding them in stables, will admit the saying that "pine boards are the very cheapest fodder in the world."

2nd Over the cellar is a building as high as the barn, which gives us room for the straw. In the front of this building, and as high up as possible, there must be a door, so that when thrashing the straw may be run from the carriers into the building. A better way than this could be obtained by hewing the door in a gothic peak on the roof of the building. The old plan of having the straw in the yard and throwing off portions every day to be trampled down by the cattle, sheep and horses, and washed by all the rains and water from the roofs of the buildings, is a practice which cannot be too greatly deprecated. Some may say they could not get half their straw rotted if they did not spread it on the yard. Give your stock ample bedding—bedding until that big poultice (for it looks like one) of manure, which adorns the sides and hind quarters of your beef cattle, disappears, and then see if your straw is not all in the manure pile by spring. If it is not, then you raise too much grain and too little stock.

The floor of the stable should be tight, and slightly inclined towards the water-tight gutter which runs behind the cattle. If you have a straw-cutter that runs by horse-power, as you should have, then cut all the bedding, and fill and keep filled the gutter. The cut straw acts excellently as an absorbent, so that you can save *all* the manure, providing you have a shed to put it under. Some may think the gutter would freeze full; but they are mistaken, if the stable be built as I have advised, and has a good foundation under it. Others have the idea that the gutter should have a slight inclination in order to run off the liquid manure. This is, however, unnecessary, nay, even seriously objectionable, because, as I have said, the cut straw will absorb all the water, and thus save the best part of the manure, whilst, if the gutter has an inclination, then the liquid manure runs out and is lost.

3rd. We have cellar room enough at the barn for all our roots.

This is more important than would appear at first sight. In the first place, having the roots where we want to feed them, we get rid of the miserable business of carrying them on the back from the house. Secondly, we can preserve the roots better, because, by building a ventilator two feet square from the cellar to the roof, which may be closed or opened at pleasure, together with a slat floor under the roots, and raised on scantling about four inches from the ground, we can ventilate them as they should be. Many may think the windows in a house cellar will ventilate sufficiently, and so they will; but the objection is, you cannot open a window in midwinter to let off foul air without the roots which are nearest the windows freezing. But the most important of all the points gained by the barn-cellar is that of better general health in the family. None can deny the fact that the odor of a thousand bushels of turnips and other roots under a house is both disagreeable and unhealthy. New Durham, March, 1872. B.J.P.

Youths' Department.

Uncle Tom's Corner.

Clear the track, youngsters! The FARMERS' ADVOCATE says I am to take charge of this corner of the paper, so I want all our smart boys and girls to lend a hand. I propose that we shall have a "Bee." You all shall help me with conundrums, and puzzles, and anagrams, &c., and I will be boss and see they come together right. I am one of those who believe that "Too much work makes Jack a dull boy," so I am in for helping him to a laugh at his leisure. A hearty laugh is a good thing, and no one ever feels the worse for it. Did you ever hear the story of Pat and the bull? Patrick saw a bull pawing in a field, and thought what fun it would be to jump over, catch him by the horns, and rub his nose in the dirt. The idea was so funny that he lay down and laughed to think of it. The more he thought of it the funnier it seemed, and he determined to do it. The bull quickly tossed him over the fence again, somewhat bruised. Pat, leisurely picking himself up, consoled himself with the remark—"Well, it's a moighty foine thing I had my laugh first." This is the way to take life. Enjoy what is enjoyable, and what pains—why, don't think of it!

I am proud of having charge of this column, and of having the opportunity of adding to the happiness of all my little nephews and nieces of the ADVOCATE. I am like the "cullud" individual who, being called upon for a speech, said:—"Fellow-trabellers, ef I had been eatin' dried apples for a week, an' den tuk to drinkin' for a monf, I couldn't feel more swelled up dan I am dis minnit wid pride and vanity at habin to 'dress you dis ebenin."

And now, boys and girls, if you will only help your old Uncle, we'll have *such* a jolly good time in this corner of the ADVOCATE—such jokes, such games, such puzzles, and such lots of them!—Like the little boy who was trying to impress upon his sister what a prodigious quantity of nuts and candy he was going to give her next Christmas, said—"You just turn the sky over, and I'll fill it full—chock-full."

UNCLE TOM.

BOYS AS FARMERS.—A CAPITAL SKETCH OF OLD BOYS AND YOUNG BOYS.

There are so many bright spots in the life of a farm boy, that I sometimes think I should like to live the life over again; I should almost be willing to be a girl if it were not for the chores. There is a great comfort to a boy in the amount of work he can get rid of doing.—It is sometimes astonishing how slow he can get on an errand, he who leads the school in a race. The world is new and interesting to him, and there is so much to take his attention off when he is sent to do anything. Perhaps he couldn't explain, himself, why, when he is sent to the neighbour's after yeast, he stops to stone the frogs; he is not exactly cruel, but he wants to see if he can hit 'em. No other living thing can go so slow as a boy sent on an errand. His legs seem to be dead, unless he happens to espy a woodchuck in an adjoining lot, when he gives chase to it like a deer; and it is a curious fact about boys, that two will be a great deal slower in doing anything than one, and the more you have to help on a piece of work the less is accomplished. Boys have a power in helping each other to do nothing; and they are so innocent about it and unconscious! "I went as quick as ever I could," says one boy, when his father asks him why he didn't stay all night, when he has been absent three hours on a ten minute errand. The sarcasm has no effect upon the boy. Going after the cows was a serious thing in my day. I had to climb up a hill which was covered with wild strawberries in the season. Could any boy pass by those berries? And then, in the fragrant hill pasture, there were beds of winter green with red berries, tufts of columbine, roots of sassafras to be dug, and a dozen of things good to eat or to smell, which I could not resist. It sometimes even lay in my way to climb a tree for a crow's nest, or to swing in the top, or to see if I could see the steeple of the village church. It became very important sometimes for me to see the steeple; and in the midst of my investigations the tin horn would blow a great blast from the farm house, which would send a cold chill down my back in the hottest day. I knew what it meant. It had a frightfully impatient quaver in it, not at all like the sweet note that called us to dinner from the hay field. "Why on earth doesn't that boy come home? It is almost dark, and the cows ain't milked yet!" And that was the time cows had to start into a brisk pace and make up for lost time. I wonder if any boy ever drove the cows home late, who did not say that the cows were at the further end of the pasture, and that "Old Brindle was hidden in the woods, and he couldn't find her for ever so long?" The brindle cow is the boy's scapegoat many a time. No other boy knows how to appreciate a holiday as the farm-boy does; and his best ones are of a peculiar kind. Going fishing is, of course, one sort. The excitement of rigging up the tackle, digging the bait, and the anticipation of great luck—these are pure pleasures, enjoyed because they are. Boys who can go a-fishing any time, care but little for it. Tramping all day through brush and brier, fighting flies and mosquitoes, and branches that tangle the line, and snags that break the hook, and returning home late and hungry, with wet feet and a string of speckled trout on a willow twig, and have the crowd out at the kitchen door to look at 'em and say, "Pretty well done for you, bub; did you catch that big one yourself?" This is also pure happiness, the like of which the boy will never have again; not if he becomes a selectman and deacon, and to "keep store." But the holidays I recall with delight were the two days in spring and fall, when we went to the distant pasture land, in a neighbouring town, maybe to drive thither the young cattle and colts, and to bring them back again. It was a wild and rocky upland where our great pasture was, many miles from home, the road to it running by a brawling river, and up a dashing brookside among great hills. What a day's adventure it was! It was like a journey to Europe. The night before I could scarcely sleep for thinking of it; and there was no trouble about getting me up at sunrise that morning. The breakfast was eaten, the luncheon was packed in a large basket. I wish the journey would never end; but at last, near noon, we reached the pasture and turned in the herd; and, after making the tour of the lots to make sure there are no breaks in the fences, we take our luncheon from the wagon and eat it under the trees by the spring. This is the supreme moment of the day. This is the way to life; this is like the Swiss Family Robinson and all the rest of my delightful acquaintances in romance. Baked beans, rye and Indian bread (moist, remember), doughnuts and cheese, pie and root beer. What richness! You may live to dine at Delmonico's in New York, or at Phillippe's in the Rue Montorguell in Paris, where the good old Thackeray used to eat as good a dinner as anybody, but you will get neither doughnuts, nor pie, nor root beer, nor anything so good as that luncheon at noon in the old pasture, high among the Massachusetts hills! Nor will you ever, if you live to be the oldest boy in the world, have any holiday equal to the one I have described. But I have always regretted that I did not take a fishline, just to "throw in" the brook we passed. I know there were trout there.—*C. D. Warner, in "Work and Play."*

ANSWER TO PUZZLE IN LAST NO.

Four merry fiddlers play'd all night
To many a dancing ninny,
And the next morning went away,
And each received a *guinea*.

ACROSTIC.

Plough deep the soil, with daily toil,
Like all good farmers do;
Of corn you'll reap while sluggards sleep,
Unless they do like you.
Good land and seed of course you need,
Half the battle 'tis indeed.
Deep plough the earth with joy and mirth,
Enjoy your works' reward;
Enrich the soil with all the spoil,
Plough deep the grassy sward.

