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Trials of Implements.

We believe the recent trial of agricultural implements, held under the auspices of the Provincial Board of Agriculture, to have been the best ever held in the Dominion. The judges were selected with respect to their abilities, and we believe acted fearlessly and conscientiously, and that a general feeling of satisfaction was impressed on the spectators that witnessed the trials. A prize earned under such auspices is of very great advantage to a manufacturer; but at the same time many really good manufacturers will feel aggrieved, as the majority of proprietors of implements believe they have some superior advantages over others. *It is impossible to please every one.

All who attended the trial are well aware that the grain and grass to be cut was very light and stood well; and as every farmer will have some spots of lodge grain and lying grass, some of the implements that might work well in a good standing crop, might not do their work at all satisfactorily in a heavy crop. The land on which the ploughs were tested was rough and stony enough for a trial of some kinds of ploughs, but for double-furrow or gang ploughs, or for ploughing for a seed bed, the land was unadapted, and the best decisions were arrived at that circumstances would allow of. We deem this exhibition of much more importance than the township exhibitions we have attended, as manufacturers, agents or friends may influence a decision at a small township exhibition, but still they give a good opportunity to farmers to judge for themselves. But even at a township trial the majority will be led by some friend, and machines that are rejected from some neighborhoods are the only kind that are preferred in other sections. Nearly all our manufacturers of reapers and mowers have good efficient implements, but some there are that, from the inferior quality of the material used and being improperly fitted, will not last quarter as long as some others.

Moreton Lodge Sheep.

We would call the attention of our readers to Mr. Stone's sale of sheep and pigs advertisement in this paper. We can speak with confidence in recommend-

ing purchasers to him, we mean those that want really a good animal and pure blood. We have transactions with Mr. Stone and have never found a more honorable and reliable gentleman in Canada; you will find his stock just what he says it is: the sheep well woolled, healthy and of the purest blood. The pigs are raised from imported stock; you need not go there for a bad one.



WEEKS WHEAT.

The above cut represents the "Weeks Wheat." This variety has done as well as any we raised on our farm this year, but we only raised a few varieties, not a tenth of what we previously raised. We do not recommend it as superior to all other varieties, because we hear of many who have much larger yields of other kinds.

Pests to Farmers.

FOXES AND SKUNKS.

Through the pages of this journal we have treated on many of the pests that are injurious to us, and now purpose touching on others equally injurious and disagreeable. Ever since the spring opened, we have heard many complaints of the damages done by foxes and skunks. On our return to the farm on Saturday last, while seated in the dining-room with the windows wide open and the lamp burning, the dog outside gave a sudden bark, and going to the window looked out just in time to see a fox taking his departure. During a residence of nearly thirty years we have only seen one fox on our farm, but every time we have returned to the farm this season some fresh accounts are detailed to us of the depredations of the foxes within a distance of two miles of us. Sixteen young foxes have been captured in our neighborhood this season, a larger number than we have heard of having been killed in the same radius in any three years of our residence here. One neighbor had young turkeys carried off, another lost a whole flock of geese, and they have not left our own farm entirely unmolested, as a litter of them were dug out in the back part of our farm, and in their nest were found lamb's legs and the remains of fowls, turkeys, &c. Remember this is in the county of Middlesex, which some consider greatly advanced, and only 14 miles from the city of London. Last year there was a wild cat within half a mile of that city.

The question which first presents itself to our minds is, of what use or benefit are foxes, skunks and wild cats? We have the answer yet to learn, and presuming that all farmers who have to depend on their farms for a livelihood, will join us in the opinion that they are of no use to us, the next question is, shall we keep them? No, not if we can help it; and the object of this article is to raise the hands of every one of our readers against them, and suggest a means for their total destruction in every county as well settled or half as well settled as Middlesex. Many councilmen will read this, and many of you that have been losers by these pests may read it. Get your councilmen in each county or

township to bring the matter before the different county councils of your several counties, and let them offer such a reward per head as they may deem sufficient to induce some of the young men to make a business of destroying the pests, and we would know no more of their devastations. The cost would be a mere trifle in comparison with the benefit derived. We will take the two cases above alluded to: seven turkeys at one dollar a piece, and fowls worth four dollars—eleven dollars loss to one poor woman, and a flock of geese valued at twenty dollars from another poor woman. Many smaller and sometimes larger sums are lost, and ten or twenty dollars is a sum of great importance to the majority of our small farmers. There are many farmers in a county that may escape loss by them for many years, but may have quite as great a loss as any the coming season. Perhaps you might not miss a lamb or a pig, but as long as we have foxes and other pests about us they must be fed. And who feeds them? Who can estimate the cost of keeping a few hundred foxes running about the country. You may depend they would foot up a bill far larger than you would imagine, therefore we say let us unite, put a general tax on all, and exterminate the animals.

Northern Ohio Fair.

Ohio appears bound to be ahead this year. \$25,000 in prizes. Only \$5,000 for fast horses. We think it would be a nice trip across the lake, and would like to go, and will if we can get away, and if some of our delinquents will furnish us with cash enough. If any of our Canadian readers do not meet us there they might send us an account of the exhibition. You will see particulars in advertisement.

ERRATUM.—In the Emporium price list for July and August, read Collard Harrow \$20, instead of \$12.

COWS HOLDING UP THEIR MILK.—J. A. Wilson writes the *Agriculturist* that he has found the best remedy for this fault is to "take a log-chain, double it, then lay it gently over the cow's back—on the 'small of the back'—so that the ends of the chain will clear the floor. The cow loses the power of holding up her milk, and after a few trials will forget the habit.

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LEN,

PRESIDENT,

WA, ONTARIO.

Winter Wheat.

The season has now arrived for us to sow our fall wheat, and nearly every one has made up his mind what variety he intends to sow. Some few are inquiring of us to describe which variety is the best; we were never more at a loss to inform them than at present. The past season has been so propitious to the fall wheat crop in general, that every variety has yielded better than they have done for the past 15 years, and our farmers' granaries are well filled. The Midge Proof variety has been of great service to us for a few years past, but the parasites that prey on the midge have so increased, that very few are now to be found. Therefore we shall not recommend Midge Proof wheat for extensive cultivation, as it is very weak in the straw and does not yield so largely nor command as good prices as many other varieties. The Mediterranean is preferable to the Midge Proof variety in many respects, as we believe it will stand as much hard usage from wet, frost, or bad cultivation as any; the Deihl is much preferred to either of the above varieties in this section of the country, as it yields more and is worth more; this wheat is a great favorite in this locality but it requires good and well-drained land. On tenacious clay soils, it is not so well liked as the Treadwell. In sections where the clay is strong and rich, the Treadwell takes the lead in yield and is the favorite wheat; indeed many could not be induced to sow any other. Mr. J. C. Fox, of Olinda, has the bearded Treadwell and he says it is more hardy than the bald. Mr. J. Cowan, of Galt has the bald Treadwell, and he prefers it to the bearded. These two gentlemen are both reliable. In Norfolk and some other eastern counties, the Soules wheat is again taking the lead, and, in fact, it is coming into demand in this locality, although we do not know a farmer in this county who raised one handful of it last year. We believe Mr. W. Freeman, of Simcoe, has raised a good crop of this wheat. One person in this county has the old Blue Stem, and it has yielded so well this year that it will no doubt be sought after by some. The Scott wheat does not appear to have lost any of its reputation as being a hardy variety and a prolific producer. Stephen White of Kent, Charing Cross P. O., has a large crop of it. The Boughten wheat is by far the earliest variety; it is also a hardy wheat, and is preferred in our northern townships and counties, where it may be more valuable than other varieties. Mr. L. Lapierre, of Paris, Brant, L. E. Shipley, Falkirk, Middlesex, and J. Welding, St. Thomas, have this variety. The Thomas variety is the shortest and thickest headed wheat we have seen; it has been raised in the vicinity of Ancaster, and can be procured from Mr. Wright of this city.

Arnold's Hybrid wheats, are said to be 15 or 16 in number; some of the American papers speak favorably of them, and some Canadian farmers have spoken and still speak favorably of them. Mr. W. Rennie of Toronto, has procured some wheat raised in that vicinity called the Turk wheat, a white bearded wheat; the yield is said to have been enormous in the county of Elgin. A farmer there selected some heads

of the Mediterranean that produced white wheat, and has now raised considerable of it; it is considered far superior to the common Mediterranean both as regards yield and quality; in that section the White Mediterranean is king. We have also received a very fine sample of White Wheat from Mr. James Ford, of Bewdly, in the county of Northumberland, the original wheat of which is said to have been imported from Australia. He had 14 acres, and it yielded at the rate of 33 bushels per acre.

With all these varieties to select from, and all of them yielding satisfactorily, we do not think it judicious to commend one above another—most of the varieties we have heard of producing between 40 and 50 bushels per acre, and some are reported to us as producing between 50 and 60. We have given the addresses of the parties who have the different varieties, so that all may make further inquiries if they wish to change. We have not deemed it prudent to invest in any of the varieties, as there are none so far superior to others as to induce us to do so. Farmers are or ought to be satisfied with their present returns, and but very few will desire to make much of a sacrifice to procure a change of seed from any other locality. The assemblage of all these varieties from the many different counties we have mentioned, costs considerable, and should a few grains of one kind get mixed with another on being sent from this establishment, a tremendous hubbub may be made and has been made in one instance, even when we did our utmost to procure the best. We must therefore observe that we can not supply the varieties as pure as they ought to be, and therefore leave you to purchase from your neighbors, millers or dealers, who can purchase at such a price as they may pay to grind or ship, if not sold for seed. Many of these varieties would cost us from \$1.50 to \$4 per bushel, and not even pure at that, therefore we prefer not investing in them this year.

The Colorado Potato Bug and Potatoes.

It is really wonderful and surprising that we farmers should not be more interested in exterminating the many pests that prey on us.

We believe however, the notices and remedies that have been given to the public have done much towards checking the increase of the potato bug, and that they have saved thousands of acres of potatoes from destruction. Some few pieces in this vicinity have been totally destroyed, on account of the bugs being allowed to increase, and particularly in the sections where no agricultural paper is circulated. We also know of an instance where a whole settlement of cultivators of the soil applied to the only one in the settlement who subscribed for this paper, to ascertain how to rid themselves of the pest, and then unitedly they destroyed them. Our subscribers in the east may not think that much harm will come to them, but do not deceive yourselves, you will have them soon enough, and plenty of them. We shall have a large crop of potatoes in this section, perhaps the largest ever raised, as the season has been very favorable for them.

Simpson's Horse & Cattle Spice.

For twenty years a system of Spicing or Seasoning the common food for Horses, Cattle, Sheep and Pigs, has been gradually gaining ground in England, until almost all intelligent feeders have adopted it as the most economical method of rearing and fattening all kinds of Farm Stock.

In 1859 the Gold Medal and First Prize at the London fat cattle show was awarded to a steer fed on food seasoned with Simpson's Spice, 2 years and 6 months old, as the best fat animal in the kingdom—and almost every exhibitor since that period, who has obtained gold medals, or won celebrity by the excellence of his fat stock, has been a customer of Messrs. Simpson. In 1860, 4—all winners; in 1861, 13—all winners; in 1862, about 30—mostly winners; in 1863, about 50—chiefly winners again. Similar results each year, until 1868, when 150 animals, fed on spiced food, won nearly 100 prizes—including 31 firsts—whilst 272 animals on non-seasoned food only won about half the number. In 1869, 123 animals on spiced food, at London, carried off nearly all the prizes.

The manner of using the Spice is by sprinkling a tea-spoonful or a table-spoonful (according to the size or class of animal) over or into the common food, such as hay, straw, roots, crushed corn, &c.—The cost is not more than is incurred by using pepper or salt in soup, or with other food for ourselves. The effect is much the same, viz.,—It gives an agreeable relish to coarse food, it warms and nourishes the stomach, assists digestion, creates health, gives a strong constitution, rapid growth and vigor to the frame, and vastly increases the size, weight, and quality of the animals—thus giving stamina and condition to Horses, rapid growth to Calves, Lambs and young Pigs, and great results in weight of carcass in fattening animals, and a large yield of rich milk and butter from Cows.

Among the long list of testimonials we see the name of Mr. G. Roach, president of the Hamilton exhibition, and gainer of numerous prizes, who speaks in high terms of the Spice. Perhaps he would kindly furnish us with his experience in its use.—We shall be pleased to give accounts of the results from any of our practical and enterprising farmers, and for the purpose of giving it a fair trial, we will present one package of the genuine Spice for so doing. We have purchased a quantity, and will give a package to any subscriber that will call at our office; or will send some by mail to parties desirous of trying it. In sending by mail the applicant must remit the postage. We only intend to give 50 packages away, and not more than one at any post office. If you desire to get one, write at once, not later than the 10th of the month.

We hope by this means to gain general information about the Spice from our own correspondents, as we are too closely confined to the office to test it as fully as we should like. Others will report direct to us about its merits.

Mr. N. Currie, of Dereham, has added to his stock three more Imported Berkshire Pigs—a boar and two sows.—We hear they are as good as England can produce. Mr. Currie has long been noted for his stock of pigs.

To Our Friends.

GENTLEMEN,—If all is well it is our intention to be at the principal exhibitions in Canada during the Autumn. At Quebec during the exhibition week; at Kingston from Monday until Wednesday; at the Western Fair in London on Thursday and Friday; at Hamilton and Guelph during the exhibitions. We may be heard of at the Secretary's office in each place, and will be happy to converse with friends on business connected with Agriculture, the paper, stock, seeds, implements or land.

Anglo Saxon, the King of Canadian stock, will not be exhibited at either place, although he looks as well as ever, and can show against any horse on the continent, now or in the spring. We are happy to inform you that last season was the best he ever made. He may be engaged for the coming season to whichever part of the province the greatest desire is evinced to raise the most valuable class of horses.—Secretaries of Agricultural Societies should apply early if they desire his services in their section.

The Scott Wheat.

Mr. John Brock Burwell, of Caradoc, was the only gentleman in this county who purchased the Scott Wheat last year, and it was very late when we heard of it. He sowed it by the side of his Deihl wheat, and it yielded seven bushels more per acre than the Deihl and weighs 68 lbs. to the bushel. The best judges pronounce it superior in quality to any other red wheat. The straw is of better quality and it is a harder wheat than the Deihl. Mr. Burwell is highly pleased with the wheat, and so is every one that we have heard from who has raised it. It is a bald, red wheat, and we must give Mr. Burwell the credit of cleaning it. It is, we think, the purest and cleanest wheat that we have ever been able to procure in this county for many years.

The Deihl wheat we offer for seed is as pure a sample as we have been able to procure; it has neither cockle or chaff in it; a few grains have been cut with the machine. The Weeks wheat is good every way, except that there is now and then a cockle to be found in it. The Treadwell wheat is good.

Manitoba.

We have seen accounts completely refuting Mr. McNeil's complaint, which will be found on another page. We feel satisfied that Manitoba and the Red River countries are destined to contain a large population, but there is a great difficulty in settlers obtaining lands; this, no doubt, will be obviated before another year arrives. We do not think it judicious for persons depending on common manual labour to go there just now, as the labour market appears over-stocked and provisions are very dear.

We are pleased to notice that our Canadian manufacturers are now sending their productions to Europe. Messrs. Gates & Co., the Sewing Machine Manufacturers, of Toronto, have received an order for 500 of their Machines, to be shipped to London, England. This speaks well for the enterprise of the firm.

COALS TO NEWCASTLE.—Mr. John Miller, of Brougham, has sold an Improved Berkshire Sow, to be sent to England.—price \$300.

Farriers' Department.

COLIC—CURE FOR HORSES OR PERSONS.—Spirits of turpentine 3 ozs.; laudanum 1 oz.; mix, and give all for a dose, by putting it into a bottle with half a pint of warm water, which prevents injury to the throat. If relief is not obtained in one hour, repeat the dose, adding half an ounce of the best powdered aloes, well dissolved together, and have no uneasiness about the result.

Symptoms.—The horse often lies down, suddenly rising again, with a spring; strikes his belly with his hind feet, stamps with his fore feet, and refuses every kind of food, &c. I suppose there is no medicine in use for colic, either in man or horse, equal to this mixture.

For persons, a dose would be from 1 to 2 teaspoons; children or weak persons, less, according to the urgency of the symptoms; to be taken in warm water or warm tea. I have been familiar with it for about 5 years, and know that it has been successful in many cases, all where it has been used. Many think it the best colic remedy in the world.

2. **ANOTHER.**—Laudanum ½ oz.; sulphuric ether 1 oz. Mix, and for a horse give all at a dose, in warm water as above. Dose for a person, as the first.

A Mr. Thorpe, of whom I obtained this recipe, tells me he has cured colic in horses, in every case, with the first dose, except one, and in that case by repeating the dose thirty minutes after the first. There is no question but what it is good, and some would prefer it to the turpentine. I know it is valuable.

BOTS—SURE REMEDY.—When a horse is attacked with bots it may be known by the occasional nipping at their own sides, and by red pimples or projections on the inner surface of the upper lip, which may be seen plainly by turning up the lip.

First, then, take new milk 2 qts.; molasses 1 qt.; and give the horse the whole amount. Second, 15 minutes afterwards, give very warm sage tea 2 qts. Lastly, 30 minutes after the tea, you will give of curriers' oil 3 pts. (or enough to operate as physic.) Lard has been used when the oil could not be obtained, with the same success.

The cure will be complete, as the milk and molasses cause the bots to let go their hold, the tea puckers them up, and the oil carries them entirely away. If you have any doubt, one trial will satisfy you perfectly. In places where the curriers' oil cannot be obtained, substitute the lard, adding three or four ounces of salt with it; if no lard, dissolve a double handful of salt in warm water, three pints, and give all.

We extract the above from Dr. Chase's Recipes, the useful book that we offer for a prize for getting up a club. See adv.

CLEANSE THE SKIN.—It is a curious fact, illustrating the necessity of cleanliness, and of keeping the pores of the skin open, that if a coat of varnish or other substance impervious to moisture be applied to the exterior of the body, death will ensue in about six hours. The experiment was once tried on a child at Florence. On the occasion of Pope Leo the Tenth's accession to the papal chair, it was desired to have a living figure to represent the Golden Age, and so a child was gilded all over with varnish and gold leaf. The child died in a few hours. If the fur of a rabbit or the skin of a pig be covered with a solution of India rubber in naphtha, the animal ceases to breathe in a couple of hours.

TO RAISE STRAWBERRIES.—First, get them; add a top dressing of good cream, and if the land be at all sour, a sprinkling of sugar will decidedly improve the quality of the crop. Then get a spoon, raise the berries as high as necessary, and dispose of them as you think fit. Many people eat them, but that is at the option of the raiser.

Getting Wet.

Hall's Journal of Health sensibly discourses: Summer showers frequently overtake persons, and "wet them to the skin," it is then safer to walk steadily and rapidly on, until the clothes become dry again, than to stop under the shelter and remain there still until the storm is over. If home is reached while the clothing is yet wet, take some hot drink instantly, a pint or more; go to the kitchen fire, remove every garment, rub the whole body with a coarse towel or flannel, put on woolen underclothing, get into bed, wrap up warm, and take another hot drink; then go to sleep, if at night; if in the day time get up in an hour, dress, and be active for the remainder of the day. Suppose you sit still in the damp clothing; in a few minutes chilliness is observed; the cold "strikes in," and next morning there is a violent cold, or an attack of pleurisy or pneumonia, which if not fatal in a week, often requires weeks and months and weary years to get rid of. The short, sharp rule should be, if the clothing gets wet, change instantly, or work or walk actively, briskly, until perfectly dry.

For the Farmer's Advocate.

Katie Lee and Willie Grey.

Two brown heads with tossing curls,
Red lips shutting over pearls,
Bare white feet, all wet with dew,
Two black eyes and two eyes blue:
Little boy and girl were they,
Katie Lee and Willie Grey.

They were standing where the brook,
Bending like a shepherd's crook,
Flashed its silver, and thick ranks
Of green willows fringed the banks,
Half in thought and half in play,
Katie Lee and Willie Grey.

They had cheeks like cherries red;

He was taller—most a head;
She, with arms like wreaths of snow,
Swung a basket to and fro,
As she loitered, half in play,
Chattering with Willie Grey.

"Pretty Katie," Willie said,
And there came a dash of red
Through the brownness of his cheek—
"Boys are strong and girls are weak,
And I'll carry, yes, I will,
Katie's basket up the hill."

