

THE MONTHLY FARMERS' ADVOCATE

PERSEVERE AND SUCCEED

Vol. 4] DEVOTED TO THE BEST INTERESTS OF THE COUNTRY. [No. 6

WILLIAM WELD,
Editor & Proprietor.

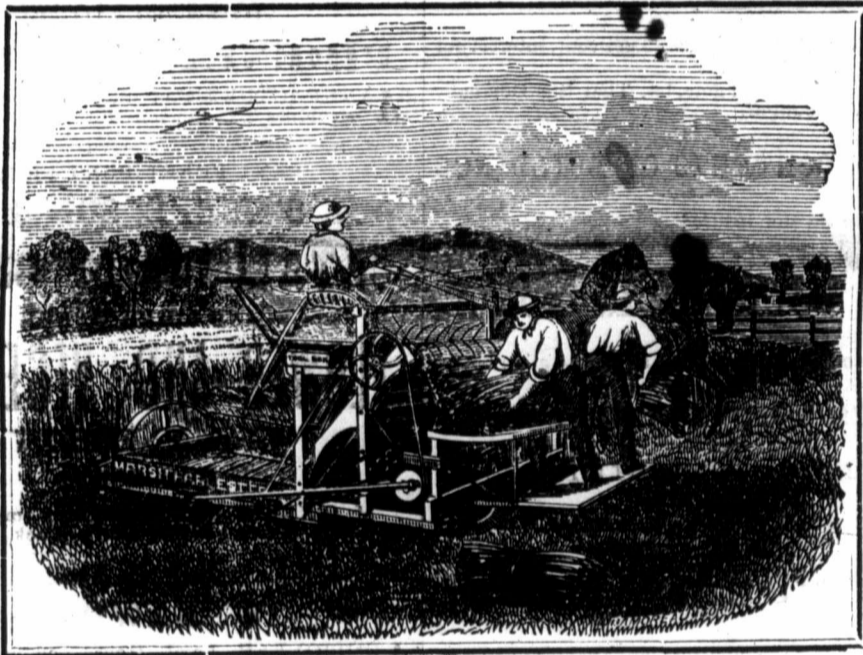
London, June, 1869.

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These are the two best Patent Bee Hives we know of.

Young's patent Sheep Marks with name; good, neat and efficient, per 100... \$3

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We sell implements as cheap as you can procure them from the manufacturers, and give equally as advantageous terms when credit is required, and every guarantee that they will give satisfaction. The above prices are the charges at the several manufactories, and any of them will be shipped at them prices on the cars. Purchasers that wish implements delivered in this city, will have to pay the freight on them to this city, as we estimate to ship all things from the factories and keep specimen articles in the ware-room. We will always admit the best, but inferior articles must find some other market.

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Without any unnecessary delay.

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Horse Hay Fork.

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HAMMOND'S IMPROVEMENT

THESE Forks have now been tested with other Hay Forks in this vicinity, and have been found preferable to them. They are highly useful and a great labor-saving implement. They are strongly made and nothing about them is liable to get out of order. The price of fork alone, \$5, with three blocks 63 feet of rope ready for use, \$10.50. Address,

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FLOWER AND VEGETABLE
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THE

FARMER'S ADVOCATE

IS published on the 1st of each month. Terms, \$1 per annum if paid in advance; 12½ cts. per month if on credit; in clubs of four or more, 75 cts. in advance. To Agricultural Societies, 60 cts. Advertisements 10 cts. per line, outside pages 20 cts. Specials, 30 cts., Editorials 50 cts. As we now pay the postage on all papers, we allow all kinds of advertisements in our paper.

Address W. WELD, London,

N.B.—All letters must be prepaid to this office, and should contain stamp if answer is required. Persons ordering seed must name the station to which to send it, and all persons should write the name of their Post Office in their letters. Some write from a township and do not receive their papers because the P.O. is not mentioned. If any post master charges one of you for postage, report to us about it and we will get it represented to the P. O. authorities.

AGRICULTURAL IMPLEMENTS.