S. WHERRY, JR., Newry.

ACROSTIC.

Young men—young *farmers*, I should say—
Each of you want to "make it pay;"
Of this I'm sure. Then list to me,
Mind what I say and you will see
Ere long that what I say is true.
Now I will tell you what to do:
Out of your pocket-book or till,
Forthwith extract a dollar bill;
Clearly and plainly write your name,
And place of residence the same;
Now, in an envelope well seal'd,
Address to—'LONDON, WILLIAM WELD."
Do this, and get the ADVOCATE,
And soon you'll own a fine estate.

JAS. LAWSON.

Battersea, March 7, 1872.

A GAME OF MEMORY.

Forfeits to be paid for mistakes or for laughing. The players sit in a circle, and one begins by solemnly saying—"One old ox opening oysters." Everybody repeats this, and then he or she begins again—"One old ox opening oysters; Two toads totally tired trotting to Tewkesbury." This goes round the circle. The next repetition is—"One old ox opening oysters; Two toads totally tired trotting to Tewkesbury; Three tame tigers taking tea." This is repeated round the circle, always beginning at—"One old ox, &c.," and adding a number each time, as follows:—"Four fat friars fishing for frogs; Five funny farmers fighting for fireflies; Six soldiers shooting snipe; Seven saddlers sewing separate saddles; Eight elegant engineers eating excellent eggs; Nine nimble noblemen nibbling nonpareils; Ten tall tinkers taking twopence; Eleven electors eating early endive; Twelve tremendous tale-bearers telling truth.

CHARADE.

My first makes all nature appear with one face;
My second has music, and beauty and grace;
My whole, when the winter hangs chill o'er the earth,
Is the source of much pleasure, mischief and mirth.

The Farm.

CLOVER AS A FERTILIZER.

Not only should we bring to our assistance every available stimulant to vegetable growth, but also at the same time that kind should come first which is the cheapest. A great deal has been written about composting, collecting forest leaves, dissolving bones, and saving rubbish generally, all good in a measure and adding their mite to the enriching of the land but not wholly satisfying the great craving of the soil for food. It is the deduction our leading farmers made from years of experience, that clover is the cheapest manure. A principal item is the cost of applying fertilizers. I set a man at work hauling barnyard manure. He must have a team, wagon and fork. He does a good day's work if he covers an acre. I send a man to the field with a bag of clover seed on his shoulders, and when night comes he has seeded down ten acres or more. He has added more fertility to the soil than is contained in one hundred loads of common barn yard manure. A not very distant farmer says: "I cannot afford to put my straw back on my land," so at five dollars a ton his wheat straw goes to the paper mill and is immediately converted into paper, and he buys clover seed with the money. Of course he can afford to put it back, though the resulting profit would not be near so great as is commonly estimated.--It seems to me better to grow clover seed and keep the straw too.

Clover protects the surface, hence it may be truly called a mulch. A thick mat of clover prevents the escape from the earth of fertilizing properties that would otherwise be wasted. Leave a board on the ground for a few months, and no matter how barren the soil, a profitable amount of fertilizing material will accumulate under the board. Just in this way does the clover plant fetch up barren, worn-out land to a producing state. Possibly as much humus is kept back to the earth in this way as is drawn from the air by the leaves of the plant.—Again. clover mellows the soil. Land having a natural tendency to become pasty, heavy and tough may be converted, with a liberal seeding, into a mellow, friable seed bed, and when we have got a mellow soil we have reduced the expense of cultivation.

Again a heavy coat of clover keeps down many kinds of weeds that would otherwise spring up abundantly. It heads them off, just as a plant shading the ground stops effectualy any growth beneath its leaves. Finally, as fodder it is indispensable. Sheep prefer clover hay to the best of timothy and other fine grasses. Dairymen rank clover high and seed their land accordingly. In fact many farmers here sow nothing else. But then there are acres and acres of land that will not unassisted grow a clover plant two inches high. For such gypsum is the resort, the natural food. We have only to come down with this dust and leave the rest to nature. The common course here is to seed down liberally and top dress with gypsum in the spring, mow once; the next year more top dressing, and either stock lightly or mow again, and then plow under the aftergrowth.—*Carolina Farmer.*

ADVANTAGE OF FARMERS' CLUBS.

In a word, what most every farmer needs, is a thorough knowledge of his profession, and in no pursuit is knowledge more indispensable.

The farmers' club, when properly conducted, is, in every sense, a school for the dissemination of information pertaining to this branch of business, and for the free discussion of all questions and topics which affect the general welfare of its members. Those who have been successful in any particular branch of husbandry, communicate the knowledge which their experience and practice has given them; while in turn, those who have had less experience and more varied knowledge may suggest ideas valuable to all. Aside from the useful information that may be derived to all connected with these clubs, there is a social side, which may indeed be considered as one of the crowning excellences of such organizations. Farmers have less amusements, and fewer opportunities for social recreation than any other class; their isolation from each other is one of the causes of this, and the result is, of course, that while they work harder than any other class, they no doubt enjoy less of the comforts and pleasures of life.—*Green Co., Wisconsin Republican.*

Farmers, we would call your attention to the last clause of this article, so that you can see what others say of us. Let us confute this statement! Try your pens; the advantages are on your side, and if you treat the subject right, you can show that farmers have feelings as well as other persons. We agree with the first portion of the above article, but the last sentence we allow to appear on purpose to try the mettle of some of you, and give you a text for the vindication of your position.—[ED.]

WHAT IS HIGH FARMING?

It is a system of tillage and farm management that is *self-sustaining*, a system that takes nothing but the bare land, the domestic animals, the farm implements and machinery, and cultivates the soil, sustains the family and the animals, pays the annual taxes, defrays the expenses incident to the improvements that must be made on the farms, cancels the annual interest on the money invested in the land, eventually pays for the land, all from the products of the soil cultivated; and after one, two or three decades of years, leaves every acre in a far better state of fertility than the soil was at the beginning. This is high farming. There are untold numbers of quiet, unobtrusive tillers of the soil in many of our States who have commenced precisely as we have indicated, *without one dollar of cash capital*, who have had no revenue whatever besides the natural resources of their cultivated fields, and who have, by hard work and judicious management, sustained their families, paid for their land, erected all their buildings, paid for all their valuable improvements, and at the same time have brought their land up to that state of productiveness by their judicious management, that every acre now yields from two to three tons of hay where only one was originally gathered, and they harvest nearly two bushels—in many instances more than two—of cereal grain, where the product was but one bushel. *That is high farming.* Yet such a system of husbandry is usually sneered at, simply because the proprietor knew how to save his money to defray the expenses of improvements, rather than spend three times more than he made.—*N. Y. Observer.*

FALL MANURING FOR CORN.

The Vermont *Farmer* says that farmers usually have more or less manure in yards at this season of the year, which can be hauled on to the ground now while the surface is hard better than in the spring. We know farmers who scrape the yards in the fall and leave the manure in small heaps during the winter. Others spread it and plough it in so as to gain time. Both these ways are, in our opinion, wrong. If the manure is spread in the fall and allowed to lie upon the surface until near planting time, its juices are carried into the sod by falling rains and melting snow, so that its fertilizing matter is more accessible, the sod is enriched, the growth of the grasses in fall and spring is stimulated, which gives a green crop to plow in, and there is a heavier sod to decay and furnish food for the growing crop. These causes or some of them are very potent in the effect they produce on the crop.

We have no hesitation in saying that twelve loads to the acre, spread the first of October and allowed to lie until planting time before being turned under. are equal in the effect they produce on the corn crop to twenty loads applied and plowed in, the usual way in the spring. We made the discovery by accident ten years ago and have practiced it with unvarying success since.

WHAT FARMERS NEED.

What farmers need would be a long story to tell. The first thing is greater enthusiasm in their profession. Farmers generally place too low an estimate on their calling; they judge of it from its commercial relations alone. Seeing merchants, lawyers, middlemen, getting money rapidly, making fortunes in a single season, they bewail the slow progress to wealth their avocation compels. But is there nothing desirable but money? The æsthetical probabilities of the educated farmer are beyond those of any other profession. Read Irving's sketch of "Rural Life in England," or Whitehead's "Pastoral," and say if any picture the artist ever placed on canvas equals those described by these writers. However the farmer may be placed, or wherever he has in his hands the means to touch here and there the canvas, and make it more beautiful as the years go on, the farmer should possess his fac-simile with an artist's aspirations, and change and beautify it, making it to "bud and blossom as the rose." A group of trees, a single tree, will change the face of the land—raise it sometimes from inanity to an almost speaking intelligence. Who has ever planted a tree and has not felt an interest in its growth beyond that of trees planted by others? If a fruit tree, has he not watched daily the development of the fruit from flower to full-ripened richness? and when, at last, full of the summer's sun and dew and rain, it has fallen to the ground, has he not taken it carefully up, exhibited it to others, and waited many days with a sort of fondness akin to relationship before sacrificing it on the altar of taste? An apple on the bough is more than an apple to him who planted, tended and saw it through infancy, youth and age.