Katie answered with a laugh:
"You shall carry only half."
And then, tossing back her curls—
"Boys are weak as well as girls."
Do you think that Katie guessed
Half the wisdom she expressed?

Men are only boys grown tall,
Hearts don't change much after all,
And, when long years from that day,
Katie Lee and Willie Grey
Stood again beside the brook
Bending like a shepherd's crook—

Is it strange that Willie said,
While again a dash of red
Crossed the brownness of his cheek:
"I am strong and you are weak;
Life is but a slippery steep,
Hung with shadows, cold and deep,

Will you trust me, Katie dear?
Walk beside me without fear,
And I'll carry, if you will,
Your life's burdens up the hill."
Again she answered with a laugh:
"No—but you may carry half."

Close beside the little brook,
Bending like a shepherd's crook,
Washing with its silver hands
Late and early at the sands,
Stands a cottage where to-day
Katie lives with Willie Grey.

Two men would not speak to each other;
but one having been converted at a camp meeting, on seeing his former enemy, held out his hand saying: "How d'ye do, Kemp? I am humble enough to shake hands with a dog."

Editor Farmer's Advocate.

Horse Shoeing.

Sir,—In the June number of your valuable sheet I saw a piece headed "Observations on Shoeing." As it was in my line of business, I thought if there was any information to be had I would have it. It commenced this way:

"No person should ever allow his horse to be shod by a farrier who employs or keeps in his shop the knife used for cutting away the hoof, shaped like a small shovel, and braced against the shoulder when used in shovelling away the horn."

Now, I should suppose from the way this man speaks, that he is not acquainted with the name of this tool; neither is he any more acquainted with the use of it than he is with the name.

This valuable article is called a butteris, and I think if he will look in the Dictionary he will find that the meaning of the word "butteris" is not a small shovel, but a tool used to pare a horse's hoof. I have used the butteris ever since I started horse-shoeing, and have never seen any harm done with it yet, and I think it is one of the most useful tools I have in the shop. In using the butteris I can pare a horse's foot level, not as a great many horse-shoers do, take the little crooked knife and cut a little off the heels, then heat the shoe and burn the remainder; but I level it ready for the shoe to be nailed on, then there is no necessity for the hot shoe to be placed on the foot any longer than merely to see if it will fit.

In the next place he says:—

"The Almighty designed the frog as an elastic insensible cushion on which the horse should walk, and not one particle of it should ever be touched with a knife. If allowed to take its natural course, it becomes a perfect safety stand and protection to the foot."

This is all very good, but did the Almighty ordain that the frog should remain on the horse's foot without growing or becoming ragged? if so, He has created a new breed of horses where you live.

It has always been a rule with me to clean out the foot, and cut off any loose pieces of frog which may be hanging, and I have never seen any bad results from it. In some cases you will see a new frog grow up, and the old one will become loose and dangling, especially in horses that are not travelling much on the road. In this case would you leave it long, and in a short time it would drag the ground and stick out behind the heel; if so I would call you a slovenly horse shoer. I should like to know if you ever pare your toe nails? and if so, why you do it? Is it not as reasonable to suppose that they will wear off smooth by constant walking, as it is to suppose that the frog of a horse's foot will clean itself by constant labor?

I should like to see more practical lessons on Shoeing, such as "Interfering," "Over-reaching," &c.

Yours, &c., A SUBSCRIBER.
Perhaps our correspondent will favor us with some of his own ideas regarding the cause of interfering and overreaching. They are subjects well worth being wakened up and discussed. Perhaps some one may reply to him if he should wander from the beaten path.

Editor Farmer's Advocate.

Honey-Producing Plants.

To give a full list of the honey-producing plants of Canada, we would begin with the first flower of spring—the crocus. Our common garden crocus offers the first pollen to the "little busy bee, who is ever ready to improve each shining hour," even before the snow has left the hills. The willow of our swamps produces honey and pollen largely. The catkin—the first sign of vegetation amongst the leafless trees, is perhaps one of the most valuable honey-producing plants of our country, coming as it does as soon as the bees are able to travel. The willow should be planted around the premises, where the bees can get at it in early spring. The barberry comes in to flower when there are very few other honey-producers, and although a good producer, is much neglected; it makes a fine hedge, growing about eight feet high, and will stand clipping in any shape; its flowers are yellow hanging very gracefully among the leaves, and its fruit stays on all winter. The native plum, cherry and crab-apple are honey fruits. The raspberry is one of our best honey plants, and the Philadelphia variety is better for honey than fruit. The locust tree offers rich stores

to the honey gatherer, just before the clover season, a time when most needed; this tree is very hardy, and, all things considered, it is a tree well worth planting in any place where its sprouting propensities will not trespass. The white clover is the great honey-producing plant; it grows on almost all kinds of soil, and appears just as the bees are ready to receive it; it produces honey and pollen at the season when comb building is going on, and the foundation laid for the season's work. The bass-wood is next in succession, and, being high up in the air, we little know the rich stores gathered from it by the little wanderer. Although the bass-wood is one of our finest shade trees, and adapted to all kinds of soil, it is much neglected. The clematis—a native vine, growing on low lands—makes a fine climber for arbors or screens, and bears a white flower that the bees take to in time of need. The buck-wheat is the great fall pasturage for the bee; some say it is not good, but that we will leave the bees to decide.

Coburgh, August, 1871.

B. LOSTE.

Editor Farmer's Advocate.

SIR,—I send a report of the seeds I received from you this spring. I sowed the pound of Russian barley on the 22nd of April last, on mucky soil, and it came on well for a short time, until the drought set in, which caused it to be short in the straw. The heads were nearly as long as the straw and well filled. I had such a small piece sown that when I had it harvested and taken to the barn, it appeared to me to be about half eaten by the rats, mice, geese, etc. On threshing, I had 34 lbs left for my share; as near as I can calculate, it yielded fifty to one. I think it is an excellent barley, and believe it would make good flour; its appearance is equal to the Mediterranean wheat, and I intend to try it. I sowed the four ounces of McCarrling wheat the same day, beside the barley, and it yielded four lbs. of good wheat; it is an excellent variety. I sowed the four ounces of Baltic wheat at the same time, and it yielded 3½ lbs. In my opinion the Baltic is a good spring variety, but not at all equal to the McCarrling. I will give you an account of how the potatoes succeeded, perhaps next month.

Maidstone, Aug. 24th, 1871.

T. F. K.

Fifty Dollar Challenge.

I, William Mathewson, proprietor and patentee of Mathewson's Oscillating Washing Machine, hereby challenge all proprietors of other Washing Machines to a trial, to take place before three ladies, as judges, who will be appointed by the directors of the Provincial Board of Agriculture for Canada, who will arrange when and where such trial will take place. I hereby offer \$50 against any one accepting this challenge, for testing the capability of said washing machine, as to its efficiency for washing without anything but the usual amount of soap and water, washing the clothes thoroughly, protecting the fabric from any injury by being washed, and for the shortness of time employed and the ease with which it can be performed. The expenses of said trial to be paid out of the \$100 staked, and the balance to be paid over by the judges to the party gaining the trial.

Wm. MATHEWSON.
Brougham, Aug. 1st, 1871.

TEXAS CATTLE IN KANSAS.—The entire country, east, west and south of Salina, down to the Arkansas river and Wichita, is now filled with Texas cattle. There is not only cattle "on a thousand hills," but a thousand on one hill, and every hill. The bottoms are overflowing with them, and the water-courses lined with this great article of traffic. Perhaps not less than 200,000 head are within the precincts of the State, 60,000 of which are within a day's ride of Salina. And the cry is: "Still they come!" Every available place is occupied from within five miles of Salina to the south line of the State.

Editor Farmer's Advocate.

From Red River.

SIR.—The crops here are splendid, notwithstanding that they did not get a shower of rain from the middle of May until the 23rd of July, and then very little. There will not be as much straw as usual, but quite as much grain, and that of the very best quality. The power of the soil here to produce crops under difficulties is almost incredible. The spring was ten or fifteen days later than usual in opening, but was very fine when it did open. The summer so far has been cooler than usual, but no frosts. Barley cutting commenced the harvest last week, and wheat cutting will commence next week. It is estimated that over 2000 emigrants have arrived from Ontario, besides a good number from Minnesota and Kansas, most of whom are well pleased with the country. The first lot of emigrants by the Lake of the Woods or Thunder Bay route, (the cheapest way) have just arrived here.

Fort Garry, July 30th, 1871.

RETURN OF A DISSATISFIED EMIGRANT

In company with others from Lobo and Williams, I started from here on the 25th of May last. After a good deal of "fire and labor," as Robinson Crusoe used to say, we arrived safe and sound at Fort Garry on the 19th of June, and though we were subject to many inconveniences and some heavy expenses, such as meals at 75 cents, and a guide from St. Paul's to Frog Point at \$5 per day, still all would have been forgotten, had the country been half as good as had been represented. Upon arriving we found that no provision had been made to give the settler proper or legal possession of any land he might wish to take up. They have no fat registry offices there yet, so each settler takes possession by the "rule of thumb" and that rule in this case is that the settler draws his wagon and plough into the centre of the piece of land he wishes to have. His wagon is called his home, his plough his farm implements, and he claims 160 acres of land around his wagon, provided some other settler or half-breed has not made similar settlement duties before him, which, by the way, go where he will in the part of the country that he can get at, is sure to be the case. So a man may link his home and settle down for one night, but on awaking next morning may think himself in the London market, for he is almost sure to hear the old well-known cry, "Come, drive on, drive on there, sir, you can't stop here, this place is taken up." But even if he should be fortunate enough to be the first man on the ground, should he ever have to take his wagon from home, to mill for example, which is only 60 miles distant, he forfeits all possession, and may return to find some hybrid Italian sitting under and enjoying his vine and fig tree or their equivalent. I found the natives and half-breeds friendly enough, and in many respects they behaved better than some of our Canadian ones there. The Indians are much larger and stronger looking than ours; their clothing is not burdensome, for with, I suppose, commendable forethought, in warm weather they save it all to keep themselves warm when it turns cold; it appears also that they are far from being epicures, for one of the company having lost a horse, he drew it to the commons outside of Fort Garry, but was instantly followed by fifteen Indians, who cut it all up into pieces for their dinners. Both Indians and half-breeds are wholly destitute of decency and are filthy beyond description. The soil is a black, rich loam, 4 feet deep and of excellent quality, but water is very scarce, and that which is fit to drink is almost impossible to get. I saw only two springs, and only got three drinks of good water while there.

In the middle of July I started to dig a well, and at the depth of five feet I was not through the frost. Others of the company, at the same time, were sinking a post, and at the depth of seven feet were not through the frost. Even if everything else was satisfactory the climate is too cold, for I only saw three days that I could not have worn my overcoat with comfort; and to make the matter worse the supply of wood is very limited, and only poplar and other soft wood at that. It is now brought for five miles down the river in rafts to Fort Garry, and it is merely a question of a few years when all that is within reach will be consumed. The houses are log, built after a peculiar fashion of the country not at all like ours. The roofs are made of mud and grass, but the houses are very warm and comfortable. I saw a church of Mr. Fletcher's that was partly built last

year, and the rest of the logs are laying about covered with grass. The water is drawn out of the River at Fort Garry with oxen and sold at fifty cents a barrel, and "as muddy as ever the Sauble was." At Fort Garry flour is \$9.50 per barrel; beef, 16c. per pound; pork, \$60 per barrel; butter, 40c. per pound; cheese, 70c. per pound; eggs, 35c. per dozen; sugar, 25c. per pound; tea, 70c. per pound; liquors, 124c. a drink; oats, \$1.50 per bushel; wheat and barley, \$1.25 per bushel; cows, \$70 each; horses, from \$400 to \$600 a span; common pine lumber, \$80 per 1000 ft.; board, \$10 per week, with bed, and \$8 without. And, by the way, a bed was a luxury I did not enjoy only five nights from the time I left home until I returned. My custom was to tumble under the wagon at night and cover myself up head and ears, before the mosquitoes would eat me. I am no greenhorn at travelling, and I know a good country when I see it; for I have travelled over twelve States of the Union, all over Canada, through England, Ireland and Scotland, been at Madagascar in Africa, stopped a good while in New Zealand, and also been in part of South America, and I never was in as mean a country in my life as Red River, and I advise my friends to never think of going there.

While there I saw and stood on the very place poor Scott was shot. There is a strong feeling yet among the loyal residents that his blood shall be avenged. Riel is now living at a place called Stinking Creek, a very appropriate place for him to rusticate. A strong feeling exists against some parties who had previously left these parts for representing the country to be what they must have known it was not, and other parties who left here this summer are returning home faster than they went, and their statements all corroborate those made by me. Many who have not returned would wish to do so if they had the means; lots of clerks and other young fellows who never did a day's work in all their lives, are now seen glad to get a job at anything. No discredit, of course, but it goes to prove the truth of my statements that Red River is a humbug.

On the road home I stopped at a farm house at St. George, Minnesota. The farmer had 300 bushels of oats sown, and they were all coming out in head, and while I was there at 3 o'clock, p. m., the grasshoppers came down in a perfect cloud and settled on the oats, and next morning out of the whole lot there was not a green blade to be seen. The whole earth appeared to be covered several inches deep with them. On the 29th of July I returned home a wiser if not a richer man.

ALEX. MCNEIL.

We give the foregoing information in the writer's own terms. As our readers wish to know both sides of the question, they will observe quite a difference of opinion between Mr. McNeil's account and the accounts we publish in this number from our special correspondent. Both letters are reliable, and will be read with interest.

Editor Farmer's Advocate.

Western Fair.

SIR.—The challenge that appeared in the last number of the *Advocate*, is quite sufficient to satisfy any right-minded person as to which is in error in regard to the controversy that is going on between you and the managers of the Western Fair; the non-acceptance of the same ought at least be the means of making them very reticent in maligning either publicly or privately, you or the useful paper under your control.

Now I wish to offer a few observations (being disinterested both personally and locally) with regard to the influence and effects the holding of said Fair have had and will have on the people residing at or near to where different Provincial Exhibitions are held from time to time. The last time the Exhibition was held in London, there was no opposition got up against it either by the eastern section of the Province, at Kingston, or by the central part at Toronto. Even had they done so, they would only be acting in the same way as the managers of the Western Fair are and have been doing; and what other thoughts can pervade the minds of unprejudiced people but that this same Fair was initiated and is carried on solely for the purpose of opposition and defeating the object of the Ontario Exhibition and the Provincial Board. Messrs. Johnston & Co., this sort of thing went do; it looks too selfish on your part and will arouse the indignation of every friend of Agriculture,

no matter in what part of the Province he may reside. What would be the consequence if opposition Fairs were started, say in three or four sections of Ontario? Of course the result would be that we should have to mourn over the demise of our lost and annually cherished Provincial Exhibition, as in the old truthful adage, "a house divided against itself must fall." In conclusion, then, I say away with sectional prejudices, and let every friend of agriculture rally around the Provincial Board, and let us have an annual Exhibition worthy of Ontario, the queen Province of this "Canada of Ours."

Yours, etc.,
"AGRICOLA."
Simcoe County, Aug. 15th, 1871.

Editor Farmer's Advocate.

SIR.—I write to inform you that by some mistake somewhere, I have never received my July copy of the *FARMER'S ADVOCATE*, and I will be obliged to you if you will forward it to my address without delay.

Yours truly,
DAVID HUNTER,
Craigvale, Ont.

P.S.—SIR.—I await with very much interest your description of the yield of the several new kinds of fall wheat, in the September number of the *Advocate*, coupled with your recommendation of the same, as regards their purity and freedom from foul seeds. Since I became a subscriber to your valuable paper it has afforded me much pleasure to read of your experiments with the different kinds of seeds and plants on your own farm, and your remarks about them. Fall wheat is a splendid crop in our township (Innisfil) this year; the chief varieties grown are the Soules, Treadwell and Diehl. I cannot as yet tell you the yield per acre as the threshing is scarcely commenced with us as yet, but I heard to-day that some of my neighbors think they will have about 50 bushels to the acre of a small piece of the Diehl variety. We find this variety does not stand our deep snows as well as the others, but where it comes out in the spring all right, "it is the wheat," although I must fully concur in your statements as regards its shelling and sprouting propensities. Dear me, how it did tease me last year. Being a wet harvest, it would grow in spite of all I could do; it even grew in the stook. But I was not discouraged; I thought when it was so keen for growing I would let some of it have a chance, so I sowed about ten acres of barley and pea stubble with it, and I have a splendid crop. It did grow well. I may just say that I procured my seed from Mr. Springer, Hamilton, and this is the third year of its growth, and I may safely say it is now as pure as when I received it, for I was under the necessity of hand-picking it the first year, and you may be sure I gave vent to some of my experience in regard to advertisements of good seed wheat. Believing you will still continue to give full and reliable information of the merits and demerits of the different kinds of seeds as they come under your notice, I will wait until I receive the next number of your paper before I decide what change to make of my seed. Wishing you success in your undertaking for the public weal,
I remain yours, &c.,
D. HUNTER.

Craigvale P.O., July 31st, 1871.

Mr. Hunter's cause of complaint is no uncommon one. We are most careful in seeing that all our subscribers' papers are duly mailed here, but cannot follow them to their destination. However, in such cases where the Post Office arrangements fail in being carried out, we always, on being informed, re-mail the undelivered copies when we have them about us, which, under the circumstances, is all we can do.

We are extremely pleased with Mr. Hunter's remarks, and regret very much we cannot test seeds on our own farm to a much greater extent than we have hitherto done, from the meagre support given us by those most interested in it. Our plans were much approved of by the Governor, Sir John Young, John A. Macdonald and others, at the Provincial Exhibition held at London in 1869, and obtained the promise that the Minister of Agriculture would see that they should be encouraged. That is all the aid we ever have had from that quarter, or ever likely to have. The testing of various seeds has entailed

large outlay and heavy loss upon us as yet, and our main stay of hope for support to carry on our Emporium plans more extensively rests on the farmers of the Dominion, who have proved themselves to be our most trustworthy friends. Let them subscribe for and write for their own paper, the *FARMER'S ADVOCATE*, and we pledge ourselves to spend and be spent to the utmost of our abilities and means in working for the agricultural interests of the Dominion, and in advocating all that is likely to further the advancement of the same.

Editor Farmer's Advocate.

The Apiary.

SIR.—I would like to give information to others if I had the faculty for doing so; I often ask people to come and see my bees and would like to give them a better idea than by just giving them a description of management. I have been experimenting this season with an imported Italian queen from Mr. H. A. King, of New York, and have been rather successful. On June 19th I introduced her into a stock successfully and raised five queens which I found laying and five more not laying, but quite young. I am also experimenting with another in a fertilizing cage after Mrs. Tupper's plan. Artificial impregnation appears to be the great question before beekeepers at the present time. I have had a desire for some time to write an article on wintering bees in the open air, but my time is too fully occupied at present. I have under way a honey extractor which I intend to exhibit at Kingston with other articles. Extracting honey is quite a new idea in this country, and it takes us some time to get into the improvements that our American cousins have, but the time is coming when honey will be taken from bees and they will not make new comb in the top boxes, but will fill the old comb in the body of the hive.

Any agricultural paper to be up to the times now, must devote a portion of its space to bee-keeping.

Yours, &c.,

B. LOSIE.

We intend devoting more attention to the bee question in future, but hope Mr. Losie, or some other apiarian will oblige us with an article each month to show the plain farmer how to keep his bees with less loss and enable him to extract the honey without the destruction of the comb. It is our desire to learn and practice more the mode of treating the bees in the movable frame hives, to teach which is the best hive, the best kind of bee, the best mode of management, and to ascertain which is the best honey extractor. Some say they do not want anybody to teach them how to use an extractor, as they perfectly understand that part of the business, but they destroy as much of the wax as a bear would.

Editor Farmer's Advocate.

Orchard Grass.

SIR.—Have you any of the Orchard Grass seed for sale, and if you have, at what price? Please inform me how it stands the drought; what kind of land is suitable for it; how much is sown per acre and when it should be sown? I want to sow a field of green feed for cows and calves, for next season, and I should like to know if there is anything would answer better than orchard grass.

Yours, &c.,
T. G. CHATE.

Warsaw, Aug. 5th, '71.

We have not raised any orchard grass ourselves, but have seen it growing, and we know of nothing that will grow quicker for spring feed. We believe it will do to sow either in the spring or fall. We have not the seed at present, but will try and procure some. We should feel obliged if some of our readers that have raised it, would send us an article on it. We believe it will be much more grown as soon as its advantages are known, but it takes a number of years to learn its full advantages and get it generally introduced.