The great improvements that are annually made in labor-saving machines of various kinds, should cause each farmer to take an agricultural paper to prevent himself being imposed upon, by having some useless, or, at least, second or third quality of machine talked into him by the many traveling agents. It is true many traveling agents are reliable men, and are selling really good and valuable machines, still by the power of a good tongue, tens of thousands of dollars are annually taken from your pockets for things that are worse than useless. For instance, the patent roller scheme, the patent butter arrangement, the Everbearing strawberry, the Surprise oats, and patents innumerable, you require reliable information from a reliable source. There are even editors who will descend to publishing known falsehoods, and keeping truth and such knowledge as you should be furnished with from you; but the discerning public eye will trample such publications down, and principle will eventually carry the power. In some of our varieties of seed, late orders have not been supplied for the lack of stock; even in implements some persons have been compelled to wait months for them. We would advise you that wish to be supplied, to send your orders in early. You have no more to pay by having your machine ordered or even delivered before the season of use arrives, as our prices are arranged for the dates of each season's requirements.

At the present time you require Horse Rakes, Horse Forks, and Mowing machines. You may either call at the Agricultural Ware-room and examine different kinds or send your orders.

In regard to the Combined Reaping and Mowing machines previously alluded to, we are now prepared to fill orders and give you this guarantee, that the machine we send you shall be as complete in all its parts as any you can select; shall be strongly and efficiently made, and do its work efficiently and give entire satisfaction. The price of the Combined Reaper and Mower is \$160 cash, and if time is required, eight per cent. interest will be charged. At this price they will be shipped on board the cars, and if it is required by you to have them put in operation in the field, at any kind of work, we send a person to start them when you require it. No one accustomed to a machine will need any instructions, as there is nothing complicated about them.

For a Horse Hay Rake, we consider Lazier's patent as good as any wooden rake we have seen.

For Horse Hay Forks we have Duncan's patent, a single barbed, harpoon fork; it is cheap, strong and efficient; it is a good fork, the least liable to get out of gear or repair, and its friends consider it the best. Carter's

patent, a double barbed fork, is another good implement. It will take the hay cleaner from the ground or floor than Duncan's, but we do not consider its facilities for loading and unloading itself are equal to Duncan's; still many prefer it. We hear it gives satisfaction to those that have it. It is a good implement and cheap. Lastly we have Palmer's Excelsior. This fork has taken the first prizes in Canada and the States, and is adapted to more general work. They are much higher in price, and too many of our farmers are losers by selecting an implement an animal or seed, because its principal recommendation is cheapness; but they too often find they are the dearest. We have seen many forks and those three are the best that have come under our notice. We see in some barns, forks that we would not offer to take. If there are improvements made, or any better forks introduced, we have yet to hear it and we will make place for them in our ware-room.

Don't neglect to send your orders for one of the Little Giant Threshers, by which you can thresh and clean your own grain cheaper and better than by having one of these large ten horse power machines, fowling your land and seed by mixtures, &c., &c. They are best adapted to farmers of moderate means. The large machines are best adapted for traveling.

The cultivators offered by us are really good implements. One is the steel-fronted tooth corn cultivator; the fronts to be turned upside down when one part is worn. They are strong and best adapted for rough land where there is much rough grass to kill. The other is a reversible mould board cultivator and plough. This is well adapted for good cultivation, for removing the earth from the sides of carrots, for drilling and hilling corn and potatoes, and for clearing the land. This is a steel mould-board cultivator, for ploughing the land either way.

The two best patent bee-hives are in the ware-room, both having their separate advantages, and both giving satisfaction as far as we have heard.

While attending to the labor-saving implements for the men, we cannot think of neglecting the ladies' department. The heaviest work is the churning and washing and the inventions and patents are legion; but as yet we find most of these patent arrangements are thrown aside, and the old dash churn and wash-board are yet the kings in the dairy and wash room in most places. We are not yet fully satisfied about any machine for washing or churning, that we can place them at the head or recommend them safely to all, for some are too complicated, some too dear and some inefficient. We have in our list several kinds; if there are better we have yet to find them out. We commend them on trial.

A Hint After Cows Have Calved.