When the farmer considers that he owes more to the farm than that does to him, he will begin to be worthy of it. It teaches *justice.* It will give, but it must also receive, and its giving will be in proportion to its receiving, with this difference—that it takes our crude gifts and changes them into refined, and returns them "things of beauty." It will have us near; will have our care and sympathy. The farm teaches *integrity.* No shams allowed here; what you do must be well done; you must sow good seed; you cannot get figs for thistles. You may cheat yourself, your neighbours, but you cannot deceive the farm. When the farmer learns these things, he is better than money can make him. The farmer needs *perseverance* in a well-considered plan. If a dairyman, let him follow dairying through to its complete triumph. If mixed husbandry is the plan (and it is a good one), then follow that, without that unstableness often witnessed. We see, for instance, that when wool is a paying crop the whole attention will be given to sheep; a reverse comes, and then "pelting" will be the order of the day. Now, when pork is at a low ebb, many farmers are making small provision for a future crop, and the result will be no hogs, or few, for sale when prices are remunerative. The same is true of horses, a large crop and a small demand; and too little attention to breeding such as will pay.—S. B. L., *in Country Gentleman.*

Dairy Department.

X. A. Willard's Address

Delivered at the Dairymens' Convention, held at Ingersoll, 1872.

(*Concluded.*)

Nothing struck me with more force than the care taken by the Cheddar dairymen of Somersetshire to get good cheese. The pastures are well drained and provided with an abundance of good, clear, running water; there are no filthy pools or mud holes; the milking sheds are open on one side, and paved with stone and cement. There is sufficient incline back of the cows to carry off all filth, and after milking all droppings are removed, and the floors and gutters flushed with water, so that everything is clean and sweet for the next milking.

I am convinced that unless the dairymen of America commence at once to pay attention to cleanliness in pastures, not only in regard to slough holes, but the eradication of weeds, providing stock with an abundance of fresh clean water, together with attention to curing cheese, European manufacturers will soon outstrip us in the race for making fine goods.

The factory system is now being established in Europe, our inventions and appliances are eagerly sought after, and every good thing discovered by us is adopted in England, Sweden, Germany, Russia, Holland, and Switzerland.

Now, understanding the cause and its effects, we can apply the remedy. I have no doubt that the terrible disease known under the name of "milk sickness," so prevalent in Indiana and other parts of the West during the hot weather, will be traced to certain species of fungi in the milk derived from bad water or from some vegetable decomposition. These enter the circulation of the animal and poison the milk, and it is not the result of any poisonous plant that the cows eat.

Mr. Willard then went on to urge the necessity of impressing the patrons with the importance of following these rules of cleanliness, of keeping a daily record of the condition of all milk delivered, of imposing a fine and lowering the per centage of profit, to a person who persisted in delivering milk from over-heated cows, or from cows kept upon pastures subject to the abuses already mentioned. The longer this decided course is delayed, the more money is thrown away in wanton, useless waste. He then proceeded to show the electrical influences of a thunderstorm upon milk, recounting some of the experiments on electricity by one of the earliest experimenters, Andrew Cross, a native of Somersetshire. After describing many of the results of Mr. Cross's researches, he went on to say:—

The influence of electrical action is a question entirely new to the dairy public; but it is one concerning which I think some useful suggestions present themselves for our consideration. When the electrical equilibrium is disturbed, or when the state of the atmosphere indicates a preponderance of negative electricity we are made aware of the fact by its depressing influences. At such times it is important to take more than ordinary care in the handling of milk—that it be kept out of harmful odours—that attention be directed to its aeration, and such treatment be given it as shall be inimical to the growth or development of fungi.

And again, the fact that milk may be kept sweet a long time in hot water by electrical action, will offer a very important suggestion to inventors in the preservation of milk, and perhaps in the improvement of cheese at factories.

I have dwelt upon this matter of milk, and the curing of cheese because they are the living vital questions of the day. Dairymen everywhere upon this continent have reason to be alarmed at the introduction of the system into England, with its cheap labour and immense fields of good dairy lands, for the day may come when their goods may be placed in competition with ours in our own market.

After passing a glowing eulogium upon those already in the work of the factory system in America, Mr. Willard traced the chief reason of so much failure in the production of a first-class article to the dead weight of farmers who will not think, farmers who will not act, who hang back and settle themselves down in the old rut, farmers who do not believe in progress, who do not attend these conventions, who whine at low prices, who dump their rotten milk at the factory doors, and grumble because it is not made into gilt-edged cheese.

It is this dead weight—this living corpse—that is this day paralysing our efforts for progress and improvement. I see these men everywhere in my travels, they have rhinoceros hides, they are wrapped up in their own conceit and will not believe, they have no eyes to see, and their ears are too long to hear. Oh! my friends, it is this class which the progressive dairymen of the age are obliged to lift and carry along by main strength. If we could only reach these men—if we could only induce farmers to improve—to make that progress which the age and the cheese-making art now demands—our progress would be almost boundless, and the prosperity of the dairy interest would be beyond peradventure.

The speaker instanced the market price obtained for his butter by Col. George E. Waring, as detailed in the "Ogden Farm Papers" in the *American Agriculturist*, as a convincing proof that a good artecle must and ever will command a high price.

The imports of dairy produce into Great Britain for 11 months ending Nov. 30, 1871, by official returns, amounted to nearly $48,000,000. On the 1st of January, 1872, Normandy butter sold in London at wholesale for 160s. sterling per cwt., while Canadian only fetched from 70s. to 116s., a difference of over a shilling per pound in gold.

Mr. Willard then gave a sketch of the milk condensing system, showing the profits resulting from this business to be as high as an average of a dollar per day upon each cow.

He had been informed that the condensing factories of Massachusetts and New York had recently received an order from China for 11,000,000 pounds of condensed milk.

WINTER BUTTER.

A writer in an exchange tells us of two persons who supplied him with winter butter. The butter of one failed both in quantity and quality on the approach of cold weather, while that of the other kept up to the standard, looking and tasting like May butter. He further states that the superiority of the last mentioned was the result of having rye pasture during the winter. The rye was sowed among the corn in August, and made a good growth early in the fall. The corn being husked in good season, furnished the cows with excellent pasture all winter. A shelter was provided in the field, to be used at pleasure, with but little outlay, and upon the continuance of snow for a few days, bran and meal were fed. Beside the benefit to the cows, the rye prevents a growth of weeds in the fall, and furnishes a quantity of green manure to aid in bringing large crops. This method seems a reasonable one, and we intend to test it the coming autumn.

We extract the above from the *Iowa Homestead,* published in Des Moines,

Iowa, and we trust that some of our readers will try this plan and report to us. It appears very reasonable, not very expensive to try, and may prove very profitable. Some of our dairymen may profit by it, and report at the next Convention. This little hint may be worth an immense sum to our country if it answers as well as reported above. We mention the dairymen because, as a class, we find them far ahead of the grain and stock raisers in the matter of progress. They are doing far more good to the country by their enterprising trials and reports than ten times the number who go on in the old ruts worn out by their grandfathers, can do.

Stock.

The London *Mark Lane Express*, in speaking of recent exportations of British stock to other countries, says: "From Glasgow, Mr. Simon Beattie, of Canada, has been shipping for his own stud farm at Bangor, Ontario, and Mr. Cochrane, of Montreal, two Short-horn cows from the late Mr. Barnes' herd; a roan heifer of the Fame tribe from the Hon. Col. Duncombe's; and a large collection of very first-rate Ayrshires, cows and heifers, bought up during the last three months from the best breeders in Ayr, Wigtoun, Lanark, Peebles and other counties noted for their Ayrshire herds. Two or three first-class Clydesdale and other stallions, prize winners, also accompany the cattle."

There is much speculation as to the amount of gross in beef cattle. Experiments have lately been made in Liverpool to determine, as near as possible, the amount of meat. But the race, blood, and condition of the animal enter largely into the calculation. it was found that certain animals produced 70 per cent. of meat, while others gave only 50 per cent. The mean weight of meat produced in several hundred experiments, on an average was 58 per cent. An ox weighing alive 1,332 pounds, contained 772 of meat, skin 110, grease 88, blood 55, and hoofs 22, head 21, tongue 6½, lungs and heart 15½, liver and spleen 22, intestines 66, lost and evaporation 154 pounds, making 1,332 pounds. By this it will be seen that if an ox of that weight is purchased at 4 cents per pound it costs $58,28. If the 772 pounds is sold, on an average at 7 cents it will bring $54,04 leaving the hide and tallow to pay the butcher, which is worth $17.—*Ex.*

The matter of in-and-in breeding is one upon which it would seem breeders have little room for difference; and yet there is scarcely anything connected with breeding, and the improvement of the various kinds of stock, concerning which breeders entertain such a wide diversity of opinion. One class of breeders—and their number and reputation is amply sufficient to secure a respectful consideration for such propositions as they may advance concerning the philosophy of breeding—hold that the system of in-and-in breeding is radically and entirely wrong; while, on the other hand, another class of breeders, equally numerous and respectable, believe that through this system alone can the breeder hope to make any improvement in his herds, or even maintain the standard of excellence already secured.