Editor Farmer's Advocate.

Carter's Ditching Machine.

Testimonial from the Superintendent of the London Asylum:—

SIR,—I willingly bear testimony to the value and efficiency of the Carter Ditching Machine, purchased from you. Last year we drained fourteen acres with it for our garden, on very stony ground. In clear ground, whether sand or clay, it works well and rapidly and saves labor to a large extent. Next year I shall be better able to give you the cost of draining by the machine compared with hand labor, as I have nearly fifty acres to finish this year. Farmers purchasing it will soon save its cost. I made two hundred rods of drain three feet deep in four hours.

Yours, &c.,
HENRY LANDOR.

London Asylum, Aug. 14, 1871.

Mr. Landor says much more work can be done in the same time on land having no stones on it, and when men are accustomed to work the ditcher.

Editor Farmer's Advocate.

Crops, Canada Thistles, &c.

SIR,—Inclosed you will find four dollars, being this year's subscription for your valuable journal. The weather is extremely dry here; no rain for about a month. Fall wheat light in general, but will yield well; spring wheat and oats light on late sowing—early sowing, average; barley, light but good sample; peas are an average crop; hay, very light. I noticed in your paper an account of a man in your vicinity that can destroy Canada thistles. If he will kill all the thistles on my place or give a method that will, without taking a lifetime to do it in, I will give him one hundred dollars, and I think he will have no difficulty in raising many a hundred more in this vicinity.

Yours truly,
WM. WALKER.

Penville P. O., Tecumseh, August, 1871.

We have been in expectation of further accounts about the destruction of Canada thistles from the experimenter, and will furnish information as soon as obtained.

Letter from Australia.

[We give a few extracts from a letter from South Australia, which we think will be of interest to our readers.]

Editor Farmer's Advocate.

SIR,—I have great faith in this country, and with time I am certain it must succeed. What with our cereals, metals, wool, wine, preserved meats, etc., I can see a state of prosperity and happiness in future for it. I do not advise any one to come, especially those who are grown up in years with all their prejudices and feelings in favor of old views. Habit is a second nature, and I have grown accustomed to the habits of this country, and I should be miserable if I were out of it. Even now we are doing well. Five million bushels of wheat for export at 51 cts. per bushel is not so bad; our land laws also are becoming more liberal every session. Government rent for land is eight dollars per acre for three years, and not a stone or stump to grub. Two young chaps went up last year from this place and put in about 100 acres in five months, realizing 15 bushels to the acre, and this year they have put in 300 acres. If the season (and there is the rub) proves right, they can purchase the land out and out and be in an independent position. We have had a fair season for the farmers, and although the yield in this part has been poor, the crops in the north have made up the deficiency, and the colony is in a state of prosperity, recovering from the depression which three previous bad seasons had brought about. The price of wool also has improved, and I think brighter days are in prospect. The vintage has been the best of my experience in the colony, and the yield of wine correspondingly good, probably producing from four to five hundred gallons per acre. We have not yet obtained a foreign market for this commodity, but what wines have been shipped to England have been favorably spoken of, and in time to come I have no doubt a demand will spring up for really good substantial wines, and when that shall be the case, South Australia can produce enough to supply half the world if necessary.

for the vine will grow almost anywhere in the colony and in places where wheat will not succeed. Then as to dry fruits, such as raisins and currants, we ought surely to do something in that line. By the papers I have sent you a good deal of information may be gathered as to the products of this Province.

This is our seed time and the farmers are as busy as bees; the ground is in capital condition and so far things look well. I am glad to learn you are making headway and that the size of the paper and its contents are improved, but as for writing an article in it that is not in my line, and should I do so I doubt whether you would be foolish enough to put it in.

Yours, etc.,

Nairne, S. Australia, May 19th, 1871.

Editor Farmer's Advocate.

Does Farming Pay?

SIR,—In your July number, the pertinent query comes to "Young Canadian Farmers," if writing was ever taught in the school to which they went? What talk! why I never wrote an article for the press in my life, and would you believe I was considered one of the best writers in our district school. But methinks I hear you say that you mean figuratively. Well, if you will tell me what to write "I am yours to command" all day; or if you will through your valuable paper show "Young Canadians" how to make farming pay without working so hard, I will for one promise to devote part of the time thus gained in writing for you. But when one comes in from a hard day's work, tired and weary, trying to eke out a living on a farm that has seen its best days, unless the ADVOCATE tells us how to improve the soil, what grain is made of, what manure to apply to the soil to furnish those ingredients taken from it by the crops, how to raise thirty bushels where we only raise ten, how do you expect that we can find time or energy for writing? or what can we get to write about, unless to whine and complain of poor crops, hard times, etc. (But enough of that this time, and perhaps we will try and find out the reason why farming as a general thing is not made to pay.)

You make a noise about the Colorado beetle, but it has not got this far yet; our potatoes suffered more from late frosts and dry weather than they would from a small army of the aforesaid bugs, so that the potatoe crop will be next to nothing. Hay was the lightest known for years, but what there was is of the best quality. Fall wheat was rather spotted, and winter killed badly, but the sample is first-class. Barley and peas are in general good, and by the end of this week the greater part of them will be secured. But of spring wheat, for which our township is noted, I am ashamed to speak. Oats, those especially sown early, will be an average crop, and pasture—well, if it does not rain soon, cattle will have to be fed to keep them from starving, as the pasture is dried up. Well, I guess I had better "dry up" to.

Yours, etc.,
"A YOUNG CANADIAN."

Erin, Aug. 8th, '71.

We insert "Young Canadian's" prelude to expected future articles, but he will have a difficult task to show that farming does not pay. We contend it does pay, but blundering may not. Answers to his queries are continuously to be found in the columns of the FARMER'S ADVOCATE; we hope he may report on some of the plans successfully carried out, such as clovering and draining. We hope some other "Young Canadians" from other counties will send in communications. Information and suggestions for improvement are what we most require.

Editor Farmer's Advocate.

Grant's Hay Fork.

SIR,—I write to inform you that through the advertisement I inserted in your paper I have been enabled to introduce my fork to a much greater extent than I could otherwise have done. I have even sent them into New Brunswick, the advertisement having been seen in your paper in that distant part of our Dominion. I wish you every success in your useful undertaking.

Yours respectfully,
PETER GRANT.

Clinton, Aug. 11th, 1871.

From the Ontario Farmer.

Mulch.

Too many are apparently quite ignorant of the value of mulch. Indeed we have met with parties making some pretensions to be gardeners, who did not know the meaning of the term. As a protection and help to newly planted trees there is nothing like it. Few transplanted trees would fail if this precaution were taken. A good mulching of straw, bitter leaves, newly mown grass, weeds, spent tan bark, or sawdust, keeps the ground loose, friable and moist, and in the best state generally for securing steady and thrifty growth. A correspondent of the *Rural New Yorker*, writing on this subject urges the use of all manner of material for the purpose, that may happen to be within reach, and says that shavings, brush, but short, and even cobble stones will make a mulch, if nothing better is at hand. He also gives an interesting account of "the philosophy of mulching," a point on which little has been written. He observes: Downing says, "by preventing evaporation it keeps the soil from becoming dry." This is the general theory, right as far as it goes, but is far from expressing the whole truth. Mulching is actually watering. It is providing a constant and ample supply of moisture. It does more than this: it provides a constant supply of fertilizing matter. Some years since, observing the remarkable effects of mulch, the writer tried some experiments, which to his mind, tended to throw some light upon the mode of its action. Perceiving that a heavy mulching of saw-dust produced all the apparent effects of heavy manuring, and kept the ground moist in the driest season, the bulb of a thermometer was sunk to the bottom of the mulch, and the mercury fell ten degrees. This demonstrates to my mind the cause of moisture and fertilizing. The mulch being always porous, permits the free circulation of the air, and being ten degrees cooler than the general atmosphere the moisture of the air is condensed. This accounts for the constant moisture of the earth under it, even in the driest season. The fertilizing matter of the air consisting of the ammonia, and carbonic acid, are deposited by the condensation of moisture under the mulch. We are familiar with the fact that frequent stirring of the soil, in a dry time will prevent injury to a crop for want of rain. This acts upon the same principle as the mulch. The soil being kept porous receives its moisture by condensation from the air. Nitre is often gathered from the earth in damp, dark cellars, and from under rubbish which has been long undisturbed, and it was deposited there in the same manner as under the mulch.

Mulch has another remarkable quality. It will render the hardest and most compact earth loose and porous in a few months. The benefit of summer fallow is based upon the free circulation of air through the soil, caused by many ploughings. If the soil is left unused, but without stirring, it becomes compact and little or no benefit arises from a year's rest. If the ground were mulched, it would need no ploughing to produce the same benefit. It is recommended by some horticulturists to remove the mulch in September, for a time to prevent too much water from being taken up between the bark and the sap wood, which it is said, will freeze in winter, and cause the frozen sap-blight; the mulch may be returned at the commencement of the cold weather. This may be done by those who believe the winter-blight thus produced. But let no one forget to mulch who has anything to do it with.

Horace Greeley's Agricultural Maxims.

I. Only good farming pays. He who sows or plants without reasonable assurance of good crops annually, might better earn wages of some capable neighbor than work for so poor a paymaster as he is certain to prove himself.

II. The good farmer is proved by the steady appreciation of his crops. Any one may reap an ample harvest from a fertile virgin soil; the good farmer alone grows good crops at first, and better ever afterward.

III. It is far easier to maintain the productive capacity of a farm than to restore it. To exhaust its fecundity, and then attempt its restoration by buying costly commercial fertilizers is wasteful and irrational.

IV. The good farmer sells mainly such products as are least exhaustive. Necessity may constrain him, for the first year or two, to sell grain, or even hay; but he will soon send off his surplus mainly in the form of cotton, or wool, or meat, or butter and cheese, or something else that returns to the soil nearly all that

is taken from it. A bank account daily drawn upon, while nothing is deposited to the credit, must soon respond, "No funds;" so with a farm similarly treated.

V. Rotation is at least negative fertilization. It may not positively enrich a farm; it will at least retard and postpone its impoverishment. He who grows wheat after wheat, corn after corn, for twenty years, will need to emigrate before that term is fulfilled. The same farm cannot support (nor endure) him longer than that. All our great wheat-growing sections of fifty years are wheat-growing no longer; while England grows large crops there-of on the very fields that fed the armies of Saxon Harold and William the Conqueror. Rotation has preserved these, as the lack of it ruined those.

VI. Wisdom is never dear, provided the article be genuine. I have known farmers who toiled constantly from daybreak to dark, yet died poor, because, through ignorance, they wrought to disadvantage. If every farmer would devote two hours of each day to reading and reflection, there would be fewer failures in farming than there are.

VII. The best investment a farmer can make for his children is that which surrounds their youth with the rational delights of a beautiful, attractive home. The dwelling may be small and rude, yet, a few flowers will embellish, as choice fruit trees will enrich and gladden it; while grass and shade are within the reach of the humblest. Hardly any labor done on a farm is so profitable as that which makes the wife and children fond and proud of their home.

VIII. A good practical education, including a good trade, is a better outfit for a youth than a grand estate with the drawback of an empty mind. Many parents have slaved and pinched to leave their children rich, when half the sum thus lavished would have profited them far more had it been devoted to the cultivation of their minds, the enlargement of their capacity to think, observe and work. The one structure that no neighborhood can afford to do without is the school-house.

IX. A small library of well selected books in his home has saved many a youth from wandering into the baneful ways of the Prodigal Son. Where paternal strictness and severity would have bred nothing but dislike and a fixed resolve to abscond at the first opportunity, good books and pleasant surroundings have weaned many a youth from the first wild impulse to go to sea or cross the continent, and make him a docile, contented, obedient, happy lingerer by the parental fireside. In a family, however rich or poor, no other good is so precious as thoughtful, watchful love.

X. Most men are born poor, but no man who has average capacities and tolerable luck need remain so. And the farmer's calling, though proffering no sudden leaps, no ready short cuts to opulence, is the surest of all ways from poverty and want to comfort and independence. Other men must climb; the temperate, frugal, diligent, provident farmer may grow into competence and every external accessory to happiness. Each year of his devotion to his homestead may find it more valuable, more attractive than the last, and leave it better still.

Tanning Sheep-Skins with the Wool on.

About every six weeks we have an inquiry as to the best method of tanning sheep-skins with the wool on, for use, as doormats, rugs, &c. Here are the directions: Tack the skin upon a board with the flesh side out, and then scrape with a blunt knife; next rub it over hard with pulverized chalk until it will absorb no more. Then take the skin from the board and cover it with pulverized alum; double half way over with flesh side in contact; then roll tight together and keep dry for three days, after which unfold it and stretch it again on a board or door, and dry in the air, and it will be ready for use.—*American Artisan.*

PRICE OF HORSES IN EUROPE.—Some alarm has been felt least a great rise in price may take place when the gaps caused by the recent destruction of horses on the Continent come to be filled. We have not met with any estimate of the total number of horses during the war. It is stated that 70,000 horses were eaten in Paris; but what was the total number used up by the Prussian and French armies will probably never be known. Even if roughly estimated at 500,000, however, there is no ground for a large advance, as the latest returns report that there were about ten million horses in Western Europe.—*Sat. Review.*

From a recent English special report, it appears that Mary is the most popular Christian name, William ranking next. Of one hundred thousand children, half boys and half girls, six thousand eight hundred and nineteen bore the name of Mary, six thousand five hundred and ninety, William; six thousand six hundred and thirty, John; four thousand six hundred and seventeen, Elizabeth; three thousand eight hundred and seventy-six, Thomas, etc. There were also twelve hundred and thirty-seven Arthurs, twelve hundred and thirty-two Alfreds.

How to Grow Pears.

The proper cultivation of this universal favorite is more frequently the subject of discussion than that of any other fruit. Successful growers of apples and other fruits so often fail in their attempts to raise pears, that they regard the favorable results of their friends as a mystery—the effects of a dear-bought recipe, to them kept secret. Their extensive cultivation, especially in the Northern States, has seldom been attempted; but those most successful in raising them are most desirous of extending their culture and improving their qualities.

To discuss the merits of the various theories and practices of different cultivators, would require more time and space than we can at present devote to the subject. From the widely different modes of treating this fruit tree, an outline of the course suggested by our own experience and observation will, we feel assured, prove satisfactory in similar circumstances.

It cannot be far from correct that every climate and soil which will grow corn can be made to grow pears. Soils which are of a strong, gravelly texture, with some clay intermixed, appear to be best adapted to produce fruit of the highest excellence. Varieties which flourish on the quince, do exceedingly well in a soil rather moist; but any soil not inclining to be dry, with good culture will produce fine fruit, either on the pear root or quince. It must, however, in either case, be deep and rich, as success can be obtained on no other condition. Whether pears succeed best on the quince or on their own roots, is a question frequently asked. "I do not want any more of your dwarf trees," said a driving farmer, "they get broke down with the snow, and break off where they grafted. They are good for nothing; too short lived. I want something not afraid to hold their heads up; some good large standards, as you call 'em. If they don't bear in my day, my grandchildren will have something to remember me by, and I shall get some credit, if no pears." "If I can have only one style of tree," says our city gardener, "I would sooner take the dwarf. It takes very much less room, and you can have a greater variety, and get pears in a year or two after they are planted. I have gathered two bushels of as handsome Louise Bonne's as were ever seen in market; and the tree had been planted only six years last spring. And I have a dozen more trees in my garden, all dwarfs and planted at the same time, that you could not buy for fifty dollars apiece."

It is not to be wondered that tyros, who come in contact with either of the zealous representatives of these different methods of pear growing, should become at the outset as decided in their preferences as a young politician, who reads one political paper. In this, as in many other theories, truth is found between two extremes. It is as well ascertained that the Duchess does admirably on the quince, as that the Bartlett will flourish best on the pear stock. The Duchess cannot be grown advantageously on the pear; and the Bartlett will not unite well nor flourish on the quince. But we venture an opinion that few lovers of pears would be willing to leave either of these choice old varieties out of their collections.

The first requisite is a rich and mellow soil. If moist, it must be underdrained. We do not mean by richness any such quality of soil as the farmer describes when he speaks of his best corn lands, or grass fields, or even his garden. One of the pear growers in Massachusetts plowed a certain lot ten or twelve times as deeply as possible, and applied thoroughly decomposed compost half as many. The trees had been planted three years, and had made a growth of four to six feet in one season on the leading shoots. This extravagant mode of enriching, succeeded by a like excessive growth, is so unlikely to be imitated, that we need not caution our readers in this direction. Our fear is that sufficient nourishment will not be provided to produce satisfactory results.

Next in importance is the selection of the trees; and in no particular is the novice likely to err. The variety, size, form and health of the tree, are points about which he can be informed only by years of observation and experience. Trees slightly crooked are certain to become of sufficient size; but they are often rejected for such as are perfectly symmetrical, but defective in other respects, when examined by the experienced grower. And this demand for perfectly formed trees, as if manufactured to order at some umbrella establishment, has a tendency to induce the growth of certain straight, vigorous-growing sorts by nurserymen, to the exclusion often of better varieties, which are straggling and crooked in their habits,—as the Winter Nelis. Varieties, too, are often selected which it is as unwise to plant as it would be to attempt to grow the fig or the apricot; and the more experience a gardener has in this department, the more caution and care will he exhibit in his recommendation of sorts.

Planting, when the ground is thoroughly prepared, is very quickly and easily performed. The holes for the reception of the tree should be wide and deep enough to receive the roots without bending. Branches that are too luxuriant are checked by simply bending them downward. In like manner, a short curve of the roots from their natural position will prevent growth and weaken the tree. Deep planting is yet more fatal in its effects. Even the dwarf tree on the quince should not be planted as low as is recommended by some writers. It is sufficiently deep if the stock is covered. The greater facility of operating has induced some nurserymen to graft quince at too great a distance from the ground. When planters understand their interest, the practice will be discontinued for want of purchasers, as trees grown in this way seldom produce satisfactory results.

Various ways of staking are adopted to prevent the newly-planted tree from being blown about by the winds, an important item, sufficiently understood. Watering is seldom necessary, and as usually performed is injurious. At the time of planting, it may be applied very soon after the roots are covered, but the final layer of earth should be thrown on dry and light, to prevent evaporation. Every one must have noticed how much sooner and deeper a hard road dries or freezes, than lightly plowed land; and watering the surface very soon hardens the soil, when it resists the action of dews and becomes parched and cracked, thus producing the dryness so important to prevent. It is, however, sometimes necessary to resort to artificial watering, to save the life of the tree, and the more nearly we imitate the natural showers, the greater will be our success. We have several times saved very valuable trees by sprinkling the top with a garden engine,—the best method we have ever adopted for this purpose. Very good results may be obtained by simply removing the earth nearly to the surface roots and applying a large quantity of water at once, only in as gradual a manner as possible. When a barrel of water has thus been absorbed, the soil may be replaced, and no more water applied for several days or weeks.

Mulching with any substance that will keep the ground moist, is of great importance. Where various materials can be had, preference should be given those of an enriching nature, and the mulching should go on in winter as well as in summer. In young apple orchards, if this were allowed, danger would arise from the depredations of mice, but pear trees are seldom troubled by this vexatious quadruped. Offensive substances are sometimes applied to guard or preserve them. Alkalies and various other substances, at proper times and proportions, benefit the tree also, by producing thrift and preventing insects. But application of coal tar or oily substances should never be made to a growing tree.

At the time of planting, the tree requires more or less pruning and shortening of the branches. You will never need to caution the nurserymen about giving you too many roots. It would be better to ask him to

send the roots with the tops, and have them packed in the most approved style, as pennies saved in lifting or packing are as many dollars deducted from our prospective pear orchards. Smoothly paring the roots, where they are broken, assists them in healing. All superfluous branches should now be cut out, and usually one-half the growth of the previous season should be cut back. The most upright shoots, however, being the strongest, should be reduced more than one-half, while the lowest side branches should remain nearly their full length. The form of the tree has much to do in the proportion of this reduction.

The dwarf pear tree requires to be pruned in a manner somewhat similar, but its lower branches should be kept within two feet of the ground, and the pyramidal form adopted. All attempts to grow this tree as a tall standard have failed. The leading shoot of two year old trees (the usual age to plant) should be cut back, leaving only six or eight buds at its base, while the side branches should be pruned in less proportion, keeping the pyramid form in view.

Preparing and Preserving Rennet.