We have of late been asked to give a few brief outlines on this subject with respect to the placenta or afterbirth in the cow. It is generally expelled within fifteen hours, often sooner, after the birth of the calf, but instances are on record of its having remained for the space of ten days without producing any bad effects. In these cases the ignorant cow leech has recourse to various means, and to stimulating drenches, more likely to bring on inflammation than act as intended. In some instances it is advisable to assist the expulsive efforts by drawing forward the umbilical cord during each accession, but when the natural efforts with this assistance are insufficient, and the animal appears ill and distressed, it may be necessary to separate the placenta from its attachments by the hand, an operation requiring great caution and care, and ought to be attempted only by a person well acquainted with the anatomy of the cow, or a Veterinary Surgeon. We have known some after the birth of the calf, to attach a small weight to the umbilical cord, in order to facilitate the separation and expulsion of the placenta. There is no great harm in this, and if a cow be weakly, and the expulsive pains slight it may be of service. The placenta of the cow consists (besides the membranes) of numerous cotyledons, or tufts of vessels, which form the union between the chorion and the uterus.

N. B.—To our correspondent G. F. Cole, M. D., Potsdam, N. Y. There is an excellent work on the Parturition of the Cow, "Brown's Farriery," published by Geo. Virtue & Co., Ivy Lane, London, England. Can be obtained through any respectable bookseller.

FIRE.

On the 10th of April last a thunder-storm passed over this part of the Dominion, causing no less than nine fires of farmer's buildings, that were insured in one office in this city alone. How many losses other companies had to pay from that storm, we know not, and the losses that were borne by the uninsured will never be known, beyond the circulation of a County paper at most. There are reliable Companies, and it costs but a small sum to insure farm buildings, and we think it very poor economy to run the risk of losing all one's crop and buildings, when a person may so easily pay a small sum, and be comparatively secure from danger.

STRAIGHTENING UP TREES.—A correspondent to the Rural New Yorker says: "Trees out of true line can be made to assume the perpendicular by loosening the soil over the roots, especially on the leaning side. Should the trees be large, it will be found necessary to cut off an obstinate root to get the tree erect. When in position, retain it there by staking as before noticed, or by a rope extending from one of the branches to a stout peg driven in the ground a few feet distant."

SEEDS.

Since the commencement of the seed season, we have had a busy time and have sent our seeds over a greater extent of country than we did last year, and we feel confident of giving general satisfaction. Our arrangements have been greatly improved, consequently persons have received them in quicker time. Our testing of grain was not as complete last year as we could wish. This season very great improvements have been made. The division of labor has done much to aid us, as we found it impossible to keep all things on our farm. We have now the aid of H. Johnstone, the reeve of Delaware, who has taken the Fall Wheat to test and report to us about. We have on his farm, upwards of twenty varieties, most of which are looking well. Some varieties have been winter killed, but the particulars of each will be reported to you in the autumn.

We have twelve varieties of Spring Wheat under the care of Mr. Thomas Hodgins of London township. The various varieties of Barley are in charge of Mr. Geo. Jarvis, of Westminster; Alex. Pontey, of Westminster is cultivating thirty varieties of Potatoes for us. Our Corn, Peas, Beans, Vegetables and Flowers are in different persons hands, each cultivator being selected by us to take charge of such as they are best adapted for, or their inclination is inclined most to cultivate.

There are so many deceptions practiced to gain money, gain a name, or gain power and every cent comes from our pockets. We speak practically as a farmer as that is our avocation. This editorial business is but to show our requirements and aid us from losses, either from degeneracy of seed, attacks of insects or impositions practiced.

POTATOES.—We have received a present from Mr. H. Balmer of this city, of a few recently imported potatoes, viz: the Flounders the Bishop's seedling and Prince Regent. We have shown them to one of our best judges of potatoes, and our united opinion is that the Prince Regent is the most valuable of all three. We shall have them tested, and if deserving further notice will report on them. Mr. Balmer will accept our thanks for his kindness.

ADULTERATION OF SEEDS.

The purity of seeds sown or purchased, is a question of vital importance to farmers. There is no doubt but many farmers persist in sowing seeds of inferior kinds, covering an equal space, requiring similar cultivation, absorbing capital, and producing an article inferior in size, quantity and quality. Varieties are constantly being thrown upon the market, some possessing real merit and others worthless. Even when an article is proven to be good, by testing, such a demand is created that seedsmen are tempted to pretend to supply it, although the stock on hand is far from being sufficient. Ever since we have