Were these differences to be reconciled by an appeal to the personal experience of the breeders of to-day, it is possible that the most extended research would fail in bringing us to satisfactory conclusions. This generation, however, is not the only one which has labored for the improvement of our domestic animals, and we are not, therefore, compelled to rely altogether upon the testimony and experience of men now living. And in taking the average recorded experience of the past, we cannot escape the conclusion that this system of breeding has contributed more than all others combined to the improvement of the various races of domestic animals. The thoroughbred horse, the Short-horn, and various families of sheep and swine—and there is also good reason for believing the same to be true of the Hereford cattle—are the product of this system of in-and-in breeding. The foundations of all our improved varieties of stock were laid in this system, and until it was discovered and generally practiced no breeder appears to have achieved any remarkable degree of success in the improvement of domestic animals.

This evidence seems sufficiently conclusive; and that it is in many quarters not so received, is due to the fact, that many have, within their own observation, known of instances where the same system has been productive of pernicious consequences. For, that such is sometimes the character of its results, few will deny. Like many other things, from which substantial benefits can be secured when used with judgment and to a proper extent, the system of in-and-in breeding, in the hands of careless and ignorant persons who carry it to an extreme, and pursue it with no definite purpose in view, may, and likely will, be mischievous in its consequences. In-and-in breeding tends to intensify and fix in the offspring the qualities and peculiarities of the animal whose blood is made the basis of the operation. And where an animal possesses exceptional points of excellence, a judicious course of in-and-in breeding will tend to fix permanently in the offspring these points of excellence, which otherwise there would be no certainty of reproducing. In-and-in breeding, however, while it fixes and intensifies a type, and imparts to the blood of an animal increased strength or capacity to reproduce itself, is at the cost of size and vitality—for the law of compensations applies here as well as elsewhere. Therefore, when animals possess no exceptional good qualities which it is desired to fix and secure, there is nothing gained by breeding in-and-in; while the loss in size and vitality—slight, perhaps, in the first instance, but increasing with alarming ratio as the operation is continued—is so much ground lost. And when, coupled with the fact that animals may possess no exceptional points of excellence to be preserved and fixed, they do many points of inferiority, a course of in-breeding is not only at the expense of the size and constitution of the progeny, but at the additional expense also of fixing and exaggerating their bad qualities.—And this is so frequently the result of the operations of those who pursue a course of breeding in-and-in, that we are not at all surprised that many careful observers have come to denounce in its entirety a system productive of so much mischief.

In the hands of the experienced and intelligent breeder, who will use proper judgment in the selection of animals, and in the extent to which he carries it—who knows the qualities which it is desirable to secure, and when he has succeeded in fixing them—who possesses the facilities and can exercise the judgment to restore the vitality which he has sacrificed in the operation, and to preserve the good qualities he has implanted in his herd while breeding out the undesirable—in the hands of such a breeder, to be resorted to when occasion seems to demand it, we regard in-and-in breeding as the most potential influence upon which he can rely for making permanent improvement in his herds or flocks. And without it, we believe improvement, if possible at all, would be extremely slow and difficult.

On the contrary, in the hands of the ignorant and careless, or those destitute of the proper facilities for pursuing it with success, there is probably nothing so certain to result in deterioration as a resort to in-and-in breeding. For while animals possessing good qualities worthy of being intensified by such a course are rare, animals possessing bad qualities which will be fixed in the same degree, are very common. And in addition to animals making no improvement in the hands of an unskilful breeder, but remaining in a condition where it is possible for his successor to accomplish more, bad qualities may become so fixed by injudicious in-breeding, that subsequent efforts cannot, for a long time at least, remove them.—"OBSERVER," in the *National Live Stock Journal*.

N. P. BOYER & CO., PARKESBURG, PA.

N. P. Boyer & Co. send broadcast over the country a periodical called the *Stock Journal*. This paper contains inviting-looking advertisements of stock, &c., which these gentlemen appear to be solicitous to dispose of to their patrons and the public generally. This stock is represented as being "pure and high bred," and these gentlemen announce that the $250,000 which they have invested in this superior quality of stock will be used in a manner satisfactory to their customers and honorable to themselves. Some of our subscribers have, by letter, and others in person, inquired of us in reference to the standing of the aforesaid N. P. Boyer & Co., and whether or not we thought it advisable to make purchases of them. Until rather recently we have been unable to advise, as we had no knowledge of these parties. And now our information is confined to reports of others, and not to personal knowledge. But we are constrained to the conviction that they are not giving satisfaction to all their patrons, and that at least a part of the stock they are shipping is indifferent and miserably inferior-looking. We speak of this on authority and of what we know. A short time since we made a visit to Kentucky, and whilst there heard most bitter complaints of this firm. We will not mention the strengthening adjectives or epithets applied to them, but they were sufficiently positive to assure us that they were not highly esteemed by parties who had *paid* to know of what they spoke. We notice, too, in the September number of the *Rural Carolinian* that Mr. J. M. Dennis and quite a number of his neighbors, do not speak lovingly of Messrs. N. P. Boyer & Co., nor admiringly of the Essex pigs that have grown in that $100,000 sty of Messrs. N. P. B. & Co., and for which Mr. Dennis paid $40 per pair.

In fact Mr. Dennis grows very irate, and is evidently of the opinion that the Parkesburg swine grower is a swindler, and proposes to advertise that fact by exhibiting his $40 pigs at the State Fair. At seven months of age they average something under thirty pounds.

Now this article is not written for the benefit of the *Stock Journal* man alone—it is written to impress upon our readers the importance of investing their money with, and purchasing stock only of such persons as they are assured will not impose on them. There are men who have established character for honesty and integrity. These are the persons to whom you should send your orders.—*St. Louis Journal of Agriculture.*

We are aware that some Canadians are ot satisfied with transactions that have taken place, and we deem it right to insert the above that our readers at least may be on their guard.

Miscellaneous.

DISCOURAGEMENTS IN FARMING.

It is not at all uncommon for people, especially the young, to get easily discouraged.

We take a farm and commence operations, and find at the end of the year that we have not done as well as we expected, or we have even lost considerable, and, getting frightened, run away frequently to meet only the same trouble elsewhere.

If we would plant in our children the best seeds of success, we do not know any more promising than courage to face difficulties. Very few ever faced trouble boldly who did not come off better than conquerors, for they not only gained their point at last, but gained the force and experience which enabled them to forsee and prevent much trouble in the future.

A very pleasant experience we recently read somewhere—we think in the *Maine Farmer*—of Mr. J. H. Willard, now a wealthy farmer of Wilton, in that State. Referring to the cry of hard times, he thinks they are not much to those of us whose hair is tinged gray. He says: "Many think they never saw such discouraging times. The young people probably never did; but we old people have seen much worse. In 1816 I commenced farming on my own hook. I had just got married, and was full of courage. The spring was dry, and we got in our crops in good season. On the 6th, 7th and 8th of June it snowed each day, and a sleigh passed my house in Lancaster, N. H., for the village, on the 8th. Not a bushel of sound corn was raised in the north of New Hampshire or Vermont, nor a bushel of ripe potatoes except early blue, and most of the wheat was frost bitten, and the hay crops light: yet nobody starved, all were healthy and received the bountiful crops of 1817 with thankful hearts and good appetites. The year 1835 was another hard time—harder than this, for people were poorer, and means of transportation less. I repeat, don't be discouraged. Trust to Providence, keep trying, and all will come out right."

This is the experience of most of us to the times; and as to the success of our ventures, there are few of us who do not know what the struggles cost us. The writer of this well remembers his own sailings against the waves of fate. He looks back with pride particularly to one period, when he lived for six months on an average of two dollars and a half per week, rather than abandon what seemed to many as a hopeless enterprise. But it succeeded and was the foundation of many blessings which followed.

In like manner, his first enterprise at farming was a terrible disaster. The crops yielded hardly the price of the seed used, and the year's labor was entirely thrown away. The little cash capital was all gone, and nothing much was left but a tract of good but worn out land. The live stock was not sufficient to make manure for the whole farm, and there was no money to buy any. True there were friends who would loan it if asked but a spirit of independence forbade that. The feeling with which the writer sat on his last load of rye straw, to take to market, is well remembered. The land needed manure, and that straw ought to be kept and used at home; but there was a wife and one infant to be provided for, and the money must be raised even by the sale of the last straw. But the resolution to proceed never died. How to conquer was a continual study. It was resolved that one half the farm should lie in weeds and waste, so that the other half might be well manured and well tilled, and that policy prevailed. The crops which followed made a handsome surplus over cost, and in a few years the whole neglected portion was brought into successful and profitable cultivation. This land was sold some years ago for a handsome profit over first cost; but it was not parted with without some regret, as the field of one of our earliest and greatest victories in the great battle of life. And so we would not have our young friends discouraged if they find crops fail or times hard. There never was a truer saying than that "fortune favors the brave;" just as true is it in the everyday affairs of life as in the love affairs for which it was first applied.—*Philadelphia Weekly Press.*

THE FARMER.