In a discussion at the Dairymen's Club in Utica, Mr. H. Lewis of Frankfort said:

How shall we prepare rennet for use in cheese-making? Dip a sufficient quantity of whey from a sweet curd, or one-half gallon from each rennet to be used; heat it up to the boiling point over a slow fire and skim off the albumen that rises to the surface. Set by the whey until cold; then turn the whey off from the albuminous matter at the bottom of the vessel, and to each half-gallon of whey add one rennet and sufficient salt so that there will always be a small quantity of salt undissolved. By rubbing the rennets three or four times each day, for as many days, the liquid will be of sufficient strength for use. Strain this into a jar, to be kept for daily use, always keeping it supplied with salt undissolved. Every time before dipping out for use, stir the liquid thoroughly. The daily stirring will make the rennet of uniform strength, and also aid its keeping. The rennet skins may be salted and again dried, or put into another jar with half the quantity of whey first used; and by soaking and rubbing as before directed, the liquid will, in a few days, be of about equal strength with that obtained at the first soaking, and may be strained into the same jar with it. The skins may now be returned to the jar, and sufficient whey added to cover them; a weight being put on to keep them under, and sufficient salt added to reach above the liquid. The rennets will remain perfectly sweet any length of time, or until the jar may be wanted for a new batch of rennets. Then for each new rennet add a half gallon of whey as before, give the old skins a thorough rubbing and rinsing, after which they may be thrown away. In preparing rennet for use in cheese-making, two precautions are necessary; first, every rennet should be carefully examined, so that no impure nor tainted rennet shall be put into the batch; and secondly, salt undissolved should always be kept in the jar while preparing it for use, and also in the jar from which the daily supply is taken.

Magic Nerve Liniment.

This was used and recommended by Dr. Stewart, for nervous affections, spring-halt, swelled joints, &c., in horses.

Spirits Hartshorn, 1½ oz.
Sulphuric Ether, 1½ oz.
Spirits Turpentine, ½ oz.
Sweet Oil, ¼ oz.
Oil Cloves, ¼ oz.
Chloroform, 1 oz.

Put into a strong bottle of the capacity of eight ounces, shake liniment, and it is ready for use. Keep the bottle securely closed, and in a dark place free from light. D. C. H.
Dane, Wis.

Both the Army worm and Chintz bug are reported doing much damage to crops in different sections of Iowa.

The Potato Bug.

On the approach of winter they dig down and bury themselves in the earth six or eight inches deep, where thousands of them may be found in their winter quarters, only waiting for the warm sun of June to call them forth to their work of destruction. The bugs will make their appearance about the first of June, but will not be so numerous but that they can be managed until an early crop can be matured. When they first appear, they immediately fly in search of their favorite food. After a few days the sexes pair, and in a day or two the eggs are deposited, after which the old bugs soon become torpid and die, having gone their round of life, and filled out their little day. In four or five days these eggs in their turn are hatched, and after about ten days of voracious feeding, these things that are hatched attain to the full size of the potato bug larvæ. They then seek the earth and dig about an inch under ground, where in a few days the larvæ changes to the beetle, when they come forth the complete Colorado potato bug, to perpetuate their species in like manner as the first. And thus they keep on multiplying, one generation after another, increasing to such astonishing numbers as to sweep everything before them. On the approach of cold in autumn it seems that those only burrow in the earth that have not yet paired together, while all the rest die off. Paris green will kill them, but they keep coming in such numbers and multiplying so fast, that I think it extremely doubtful whether it will pay to cultivate the late varieties of potatoes at all.

Lime and Salt.

Prof. Johnson recommends for fertilizing purposes, to mix 1 bushel salt and 2 bushels dry lime under cover, and allow the mixture to decompose gradually, thus forming an intimate chemical union of the two materials. For this purpose the mixture should be at least 6 weeks before use, or, still better, 2 or 3 months, the heap mentioned being turned over occasionally. This salt and lime mixture, when applied at the rate of 20 or 30 bushels per acre, forms an excellent topdressing for many crops. It acts powerfully on the vegetable matter of soils; 56 bushels applied to a turnip field have produced as large a crop as barnyard manure. It is also very destructive to insects and grubs in soil—it attracts moisture from the air, and is useful against drought. Its decomposing power is remarkable, and if 3 or 4 bushels of it are mixed with a cord of swamp muck, the latter would soon be reduced to powder.

Salt and plaster mixed are also said to be a very good top-dressing on some, while on others they do no good. Plaster does well on some soils and is worthless on others. The same is also true of both lime and salt, as it is of most other commercial fertilizers. Let these facts be carefully heeded by farmers and gardeners.

Pickling Cucumbers.

The following receipts from an exchange are reasonable and appear practical:

1st. Take cucumbers, wipe them clean, and lay them in stone jars. Allow one quart of coarse salt to a pail of water; boil the salt and water till the salt is dissolved; turn it boiling hot on the cucumbers; cover them up tight and let them stand for twenty-four hours; turn them into a basket to drain. Boil as much vinegar as will cover the cucumbers wash out the jars and put the cucumbers into them; turn the vinegar on boiling hot; cover them with cabbage leaves and cover them tight. In forty-eight hours they will be fit for use.

2nd. Pick cucumbers each morning, let them stand in weak brine three or four days, putting in mustard pods and horse radish leaves to keep them green. Then take out and drain, covering with vinegar for a week; at which time take out and drain again, putting in vinegar, adding mustard seed, ginger root, cloves, pepper and red pepper pods, of each about one or two ounces, to suit different tastes, for each barrel.

The vinegar must be changed once, as the large amount of water in the cucumber reduces the vinegar so much that this change is absolutely necessary, and if they should seem to lose their sharp taste again, just add a little molasses or spirit, and all will be right.

Mrs. Kate Hunnibee's Diary.

In *Hearth and Home*, a handsome and well got-up agricultural paper, published in New York, there is a continued conversation published every month on farm, household and domestic topics. We quote the following as treating on one subject, but have not space to give the whole article, which is worth reading. The articles are headed Mrs. Kate Hunnibee's Diary.

"During Mrs. Ferguson's visit our conversation fell, one afternoon, upon marriage and divorce. 'They're so common, divorces are, nowadays,' said Aunt Betsy. 'When I was a gal, one scarce ever heard tell of them; but just look here, in Busydale, since I can remember, there've been eight or ten separations and four divorces. There's Susie Folger that was—she that married Jimmy Thorp—they never lived happy together, and in three years after they were married he went off an' left her, and then she got a divorce.' 'Why did they marry, in the first place?' inquired Mrs. Ferguson. 'Oh!' said Aunt Betsy, 'she was rich, and he liked her money; an' he was gay and handsome, an' her folks thought he'd settle down after he was married to Susie; but he was just as wild as ever before they'd been married a year. Then she quarrelled with him 'bout one thing an' then another. She allers was delicate, you know, an' sort o' peevish, an' he wouldn't stan' it, so they parted. It's lucky they never had no children.' 'Perhaps if they had had children they wouldn't have parted,' suggested Mrs. Lester. 'Folks are a great deal wiser nowadays than they used to be,' said Mrs. Knox. 'We've railroads and telegraphs, and numberless improvements on the ways of our fathers, and so our people are trying to improve on their ways in other respects; but I think in marriage we can't take any other right view than the scriptural view. If matrimony is looked upon by the young as a mere matter of banter, and something to be entered into carelessly, and by accident, as it were, how can we expect happy unions?' 'I have given this subject most earnest thought,' said Mrs. Ferguson, 'for it is vital to society, and I am training all my children, boys and girls, to make good husbands and good wives. I would have my sons, as did King Arthur's knights,

—lay their hands in mine, and swear To lead sweet lives in purest chastity, To love one maiden only, cleave to her, And worship her by years of noble deeds, Until they won her; for indeed I know Of no more subtle master under heaven Than is the maiden passion for a maid, Not only to keep down the base in man, But teach high thought and amiable words, And courtliness, and the desire of fame, And love of truth, and all that makes a man.

For my daughters, I am more desirous that they be women than that they be ladies. After moral excellence, I look upon perfect physical health as a prime requisite. With this, a sound education, and the knowledge that every woman should possess—how to make good bread; how to keep a house in order; how to make a dress, a coat, a shirt; how to submit gracefully to what is best rather than to what is pleasant—I trust they may find peace and joy in wedlock. We can do little to promote the happiness of those unsuitably married; but we can, by timely counsels to the young, prevent ill-advised unions, and increase the number of such as promise felicity. Milton truly says:

'Love hath his seat in reason, and is judicious,' Mrs. Lester.—'I never knew a couple who were suitably mated as to age, station in life, education and tastes, and who cheerfully accepted the obligations and responsibilities marriage imposes—I never knew such a pair draw unevenly in the yoke of wedlock or seek a release from it.'

Lunches.

Farmers travelling to Exhibitions, with their families, are often troubled with headaches or sickness or have to pay dearly for what they get. To such the following may be of value:

Many persons find that the lunches they catch at railroad stations, or which they carry with them in their bags or baskets, give them headaches and serve as very poor substitutes for warm dinners at home. It is probably because they are made up so largely of cake or pastry. The food is too concentrated, has not enough waste matter and fluid about it, and so produces constipation, which is a sure cause of a dull head and general bodily discomfort. The vegetables and soups we eat with our dinners at home, are valuable for their waste matter as well as for their nutriment. With our lunches we miss these, but fruit is still better for those whose stomachs are healthy enough to eat it un-

cooked, and fruit we can almost always have with us.

For a substantial lunch to take from home, especially for one who is taking active exercise, cold chicken is good, or cold meat cut in slices. These, laid between buttered slices of bread, make very nice sandwiches. Thin biscuit is usually more acceptable than bread, and if cut open, spread with currant jelly, and put together again, is very nice. The less of cake, and the plainer that little, the better for the traveler's comfort. Fresh soda crackers and fresh apples make an excellent light lunch; but the fine flour crackers are so concentrated, that it is best for all who can do so to eat the accompanying apples without peeling them. A simple lunch of this kind, which you can buy as you hasten through the streets to the depot, is far better than the little sweet cakes and pastry abominations sold at stands near the depot. I doubt if women, who know how such things are made, are often caught buying them. Figs or raisins go well with crackers; but fresh, juicy fruit is preferable when you can get it.

Paying the Printer.

There are people of every civilized country under the sun who have mistaken ideas about the business of printing and the manufacture of newspapers. They believe that a newspaper can exist, thrive and flourish on itself, without any external aid, on the principle on which the bear manages to tide over the cold weather, without requiring sustenance on board. Many of the people of Canada labor under this strange idea, hence it comes that some of our brethren of the Provincial press are driven half yearly to dun and to clamor for what is due to them, and to browbeat readers who believe that they can read their paper without money and without price. Our brother of the *Alliston Star* of the 29th ult., makes an appeal *ad misericordiam* which is a fair sample of what printers are driven to by the wanton neglect and carelessness of those whom they faithfully serve. He says:

'We want money and must have it. From the date of our commencement to the present, we have not urged upon our subscribers or advertisers the necessity of paying up. There is an excuse for all things, and we find that the time has arrived when we can no longer refrain from asking for that which should have been paid long since. Printers, like other people, require money. We have a large weekly outlay in the way of wages, paper, ink, &c. We therefore trust that this hint may be sufficient.'

Every straightforward man will admit that there is something desperately wicked in the system which compels a decent man to turn bum-bailiff and throw out such vivid hints and insinuations as the above. Every straightforward man will admit, also, that the parties who are the cause of such a transformation are guilty not only of uncharitableness but of downright dishonesty, and should be placarded as swindlers of the poor and needy. The printer ought to be the last man in the world subjected to gouging. His profits are small—he has to toil early and late, to steer his bark through a multitude of breakers, if justice were done, should fall on other shoulders; and, besides doing all this, he must never lose sight of the interests of his readers, nor cease to push them forward with might and main.

TAN AND SUNBURN.—Ladies who have spent the summer in the country and at the seaside, may be glad to know of some simple remedies for tan and sunburn. When the face is burnt by exposure, it is best to bathe it with a little cold cream; this simple and pleasant wash will remove the discoloration and swelling as if by magic, and leave the skin cool and smooth. To prevent tan and sunburn, it is a good plan to take the juice of a fresh lemon and rub it in thoroughly before going into the open air, allowing it to dry on the face; at night dust a little oatmeal upon the skin, and next morning, after washing it off, apply a little cold cream or buttermilk. Such a simple and harmless treatment will be found much more effectual than the use of cosmetics, which close up the pores, and dry and roughen the finest complexion in a frightful way and in a short space of time.

RAISING THE WIND.—The latest American discovery appears to be the art of raising the wind—in the literal, not the figurative sense. The *New York papers* report that at a place called Glen Falls, near that city, a farmer a few days ago, wishing to burn a fallow of about fifteen or twenty acres, ignited the brush at several places at the outer edge. The flames rushed towards the centre and assumed a rotary motion, which increased in velocity till a terrific whirlwind was formed, which tore up small trees, root and branch, and frightened everybody who witnessed it. A column of smoke rose to so great a height that it was visible for many miles, and a noise as loud as thunder accompanied this singular phenomenon.

There are upwards of \$100,000 worth of new buildings in course of erection and contracted for in the town of Winnipeg.

Seasonable Notes.

We make a few extracts from the *Horticulturist*, which is an excellent publication for gardeners, and well deserves a place on the table of every cultivator of fruit and flowers. It is published by H. T. Williams, 37 Park Row, New York:

The *Rural New Yorker* advises the more general culture of the Hawthorns as among the most elegant of the ornamental class of trees.

'They are in full bloom during the last half of the month of May, and with their pink, white and purple flowers, make a splendid show. The single flowering sorts are very handsome, but last for but a few days, while the double flowers remain for two or three weeks.

'Few trees of so hardy a character as the Hawthorn make so brilliant a display when in bloom as the single varieties do when loaded with fruit in the autumn. The flowers of the double sorts resemble small roses crowded into dense clusters, two or three inches in diameter.'

Dr. Chas. Hay, of Warsaw, Ill., read a paper recently before the Horticultural Club of that place, saying: 'That as an investment for our immediate heirs, tree planting is better and safer than a life insurance policy. The growth of wood on ten acres of land, in the older States, it has been proved by experiment, will, in twenty or twenty-five years, equal the price of the land. In twelve years White Maple grows one foot in diameter and thirty feet high; Ash Leafed Maple, one foot in diameter and twenty feet high; Black or White Walnut, Elm and Chestnut, the same; Hickory, eight inches in diameter and twenty-five feet high. The different varieties of Evergreens make an average growth of twenty inches in height, annually.' Mr. Scofield, of Elgin, Ill., says: 'From his own experience, timber three feet in diameter can be grown on our prairies within five years. He recommends the Scotch and Weymouth Pines, for rapid growth, in preference to the Tyrolese Larch.'

A practical grape grower in his letter to the *Country Gentleman*, says, that he observed that when the leaves of the vines were scant, the fruit did not ripen well, while in another part where the foliage was thick, the clusters of fruit were larger and ripened well. Where a Concord vine was close pruned, yet abundance of leaves retained, the fruit ripened at the proper time, but where the fruit was unusually heavy and close, it did not mature rapidly. Hence he forms the general conclusion that an over heavy crop is tardy in ripening. The cure for this is thinning. It hastens maturity, increases the quality and size of the fruit, favors the wood growth, and the set of fruit for the year following. The same rule will apply to all standard fruits as well as the grape.

A New Hampshire family cut up 250 bushels of apples last fall, which when dried made 1,457 pounds, and sold for 21 cents per pound, making \$300.

The *London Gardener's Chronicle*, in a recent article on "pruning the grape," states that vines in vineries, pruned in September, while the leaves are on, will have the succeeding crop ripen fifteen to twenty days earlier than other vines pruned in November, all other circumstances being equal. 'The experiment has been tried for years on vines that yielded a supply of fruit from June until January, and whether in the early or in the late houses the result is the same.

The *Florist and Pomologist* says, that the following is strongly recommended for mildew, scale, red spider, etc., upon greenhouse plants and out-of-door shrubs and trees: Flour of sulphur two ounces, worked to a paste with a little water; sal soda, two ounces; cut tobacco, half an ounce; quicklime the size of a duck's egg; water, one gallon. Boil together and stir for fifteen minutes, and let cool and settle. In use it is diluted according to the character of the plants, which are to be syringed with water after the application.

The oldest of all rose bushes is said to

be one which is trained upon one side of the cathedral of Hildesheim in Germany. The root is buried under the crypt, below the choir. The stem is a foot thick, and a half dozen branches nearly cover the eastern side of the church, bearing countless flowers in summer. Its age is unknown, but documents exist which prove that a Bishop Hezilo, nearly a thousand years ago, protected it by a stone roof, which is still extant.

The largest rose bush is a white Banksia—so called after Lady Banks—in the Marine Garden of London, which was sent there, the first of its kind, in 1812, by Bonpland. Its numerous branches, some of which measure eighteen inches in circumference, cover an immense wall to the width of nearly sixty feet, and at times, in early spring, as many as fifty thousand flowers have been counted on this queen of all roses.

Tens of thousands of trees were lost last season, throughout the West, from inattention to mulching. Evergreens need mulching no less than fruit or other deciduous trees—in fact more, for their fine fibrous roots will ramble near the surface, however deep the tree may be set. Never stir the soil about an Evergreen, but use mulch unsparsingly, to the full extent of the roots.

The *Florist and Pomologist* says, "don't cut asparagus when intended for home use, but let it grow to the height of 6 or 8 inches, then break it off at the proper length; it is as brittle as an icicle, and can all be eaten, which is more than can be said of the article usually sold in the markets."

The Pea Bug can be effectually got rid of, by taking the seed when ripe and dry; put it in bottles and cork it up perfectly air-tight. The larvae, though not so minute as not to be seen by the naked eye, will die for want of air, just like any other living thing.

TOMATO OMELETTE.—Six eggs, a wine-glass of flour, four ripe tomatoes, pepper and salt to the taste, milk sufficient to mix the flour smoothly. Beat the eggs very light, stir in the mixed milk and flour, pell and chop the tomatoes, and add with the pepper and salt. Have a pan with some hot butter, pour in the mixture and fry it. When done, it may be lapped half over or not, according to the fancy. Do not turn it.

Asa Baldwin, in Chataqua County, N. Y., says that fifty years ago a very lousy cow of his ate ten or twelve onions, and in fifteen hours afterwards the lice had disappeared. He has tried the same remedy many times since, with the same result in each case. This is simple and worth trying.

BEEF TOMATO PIE.—Take cold roast beef, cut in small thin slices; have the tomatoes ripe and peeled; line a deep dish with a light biscuit crust; put a layer of beef, then a layer of sliced tomatoes; salt, butter and pepper to taste, until the dish is nearly full; put on the top crust, cutting a gash from top to bottom of the dish that it may not burn. Bake two hours in a slow oven.

A singular disease has broken out among cows in Kansas City, Missouri. A local paper states that there are not less than two hundred blind cows in that place. Some of the dairies have had in the last week fifteen blind milkers at one time. The eyes begin to swell a little, lasting generally from five days to two weeks. As soon as the swelling commences the eyes begin to run clear water, just as though some hard and foreign substance was beneath the lids. After the running ceases, a hard white film covers the eye balls, completely destroying the sight. This disease does not affect the general health of the cow. Her appetite is as good as ever. There appears to be no change in the quality or quantity of the milk, no pain, no uneasiness of any kind, no peculiar thirst indicating fever, and, indeed, no symptoms that would indicate disease. The eyes alone suffer and are destroyed. The disease is represented as epidemic throughout Missouri.

The Dairyman's Ten Commandments.

The following, by Mr. T. D. Curtis, was read before the Central New York Farmers' Club:—
I have been repeatedly urged to draw up a set of rules for the observation of the patrons of cheese-factories. I have preferred, like Moses, to give my inspiration in the form of a decalogue, without the observance of which no patron need hope to make the land flow with milk and money.

1. Thou shalt not abuse or worry thy cow—thou, nor thy maid-servant, nor thy man-servant, nor thy dog, nor the boy whose business it is to "drive up" the cows,—but thou shalt at all times treat thy cow gently and kindly, securing her confidence, and allowing no one to molest her or make her afraid.

2. Thou shalt not starve or stint thy cow for food, nor give her poor, innutritious or unwholesome food of any kind whatsoever, but an abundance of that which is palatable and good for her system, that she may keep in good flesh, have a smooth coat, and a clear eye; and thou shalt give her salt to lick whenever she liketh.