established a depot for seeds in connection with the Emporium, this fact has been before us. We have sent nothing forth with our unqualified approval without a thorough testing. In some instances we have been deceived, but this, to a great extent, was caused by the imperfect means of testing seeds by actual cropping attendant upon a new venture. Our arrangements for the future are so completed that we trust few mistakes will occur. Our aim is to establish a name for reliability, and if labor and careful attention will secure this end, we will succeed. The impurity of seeds is attracting the serious attention of European farmers. The Royal Horticultural Society of England has been investigating the charges of adulteration in seeds. They quietly bought up packages from the leading wholesale houses, and had the packages tested, publishing the proportion of good seeds to bad from each package from each house. In many cases only ten per cent were good, and very few went over fifty per cent. The most common forms of trickery appear to be, that when the stock on hand is short, and the demand good, some worthless kind is roasted enough to destroy the germ and mixed with a few of the desired thing—which, of course, is the only lot that grows. The purchaser gets his "pound of seed," but only an ounce or two comes up. These adulterations are defended on the ground that the public will have the lowest price seeds, and that all have to do "what others do," in order to be able to sell at all. There are a few, it appears, who sell good seed, and these have, after a struggle at first, found that Honesty is, after all, the best policy.

HUMBUGS.

There ever have been, and will be persons ready to be humbugged, and those are not wanting who are ready to practice it. We cautioned our readers previously about the Japan Wheat, the Surprise Oats, and Agricultural machines of which parties are selling the patent rights. There is money to be made in these ways, but we caution our Agricultural readers to avoid this mode of procuring wealth. The chances are ten to one but you will be a looser instead of a gainer. You may bet at the gambling table or at the horse-race if you are over-burdened with cash. A hue and cry has been got up in some places about the ever-bearing Strawberry and the Surprise Oats. We have yet to learn that either are an improvement, or even new varieties. We only supply any untried thing with caution. Farmers would be greater gainers by reading more, and giving less support to the venders of useless wares.

Beet Culture And Beet Sugar in Canada.

The subject of beet sugar is attracting considerable attention in the United States: and many of our exchanges are urging the importance of cultivating sugar beets for the purpose of manufacturing sugar. We think the subject is worthy the attention of the Board of Agriculture as well as the Board of Arts and Manufactures. It would be an easy matter to test the economic value of the sugar. But in Canada a large prize, say \$50, for the best cask of beet syrup, ready for the refinery and \$50 for the best sample of sugar, might be offered. Warm sun is necessary for the

full development of the saccharine element in the beet; and it is a question whether our short summers would be favorable. The quality of the sugar beet may be much improved, and it may interest our readers to know the mode adopted to perfect the sugar beet of to-day. Mr. Vilmerin, the celebrated seedsman, found that beets differed in their "sweetness." It was important to sow only the seeds of the sweetest, in order to gradually increase the quantity of sugar in each root. He constructed a "saccharometer," by which he could ascertain the exact quantity of sugar in an ounce of beet pulp. He then went through a field of sugar beets, and scooped out of growing plants an ounce of pulp. He tried one thousand samples, testing them by the saccharometer; and such roots as contained the largest quantity of sugar he reserved for seed. By repeating these operations for several years, he at last produced an "improved sugar beet," and it is now cultivated for sugar in Europe. It also makes excellent food for cattle. We mention these facts to show what can be done in improving vegetables. We think if the government was to favor the manufacture of sugar from beets, for three years, by large prizes in every county, the capabilities of Canada for sugar growing would be well tested. The growers who were sent out to America to select a tract of land to grow sugar beets have chosen Kentucky as the best locality, the more northern States being too cold, and the summer too short, for the production of good sugar beets. One thing is certain, we have seen larger beets at our exhibitions than in France. In California, beets have been grown of forty-two pounds weight. It is not, however, so much size as sweetness that is required. We think the best way to test the question and profit, is to offer large prizes at our Provincial Exhibitions for the beet syrup for the refinery, and refined beet sugar. This mode of encouraging the production of beet sugar would have the effect of testing the question of the economic value of beets for sugar, and it would be done at little expense to government; at the same time the prizes would afford some remuneration to the farmer for the loss attending a new enterprise. After one year's trial, if successful, private enterprise would soon make the sugar beet one of the staple productions of the country.—Witness.

CURE FOR SHEEP-CHASING DOGS.