The man who stands upon his own soil, who feels that by the laws of the land in which he lives—by the law of civilized nations—he is the rightful owner of the land which he tills, is by the constitution of nature under a wholesome influence, not easily imbibed from any other source. He feels, other things being equal, more strongly than another, the character of a man, as the lord of the animate world. Of this great and powerful sphere which, fashioned by the hand of God, and upheld by His power, is rolling through the heavens, a portion is his from centre to sky. It is the space on which the generation before him moved in its round of duties; and he feels himself connected by a visible link, with those who precede him, as he is also to those who follow him, and to whom he is to transmit a home. Perhaps his farm has come down to him from his fathers.—They have gone to their last home; but he can trace their footsteps over the scenes of the daily labor. The roof that shelters him was reared by those to whom he owes his being. Some interesting domestic tradition is connected with every enclosure. The favorite fruit tree was planted by his father's hand. He sported in his boyhood beside the brook, which still winds through the meadow. Through the field lies the path to the village school of early days. He still hears from his window the voice of the Sabbath bell which called his fathers and forefathers to the house of God, and near at hand is the spot where his parent laid down to rest, and where when his time is come, he shall be laid by his children. These are the feelings of the owner of the soil. Words cannot paint them; gold cannot buy them; they flow out of the deepest fountains of the heart; they are the life spring of fresh, healthy and generous national character.—*Edward Everett.*

An exchange says:—To the editor of a local newspaper these three things are among the most desirable:—Money letters, order for the paper, or for advertising or job printing, and last but by no means least, brief, pithy notices of *local affairs* from all parts of the country, where he has any subscribers. The life of a paper is in its local matters, and if subscribers in the several localities would pour a little news into the common fund, there would be a much richer supply to draw out of it. The local correspondent is one of the most useful men on the staff of any journal, and no one appreciates his worth more highly than the editor.

A correspondent of the *Country Gent.* says:—"If care is taken in scalding black hogs, they can be dressed as white as white hogs. Hence in dressing black hogs the water should not be so hot as in scalding white ones. If this simple rule is observed, there will be no difficulty in dressing black hogs. Instead of this color being an objection, I regard it as an advantage, for the skin of a black hog will always be found to be smooth and glossy, free from cutaneous eruptions and always clean." This is sound. Water for daessing any hog should never exceed 109 ° Farenheit.

POTATOES AT $4,000 A BUSHEL.—This is somewhat above our market quotations, but we have seen documentary evidence to prove that an offer has been made at the above rates. A gentleman in Vermont has raised a new potato which he represents as much earlier than any other variety. The potatoes being of fine quality, Messrs. Bliss & Son bought his stock, allowing him to retain half a peck; he entered into an agreement not to sell this half-peck of potatoes nor their produce until 1874. The raiser now writes that a neighbor has offered him $500 for that half-peck of potatoes, and he wishes permission to sell them. The potato has not recived a name, but it will be tried during the coming summer before putting it upon the market.

TO DESTROY THE CUCUMBER BUG.

A correspondent of the *Maryland Farmer* says:

The following effectually protected my melon, squash, cucumber and other vines from the "striped or cucumber bug," the past season, with only one application, viz.: a strong solution of hen house manure to one and a half gallons of water—let it stand twenty-four hours and sprinkle the plants freely with it after sunset. The above was suggested to me by a negro woman living on my place, who has some practical experience in gardening, and has used it forty years, and has never known the first application to fail to drive them off, and they never return.

It will cost but little to try this, and we hope some of our readers will report the result to us next season.—[ED.]

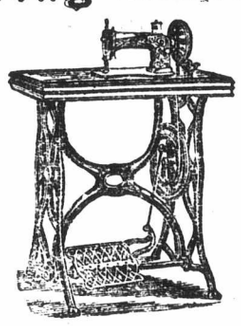
London Markets.

LONDON, Monday, March 25, 1872.

GRAIN.			
White Wheat, per bush	$ 1 28	to	1 30
Red Winter Wheat	1 15	to	1 18
Spring Wheat	1 24	to	1 26
Barley	53	to	56
Peas	60	to	63
Oats	34½	to	35
Corn	56	to	60
Rye	50	to	60
PRODUCE.			
Hay, per ton	10 00	to	13 00
Clover Seed	5 25	to	5 50
Alsike Clover Seed	6 00	to	6 00
Timothy Seed	3 00	to	3 50
Straw, per load	3 00	to	00
Pea Straw, per load	4 00		4 25
Hops, per lb	35	to	45
Apples, green, per bush.	75	to	
" dried, "	1 75	to	00
Potatoes, "	40	to	45
Onions, "	1 75	to	00
Turnips	18	to	20
Cordwood, per cord, dry	4 00	to	4 50
" " green	3 25	to	3 50
PROVISIONS.			
Eggs, fresh, per dozen	15	to	20
Butter, fresh, per lb	17	to	22
" keg "	10	to	12½
Cheese, factory	9	to	10
Tallow	7	to	7½
Lard	7½	to	8
MEATS.			
Beef, per qr	4 50	to	6 50
Mutton, per lb	7	to	8
Dressed Hogs	5 62½	to	5 75
Veal, per lb	4	to	5
POULTRY.			
Chickens, per pair	50	to	60
Ducks, "	50	to	75
Geese	50	to	75
Turkeys	75	to	1 25

THE GARDNER PATENT

Sewing Machine



MANUFACTURED BY

GARDNER SEWING MACHINE COMPANY

Nos. 61, 63, 65, 67, 69, 71 and 73, James St.,

HAMILTON, ONT.

F. A. GARDNER, Mechanical Supt. F. M. WILLSON, Sec.-Treas. GEO. LEE, Business Supt.

THE GARDNER PATENT SEWING MACHINE

READ THE FOLLOWING DESCRIPTION.

In design, the machine resembles the Family Singer; but the principle of the working parts is entirely different, having no gear, and being as nearly noiseless as it is possible to make a Sewing Machine.

The UPPER tension is on the face-plate. The discs between which the thread passes are attached by a stud to the tension spring, which is flat and placed on the inside of the face-plate, its upper end secured to the arm, and is regulated by a thumbscrew in the face-plate.

The SHUTTLE MOVEMENT is obtained from the shuttle-cam on the shaft, which is designated as a "ball cam," working between the prongs of a fork which is pinned to the shaft of the shuttle-arm. This shaft is also made of steel, and securely fastened to the shuttle arm, which in a basket at the end carries the shuttle along the face of the shuttle-race, describing a radial movement which is conceded by all to be the best movement to prevent skipping stitches, the centrifugal force always keeping the shuttle firm to the face of the race.

The FEED derives its motion from the "feed cam" placed on the same shaft, the motion being transmitted through the eccentric rod and feed lever under the machine to the feed, which is made of steel, having a bearing its whole length, thereby preventing any twisting movement. To the end of the feed lever is attached a screw, which serves to give any required lift to the feed that may be necessary for light or heavy goods. The feed spring is also attached to the bed; it is flat, made of steel, and very durable.

The DURABILITY OF THE MACHINE cannot be questioned; the movements being all hardened, are not likely to get out of repair. The whole of the works are enclosed in the arm, which is finely secured to the bed-plate, and set upon a walnut top or enclosed in half or full cabinet case, as may be ordered.

It will be observed that there is no gear of any kind, and that all the motions are derived from the same shaft,—all the usual complicated shuttle and feed movements being avoided.

The TREADLE is adjustable, working upon "centres" in brackets which are fastened to the treadle-bar, giving a light easy motion without any noise or looseness, and can be adjusted to give any required "dip" to either toe or heel of the treadle, besides taking up the wear or loose motion.

The WHEEL BEARING. The wheel runs upon a tapered stud or bearing fastened to the side of the stand by a nut with the bearing end turned to a centre; the wheel is bored tapering to fit the stud; upon the front side of the wheel a steel plate is fastened by two screws, which bear against the centre of the stud; the plate is adjustable, and screws to draw the wheel upon the tapered stud, taking up the wear and yet running easy.

The GARDNER PATENT is fitted with all the latest and most improved attachments, comprising the following, which are furnished without extra charge:—

One silver-plated Sewing Guage, with thumbscrew. One silver-plated Corder. One silver-plated Tucker. One silver-plated Friller. One silver-plated Hemmer, which will hem to any width. One Quilting Guage. One Braider. One Screw Driver. One Oil Can. One Bottle Oil. One Spool Thread. Seven Cloth or Leather Needles. Six Bobbins. Extra Spring for leather work. Printed Directions.

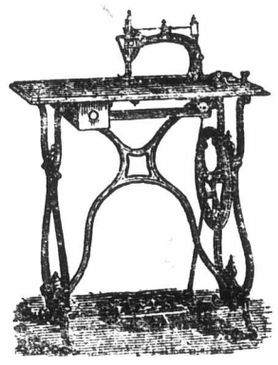
Address,

GARDNER SEWING MACHINE CO.,

71-6-12i HAMILTON, ONT.