3. Thou shalt in no way deprive, nor allow thy cow to be deprived of plenty of clean water to drink, not compel her to wallow in mud, nor to go a long distance to get water, nor to drink out of mud-holes, stagnant ponds or pools, nor to sip water from holes in the earth made by her own feet, or the feet of other animals; but thou shalt give her an abundance of spring, brook or well water, kept clean enough for thine own use.

4. Thou shalt give thy cow ample shade in summer, and a warm shelter in winter; and the latter shall be kept clean and sweet, and be withal well ventilated; and thy cow shall have room for freedom of motion, a clean bed to lie on, and an opportunity for such out-door exercise as she may desire, to the end that her blood shall freely circulate, that her muscles shall not deteriorate and become weak or stiffened, and that her digestion and appetite shall remain good.

5. Thou shalt milk thy cow in a cool place in summer, and when she is not heated or fretted, but standeth quiet and cheweth her cud, and in a clean place at all times; thou shalt clean thy cow's bag, milk her gently, and avoid getting filth into thy milk-pail; and thou shalt not save for thine own or thy neighbor's use, or carry to the factory, any milk drawn from a cow with a calf less than four days old, nor milk drawn from a cow suffering from horn and hoof disease, or horn distemper, or fever, or garget, or any other disease, nor from any cow which thou hast good reason to believe is suffering from ill-health.

6. Thou shalt keep everything about thy stable and dairy-house scrupulously clean; thou shalt thoroughly cleanse and scald—not merely rinse in hot water—all the pails, cans, strainers, pans and other utensils used in milking, carrying milk, setting milk, or manufacturing it into any of the products of the dairy; and thou shalt carefully keep thy milk from exposure to a foul, tainted or diseased atmosphere; so shalt thou prevent the oily particles in thy milk from absorbing bad odors, and fever malaria, and the virus of contagious disease; and thou shalt spare thyself the sin and shame of delivering milk that "tasteth of the barn-yard," and of introducing disease into the families of those who eat of the products of the dairy.

7. Thou shalt cool and air thy milk as soon as drawn from the cow, by using the best appliances at thy command—not by putting cold water or ice in it, for that would be a violation of both the law and the commandments—but by bringing thy milk in contact with a cool surface above the freezing point, and exposing thy milk in thin sheets to a clean atmosphere, that it may become charged with oxygen, which hath a wonderful virtue to prevent souring or tainting. It is shrewdly suspected by some of the prophets that airing milk is of more value than cooling it, and experience showeth that stirring with a dipper hath a preservative effect that should commend it to every patron of a cheese-factory. Thou shalt confine thy milk in a covered can as short a time as possible, and protect it from the rays of the sun and the hot atmosphere. A woolen blanket thrown over the can, and a canvas stretched over the milk-wagon, would be found quite efficacious—the blanket not to be used unless the milk is cooled.

8. Thou shalt not water thy milk by mixing with it the contents of the spring, the well, the cistern, the brook, the watering-trough or other source of water supply; nor by feeding thy cow villainous slops, whey, or extremely succulent food, whereby the contents of thy milk-can shall be increased in quantity at the expense of quality, with a view of cheating thine own soul and stand in constant danger of the penalty of the law.

9. Thou shalt not skim thy milk by taking off the cream that riseth in the can over night, that thou mayst have a little cream for coffee; nor by setting it in pans or other utensils over night; nor by saving strippings, nor by any other process—for if thine own sense of honesty doth not restrain thee, thou shouldst constantly have the fear of the law and of the watchful eyes of thy neighbors before thee. It is better

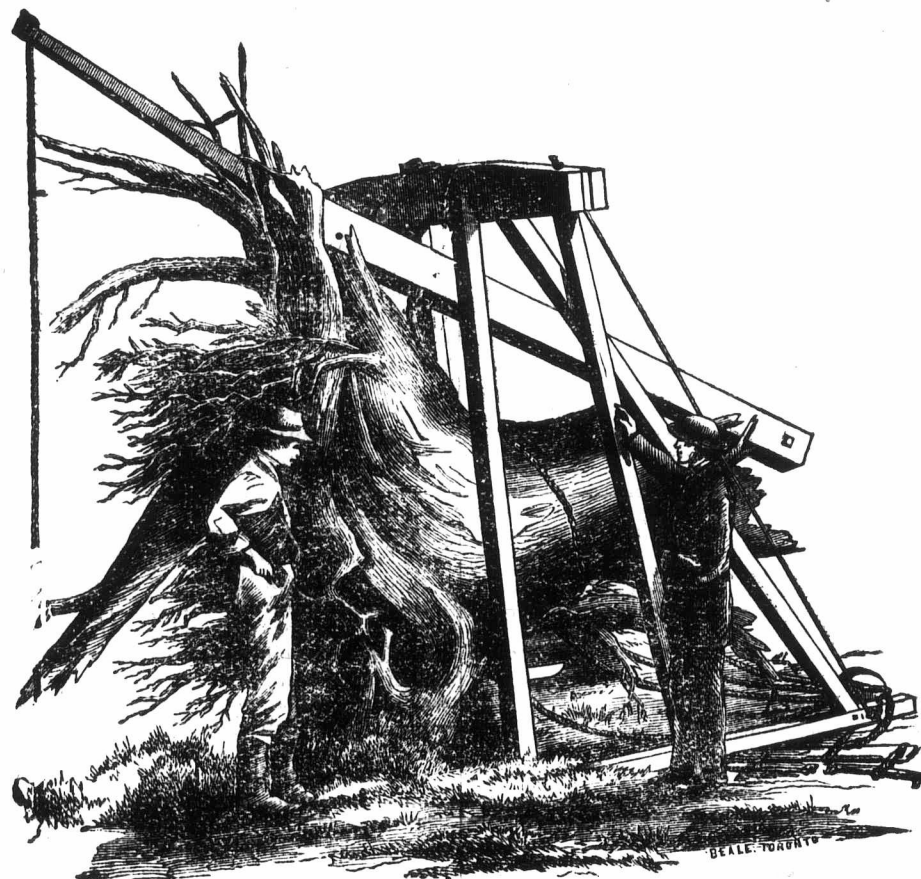
to save out a small mess of milk for thine own use.

10. Thou shalt not commit adultery by adulterating thy milk with burnt sugar, chalk, soda, salt or any ingredient or compound whatsoever; nor by giving vile stuffs to thy cow; nor by any means, trick, device or process known or unknown to the naturally depraved. The laws of the State, the health of the community, and the lives of the people, especially of the hosts of little ones who are likened unto the kingdom of heaven, cry out against this unpardonable sin.

Under the new dispensation, I add the 11th commandment:

11. Thou shalt love thy neighbor as thyself, and keep the Sunday's milk at home for the purpose of making sweet butter for the use of thy family, and that the cheese-maker and all those who labor with him in the factory may rest, and worship according to the dictates of conscience on every Sunday. Thereby shalt thou meet the requirements of the Scriptures and of the Constitution of the United States, and prolong the lives and improve the morals of a large and increasing class of useful citizens.

By faithfully observing these commandments, the dairyman shall keep a clear conscience, avoid annoying and expensive prosecutions, retain the respect of his neighbors, secure a competency of this world's goods, live a peaceful life, and in his old age "approach the bed of death like one who wraps the drapery of his couch about him and lies down to pleasant dreams."



The Dominion Stump Extractor.

The above illustration was engraved from a photograph taken on a farm two miles from this city. Numerous spectators witnessed the extraction of this old leviathan of the forest. It was a pine stump, and most probably, would have occupied the land for fifty years to come, if not removed. We have oak and walnut stumps on our farm with but little symptoms of decay, and we cut the trees down twenty years ago. Land has increased in value at such a rapid rate that many enterprising farmers find that it pays to extract the stumps; but we do not consider it pays in localities where land is cheap and of poor quality. On land that will sell for \$50 per acre, as soon as the timber is taken off it, the stumps should be removed, and it well pays the expense where the land is to be cultivated, sold as building lots or for railroads or county roads. The old screw machine was the implement used for extracting stumps until skill and ingenuity invented the Dominion Extractor, which is a combination

of lever and multiplied lever. The old screw machine was too slow. The Dominion machine does two or three times as much work in the same time, and only one span of horses is required to work it. The machine is carried on a good Democrat waggon, and it can be unloaded and set up in fifteen minutes. The horses are hitched to it and it is hauled over to any stump required to be pulled. A large chain is then hitched round one of the main roots and a small one round the stump to which is attached a stretch block. The rope is passed twice through the blocks in the end of the large lever. The horses are attached to the rope and draw down the lever, which loosens the stump; the lever is then pulled down again by a rope fastened to a small lever which is attached to the large lever, the chain is shortened, the horses take another pull and up comes the stump. A large stump may require several hitches, as there are notches on the top of the lever

which regulate the distance to raise the stump each time. A small stump can be suspended in the air by one pull of the horses. Any man with common ingenuity can use the machine at once, and all that have used it or seen it used, are highly satisfied with its work, and no one having once seen it working would ever purchase any other yet invented. There has been some difficulty in regard to the patent right, as the agent of it was remiss in his business and machines could only be used in certain localities. But now the enterprising firm of Plummer & Pacey of this city are prepared to supply the machines and to send them to nearly all the counties in Canada, together with any information required. There are three kinds made: one at \$50, for stumps 1½ feet and less; another at \$70, for stumps 2½ feet; and a third at \$120 for any stump that can be found in Canada. The largest size require a double lever and are worked with two span of horses. We do not consider it greatly superior to the screw machine for stumps over 2½ feet in diameter

but for smaller sized stumps it will take out three to every one taken out by the screw machine in the same time. The smaller ones are worked by one horse.

Proper Position for Preserving or Packing Eggs for Hatching.

The famous discussion as to which end of the egg was the right one to open at the breakfast table, was not by half so interesting to connoisseurs as the knowledge to poultry-breeders would be which end of a hatching egg should be placed uppermost, when stored away for hatching purposes. Mr. Geyelin, in his well-known pamphlet, advocated the placing of all eggs intended for hatching with their large end downwards. But Mr. Geyelin was ahead of his time—few people paid much attention to his recommendation; and, like many others of his suggestions which were opposed to all practical knowledge of the subject, they went unheeded—breeders still stored and packed their eggs in the old way, with the small end downward.

We have recently obtained more information on this subject, however—whether through the instrumentality of Mr. Geyelin's pamphlet or not we cannot say—but it seems a lady at Wickham Market (England), whose name has not reached us, nearly three years ago, wrote a letter to Mr. Wright, the well-known poultry writer, on the subject, which he recently gave to the public, after keeping it secret for two years, for the purpose of experimenting on the information conveyed by it. We don't know that breeders will thank this gentleman for withholding such valuable information so long; it is, however, satisfactory to know, that the experiments made by Mr. Wright during that period all go to confirm this lady's recommendation. She said: "Keeping eggs on the small end appears to me to cause the air-bubble to spread, detaching it from the shell, or rather from its membranous lining; and after being so kept for a fortnight, the air-bubble will be found to be much spread, and the egg to have lost much of its vitality, though still very good for eating." She then described her success by keeping the eggs in the contrary position, saying: "Owing to this method of storing, such a thing as a stale egg has never been known in my house; and, as regards success in hatching, for several seasons, when I was able to attend to my poultry myself, of many broods set every egg produced a chicken." Such is the testimony of this lady. Let us now hear the result of Mr. Wright's experience. He says: "After considerable and patient testing of both methods throughout two seasons, I can say, without hesitation, that there really is a marked difference between the vitality of eggs kept more than a few days, according to the position in which they are placed. It will be found, as this intelligent lady states, that the air-bubble in one case is much more spread than in the other. This can be tested at once, but of course of itself proves nothing. The great point is—and it is in this way the matter is especially interesting to all fanciers—that eggs are perfectly good for hatching at a month old when stored with the large end downward; and thus the eggs of valuable birds may be kept till the hen is ready for them, or eggs may be sent from distances which, under the old plan, would give little hopes of success." This information is interesting to breeders, and ought to be acted upon. The importance of preserving the vitality of hatching eggs is too well known, by fanciers, and requires no comment from us.—*Canadian Poultry Chronicle.*

MARKETING GRAIN.—We have occasionally inquiries as to the propriety of disposing of grain as soon as ready for market, or of holding for a rise later in the season. We can not with propriety advise in a matter on which so many men have widely different ideas, yet there are some circumstances in which the farmer may find himself in doubt as to which course should be followed, and make a man's interest apparent. First. A farmer should go to market without loss of time when other parties have an interest in his crop. If the merchant has been promised a part of the proceeds, it is only strict honesty to fulfil the promise at the earliest day. Second. It is never wise for a farmer to borrow money rather than sell his crop. He will afterwards keenly regret this course. The anxiety of the speculator will consume him, and even should he succeed in gaining an advance, the cost of interest will doubtless eat it up. If a farmer has money at hand and grain in his barn, he is independent of contingencies and can do as he pleases; but for all others, we think that the sooner they go to market, the better.

Although oak timber in England is not of the value that it was prior to the invention of iron ship-building, it continues to fetch a considerable price. Lately a few of the magnificent oak trees in Burghley Park, having shown symptoms of decay, were cut down and sold at auction. The size of the trees and the value of the timber may be inferred from the prices realized. One tree brought £72, a second £61, a third £64, and the whole 30 in number realized £300.

HANDL

To be a success keeping them know at all t do this satisfi able frame h open it and t "But," says should not d Yes, we know not careful, a hit them on and smashing will be caref needed, there wish to open it, so as not out and in, a knife or some weather is w the honey-bo a particle. as soon as y some, to ke three frames out, and w away a little After the fire by setting o hive. With want smoke goes, with t smoke.

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APIARY.

HANDLING BEES, SMOKER, ETC.

To be a successful bee-keeper, the persons keeping them should see their bees often, and know at all times their actual condition. To do this satisfactorily we must have the movable frame hive in some form, and be able to open it and take out the frames at pleasure. "But," says one, "the bees will sting." I should not dare open a hive full of bees. Yes, we know the bees will sting if you are not careful, and in taking out the frames you hit them one against another, thus jarring and smashing the bees and honey. But if you will be careful, and use a little smoke when needed, there will be no trouble. When you wish to open a hive, step to the back side of it, so as not to interfere with the bees flying out and in, remove your cap, and with your knife or something else, pry gently. If the weather is warm the propolis will be soft, and the honey-board will come off without jarring a particle. Have on hand some smoke, and as soon as you raise the honey-board blow in some, to keep them quiet. Begin two or three frames from the one you wish to take out, and with your knife or fingers move them away a little, then take the one you wish out. After the first you can take out any you wish by setting one down on the outside of the hive. With the blacks and hybrids you will want smoke; but as far as my experience goes, with the pure Italians you will need no smoke.

I will describe a smoker which works with me like a charm, and what suits me I think will suit any one. Take a piece of sheet iron and make a tube eight inches long and two inches in diameter. This is easily done with small rivets used by tinnermen, and almost any person can make it. Now, make a plug for each end, tapering each down to a point. Bore a quarter-inch hole in the plugs, and cover the large ends of the plugs with wire cloth, which should be bent so as to raise them in the centre; this keeps trash from filling the holes in the plugs. Next, one end is nailed fast, and the other is left moveable, so that it may be taken out when the pipe or tube thus prepared is to be filled with decayed wood, which is to be kindled at the open end, of course. You yet want a handle, which is made by boring a two-inch hole in a piece of half-inch board, and shaping it to suit you. Then slip the tube into it, and it may be fastened by inserting a nail between the wood and the tube. One plug should be shaped convenient to be held in the mouth when blowing smoke through the tube. When you wish to use the smoker, insert the plug made for the mouthpiece, and then you can smoke the bees sufficiently in a short time. By adding fuel occasionally, you can keep it burning any length of time, keeping one end open when not in use. Do not use tobacco for smoke, as it stupefies the bees and makes them irritable for several days after.

Now a word for the Italians. I find them very peaceable when compared with the black bees. I can open a hive of Italians at any time when they are raising brood, without smoke, and not have one offer to sting me, unless by some mishap I jar them so as to arouse them, which takes considerable. Beside this, you can find the queen readily; the young bees do not drop from the comb as the black ones do, and as far as my experience goes, they will make one-third more honey. I have one stock of Italians that gave me one good swarm and 125 pounds box honey the first season. The Italians, to be pure, should all have three yellow bands, and some will occasionally show the fourth.—G. M. Doolittle, in *National Bee Journal*.

Chinese Mode of Taking Honey.

Mr. Fortune, the well-known English botanist, thus describes the mode adopted by the Chinese for taking honey from bee-hives. He says: "The Chinese hive is a very rude affair, and looks very different from what we are accustomed to use in England. It consists of a rough box, sometimes square and sometimes cylindrical, with a moveable top and bottom. When the bees are put into a hive of this description it is rarely placed on or near the ground, as with us, but is raised eight or ten feet, and generally fixed under a projecting roof of a house or out-building. My landlord, who had a number of hives, having determined one day to take some honey from two of them, a half-witted priest, who was famous for his powers in such matters, was sent for to perform the operation. This man, in addition to his priestly duties, had charge of the buffaloes which were kept on the farm attached to the temple. He came around in high glee, evi-

dently considering the qualification of no ordinary kind for the operation he was about to perform. Curious to witness his method of proceeding with the business, I left some work with which I was busy, and followed him and the other priests and servants of the establishment to the place where the hives were fixed. The form of the hive in this instance was cylindrical; each was about three feet in length, and rather wider at the bottom than at the top. When we reached the spot where the hives were placed, our operator jumped upon a table there for the purpose, and gently lifted down one of the hives and placed it on its side on the table. He then took the movable top off, and the honey-comb, with which the top was quite full, was exposed to our view. In the mean time an old priest having brought a large basin, and everything being ready, our friend commenced to cut out the honey with a knife apparently made for the purpose, and having the handle almost at right angles with the blade. Having taken about one-third of the contents of the hive, the top was put on again, and the hive elevated to its former position. The same operation was repeated with the second hive, and in a manner quite satisfactory. "But," it may be asked, "where were the bees at that time?" and that is the most curious part of my story. They had not been killed by the fumes of brimstone, for it is contrary to the Buddhist creed to take animal life; nor had they been stupefied with fungus, which is sometimes done at home; but they were flying about over our heads in great numbers, and yet, although we were not protected in the slightest degree, not one of us were stung; and this was more remarkable as the bodies of the operators and servants were completely naked from the middle upwards. The charm was a simple one; it lay in a few dry stems and leaves of a species of Artemesian wormwood, which grows wild on these hills, and which is largely used to drive the pest, mosquito, out of the dwellings of the people. This plant is cut early in the summer, sun-dried, then twisted into bands and is ready for use. At the commencement of the operation which I am describing one of the substances was ignited, and kept burning slowly as the work went on. The poor bees did not seem to know what to make of it. They were perfectly good-tempered, and kept hovering about our heads, but apparently incapable of doing us the slightest injury. When the hives were properly fixed the charm was put out, and my host and his servants carried off the honey in triumph."

Scraping Apple Trees.

We hardly take up a work on horticulture, or even an agricultural paper, without seeing an article advising scraping apple trees.

My orchards are from ten to sixteen years planted, and until within three years I have always scraped the bark in the spring or mid-summer. Now for the results. I often found small patches of bark, about the size of a fingernail, discolored, having the appearance of being sunburnt on applying a knife, cutting dry and hard—dead to all appearances. Now my trees look like shag-bark hickory, all the old bark hanging by a small part in the middle so loosely that it can be taken off by the thumb and fingers better than with a scraper. These little pieces of bark, about the size of my hand, act as a perfect sunshade for the tender new bark underneath, which is smooth, thrifty, of a pale brown color, with no more indications of diseased portions in it than is found in the bark of a maiden tree of the same variety.

I have never allowed grass to grow under my trees. I feed them well, keep the soil mellow, shoe deep, all through the growing season, with a small harrow made for the purpose—with five (of Ford's) teeth, that will not catch the roots—drawn by two horses, the driver riding on a seat to shun the fate of Absalom among the limbs, the horses going at a quick pace. One day will do up four acres, going both ways; leaving the soil, if dry, light and pliable, and as porous as granulated sugar, five inches deep.

A horse may be groomed until doomsday, but if he does not have good food he makes a sorry figure and is unable to work. So with an apple tree; it may be scraped and washed, but if it don't have food and culture, it soon becomes a painted sepulchre, a receptacle for the labor lost trying to coax Nature to violate her great immutable law of compensation.