Your correspondent "Straightforward," tells us how he has cured some dogs addicted to chasing sheep. He recommends much patience; in this I quite agree, but to cure a confirmed "chaser" requires more than most men possess. Your correspondent fears a Newfoundland or any other large breed after he has tasted blood is incurable. I can assure him to the contrary. A large deerhound of mine, or rather of my father's (a prize winner at Birmingham,) with not being well looked after, got into the habit of chasing sheep, and killing them too, when ever he had an opportunity. He was sharply corrected and kept chained up for some days, but when again taken out was as bad as ever. My father happily remembered how he had cured a large retriever of the same sin five-and-thirty years before, and we have, I am pleased to say, made a perfect cure of my deerhound. After one of his chases he was taken up to the sheep farm, securely tied between two old Scotch rams, and then let loose in the yard. No sooner were they let loose, than all three being good jumpers, they cleared the wall, and the dog was dragged about the park till all three were dead tired. The poor fellow was then taken home, and I can assure you "sheep chasing" is now the very last thing of all others that he ever thinks of.—LONDON FIELD.

GREAT SALE OF SHORT HORNS.

We copy the following from an English Agricultural paper, showing the almost fabulous prices paid for animals; they are known as the Didmarton Herd, the property of Mr. Stiles Rich. About 2,000 people were present, including some of the most noted breeders from various parts of the country. "The cows and heifers averaged £75. 12s per head; the bulls £88. 5s each; the total amount realized by the sale was £4,036. 4s, or an average of upwards of £720 stg. per head throughout. The highest figure reached, was for a bull calved October, 1866, called second Duke of Collingham; knocked down to Lord Dunmore, after a spirited competition between his lordship and Lord Fitzhardinge. at 650 guineas. Another bull went to the agent of the Viceroy of Egypt, at 140 guineas, and a cow 5 years old was bought by Lord Fitzhardinge for 360 guineas. Another 4 years old by Mr. Hoster for 205 guineas; another 4½ years old by Mr. Larken for 120 guineas; and two others at 100 guineas each. by the same purchaser.

HILL, OR LEVEL CULTURE.

The questions of hill, or near level culture, have each their advocates among farmers; but those who are in favor of constructing the old fashioned, large, conical hill, for corn or potatoes, are diminishing in number rapidly, wherever nearer level culture is once introduced. What advantage there can be in hilling corn or potatoes, we are at a loss to see; on the contrary we see many disadvantages, especially on dry, and well drained land. It makes extra labor, tends to increase the effects of drouth, as it exposes more surface to the influence of the atmosphere, and increases arefaction at times, when all the moisture contained in the soil is required for the support, and sustenance of the plants. The conical hill conducts the rain from the roots to the centre between the rows of hill, very little being retained within the range of the fibrous roots, by which the nutriment is taken up by the growing plants, and without which they would immediately languish and decay. The hilling is further disadvantageous, as every fresh layer of earth over the roots causes a new set to start out, to the detriment of the old, which soon lose their vitality, and become worthless. The energy of the plant is thus exhausted, without increasing its means of support. The constant hilling would keep the plant making roots half its natural life, if it did not entirely kill it; besides the cutting off, and destroying many roots. The same objections may be made to the high hilling of potatoes, with their long clinging roots, and the little fibrous roots around the vine to give growth to the top.—RURAL AMERICAN.

GRASSHOPPER.

During the last few years the ravages of this pest has attracted considerable attention among scientific men. On this continent they have swept over large tracts of country, stripping every field in their march, leaving

them as destitute of vegetation as the desert. The labors of the husbandmen in Kansas were consumed, and bare fields attested their powers. Last year their march reached the Red River Settlements, and the claims of its suffering inhabitants were made known in every Canadian village. Was it not for the noble and generous response, death from starvation must have ensued. Their course is ever onward, and the spared section of this year cannot tell how soon its turn may come. We copy from one of our exchanges—"Adelaide Observer," Australia, the following means practised in that distant colony, and commend it to the attention of thoughtful men. He says:—"I see that the grasshoppers are committing great depredations in various parts of the colony, and as I know a simple way of destroying them when they do come, which I have practised in South Australia for years (where in some seasons clouds of grasshoppers come as thick as flakes of snow in a snow storm), I send it to your valuable paper, as it may be of great use to gardeners and others who suffer most by their visitations. The plan is to sow borders or rows of the common larkspur in gardens; in vineyards it might be sown between the vines. The larkspur has a very pretty flower, and the leaf is so green that it attracts the grasshoppers at once, and when eaten, it is sudden death to them. I have seen them lying dead by thousands under the larkspur borders in the gardens in Adelaide."