The King of Sewing Machines

THE MACHINE FOR THE FARMERS OF CANADA.



THE MACHINE FOR THE ARTIZANS OF CANADA.

THE OSBORN

LOCK STITCH

Sewing Machine

Has now been tested beyond all question, and the verdict of the public is that to-day it stands without a rival. It is the most substantially built, has the fewest working parts, and is beautiful in design and finish. Has the best design of a shuttle, and by far the largest bobbins. It is capable of performing a range of work hitherto thought impossible for Sewing Machines, is sold at about one-half the price of other Machines doing the like work, and is equally at home on leather as on fine goods. A perfect machine guaranteed or no sale. It is the best made, simplest, more durable and reliable than any other single thread Machine. Larger and works with greater ease. Will do all kinds of domestic Sewing in a perfectly satisfactory manner. Has taken first prize wherever exhibited.

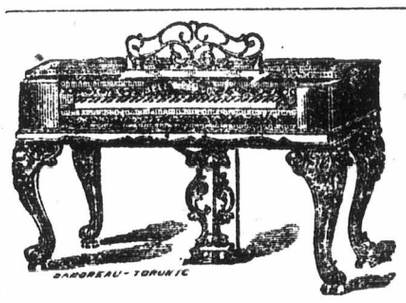
Agents wanted everywhere. Splendid Inducements.

GUELPH SEWING MACHINE CO.,

Guelph, Canada

John Morrish, Chatham, General Agent for the County of Kent.

Wm. Lundie, Mount Brydges, Agent for West Middlesex. 71-2



W. BELL & CO.,

Organ & Melodeon Manufacturers,

GUELPH, ONT.

RECEIVED AT KINGSTON,

A Silver Medal, and all the First Prizes.

At Western Fair, London. Diploma and First Prize for best Melodeon and Cabinet Organ of any kind.

At Great Central Fair, Hamilton. Diploma and all the First Prizes.

At Central Exhibition, Guelph. A Diploma for General Excellence, and 3 First Prizes out of 4 for Music. 11

NOTICE.

MR. WM. WEBB manufactures and keeps constantly on hand the Patent COMBINED PEA HARVESTER AND HAY RAKE, a complete Implement. Price $20.

Extract from Certificate:—

We, the undersigned, take great pleasure in recommending to the Farmers your Pea Harvester and Hay Rake. Having used your Machine and seen it used, would say we can pull from eight to ten acres of peas per day with it as well as it can be done with the scythe.

Yours respectfully.

James Corsort, S. A. Corsort, G. F. Ryland, John Atkinson, J. C. Shoebottom, J. Campbell, P. Anderson, Wm. Smibert, A. Decker, Jos. Mitcheltree, D. Y. Decker, Wm. H. Telfer, A. Dievar, M.R.C.S.L., Thos. Hodson, Wm. J. Howard, R. Porter, Wm. Tears, Geo. Walker, James Howard, Fishwick Loft, James Hynes, all of the Township of London.

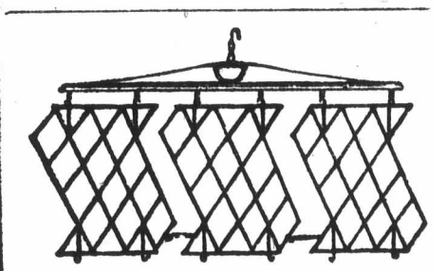
For Machines address WM. WEBB, London, or call at the Manufactory, opposite Mr. John Elliot's Foundry, Wellington Street.

London, May 1, 1870. 6tf

MARKHAM BELL FOUNDRY.

No. 1 Bell,	15 inches	diameter—yoke & crank	...	$10
No 2 "	16 "	" "	...	12
No. 3 "	18½ "	" "	...	20
No. 4 "	17 "	—Yoke & Wheel.	..	30
No. 5 "	26 "	" "	...	50
No. 6 "	30 "	" "	...	70
No. 7 "	36 "	" "	...	120

There are about 1800 of the above bells now in use and giving the best of satisfaction, costing only one third the amount of ordinary bells, and are all warranted one year. Encourage home manufacture and purchase a warranted article. Farmers! throw aside those dinner horns, which cause the ladies to get swelled necks by blowing. JONES & CO., Markham P. O., Ont. W. WELD, Agent, London. 72



HOWARD'S IMPROVED IRON HARROW.

THIS Harrow is superior to all others, because it is the most complete. It covers 14 feet of land. It leaves the ground finer, works freer, and adapts itself to uneven land. It does not bend, and choke less than any other Harrow. It is so constructed as to draw either end. The teeth being so set as to tear the ground up to a good depth, or to pass lightly over the surface, as the teeth are beveled on one side. It can be worked with a span or three horses, or it may be unjointed and worked with one or two horses, in one, two or three sections.

They are giving entire satisfaction.

Price of Harrow complete, with three sections, treble-tree, and two coupling-trees, $35.

Price of two sections and one coupling tree, $22.

Address— THOMAS HOWARD,

Adelaide Street, London, Ontario

Samples may be seen and orders taken at the Agricultural Emporium. 71-4e

CURRIE BOILER WORKS

Manufacture all kinds of

AGRICULTURAL, Stationary & Portable Boilers, Oil Stills, Worms, Agitators, Iron Boots, Bridge Girders, Tanks, &c.

New and Second-hand Boilers for Sale.

Works on the Esplanade, Foot of Church Street TORONTO.

8-y NEIL CURRIE, Proprietor.

USE SIMPSON'S CATTLE SPICE

It is the finest Condition Powder in the World FOR HORSES.

It fatteas Cattle, Sheep, Hogs and all animals.

It gives a relish to the coarsest Food.

It fattens Cattle in half the usual time, and at a great saving of expense.

For sale by the principal Chemists and Merchants in every town.

PRICE 25c. per lb.

Wholesale by C. GARLICK, 138 St. James Street, MONTREAL.

11-1871 W. WELD, Agent, London.

PORT PERRY HOUSE,

PORT PERRY, ONT.

JAS. THOMPSON, - Proprietor.

THE Subscriber wishes to inform the community that his premises are now open to the public where he is prepared to furnish as good accommodation as any in the County. 71-6m

WILLIAM RENNIE

120 ADELAIDE STREET, EAST - - - TORONTO

IMPORTER,

MANUFACTURER AND DEALER IN

The latest and most approved Agricultural Implements, &c., &c.

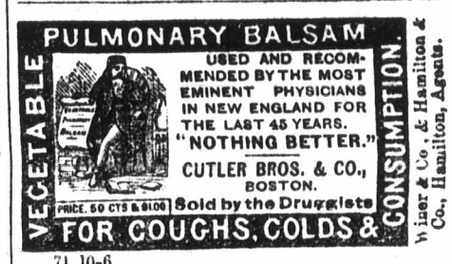
GRAY'S CHAMPION

Double and Single Furrow Plows

and all kinds of

PLOW FITTINGS KEPT IN STOCK.

FANNING MILLS for $20. Send for illustrated Catalogue. P. O. Box 1355 71-y



71 10-6

TIME AND LABOR SAVED

TH OSCILLATING

WASHING MACHINE

Patented on the 18th of July, 1870, by

WILLIAM MATHEWSON,

OF BROOKLIN, ONT.

THE Patentee challenges any other Washing Machine now in use to compete against him, for any sum they may name. The Machine has been thoroughly tested, and used by nearly all the principal hotels and leading farmers in the County, who pronounce it the best now in use. It will wash from a muslin pocket-handkerchief to a bed-quilt. A trial will satisfy any person as to its merits.

County Rights and Machines for sale

Apply to WM. MATHEWSON,

Brooklin, Ont.

This Machine can be seen and procured at the Agricultural Emporium Wareroom, London.

Brooklin, March, 1871. 8-1y

DANA'S PATENT SHEEP MARKS.

THESE MARKS ARE THE CHEAPEST, the most lasting, the least troublesome and most complete ever invented. They are used and recommended by many of the best Breeders in the United States and Canada such as G. B. Loring, Salem, Mass., President New England Wool Growers' Society; John S. Ross Henneptn, Ill.; Professor M. Miles, of the State Agricultural College, Lansing, Mich.; Hon. George Brown, Toronto, Ont.; John Snell, Edmonton, Ont. On each Mark is stamped the owner's name and the sheep's number. They will be sent free, by mail or express, for ONLY FOUR CENTS EACH, and will last for twenty years.

☞ Cash must accompany all orders.

ARCHIBALD YOUNG, JR.,

Sarnia, Ont.

Orders addressed to the "Farmers' Advocate" Office for any quantity will be filled at the above-mentioned price, as quickly as the Marks can be made and sent. 8-tf W. WELD.

Emporium Price List for April.