Some theorists entertain the idea that the elements necessary to produce a good crop of apples are deficient in the soil of late years. Is not the law of compensation violated? If we draw off the yearly crop, can we replace all the elements in the soil by manure, unless that manure is made of that kind of material? The inquiry has often been suggested to my mind, while rambling through the woods where no cattle roam: "Why is it that those apple trees found among the woods are such constant bearers?" Is it because all the fruit perishing, leaves all its organic and inorganic elements to pass into the soil as food, to be taken up by the tree to make its crop? The fairest apples I grew last year were on a tree under which a lot of cider apples rotted the previous year. The original Fall Harvey tree sprang up and grew

(in this town) within six feet of a cider mill. It yielded yearly great crops. After the mill was removed from the building, the tree commenced to fail, and is now gone. Had the elements of the acids anything to do for these trees, or were they accidental circumstances?

I have a lot of pomace from five or six thousand bushels of apples, that I shall mulch a part of my orchard with next June, after my second harrowing. As a manure for grass or any hoed crops, it is worthless.

This matter may all be a crotchet, a whim of my brain, but I am going to give it a good trial, and perhaps I may report the results to you some future time.

I know it is getting out of the old rut, but the old ruts are so deep there is no prospect of success in pulling in them. When the hub rubs it is time to look at your ways. I have fought the battle, won the trees, and good ones too; now I want the fruits of the victory.—J. S. NEEDHAM, in *Tilton's Journal of Hort.*

Smut in Wheat.

Mr. Hope, of Fentonbarns, a distinguished Scotch agriculturist, expresses the following opinion on pickling seed wheat as a preventative of the above difficulty:—

I have long been of opinion that ball-smut is a fungus propagated by adhering to the seed, and unless this fungus is destroyed before being sown, all the grains infected by it are sure to produce diseased ears. I must remark here that smut is of two kinds. In one of them the smut or black powder flies or wastes away before the sound wheat becomes ripe, while in the other the powder is enclosed in a skin frequently strong enough to remain unbroken when passing through the threshing machine. The larger number of balls, however, do get broken, the powder discoloring the sample, giving it a disagreeable smell, and a peculiar oily feeling, which judges know at once. It is this variety which is destroyed by pickling. The other appears to be propagated in some other way; at least as yet no remedy has been found for checking it. Many years ago, I rubbed smut balls among clean wheat, then pickled part and sowed both. The result was the pickled seed produced a healthy crop, while of the unpickled portion there was hardly one sound ear. I have again and again seen the sowing of fields finished with unpickled seed tell to the spot where the dressed and undressed seed met. Old wheat should not be pickled, as its vitality is sometimes totally destroyed by it, and the fungus itself seems incapable of growth when upwards of twelve months old. I am far from saying that ball invariably follows when undressed wheat is used for seed, as by a careful selection of seed this may be avoided for years. But the little trouble and expense saved by not pickling seed is trifling, indeed, in comparison to the security given. I have tried pickling barley for blackheads, where the powder blows off before the grain is ripe, but, as in wheat, without success. Still, I think it is worthy of further trial, as it has appeared to me, for the last two or three years, that many of the blackheads in both oats and barley are more nearly allied than formerly to the true ball in wheat. I should like to see experiments made by steeping grain different lengths of time in sea water, or in water salted to the strength of swimming an egg. This is said to be a remedy against mildew and rust in warm climates, and possibly it may prove equally efficacious here.

Which is the Best Rotation?

In some respects a rotation or system of cropping which starts from seed with a summer fallow and ends with a crop of spring grain, is superior to one that begins with a hoed crop and finishes with wheat. If a sod is turned in the spring and a hoed crop put in, there is no opportunity for enriching the soil by turning under a grass crop. Cultivation of the hoed crop must also be depended on solely for subduing the land for the spring grain which succeeds. There is no chance for fall or summer fallowing. Wheat succeeds the spring grain so closely that there is barely time to plow and mellow the soil, and not sufficient for destroying weeds. After the wheat comes clover or grass, which is usually mown or pastured, and thus some of its fertilizing powers are lost to the field. This course, however, is a good one for corn, if the sod is not too firm and old, and middling good for barley, oats or spring wheat, but without liberal manuring, is a poor one for the last crop—winter wheat. But it is a convenient rotation, and the one usually followed—where any is pursued—in Western New York.

But let us examine a somewhat different system. Suppose a summer fallow begins the rotation. The clover is then used to enrich the soil instead of being mown or pastured. There is a good chance for killing weeds and bringing the land to fine tilth, which are objects much to be desired, and to attain which some of our best farmers persistently cling to the summer fallow. The wheat crop, which is probably the most important, has the advantage of occupying the soil when under the best preparation, and in the best condition for it to succeed. After the crop is harvested, there is time to fall fallow, again giving battle to weeds, and preparing the soil in the best possible manner for a hoed crop. The two fallowings, and the cultivation of the hoed crop, should free the soil of weeds, and render the success of the last crop in the rotation—spring grain—certain. Manure should be applied to one, at least, of the two last crops, and clover sown with the spring grain. If there is considerable manure used, and the land is naturally fertile, the field may be again taken up and summer fallowed for wheat, the year succeeding the spring grain, or it may be allowed to lie in pasture or meadow as long as desirable.

How to Make a Roller.

A correspondent of the *Ohio Farmer* gives the following plan:—First, I cut a solid, smooth, white oak log, six feet long; then struck a circle on the ends and hewed it, working to a line so as to make it straight and round, taking off the sap; it was then twenty-two inches in diameter, (two feet is the right size,) then sawed it in two, then with an axe cut the inner end of each, concaving one and one-half inches, bored the ends and set one and one-fourth inch journals ten inches long, sharpened at the point, having a collar on them; the outer ones three inches from the end, driving it snug to the log; the inner ones one and three-fourth inches from the end. I mounted one at a time on bearings, then two men run it with their hands as a squirrel does his cage, and with a jack-plane set coarse turned it smooth. For a frame, I made a square sash of three by four scantlings, just long enough for the rollers to run in, and eight inches broader than they were in diameter. The tongue is thirteen feet long, four inches square at the back end, halved on to the middle of the frame and fastened with three-quarter inch bolts, bracing it with iron bars to the frame; it is cut to fit the concave ends of the roller, bored through in the middle for both journals; it is cut to one and one-half inches at the outer edge of the rollers, which leaves a space between them of two and one-half inches, which is no objection. They need no boxes, only thick plates spiked to the inside of the frame for the collar to run against with good hard seasoned wood for frame. I burn the holes with one of the journals, and provide an oil hole. It runs light and well; and it cost me just eight dollars, and is better for all practical purposes, and will probably last longer than some that I have seen work, that cost from \$40 to \$60.

Barley.

Barley draws more mineral substance from the soil than does wheat. It is an exhaustive crop, but unlike wheat or oats, its roots spread through and gather their food from a few inches in depth of the soil. The roots, running through the top soil, keep it loose, and a barley field plows easier after the crop than one sown with oats. It is a much better crop than oats to precede wheat. A light, fertile soil is required, and it should be well pulverized to the depth of four or six inches. An inverted sod is not safe; it should follow a hoed crop or a fall fallow. Weeds injure the yield. Drilling is preferable to broadcast sowing, but the seed should not be covered deeper than two inches—better shallower than deeper. The roller should be used after sowing, if the soil be suitably dry. It is the best of all spring crops to sow clover or grass seed with. Ashes are found to be an excellent special fertilizer.

ONTARIO BEE KEEPER'S ASSOCIATION.—The annual meetings of this Association always take place at the time and place of the Provincial Show, and it is proposed to hold special sessions in London this year during the time of the Western Fair. Subjects intended to be brought up for discussion will please be forwarded to the undersigned before the 10th of September next, after which further notice will be given of the meetings. A. C. ARWOOD, Sec. & Treas., O. B. A., Vanneck P. O.

BARREN APPLE TREES—REMEDY.—The St. Jo. (Mich.) Herald says:—First, the Northern Spy, Red Astracan, and a number of other choice varieties of apples, have failed through this region to bear apples, although ten or fifteen years old. Two years ago, Dr. Hull, of Alton, delivered a lecture at Benton Harbor, in which he recommended root-pruning. Mr. A. O. Winchester, of St. Joseph, of Archer & Co., Nurserymen, had ten Northern Spy apple trees, thirteen or more years old, which had never blossomed or borne a crop. After the lecture, though late in the season, he directed his man to root-prune one tree, and half root-prune another. Last year, no favorable results appeared, probably from the lateness of the root-pruning. This year, the tree which was root-pruned all around, is full of blossoms, while that side of the tree half-root-pruned alone is full of blossoms, the un-root-pruned side having none at all. Every other Northern Spy apple tree, as usual, contains no blossoms.

CANADA is blessed with one of the best wheat crops she ever had, but roots will be a light crop.

Exhibitions for 1871

- CANADA.
- Dundas, Dundas, Aug. 30—Sept. 1.
 - Brockville and Elizabethtown; Unionville, Sept. 19, 20.
 - Toronto; Toronto, Sept. 19 21.
 - Blandford; Plattville, Sept. 22.
 - Vespra; Midhurst, Sept. 22.
 - Provincial; Kingston, Sept. 24 29.
 - Western Union; London, Sept. 26—29.
 - Wellington, N.; Harriston, Sept. 27.
 - McNab; Balmer's Island, Sept. 27.
 - Saltfleet and Binbrook; Stony Creek, Sept. 29.
 - Southold and Dunwich; Iona, Sept. 29.
 - Osborne; Exeter, Oct. 2, 3.
 - Renfrew (South); Renfrew, Oct. 3.
 - East Wawanosh; Wawanosh, Oct. 3.
 - Waterloo; Waterloo, Oct. 5, 6.
 - Barton and Glanford; Glanford, Oct. 10.
 - Esquimaux; Georgetown, Oct. 13.
 - Otonabee; Keene, Oct. 13.
 - Northumberland (west) Cobourg, Oct. 17, 18.
 - Arts and Manufactures; Quebec, Sept. 12—15.
 - Central Fair, Hamilton; Oct. 4—6.
- UNITED STATES.
- New England; Lowell, Sept. 5—8.
 - Am. Pomological; Richmond, Va., Sept. 6—8.
 - Cincinnati Industrial; Cincinnati, Sept. 6—Oct. 7.
 - Ohio (Northern); Cleveland, Sept. 12 17.
 - Swine Exhibition; Chicago, Sept. 19—21.
 - Ohio (Central); Mechanicburg, Sept. 19—21.
 - Wisconsin; Milwaukee, Sept. 25—29.
 - New York; Albany, Oct. 2—6.
 - Michigan (Central); Lansing, Oct. 3—5.

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- 130—Winter Wheat; The Colorado Potato Bug and Potatoes; Simpson's Horse and Cattle Spice; To Our Friends; Manitoba; The Scott Wheat.
- 131—Farrier's Department; Getting Wet; Katie Lee and Willie Grey; Horse Shoeing; Honey-producing Plants; \$50 Challenge; Texas Cattle.
- 132—From Red River; Western Fair; The Apiary; Orchard Grass.
- 133—Carter's Ditching Machine; Crops; Canada Thistles; Letter from Australia; Does Farming Pay? Grant's Hay Fork; Mulch; Horace Greely's Agricultural Maxims; Tanning Sheep Skins with the Wool on; Price of Horses in Europe.
- 134—How to Grow Peas; Preparing and Preserving Rennet; The Potato Bug; Lime and Salt; Picking Cucumbers.
- 135—Mrs. Kate Hunnibee's Diary; Lunches; Paving the Printer; Seasonable Notes.
- 136—The Dairyman's Ten Commandments; The Dominion Stump Extractor—Illustration; Proper Position for Preserving or Packing Eggs for Hatching; Marketing Grain.
- 137—Apiary; Handling Bees, Smoker, &c.; Chinese Mode of Taking Honey; Scraping Apple Trees; Smut in Wheat; Which is the Best Rotation; Barley; Ontario Beekeepers' Association.
- 138—Barren Apple Trees; Exhibition for 1871; Index; Markets; Youth's Dept.; Emporium Price List; Clubs.
- 139—Noble Sentiments; Railway Time Tables; Pain-Killer; Burlington; Advertisements.
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London Markets.

LONDON, Saturday, Aug. 26, 1871.
The market this day began to look like olden times. The space allotted for the exchange of agricultural products was well filled up, and a lively business transacted. The Grain market was liberally represented with Wheat, Barley, Peas and Oats—better than any previous day this week. White Fall Wheat: good receipts and very fair prices going; the lowest and highest figures ranging from \$1 to \$1.14½—the general run, however, was \$1.08, \$1.09, \$1.10 and \$1.11. Red Winter Wheat: fair supply—new crop selling at \$1.05 a \$1.08; old, 80¢ a 95¢. Spring Wheat: only one load, among the first of the new crop, brought \$1.10. Barley: a few loads; fetching from 40c to 54c. Peas: generous receipts; commanding from 55c to 63c. New Oats going at 33c to 35c; Old at 40c to 46c. A fair supply of Butter, but the dry weather has materially lessened the quantity made, and prices are firm; Keg brings from 14c to 15½c; in pails and crocks 15c to 16; in rolls 18c to 20c—the latter figure prevails. Some Factory Cheese sold at 8c per pound by the lot. Potatoes plentiful, at 40c to 50c—the continued drought has given to them a slight upward tendency. Vegetables in good variety, and at reasonable rates; competition in these are hardly as keen as in former seasons, which may be accounted for by the dry weather, causing a less abundant yield. Apples plentiful, at 75c to \$1. Chickens from 25c to 40c per pair. Honey, in the comb, from 15c to 18c per pound. Hay from \$10 to \$12. For other articles see list.

Wholesale Market Prices.

White Wheat, per bush.....	1 00 to	1 14½
New Red Winter Wheat.....	1 05 to	1 08
Old " " " " " " " " " " " "	81 to	95
Spring Wheat.....	1 10 to	1 10
Barley.....	40 to	54

Montreal Markets.

Montreal, Aug. 26.
Flour firm and steady. Extra state and western, 100 bbl. lots, at \$5 70 to \$5 75; fancy scarce, and worth \$5.50 to \$5.55; ordinary super taken to a limited extent at \$5.30 to \$5.35; choice and strong ranging upward, according to quality; No. 2 in fair demand, at \$4.95 to \$5.00—Wheat: a cargo of Mill No. 2 at \$1.21½; no reported transactions in Canada varieties. Peas dull and drooping. Provisions heavy, and only taken for consumptive use. Butter dull and virtually nominal, in absence of supplies to suit the demand. Cheese nominal; 8c to 9c. Ashes steady.

New York Markets, Aug. 26.

Cotton at 19c for middling uplands.
Flour market 10c to 20c better; receipts 14,000 bbls; sales 10,000 bbls, at \$5 10 a \$5.50 for superfine State and Western; \$5.85 a \$6.60 for common to good extra State and Western; \$9.00 a \$9.00 for good to choice extra western.
Wheat is active, 1c to 2c better; receipts 221,000 bushels; sales 209,000 bushels, at \$1.49 a \$1.44 for No. 2 spring afloat; \$1.45 a \$1.47 for new winter red and amber western.
Rye quiet; receipts 9,000 bushels.
Corn unchanged; receipts 267,000 bush; sales 98,000 bushels, at 68½c a 68½c for western and mixed.
Barley dull and nominal.
Oats: market steady to-day; receipts 100,000 bushels; sales 32,000 bushels, at 42c a 50c for good to choice.
Pork steady, at \$3.75 for new mess.
Lard steady, at 9c a 9½c for steam; 10c for kettle rendered.
Butter 10c a 30c for new State and Western. Cheese 5c a 10½c for common to prime.
Petroleum: crude, 13½c a 13½c; refined, 24½c a 24½c.

Albany Live Stock Market.

Albany, Aug. 26, 1871.
CATTLE.
The market opened inactive, and the supply is 28 cars short of last week, and the quality is not so good. Prices of choice are heavy. — Butcher stock are held fully up to last week's prices. For medium weights a concession of 25¢ has been made to effect sales. The highest price realized was \$6.50 and fair weights sold down to \$5.50 a \$6. Milch cows are in better demand; receipts 100; all sold at \$33 a \$40, the latter for fancy.
SHEEP AND LAMBS.
Receipts 51 cars. The market is firm, with ½c advance on both. The ruling price for sheep is 4½c a 6½c. Lambs at 6½c a 7½c.

Youth's Department.

Answers.

TO PICTORIAL PUZZLE IN AUG. NUMBER.
Correct answers by Bella and James Hooper. Honesty is the best policy.

TO PUZZLES.

Correct answers by Bella; to No. 2 by James Hooper.

1. Goosequill. 2. Yesterday.

ARITHMETICAL PUZZLE.—No answer.

8
6
3
17
24
59
100

DIAMOND PUZZLE.

My first as consonant or vowel
Is used as needs may be;
My second, flashes of the muse,
Producing laughter, mirth and glee;
My third a flower of beauteous mein
As any you may see;
My fourth, an expression of the face,
Showing pleasure or disdain;
My fifth denotes not what we mean,
But something like the same;
My sixth, a name most widely known
Amongst those engaged in farming;
My seventh expresses like unto,
Whether 'tis pleasing or alarming;
My eighth, a product from the main,
Is cast out by the storm;
My ninth, a word which is applied
When feigned virtues do adorn;
My tenth a measure so much long,
For measuring goods, not land;
My last, a letter which is heard
But not seen into; and
From top to bottom a famous name,
And through the centre is the same.

F. B. K., Quebec.

RIDDLE.

I visit the rich, I visit the poor,
I am not kept out by bolt or door,
I am in the mouth but never am eaten,
And for aggravation I cannot be beaten.

J. M., London.

CROSS-WORD ENIGMA.

My first is in padlock, but not in the key,
My second's in acorn, but not in the tree.
My third is in tumult, but 'tis not in noise.
My fourth is in school, but not with the boys.
My fifth is in biscuit, but is not in bread.
My sixth is in stable, but not in the shed.
My seventh's in pantry, but not in the drawer.
My eighth's in the cellar, but not in the floor.
And now, if the letters you've chosen with care,
A far eastern city you'll find written there.

HIDDEN NAMES.

1. It is time for you to go to bed.
2. I had rather you would go with Georgiana than her sister.
3. Of all enterprises this is the worst.
4. I look upon him as a most infamous knave.
5. He came to Bristol evidently to steal a horse.
6. The capstan drew up the anchor.

It is claimed that metallic iron affords the readiest and simplest means of disinfecting water and of keeping it fresh. The water of the Thames, taken to sea in iron tanks, soon becomes perfectly sweet and remains so during a long voyage. A small piece of iron or a few nails in the water in which cut flowers are put will keep the water sweet. The experiment has been tried of putting some iron filings in a vessel with a very small quantity of water and then placing a leach therein. After six months had passed, the water was found quite fresh and the leach alive and healthy. These facts are curious and suggestive.

A good side show—A pretty check.

Emporium Price List for Sept.

FALL WHEAT.

Mediterranean, American Amber or Midge Proof, Diehl, Treadwell, Weeks', Boughton, Scott and Soules, the best we can procure, from \$1.25 to \$2 per bushel, depending on cost, purity, variety and quality required. Orders must be in early.
Scott Wheat, No. 1, \$1 75 per bush.
Scott Wheat, No. 2, \$1 50 " "
Diehl Wheat, \$1 50 " "
Treadwell Wheat, \$1 50 " "
Weeks Wheat, \$1 50 " "

STOCK.

4 Durham Bulls, from 4 to 12 months old.
Cotswold Rams, Lambs and Shearlings.
Leicester Rams, Lambs and Shearlings.
Breeding Ewes, Leicesters or Cotswolds, for exportation. Prices to suit applicants, either for prize-takers or for stock purposes, varying from \$6 to \$200 per head. State your requirements, and we will guarantee satisfaction to our customers, or will not fill the order.

IMPLEMENTS.