WATERING HORSES.—Horses should never be kept so long without water that they will drink largely when they get it. Give it to them often, and they will never injure themselves with it. Nothing is more common than to hitch a team to the plough, and make them work half a day without a drop. What man would submit to such treatment? If the plough is started at seven in the morning, water should be given before ten; and again in the afternoon by four o'clock. Even if half an hour is consumed, more work will be done in a day. The objection that horses on the road should not "be loaded with water" is not valid. A horse weighing 1,200 will not be much encumbered additionally by twenty pounds of water while the distention will give him additional strength. Every farmer knows that when he himself undertakes to lift a large log or heavy stone, he can do more by first inflating himself with air, and not unfrequently he loses a button or two from his pantaloons in the operation. Some degree of inflation by water will add to a horse's strength in a similar manner. In driving a horse on the road at a natural gate of nine or ten miles an hour, I have frequently had occasion to observe that he was laboring with perspiration until I let him drink freely, when he ceased to sweat, and evidently travelled more freely. Don't be afraid to give your horses water; the only danger is in making them abstain too long in which case care is needed.—COUNTRY GENTLEMAN.

The Hon. David Christie, of Paris, announces a sale of eight Durham bulls, to take place on the 10th of June. We hear that Mr. Millar's loss on his imported grain, amounted to near \$3000. We purchased some from him, but would commend those that have purchased the Black Tartar oats, whether from him or

from us, to examine the growing crop closely, as there are some seeds resembling mustard in it. We have previously cautioned those we have supplied, and would only supply in small quantities.

The government are devising plans to wrest the power now in the hands of the Board of Agriculture from them.

The grain crops of this western section are looking very promising. The Winter Wheat never looked better. The cold and backward May, just passed, will tend to shorten the hay crop. The apple crop in this vicinity will be very short this year; very few apple trees show any blossoms at all; all other fruit crops bid fair to be good. Cattle and sheep are now thriving well; no disease of any kind heard of among them. A kind of diphtheria has attacked horses in London Township; we have heard of but two deaths from it. The Artillery horses brought good prices; fat will sell.

SPRING SHOW.—The annual spring show was held at Lucknow, on Thursday, April 29th, 1869, at which a fine breed of stallions and bulls were on exhibition to compete. The prizes are as follows:—STALLIONS, 1st prize, R. Hadwen, Lucknow, \$8; 2nd, Peter Donohue, Wawanosh, \$6; 3rd, Jas. Spears, Ashfield, \$4. BULLS, 1st prize, Edwin Grant, Wawanosh, \$6; 2nd, Jas. Campbell, do., \$4. The above prizes appeared to have been awarded to the satisfaction of all those who profess to be judges of animals.

FRENCH FARMING.—Two great "revolutions" in French farming have taken place within the last fifty years. The first was that in "rotation" of crops. An old three course was followed, consisting of the division of a farm into two portions, one being in meadow, the other was sub-divided into equal parts, one of these was under grain, the other fallow, that is, remained unproductive once in every two or three years. A root crop, generally potatoes, has superseded the fallow. A five course rotation, comprising roots, wheat, clover and oats, is the favorite at present. The second revolution, dating some thirty years back, has been in manuring, that is, the employment of artificial or chemical manures, as adjuncts or complements to that of the farm yard.—LETTER FROM FRANCE.

TEST SEED CORN.—An Illinois correspondent of the "Prairie Farmer" says:—"No ear of corn should be accepted as good until one or more germs have been examined with good eyes. The difference between a sound and a damaged germ can readily be determined by comparison. The former will be light-colored, firm and bright; while the latter will be dark-colored and soft. Both ends of the germ should be examined, as sometimes the point which is to form the root will appear sound and bright, while the other end or point, which is to form the stalk, will be damaged: which I believe to be the case this year in some localities, caused undoubtedly by frost or freezing last fall, before the corn was properly matured."

AGRICULTURAL EDUCATION.