ALTERATIONS and ADDITIONS to Seed List sent out last month. Emporium and White Poland Oats wanted, as our stock is exhausted. Norway Oats reduced to 75c per bush —prices omitted last month. Surprise Oats $1 per bush. Excelsior Peas should have read $1.25; in small quantities $1.50. And the following alterations:—

	Peck.	¼ Bush.	Bush.
BRESEE'S PEERLESS—The latest and best of all Mr. Bresee's seedlings; a splendid white mealey potato; grows to a large size, often weighing from 1 to 1½ lbs. and enormously productive	$ 50		$1 50
BRESEE'S KING OF THE EARLIES—This is without exception the earliest variety in cultivation; white and flowry; cooks well, and is of the best quality for the table	75		2 00
BRESEE'S EARLY ROSE—This is a very good and productive potato, and has now become the standard for earlies. For general use, we think it preferable to the King of the King of the Earlies	30		1
BRESEE'S PROLIFIC—This is an excellent potato; cooks quickly; is very mealy, of excellent quality; yield very large, and matures three weeks later than the Early Rose	37½		1 25
CLIMAX—In productiveness this is quite equal to the Early Goderich, while its keeping qualities are as good as the Peach Blow	50		1 50
EXCELSIOR—A superior table variety, cooks white and dry, of excellent quality; very productive, and keeps well			
CALICO—A late potato, not very large, but yields well, and is a fine sort for early winter use	25		1 00
WILLARD'S SEEDLING—This is of excellent quality, not liable to rot, and pronounced by Arnold, Mitchell and others as one of the best varieties out for winter use	37½		1 25
HARRISON, GODERICH AND PEACH BLOWS	25		1 00

MANGEL WURZEL.

	lb.
LONG RED MANGEL—A large long variety. It stands a good deal out of the ground; color light red; flesh white and rose-colored; leaves green, veined with red. It is early, and sometimes used for the table when young	25
YELLOW GLOBE—A large round orange color variety, excellent quality, keeps better than the Long Red, and produces better creps on shallow soil	30
RED GLOBE—Differing from the preceding only in color	30

WESTERN CORN.

This is one of the most profitable crops to raise where feed for stock is required; every one who has tried it speaks highly of it; it will yield 20 tons per acre of very superior feed; may be sown in drills or broadcast; it requires good clean rich land; 3 bushels of seed per acre..... 80 per bush

Vetches, $2 per bush; Blackeyed Marrowfats, $2 per bush.; Clover, $6 per bush.; Timothy, $4 to 4.50 per bush.; Alsike Clover, 15c per pound. Rape 15c. per lb.

FIELD SEEDS.

	per lb
Purple Top Aberdeen Turnip	30
Skirving's King of Swedes	40
Carter's Imperial Purple Top Swedes	50
Marshall's Purple Top Swedes	40
White Flesh Swede Turnip	per bush 50
Long Yellow Mangel	25
Large White Belgian Carrot, clean seed.	35
Long Red Carrot	40
Early Farm Short Horn	1 25
Osborn's Imperial Blood Red Beet	2 00
Dwarf Dark Red Beet	3 50
Western Corn for soiling	per bush 80
Early Providence Pea	per peck 1 00
	per bush
Cock's Foot or Orchard Grass	5 00
Perennial Rye Grass	5 00

SEEDS FOR TESTING.

☞ A small quantity of each of the following varieties of seeds for testing will be sent to some person willing to do so. We have just imported them from Europe:—

Cook's Foot Grass, Italian Rye Grass (imported), Perennial Rye Grass, Smooth-stalked Meadow Grass, Yellow Oat Grass, Fall Oat Grass, Yarrow Oat Grass Beut Oat Grass, Crested Dog's Tail, Meadow Fox Tail, English Italian Grass, Wood's Meadow Rye Grass, Rough Stalked Meadow, Hard Fescue, Meadow Fescue, Fall Fescue, Sheep's Fescue, Red Fescue, Marrow Land.

FLOWERS.

Aster Truffauts	per packet	10c
,, New Victoria	,,	10c
Alysium	,,	5c
Antirrhium, mixed	,,	10c
Balsam Camellia, mixed double	,,	10c
Calliopsis	,,	5c
Candytuft, purple	,,	5c
,, white	,,	5c
,, crimson	,,	5c
Chrysanthemum	,,	10c
Convolvulus Major	,,	5c
,, Minor	,,	5c
Dianthus Lucinatus	,,	10c
,, Heddewigii	,,	10c
,, Imp. double	,,	10c
Erysimum Peroffskianum	,,	5c
Hybiscus Africanus	,,	5c
Larkspur Hyacinth, flowered	,,	5c
Malope Alpa	,,	5c
,, Grandiflora	,,	5c
Marvel of Peru	,,	5c
Marigold African	,,	5c
,, Orange	,,	5c
,, Lemon	,,	5c
,, French Dwarf	,,	5c
,, Gold-striped	,,	5c
,, French Ranunculus, double	,,	5c
Mignonette	,,	5c
Obeliscaria Pulcherrima	,,	5c
Pansy, mixed	,,	5c
Petunia, Countess of Ellesmere	,,	10c
Petunia, Blotched and striped	,,	10c
Phlox Drummondii, mixed	,,	5c
,, ,, blood purple	,,	5c
Portulaca	,,	10c
Salpiglossis, fine, mixed	,,	5c
Stock 10 Week, mixed	,,	5c
Sweet William	,,	5c
Zinnia, double	,,	10c

EVERLASTINGS.

Amaranth, purple globe, 12 varieties	,,	5c
Elichrysum Compositum Maximum	,,	5c

IMPLEMENTS.

Carter's Patent Ditching Machine, improved, $160.
Collard Cultivator, $18.
Collard's Harrow, $18.
Howard's Improved Harrow, $22 to $24.
Stump Extractor, $50, $75 and $100.
Grain Crushers, $30, $35 and $40.
Chaff Cutters, the best kinds, $16 to $50.
Little Giant Thresher, $185.
Simpson's Cattle Spice, 25 cents per lb.
Corn Shellers, $5 to $18.
White's Root Cultivator, iron. $15.
Forfar's Churns, and other Churns.
Empire Seed Drill, the best made, $72.
Turnip Drills, $4 to $20.
Thain's Drill Plough, $18.
Lamb's Knitting Machine, $53 to $80.
Lawn Mowers, from $12 to $65.
Small 1-Horse Ploughs, from $5 upwards.

Tayler's Burglar and Fire Proof Safes, from $35 to $675.

Scott's non-freezing Force Pump, Submerged, $16 and upwards. A good pump for general purposes, an excellent fire extinguisher and watering pump for gardens.

Address— WM. WELD,
London, Ont.

New Seed Grain.

THE "APRIL WHEAT" $3 per bushel.—This Wheat surpasses all other Spring sorts for rapidity of growth, large yield, and flouring qualities—Crop, 36 bushels per acre.

The "GOLDEN MELLON" BARLEY, $2 (74 lbs.), the only first-class two-rowed Barley, an excellent cropper, early to harvest, and very quick in malting; crop, 36 bush. per acre.

"EARLY PROVIDENCE" PEA—Grey Feed—$2.50; great to crop; frequently yield 50 to 60 bush. to the acre.

"HORSE BEANS," 3 dollars; promise to become a valuable crop in this country.

☞ All the above were grown here last year—seed imported from England.

J. A. HOLLINGS,
Bondhead, Co. Simcoe, Ont.

1st April, 1872. 4-1

LONDON LAND AGENCY.

LANDS FOR SALE.

No. 1—Township of Grey, Co. of Huron, 176 acres, mostly cleared, good frame buildings, 16 miles from Seaforth. 6,560 dollars.

No. 2—Township of Sombra, 100 acres, 3 1-2 miles from Wilkesport. 800 dollars.

No. 3—Township of Sombra, 200 acres, 14 miles from Sarnia, well timbered. 1,600 dollars.

No. 4—Westminster, 100 acres, 3 miles from the city, 80 acres cleared, good fruit section. 3,800 dol.

No. 5—West Zorra, 50 acres, very snug place, 6 miles from Woodstock, good land, every convenience. 2,400 dollars.

No. 6—Barham, 121 acres, 95 cleared, 8 miles from Tilsonburg Station, excellent buildings, well watered. 3,500 dollars.

No. 7—Lobo, 50 acres, 45 clear, brick house cost $1,350, good land and every convenience.—3,000 dollars.

No. 8—London Township, 50 acres, 6 miles from city on gravel road, 35 acres cleared, good land and conveniences. 2,200 dollars.

No. 9—Township of Blandford, Co. of Oxford, 400 acres, 6 miles from Woodstock, good water.—12 dollars per acre.

No. 12—Euphemia, Lambton, 300 acres, 3 miles from Bothwell, 180 cleared, 6,500 dollars.

No. 13—Euphemia, 100 acres, 70 clear, 3 miles from Newbury Station. 1,000 dollars.

No. 14—Glencoe, 100 acres, 4 miles from Glencoe; price, 1,000 dollars.

No. 15—Nissouri, 100 acres, 70 cleared; plenty of cut timber; clay loam; creek and well; young orchard; frame house, etc.; clear deed. 3,700 dollars; 10 miles from London.

No. 16—35 acres, 5 miles from London; brick house close by Railway Station; good land, clay. 3,000 dollars.

No. 17—100 acres, 7 and a half miles from London gravel road; good clay loam; well, creek, and orchard. 5,000 dollars.