Carter's Patent Ditching Machine, improved, \$130.
Collard's Harrow, \$18.
Howard's Improved Harrow, \$22 to \$24.
Lawn Mowing Machine, \$25 and upwards.—Send for Circular.
Seed Drills, \$5 to \$70.
Taylor's Burglar and Fire Proof Safes, from \$35 to \$675.
Jones' Amalgam Bells, for Churches, Factories, School Houses and Farms. From 16 to 36 inches diameter, \$10 to \$130, with yoke and crank, or yoke and wheel.
Stump Extractor, \$50, \$75 and \$100.
Paragon Grain Crusher, \$30, \$35 and \$40.
Lamb's Knitting Machine, \$50 to \$75.
Hinkley's Knitting Machine, \$30 to \$50.
Tumbling Churn, \$4, \$5 and \$7.
The celebrated Blanshard Churn.
Dana's Patent Sheep Marks, with name and number, \$3 per 100. Punches, \$1.25. Bound Registers, 50 cents. Sheet Registers, 8 cents.
Clark's Cultivator. It is of light draft, very durably constructed, and does the work completely. Price \$34.
Plowman's Patent Hardened Metal Plows,—\$14 to \$16.
Good Horse Powers, \$50. Do. with Wood Sawing Machine, complete, \$95. Best made.
Walsley's Potato Digger, with mould board for drilling, earthing up and digging. \$16, \$20.
Gardener's Root Cutter, \$23.
Chaff Cutters, the best kinds, \$28 to \$55.
Paragon Grain Crushers, \$30, \$35, \$40.
Little Giant Thresher, \$135.
Mathewson's Oscillating Washing Machine, \$8.00.
Simpson's Cattle Spice, 25 cents per lb.
Sells' Cider Mill, \$30.
Corn Shellers, \$5 to \$16.
Send a Postal Card for particulars of any Machines you may require.

Address—WM. WELD, London, Ont.

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Now is the time to subscribe for the FARMER'S ADVOCATE. The remainder of the year FREE to new paid-up subscribers! Terms of paper \$1 per annum. The following will be the PRIZES for getting up clubs during the present month:—
For four subscribers at \$1, a free copy of the paper will be sent for one year.
For larger clubs, one-fourth of the money sent in may be applied in procuring the following valuable books at the following prices:—
Dr. Chase's Receipts; or, Information for Everybody. A very useful book, containing 385 pages, 75c.
Kansas as she is, 50c.
Lawyer, \$1.50.
Allen's (L.F.) American Cattle, \$2.50.
" New American Farm Book, \$2.50.
" Diseases of Domestic Animals, \$1.
Brist's Flower Garden Directory, \$1.50.
Caldwell's Agricultural Chemical Analysis, \$2.
Fuller's Small Fruit Culturist, \$1.50.
Harney's Barns, Outbuildings and Fences, \$10.
Jacques Manual of the Garden and Farm Yard, \$2.50.
Farming for Boys, \$1.50.
Langstroth on the Honey Bee, \$2

1871. THE SECOND 1871.
NORTHERN OHIO FAIR

WILL BE HELD IN
CLEVELAND,
Sept. 12th, 13th, 14th, 15th & 16th, 1871.



\$25,000 TO BE AWARDED IN PREMIUMS.

\$40,000 worth of valuable Paintings To be exhibited in Fine Art Hall, 200 feet long.

Grounds enlarged, making now a total of Ninety-five Acres.

Great addition to Permanent Halls, erected since last Fair, giving 33,000 square feet more of exhibition rooms.

Dining Halls being erected capable of giving good meals to 33,000 people daily.

Railroads to carry Passengers at HALF FARE.

Exhibitors' Goods carried on same terms as they are carried to State Fairs.

A Third Track laid to the Fair Grounds by the Lake Shore Rail Road, thus increasing facilities for carrying passengers several times as compared with last year.

LIBERAL PREMIUMS

Will be given on the best of every thing that will conduce to the comfort and happiness of mankind, such as the products of

- The Farm, The Manufacturing Works,
- The Garden, The Mines,
- The Vineyard, Domestic Manufactures,
- The Green House, Stock Raising,
- The Dairy, The Poultry Yard,
- Fine Art, Science,
- The Work Shop, Chemistry.

TROTTING COURSE connected with the Fair Grounds

Elevated Bridge across St. Clair Street.

Premiums will be competed for by celebrated horses.

PREMIUMS,

Tuesday, \$600. Wednesday, \$1,300. Thursday, \$1,700. Friday, \$1,200.

Single Tickets good for both Fair Grounds and Trotting Park.

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TWELFTH ANNUAL SALE.

Cotswold & Southdown Sheep

AND BERKSHIRE PIGS.

MR. STONE HAS INSTRUCTED MR. W. S. G. KNOWLES, TO SELL BY PUBLIC AUCTION, at MORETON LODGE, GUELPH, ONTARIO,

On Thursday, 14th day of September, 1871,

- 50 COTSWOLD RAMS, one Shear and over.
- 50 COTSWOLD EWES, one Shear and over.
- 10 PRIME SOUTHDOWN RAMS.
- 20 BERKSHIRE PIGS.

LUNCHEON AT NOON. Sale to Commence at ONE o'clock.

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FRUIT & ORNAMENTAL
For Autumn of 1871.

WE INVITE the attention of Planters & Dealers to our large and complete stock of

- Standard and Dwarf Fruit Trees.
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- Ornamental Trees, Shrubs and Plants.
- New and Rare Fruit and Ornamental Trees.
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Descriptive and Illustrated priced Catalogues sent prepaid on receipt of Stamps, as follows:

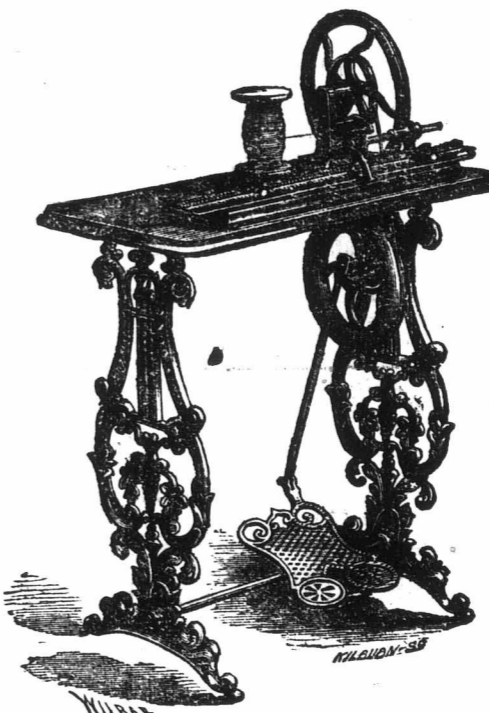
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ELLWANGER & BARRY,
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The Simplest, Cheapest
AND BEST IN USE.

HAS BUT ONE NEEDLE! - A CHILD CAN RUN IT!

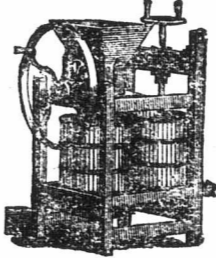


Designed especially for the use of families, and ladies who desire to knit for the market.— Will do every stitch of the knitting in a Stocking, widening and narrowing as readily as by hand. Are splendid for worsteds and fancy work, TAKING FIVE DIFFERENT KINDS OF STITCH! Are very easy to manage, and not liable to get out of order. EVERY FAMILY SHOULD HAVE ONE.

We want an Agent in every Town to introduce and sell them, to whom we offer the most liberal inducements. Send for our Circular and Sample Stocking.

Address,—HINKLEY KNITTING MACHINE CO., Bath, Me.
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CIDER MILL

FARMERS! DO YOU WANT

The Best Cider Mill & Press that is Made?

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CIDER MILLS, \$30; HORSE POWERS, 2 HORSES, \$30

JACKS OR MOTIONS, \$10.

Straw Cutters, \$18 to \$25; Corn Shellers, \$18;

GRAIN CRUSHERS, \$20;

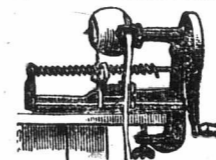
IMPROVED CIDER MILL, \$35.

For particulars send for Circulars. AGENTS WANTED.

Orders promptly attended to. Address—H. SELLS, Vienna, Ont.

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W. WELD, Agent, London.

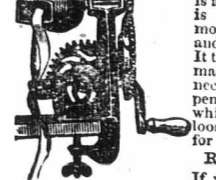


The Best, Cheapest, and only Combined Apple Parer and Slicer ever made. It is the only machine that does its work all at once. Five turns of the crank pare and slice an apple. It is a perfect model of simplicity, durability, and compactness. Every family who owns an orchard should have it! Every house-keeper needs it! For preparing fruit for drying or family use, it cannot be surpassed.

What the Press says of it.

"It is the very best for apple curers I ever saw, and worthy of universal adoption."—*Horace Greeley*. "It is a most excellent machine."—*Rural New Yorker*. "It does the work a hundred per cent. better and nicer than the most careful human hand!"—*Rock Island, Ill., Argus*. "We place it in the first rank, and it should be found in every house where the fruit itself is found."—*Davenport, Ia., Democrat*.

Retail Price at Factory, \$2.



The Union Apple Parer is a machine simply for paring, and is so constructed that the knife moves half way round and returns, and pares an apple going each way. It throws the parings clear from the machine. The gears are all connected directly with each other, dispensing with the connecting rod, which has always been liable to work loose. It is the best in the market for hard, soft, and bruised apples.

Retail Price at Factory, \$1. If you cannot find these machines in town, ask your merchant to send for them.
MANUFACTURED BY
D. H. WHITTEMORE, Worcester, Mass.

20 ACRES of good LAND for Sale.—House, Orchard, &c. Two miles and a half from the City. Apply at the Agricultural Emporium, London, Ont.

PROVINCIAL EXHIBITION

OF THE
Agricultural and Arts Association of Ontario,

To be held at Kingston,

ON THE
25th to 29th Sept., 1871.

PERSONS INTENDING TO EXHIBIT WILL please take notice that the Entries of articles in the respective classes must be made with the Secretary, at Toronto, on or before the undermentioned dates, viz:

Horses, Cattle, Sheep, Swine, Poultry, Agricultural Implements, on or before Saturday, Aug. 26th.

Grain, Field Roots, and other Farm Products, Machinery and Manufactures generally, on or before Saturday, September 2nd.

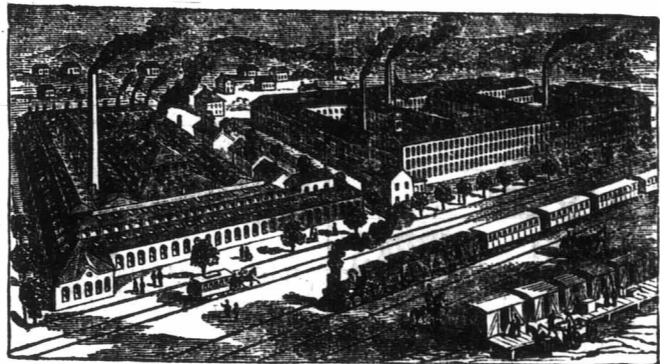
Horticultural Products, Ladies' Work, the Fine Arts, &c., on or before Saturday, September 16th.

Prize Lists and Blank Forms for making the entries upon, can be obtained of the Secretaries of all Agricultural Societies and Mechanics' Institutes throughout the Province.
HUGH C. THOMSON,
Sec'y Agricultural and Arts Association.
Toronto, August 15, 1871. 71-9-11

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PER ANNUM.

Hitherto the facilities of the Wheeler & Wilson Manufacturing Co., great as they were, have been inadequate to supply the unprecedented demand of this favorite Machine. Recent extensive additions to the Company's manufacturing resources, however, enable them now not only to supply the demand of the world, but at a much cheaper rate. The public in Canada will now reap the benefit of these changes, and it is expected the present large reduction will increase the sale still more extensively.

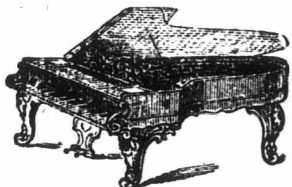
Remember the chief points of excellence of this Machine, ITS REMARKABLE SIMPLICITY OF CONSTRUCTION, MAKING THE LOCK STITCH WITHOUT A SHUTTLE, HAVING ABOUT HALF THE FRICTION AND MOVEMENTS OF ANY SHUTTLE MACHINE IN THE WORLD. Hence its Great Durability, Quiet Movements, Easy Running and Speed. CATALOGUE AND REDUCED PRICE LIST POST FREE TO ANY ADDRESS.

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HEINTZMAN & CO.
Have taken all the Prizes and Diplomas for Pianos at Provincial Exhibitions of 1870, 1868, 1867, and every where when they have competed.
We invite comparison with the imported Pianos; AND BUYERS SAVE THE DUTY.

Sole Agents for Taylor & Farley's celebrated ORGANS, which have gained prizes over those of leading manufacturers in Boston, New York and Buffalo.

CALL & EXAMINE THE STOCK
Note the address— HEINTZMAN & CO.,
115 & 117 King St. West,
TORONTO.

HUGH C. THOMSON,
Natural and Arts Association.
71-9-11

ROYAL HOTEL.
WHITBY, ONT.
JAMES PRINGLE, - PROPRIETOR.

An omnibus to all trains. First-class Sample Rooms attached. 3-

T. CLAXTON,
Dealer in first class Violins, English, German and Anglo-German Concertinas, Guitars, Flutes, Fifer, Bows, Strings, &c.
TUNING AND REPAIRING
Promptly attended to.
Good Second hand Brass Instruments Bought, Sold, or taken in exchange.
Note the address—
197 Yonge street, nearly opposite Odd Fellows' Hall
3-1f TORONTO.

Benjamin Plowman,
OF WESTON, would draw the attention of Manufacturers and Machinists to his new Patent process of **HARBENING CAST IRON** for all purposes where such is required; and would supply the trade with Plough Boards of their Patterns, on moderate terms. To Farmers he would recommend his Root Cutters, which took the 3rd Prize at the Provincial Show this year, price \$14. His Ploughs took extra Prizes with the hardened metal—Price 14 to \$16. May be procured at the Agricultural Emporium, London: 12

D. REGAN,
SUCCESSOR to John McPherson & Co.,
Manufacturer, Wholesale and Retail Dealer in Boots and Shoes, Farmer's Block, opposite Strong's Hotel, Dundas Street, London, Ont.
April 1, 1870. 4-y-cu

DOMINION TELEGRAPH COMPANY
Office, Albion Buildings
Second Door South of the Post Office, opposite the Bank of British North America,
RICHMOND ST., - - LONDON, ONT.
E. A. BUCK, Manager. T. J. WAUGH, Supt.
London, Nov. 22, 1870. 12

THE
Agricultural Mutual
ASSURANCE ASSOCIATION
OF CANADA.

HEAD OFFICE, - - LONDON, ONT.
Licensed by the Dominion Government.
CAPITAL FIRST JAN., 1871,
\$231,242 25.
Cash and Cash Items, \$72,289 55.

THIS COMPANY continues to grow in the public confidence. On 1st January, 1871, it had in force

34,528 POLICIES,
Having, during the year 1870, issued the immense number of 12,319 Policies.
Intending insurers will note—
1st—That this is the only Fire Mutual in Canada that has shown its ability to comply with the law of the Dominion, and deposit a portion of its surplus funds for the security of its members,—\$25,000 having been so deposited.
2nd—That being purely mutual, all the assets and profits belong solely to the members, and accumulate for their sole benefit, and are not paid away in the shape of dividends to shareholders as in the case of proprietary companies.
3rd—That nothing more hazardous than farm property and isolated dwelling houses are insured by this Company, and that it has no Branch for the insurance of more dangerous property, nor has it any connection with any other company whatsoever.
4th—That all honest losses are settled and paid for without any unnecessary delay.
5th—The rates of this Company are as low as those of any well established Company, and lower than those of a great many.
6th—That nearly four hundred thousand dollars have been distributed by this Company in satisfaction of losses to the farmers of Canada during the last ten years.
7th—That the "Agricultural" has never made a second call on their members for payments on their premium notes.
8th—Farmers patronize your own CANADIAN Company that has done such good service amongst you.
Address the Secretary, London, Ont.; or apply to any of the Agents. m-y

THE ARTIST PHOTOGRAPHER,
FRANK COOPER,
STUDIO RICHMOND STREET,
Near the Revere House, the place where the beautiful "Rembrandt" is made.
London, May 1871. 71-51 1

F. S. CLARKE, Richmond St., London,
Exchange Broker, Insurance Agent, and Agent of the National Steamship Co.'y from New York to Liverpool, calling at Queenstown. Prepaid certificates issued to bring out from the above places or Germany. 3-y

JOHN ELLIOTT,
PHENIX FOUNDRY.

MANUFACTURER of Stoves, Ploughs, Reaping machines, Threshing Machines, Lap-Furrow Ploughs, Cultivators, and Guage Ploughs, &c., London, Ont.
Also, at Strathroy. 3-1f

CURRIE
BOILER WORKS

Manufacture all kinds of AGRICULTURAL, Stationary & Portable Boilers, Oil Mills, 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.

J. H. WILSON,
VETERINARY SURGEON,
Graduate of the Toronto Veterinary College.
Office—New Arcade, between Dundas street and Market Square. Residence—Richmond street, opposite the old Nunnery.
References—Prof. A. Smith, V. S.; Dr. Varley V. S.; Dr. Laing, V. S.; Dr. Bovel, M. D.; Dr. Thorburn, M. D.; Dr. Rowel, M. D.; and Dr. Nichol all of Toronto. Dr. McKenzie, M. D., and J. Dulmage, of London. 4-1y

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 irregularly 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 pivoted 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-rod, 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 Gauge, with thumb-screw. One silver-plated Corder. One silver-plated Tucker. One silver-plated Friller. One silver-plated Hemmer, which will hem to any width. One Quilting Gauge. 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.,
71-6-0m
HAMILTON, ONT.

LONDON
SADDLE, HARNESS & TRUNK
FACTORY.

THE Subscriber takes pleasure in calling the attention of the citizens of London and surrounding country to his large and complete assortment of

SADDLES, TRUNKS, HARNESS, Ladies' and Gents' Valises, COLORED WOOL MATS Whips, Currycombs, Brushes.

And everything connected with a first-class Harness business—all of the best material and workmanship, which will be sold at the lowest cash prices. All work warranted.

JOHN STEVENSON,
Richmond Street, opposite City Hall,
London, May, 1871. 71-5y

AYR AGRICULTURAL WORKS.

THE UNDERSIGNED continues to manufacture and keep on hand a Stock of those

Straw Cutters, Root Cutters, And Horse Powers,

which were awarded the First Prize at the late Provincial Exhibition, and will be happy to deal with parties requiring such. Arrangements have been completed for manufacturing

Carter & Stewart's Ditching Machine for the coming Summer.

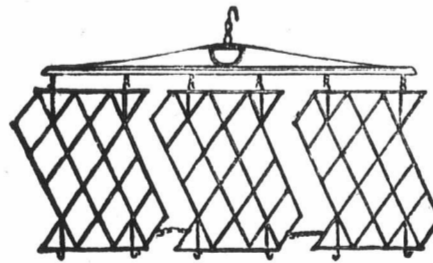
Reaping Machines (Self Rake and Hand Rake), Mowing Machines, Threshing Machines, Grain Drills, Turnip Sowers, Sulky Hay Rakes, Cultivators, Drag and Circular Saws, Ploughs, and all kinds of Agricultural Implements of the best kind and quality, always on hand at fair remunerative rates. Send for Catalogue.

JOHN WATSON,
Ayr, Ontario, Jan. 1871. 2-y

ANDREW CHISHOLM & Co.

IMPORTERS of Stables and Fancy Dry Goods, Carpets and Oil Cloths. Manufacturers of Clothing and general Outfitters. Dundas Street, London, Ont.

SIGN OF THE STRIKING CLOCK,
Opposite the Market Lane. 1-y



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 chokes 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. 71.4

BREAKFAST.—EPSS'S COCOA.—GRATEFUL AND COMFORTING.—The very agreeable character of this preparation has rendered it a general favorite. The *Civil Service Gazette* remarks:—"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoa, Mr. Epss has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills." Made simply with boiling water or milk. Sold only in tin-lined packets, labelled—JAMES EPSS & Co., Homoeopathic Chemists, London. 12-y

40 ACRES within three miles of the City. Two Houses, two Orchards, excellent Land. Apply at the Agricultural Emporium, London, Ont.

G. MOORHEAD,
WHOLESALE AND RETAIL
Manufacturer of Furniture, UPHOLSTERER, &c.
1-4f King Street, London.



It is patronised by the Royal Families of Europe. Awarded a gold Medal at Paris, 1867, and highest Prizes wherever exhibited, including the Hamilton Exhibition in 1868, Toronto 1871, for the best, cheapest, simplest, and most complete Knitter in the world. More than 13,000 Sold and in Use the past Eight Months

Lamb's Family Knitting Machine,
\$50 and \$53 Each,
WORK BY HAND

LAMB'S KNITTING MACHINE.—An indispensable appliance in every Family, Benevolent and Reformatory institution. It is used to great profit in manufacturing special lines of Goods for the Market. Sets up its own work, knits a pair of Stockings in 30 Minutes. Also, Fancy Vests, Clouds, Gloves, Mittens, Cuffs, Collar-cases, Capes, Shawls, Hosiery, Babies' Boots, Counterpanes, Anti-Macassars, Window Curtains, Double and Single Webbs, Ribbons or Plain, &c. These Machines knit the Polka Stitch and Cardigan Jackets, Widen and Narrow, the same as hand work. Call on or address the Sole Agent,
H. BAILEY, 205 Yonge Street,
P.O. Box 675, Toronto. 2-y

J. BEATTIE & Co.,
Is the cheapest Dry Goods, Millinery and Mantle Store in the City of London. 3-y

C. D. HOLMES, BARRISTER, &c.,
DUNDAS-ST., LONDON, ONT.

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. Smith, A. Decker, Jos. Mitchell, D. Y. Decker, Wm. H. Telfer, A. Dievar, M. H. C. S. L., Thos. Holson, Wm. J. Howard, R. Porter, Wm. Teare, 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. 5tfu

ABBOTT BROS., CARRIAGE BUILDERS
Dundas Street, East of Wellington Street,
9 LONDON, ONTARIO.

LONDON PUMP AND Fanning Mill Factory,
BATHURST STREET, LONDON, ONT.

J. M. COUSINS manufacturer of Improved Force and Lift Pumps, Fanning Mills, and "Little Giant" Straw Cutters. Pumps repaired, Wells dug and Cisterns built. 1-4f

EVERY FARMER
Should have a

Horse-Power Sawing Machine
And Jack combined, or separate power suitable for 2 or 3 Horses. Sawing Machines will cut 20 to 50 Cords per day. Jack suitable for driving all kinds of Machinery usually used. Price \$95.
D. DARVILL,
London, Jan., 1871. 2

Toronto Nurseries

G. LESLIE & SON,
PROPRIETORS.
EXTENT, 150 ACRES
The Stock embraces Trees, Plants and Flowers, suitable to the climate, which we can pack to carry safely to any part of the world.
Priced descriptive Catalogues sent to all applicants enclosing a two cent stamp. Address
GEO. LESLIE & SONS,
Toronto Nurseries,
Leslie P. O., Ont. 1-71

JAMES FERGUSSON & Co.
PORK PACKERS,
KING STREET, - 12y - LONDON, ONT.

R. DENNIS,
KING ST., LONDON, ONT.,
Manufacturer of WALMSLEY'S PATENT POTATO DIGGER. Horse Shoeing and General Blacksmith's Work promptly attended to.

LOUGHREY & TACKABERRY, SADDLERS,
Richmond Street, London, have in stock Harness, Saddles, Trunks, Whips, Ladies' and Gents' Travelling Valises, and all articles, pertaining to a first class saddlery business, of the best quality and workmanship. We especially invite those who wish a good article to give us a call. All work warranted to give satisfaction. 71-5y

GEO. RAILTON,
AUCTIONEER & COMMISSION MERCHANT,
Hiscox's Block, Dundas Street, LONDON, ONT.

MR. RAILTON begs to announce that he is prepared to receive Goods, Wares and Merchandise for Sale on Commission. Any property consigned to him will be sold to the best advantage; and prompt CASH RETURNS upon all his transactions.
Cash advanced upon Household Furniture and Effects put in for immediate sale. Country Sales of Farm Stock, Agricultural Implements, &c., &c., promptly attended upon liberal terms.

Mr. R. respectfully solicits a trial, feeling confident that his mode of business will merit approval. References kindly permitted to Messrs. E. Adams & Co., John Birrell & Co., W. & J. Carling, A. & J. G. McIntosh & Co., Murray Anderson. London, 24th Oct., 1870. 11-y

PLUMMER & PACEY'S
WAGON and Sleigh Factory, Ridout Street, London, Ont.

Their machinery is more perfect and complete than ever, in consequence of which they are able to turn out work, both in quantity, quality and cheapness sufficient to surprise every one not posted up in the improvements of the age. A general improvement of Hubs, Spokes and Bent Stuff, and any kind of wood work for Wagons, Sleighs, Horse Rakes, &c., always on hand. m-c

POULTRY.
EGGS FOR HATCHING

Having spared neither pains nor expense in procuring really choice Fowls from Europe and the United States, I will now dispose of a few Settings of Eggs of the following varieties, all of which I guarantee pure.

WHITE AND GREY DORKINS, BUFF COCHINS, LIGHT AND DARK BRAHMAS, Golden and Silver-Spangled, Silver and Golden Pencilled and Black Hamburgs, BLACK SPANISH, WHITE LEGHORNS Black, Red and Duckwing Game, SILVER, SEBRIGHT & WHITE BANTAMS AYLESBURY AND ROSEN DUCKS.
J. PLUMMER, JR.
London, Oct. 31, 1870. 11

FARMER'S
have a
Sewing Machine
partic power suitable for
achines will cut 20 to 50
able for driving all kinds
1. Price \$95.
D. DARVILL.

Nurseries
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ETORS.
50 ACRES
rees, Plants and Flow-
ate, which we can pack
art of the world.
alogues sent to all appli-
it stamp. Address
ESLIE & SONS,
Toronto Nurseries,
Leslie P. O., Ont.

GUSSON & Co.
ACKERS,
y - LONDON, ONT.

NNIS,
ONDON, ONT.,
MSLEY'S PATENT
Horse Shoeing and
Work promptly attended

BERRY, SADDLERS,
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Whips, Ladies' and Gents'
all articles, pertaining to a
ess, of the best quality and
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AILTON,
MISSION MERCHANT,
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to announce that he is pre-
vares and Merchandize for
Any property consigned to
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all his transactions.

Household Furniture and
late sale. Country Sales
ural Implements, &c., &c.,
liberal terms.
icits a trial, feeling condi-
siness will merit approval.
mitted to Messrs. E. Adams
O. W. & J. Carling, A. &
urray Anderson. 11-7

R & PACEY'S
leigh Factory, Ridout
n, Ont. Their machinery
omplete than ever, in con-
ey are able to turn out
y, quality and cheapness
ery one not posted up in
he age. A general im-
pokes and Bent Stuff, and
ays for Wagons, Sleighs,
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LTTRY.

HATCHING-
pains nor expense in pro-
ows from Europe and the
w dispose of a few Settings
g varieties, all of which I

EY DORKINS, BUFF
AND DARK BRAHMAS,
er-Spangled, Silver
encilled and Black

WHITE LEGHORNS
l Duckwing Game,
HT & WHITE BANTAMS
ND ROSEN DUCKS.
J. PLUMMER, JR.
11

SMITH'S IMPROVED AGRICULTURAL IMPLEMENTS

One, Two and Three Horse Thrashing Machines

With recent important improvements, which now makes this the most complete Thrasher in use.

HARPOON

Horse Hay Fork

The above is one of the greatest Labor Saving Machines yet invented in harvesting Hay or Grain, and, although but recently invented, are fast coming into general use.

CULTIVATORS

They are admitted by all who have used them to be the best and most complete Machine of the kind known.

The Wheels are so arranged as to rise and lower independent of each other, and can be set to any depth from one to six inches, and they can be removed from place to place on their wheels. The Teeth are plated with steel, and are so constructed as to be easily kept in repair.

EAGLE MOWING & REAPING MACHINE.

The celebrated Eagle Mowing and Reaping Machines, which are admitted by all Practical Farmers to be the lightest of draught and best Working Machine yet introduced.

IMPROVED WOOD SAWING MACHINE

The subscriber begs to inform Agriculturists and Farmers, that he has now on hand an assortment of the above celebrated Machines, which he offers for sale at the

Lowest Possible Prices, and on the most

FAVORABLE TERMS OF PAYMENT.

These Machines have the latest improvements, and are so constructed as to give **GREAT-ER EASE IN DRAUGHT, AND DO MORE WORK** than hitherto accomplished by any other Machine. They are of the **BEST MATERIAL** and Workmanship, are simple in management, and

Extremely Light and Durable They are recommended to parties in want of Machines with full confidence of their giving every satisfaction.

FARMERS

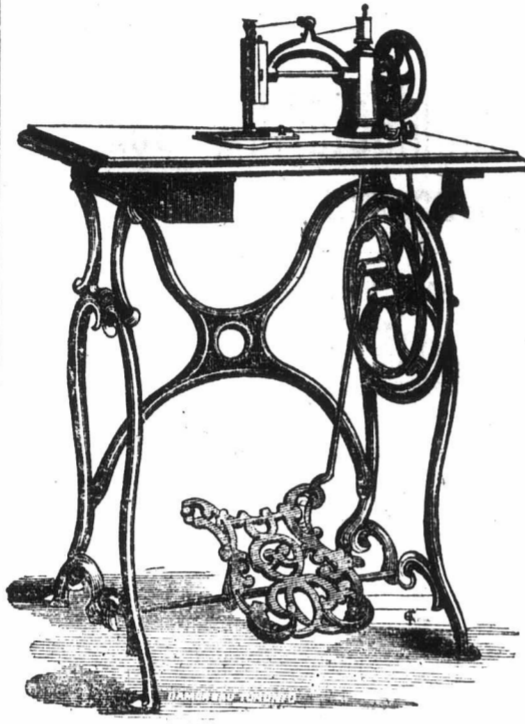
before buying elsewhere, are

Invited to Examine these Machines

Orders sent by Mail promptly attended to.
JOHN SMITH,
St. Gabriel Locks, MONTREAL.
June, 1871.

GATES' LOCK STITCH Shuttle SEWING MACHINE

For Family Use and Manufacturing Purposes.



These Machines Sew with two Threads, and make the Lock or Shuttle Stitch, which is regarded by Manufacturers, Tailors, and the masses generally, as the best suited to all kinds of work. Our Family Machines are especially adapted to all Household Sewing; also for Dress, Shirt Bosom, Cloak, Corset, Cap, Vest and Pantaloon Making; and will Hem, Fell, Tuck, Bind, Cord, Quilt & Gather in the most superior manner.

Awarded the Prize at the International Workman's Exhibition, at London, England, Nov. 1st, 1870.

1. Economy of Thread.
2. Beauty and Excellence of Stitch, alike on both sides.
3. Strength, Firmness and Durability of Seam.
4. Wide Range of Applications to Purposes and Materials.
5. Excellence of Workmanship.
6. Simplicity and Thoroughness of Construction.
7. Noiseless Movement.
8. Speed, Ease of Operation and Management.
9. It will work as well after five years constant use as on the day when purchased.
10. Has been awarded the highest Premium wherever exhibited.

G. W. GATES & CO.,
Manufacturers, Toronto, Ont.

Gates' Family (Singer) Machine, \$35.
Gates' Hand Shuttle Machine, \$25.
Gates' Hand Elliptic Machine, \$15.

Send for Circulars. Agents Wanted.
Salesroom No. 14, King Street East Toronto.



NEVER "STICKS" in any soil. For circulars, giving full information, address **COLLINS & CO., 112 Water Street, New York.**

TIME AND LABOR SAVED THE 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 his, 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. 3-17
Brooklin, March, 1871.

The Farmer's Advocate.

Published in London, Ontario, Canada, W. Weld, Editor and Proprietor. Terms, \$1 per annum in advance. Subscriptions commence at any time. The paper is continued to subscribers after the expiration of the year, and charged accordingly. Any person not wishing to continue the paper, must refuse or return it after their term of subscription has expired. 25 per cent. will be added if allowed to run one year on credit.

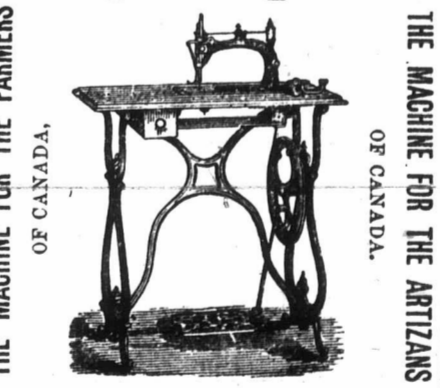
TERMS OF ADVERTISEMENTS.—10 cents per line, Agate space. Specials, 20 cents per line. Editorials 50 cents per line.

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. 71-6-y

The King of Sewing Machines



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



A Diploma and Two First Prizes

AWARDED TO **W. BELL & CO.,** MANUFACTURERS OF

MELODEONS AND ORGANS GUELPH, ONT.

At the late Provincial Exhibition in Toronto, viz., **FIRST PRIZE on MELODEONS** And Diploma and First Prize on Harmoniums or Large Cabinet Organs.

Also, all the PRIZES at the QUEBEC PROVINCIAL FAIR, held in Montreal, September, 1870.

All instruments warranted for Five Years. For Illustrated Catalogues, &c., address **W. BELL & CO.,** 5-yu GUELPH.

CHARLES THAIN,

MANUFACTURER of Ploughs, Harrows, Cultivators, Thain's Double Mould Plough & Turnip Sowers, Horse Rakes, Turnip Cutters, Churns, &c. First Prize Double Mould Plough at Provincial Show, Hamilton, 1868, at the Provincial Show, London, 1869, and at Toronto Provincial Show, 1870. First Prize Two Row Turnip, Carrot and Mangold Drill, at the Provincial Show, Toronto, 1870. Second Prize Two Horse Cultivator at the Provincial Show, Toronto, 1870. Third Prize One Horse Cultivator, Toronto, 1870. All Orders promptly attended to by addressing CHAS. THAIN, Eramosa Bridge, Guelph, Ont.

MOLSONS BANK.

Paid-up Capital, \$1,000,000
Reserve, 60,000
Contingent Fund, 13,000

THE LONDON BRANCH OF MOLSONS BANK, Dundas Street, one door west of the New Arcade,

Issues Drafts on London, England New York, U.S., St. John, N.B., and all the principal Cities and Towns in Ontario and Quebec.

Offers unusual facilities to those engaged in the produce business. Deals liberally with merchants and manufacturers.

Discounts for the Farming community. Buys and Sells Sterling Exchange, New York Exchange, Greenbacks, &c., at very close rates. Makes Advances on United States Currency and Securities on reasonable terms.

Savings Bank Department Affords opportunity for safe and remunerative investments of accumulative savings.

JOSEPH JEFFERY, Manager. London, Sept 14, 1870. 10

THE SUPERIOR FENCE POST-HOLE BORER

WHICH TOOK THE EXTRA PRIZE At the late Provincial Exhibition in London. County and township rights for sale. Apply to **ANDREW MUIR,** Rodgerville, Ont. 3-17

BURKE'S PHOTOGRAPH GALLERY

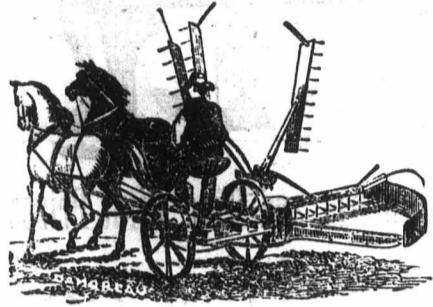
First Door south of McBride's Stove and Tin Shop; Richmond Street, London. 1-17

GEO. P. ROWELL & CO., 40 Park Row, New York, and **S. M. PETTINGILL & CO.,** 37 Park Row, New York, are sole agents for the Farmer's Advocate in that city, and are authorized to contract for inserting advertisements for us at our lowest cash rates. Advertisers in that city are requested to leave their favors with either of the above houses. **W. WELD, Editor**

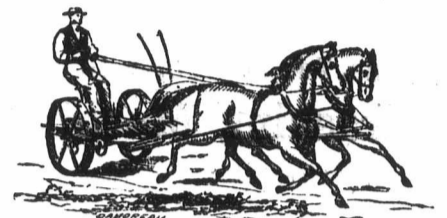
THE JOSEPH HALL MACHINE WORKS

OSHAWA, - - - ONTARIO,

ESTABLISHED 1851.



The Joseph Hall Manufacturing Company
PROPRIETORS.



WE DESIRE TO CALL ATTENTION TO OUR
**Number One and Two Buckeye Combined
REAPER AND MOWER,**
WITH JOHNSON'S SELF RAKE IMPROVED FOR 1871.

We believe this Machine, as we now build it, to be the most perfect Reaper and Mower ever yet offered to the public of Canada.

Among its many advantages we call attention to the following:—

It has no Gears on the Driving Wheels,

Enabling it to pass over marshy or sandy ground without clogging up the gearing, thereby rendering it less liable to breakage. It is furnished with

Four Knives, Two for Mowing and Two for Reaping, one of which has a sickle edge for cutting ripe, clean grain, the other a smooth edge for cutting grain in which there is grass or seed clover.

It has malleable guards both on the Mower Bar and Reaper Table, with best cast steel Ledger Plates. It is also furnished with our

New Patent Tilting Table for Picking up Lodged Grain.

This is the only really valuable Tilting Table offered on any combined Reaper and Mower.—

The Table can be very easily raised or lowered by the Driver in his Seat without stopping his Team.

This is one of the most important improvements effected in any Machine during the past two years.

Any one or all of the Arms of the Reel

Can be made to act as Rakes at the option of the Driver, by a Lever readily operated by his foot. The Cutting apparatus is in front of the Machine, and therefore whether Reaping or Mowing, the entire work of the Machine is under the eye of the Driver while guiding his team. This Table is so constructed as to

Gather the Grain into a Bundle before it leaves the Table, and deposit it in a more compact form than any other Reel Rake.

The Table is attached to the Machine both in front and rear of the Driving Wheel, which enables it to pass over rough ground with much greater ease and less injury to the Table. The Grain Wheel Axis is on a line with the axle of the Drive Wheel, which enables it to turn the corners readily.

The Rakes are driven by Gearing instead of Chains, and therefore have a steady uniform motion,

Making them much less liable to breakage on uneven ground, and more regular in removing the grain. The Gearing is very simple, strong and durable. The Boxes are all lined with

BABBIT METAL.

The parts are all numbered, so that the Repairs can be ordered by telegraph or otherwise, by simply giving the number of the part wanted.

There is no side Draught in either reaping or mowing, and the Machine is so perfectly balanced that there is no pressure on the horses' necks either when reaping or mowing. All our malleable castings, where they are subject to much strain, have been

Twice annealed, thereby rendering them both tough and strong.

OUR JOHNSON RAKE

Is so constructed as to raise the cam so far above the Grain Table that the Grain does not interfere with the machinery of the Rakes or Reels.

We make the above Machine in two sizes:

No. One, large size, for Farmers who have a large amount to reap.

No. Two medium size, for Farmers having more use for a Mower than for a Reaper.

With the exception of difference in size, these Machines are similar in every respect. Our No. 2 Machine supplies a want heretofore unfilled, viz.: A medium between the Jun. Mower and large combined Machine, both in size and price. We shall distribute our sample machines in March among our Agents, that intending purchasers may have an early opportunity of examining their merits.

And we guarantee that all Machines shipped this season shall be equal in quality and finish to the samples exhibited by our Agents.

We invite the public to withhold giving their orders until they have had an opportunity of inspecting our Machines, as we believe that they are unsurpassed by any other Machines ever yet offered on this continent.

We also offer among our other Machines:

Johnson's Self-Raking Reaper, improved for 1871, with two knives, smooth and sickle edge, and malleable guards.

Wood's Patent Self-Raking Reaper.

Buckeye Reaper No. 1, with Johnson's Self Rake.

Buckeye Reaper No. 2, with Johnson's Self-Rake.

Ohio Combined Hand Raking Reaper and Mower.

Cayuga Chief, Jr., Mower.

Buckeye Mower No. 1.

Buckeye Mower No. 2.

Ball's Ohio Mower, No. 1.

Ohio, Jr., Mower.

Taylor's Sulky Horse Rake.

Farmer's Favorite Grain Drill.

Champion Hay Tedder.

AND OUR CELEBRATED

HALL THRESHER AND SEPARATOR

Greatly improved for 1871, with either Pitt's, Pelton, Planet, Woodbury, or Hall's 8 or 10 Horse Power. We shall also offer for the Fall trade a

NEW CLOVER THRESHER AND HULLER,

Very much superior to any other heretofore introduced,

A new and complete Illustrated Catalogue of all our Machines is being published, and will be ready for early distribution, free to all applicants.

All our Machines are warranted to give satisfaction, and purchasers will have an opportunity of testing them both in Mowing and Reaping before they will be required to finally conclude the purchase.

For further information address—

F. W. GLEN,

PRESIDENT,

OSHAWA, ONTARIO.