No. 18—600 acres within ten miles of this city. 25 dollars per acre.

No. 19—two hundred acres, ten miles from this city. 30 dollars per acre.

No. 20—One hundred acres, four and a half miles from London. $5,500.

No. 21—One hundred and twenty acres, four and a half miles from Glencoe. $9 per acre—all woods. The timber will more than pay for the lot.

No. 22—Six hundred acres, within 11 miles of London. $15 per acre. Must be sold within ten days.

No. 23—Metcalfe, 220 acres, 180 clear; frame house, barn, sheds, splendid orchard; brick Cheese Factory; light clay land; hard wood. 2½ miles from Strathroy; $10,000. Easy terms.

No. 24—London, 100 acres, 70 clear; hard wood; frame house and barn; orchard; spring creek; clay loam; 4 miles from city limits, near gravel road; 3000 dollars.

No. 25—London, 106 acres, half a mile from city; splendid site for suburban residences; 150 dollars per acre; easy terms.

No. 26—North Dorchester, 100 acres, 60 improved; house, barn, root-house; on gravel road, 10 miles from London; 3360 dollars.

No. 27—London Gore, 50 acres, 35 clear, clay loam; house and barn; orchard, good spring; 7 acres fall wheat; 4½ miles from city; 2600 dollars.

No. 28—Caradoc, 96 acres, 60 clear; frame house and barn; orchard; good wheat soil; 3 miles from Komoka; 2200 dollars.

No. 29—Peel, Wellington Co.; 50 acres cleared; house and barn; well watered; 1050 dollars; terms easy.

No. 30—Dorchester, 100 acres, 65 clear; house, barns, orchard; well watered; lightish land; 3000 dollars.

No. 31—Dover East, 100 acres, 40 clear; 2 houses, barn, small orchard; 1½ miles from shipping port; 1000 dollars; easy terms.

No. 32—London Gore, 57 acres, 40 clear; house, barns, good water; loamy land; easy terms.

No 33—Osprey, 100 acres, 12 clear, hard wood, well watered; new frame house; 1000 dollars.

No. 34—Houghton, 100 acres, well wooded; $400.

No. 35—London Gore, 30 acres, clear, finely cultivated; 3 miles from London, ½ mile from gravel road. $1350.

No. 36—Dorchester, 40 acres, 34 clear; 6 acres fall wheat; good soil, orchard, house and barn; 5 miles from city. $1550.

No. 37—Delaware, 96 acres, 85 clear; brick house, first class farm buildings, 3 acres of orchard; a frame house, rents for $8 per month; good spring; on gravel road, 10 miles from city. $5000.

No. 38—West Williams, 100 acres, 70 clear; excellent timber; clay and sandy loam; good buildings, orchard; 4 miles from Arkona, 8 miles from Parkhill. $3500.

No. 39—Westminster, 57 acres, 38 clear; fair buildings, excellent land, well drained; 5 acres wheat; orchard, vines; 5 miles from city. $2850.

No. 40—Blanshard, 90 acres, 82 clear, capital land, house, barns, running spring, orchard; 11 acres fall wheat; ¼ of a mile from gravel road, and 2 miles from St. Mary's. $4700.

Lands advertised and sold on commission. Terms, from 1 to 2½ on sales only. Parties with farms or wild lands to dispose of will address, enclosing stamp, or apply to Canadian Agricultural Emporium, or to J. NATTRASS, Land Agent; Office, Market Lane, London.

FOR SALE—A BRIGHT BAY STALLION—3 years old, by Anglo-American, dam South Rainbow, g.d. Morgan Splendour. Has taken two 1st and one 2nd prize as a yearling.—Price $450.—Apply to W. & T. FRANK, Westminster. 4-1-c

BREEDERS DIRECTORY.

H E IRVING, Hamilton, Breeder of Southdown Sheep and Berkshire Pigs 72-1-y

R. D. FOLEY, Bowmanville, Importer & Breeder of Devon Cattle, Berkshire Pigs and Merino Sheep

WALTER RAIKES, Barrie, P. O., Breeder of Short Horns and Berkshire Pigs. 72-1-y

JOHN CRAWFORD, Mahem P. O., Breeder of Heavy Draught Horses and Cotswold Sheep. 1-y

JOSEPH GARDNER, Brittania P. O., Breeder of Short Horn Cattle. 72

RICHARD RUNELSON, Galt, Breeder of Cotswold, Leicester, and Southdown Sheep.

H. M. COCHRAN, Compton, P. Q., Importer and Breeder of Short Horn Cattle, Cotswold Sheep and Berkshire Pigs.

N. BETHELL, Thorold, Breeder of Short Horns, Berkshire and Yorkshire Pigs, Southdown and Leicester Sheep. 1y

W. LANG, St. Mary's, Breeder of Short Horns and Berkshire Pigs. 1y

A. PARK, Ingersoll, breeder of Ayrshire cattle.

JOHN CURRIE, Verschoyle, breeder of Berkshire Pigs. 12

J. FEATHERSTONE, Credit, breeder of Essex, Suffolk, and Yorkshire Pigs, and Cotswold Sheep.

JOHN JACKSON, Grahamsville, importer and breeder of English Cart Horses, Berkshire swine, and Leicester sheep. 12

J. B. TAYLOR, London, Ont., breeder of pure bred Short Horns. 12

J. MAIN, Boyne, importer and breeder of Cotswold Sheep and Suffolk Swine. 12

GEORGE MILLER, Importer and Breeder of Short Horn Cattle, Cotswold & Leicester Sheep, and Berkshire Swine, Markham P. O. 12

JAMES LAWRIE, Malvern P. O., breeder of Ayrshire Cattle, Clydesdale Horses, Berkshire Pigs, and Licester Sheep. 11-1y

GEORGE G. MANN, Bowmanville, Importer and breeder of Thorough-bred Devon Cattle 11-1y.

JOHN SCOTT, Coldstream, Breeder of Leicester Sheep and Short-Horn Cattle. 11-1y

THOS IRVINE, Logans Farm, Montreal, Breeder of Ayrshire Cattle, Clydesdale Horses, Yorkshire and Berkshire Pigs, and Leicester Sheep. 11-1y

BRODIE, SON & CONVERSE, Bellville, Breeders of Yorkshire Pigs and Ayrshire Cattle. 11-1y

W. HOOD, Guelph, Breeder of Galloway Cattle. 11-y.

H. H SPENCER, Breeder and Importer of Devon Cattle, Clydesdale Horses, Southdown and Hampshiredown Sheep, and Berkshire Pigs. Brooklin P. O., near Whitby Ontario 11-1y

J. MILLER, Thistle-ha," Brougham P. O., Breeder of Short-Horns, Cotswold Sheep, improved Berkshire Pigs and Clydesdale Horses. 11-1y.

R. LEAN, Coldsprings, Breeder of Leicester Sheep and Berkshire Pigs. 11-1y

G. MORTON, Morton P. O., Breeder of Ayrshire Cattle. 11-1y.

JOHN SNELL & SONS, Edmonton, Breeders of Short-Horn Cattle, Leicester and Cotswold Sheep, and improved Berkshire Pigs. Winner of the Prince of Wales prize for the best Bull and five of his Calves at Provincial Exhibition, Kingston, 1871. 11-tf.

F. W. STONE, Morton Lodge Guelph, Importer and Breeder of Short-Horn and Hereford Cattle, Cotswold and Southdown Sheep, and Berkshire Pigs. 11-tf.

JAMES COWAN CLOCKMOHR, Galt P. O., Breeder of Short-Horns, Leicester Sheep and Essex Pigs. 71-10

R. KIRBY, Breeder of Lincoln and Leicester Sheep, and Berkshire Hogs. Puslinch Township, Guelph Station, Arkell P. O. 71-11

JNO. KENNEDY, Mont Juan, Hyde Park P. O., Breeder of Short Horn Cattle, Leicester Sheep and Berkshire Pigs. 11-tf.

GEO. ROACH, Hamilton, Importer and Breeder of Berkshire, Suffolk and Essex Swine. 11-71

J. R. HUNTER, Alma, Breeder of Short Horn Cattle. 11-71

D. S. ROBERTSON, Wanstead, breeder of pure bred Berkshire pigs

EDW. JEFFS, Bond Head, Breeder of Short Horns, Leicester Sheep, Berkshire and Chester White Pigs. 72-3-y

THOS. GUY, Sydenham Farm, Oshawa, Breeder of Ayrshire and Devon Cattle. 72-3-y

FOR SALE,

A VERY FINE DURHAM BULL, aged 4 years color red, with a little white. Price $400.

Also, a very promising entire Colt, got by Black Hawk from a superior dam, aged two years, color dark brown.

Also, 5 superior Berkshire Pigs, sows and boars, aged four months; bred from Roach's and Stone's stock. Price $20 each.

Apply to J. BEETON, Strathburn. 72-3-2

WANTED, within five miles of Ingersoll, FIFTY ACRES of GOOD LAND; good buildings and constant supply of water.—Apply at this office. 3-1