Mr. Robert Robson of London Township, appears to take more interest in Agricultural Education than any other person in this County. He has brought his views before Dr. Ryerson, but to no purpose. He has at his own expense procured some useful pamphlets on Agricultural Chemistry, such as he would wish to be introduced to our schools. He has left one for our perusal. It is replete with useful and important matter, such as should be known. If we had ten such men in this County as Mr. R. Robson, it would be a great blessing to it. He is a plain, aged farmer, and his politics are solely agricultural prosperity.

IMPLEMENT AGENCY.

Established in connection with our seed department, is a ware-room for the display of agricultural implements. There is always a space for any article that bids fair to forward the labors of the husbandman. Our connection rapidly increasing with leading manufacturers, farmers in many instances will find it to their interest to order through us. Were we not to aim to supply our patrons with the most improved patterns of labor-saving machines, and we wish to give a candid expression on the relative merits of each. We have sold many machines during the past year and received but few expressions of dissatisfaction, and now feel that with our present facilities, we can meet the requirements of those that may patronize us. We advertise at the lowest prices that manufacturers will supply them to individuals, and they will be put on board the cars at the manufacturers nearest station, free of charge. When implements are delivered at the ware-room, the purchaser will have to pay the freight from where they are manufactured. By this means, persons at a distance will have the same advantages as those near the emporium.

FARMER'S PIC-NIC.

The West Middlesex Agl. Society purpose holding a Farmer's Pic-Nic on those beautiful grounds South West of Strathroy, the driving Park, on Dominion day (1st of July) when it is expected the Great Western R. R. Co. will grant an excursion from Sarnia and London, to Strathroy. The Committee of the Society will spare no pains to supply good music, good speeches, hot and cold water, swings, velocipede races, athletic games, baloon assension, &c, &c.

WEST MIDDLESEX FALL SHOW.

The Directors of the above Society have fixed upon Wednesday, 6th of October, to hold their Fall Show at Strathroy, of which North Middlesex Agricultural Society will please take notice, as those Societies have so

many members identified with both Societies, the Fall shows should be on different days.

MORE PURE BRED STOCK, FOR MIDDLESEX.—

Mr. John Fisher of London Township has purchased from Mr. E. Jones of Thorold, 3 Durham Cows and one Bull Calf.

BETTER TILLAGE.

Farmers in general expect a yield of crops more in proportion to the surface of land occupied than to the depths of the soil whereon they grow. Yet it is obvious that if one should scatter seed over an acre of rock it would perish; if over the rock there was a layer of soil two or three inches in depth, the seed might reproduce itself; add as much more soil and an ordinary yield might result; and again, if this depth should be doubled, and made available to the plant, who doubts that proportionately larger profits would be derived? Suppose this layer of soil contained plant food plentifully, but was of a consistent, impervious nature, so that the tender roots could not penetrate it, and make use of its fertility, it would then require loosening, pulverizing, aerating and in short, thorough cultivation, and according to the depth and thoroughness of that cultivation would be the amount of plant food made available, and consequently the yield of the crop. This is practically the condition of most of our land; it contains plant food enough to double the average yield of crops, if it were only made available to them, but the unworked subsoil is like rock, confining the roots of plants to the comparatively thin arable surface soil. Instead of coveting your neighbor's lands, and putting forth great efforts to secure more surface, is it not more profitable to cultivate deeper than which you already possess, and double its productiveness? With most of our farm crops the amounts of roots determines the quantity of products, and roots will develop abundantly wherever there is room and food for them, but they cannot push their way into stony lumps, nor live in hardpan layers where there is no air.

On many farms underdraining lies at the foundation of improved culture.—

The stagnant water must pass off or air will not enter the soil, nor the latter remain loose any length of time after being stirred. Then comes a fair depth of surface-plowing, followed by subsoiling to any practicable depth. This way of preparing stubble ground for spring grain is excellent. Before sowing, cultivate deep across the furrows with a long-toothed cultivator. We have seen oat-stubble prepared for wheat by plowing to the depth of twelve inches, harrowing, rolling, then stirring the soil nearly to the bottom of the furrow by a long-toothed wheel cultivator, to which four horses were attached four abreast, and all was finely pulverized. Such a chance for wheat on strong loam or clay land is better than most summer-fallows.

Farmers, look to your possessions down in the ground; there are richer mines than those in the far mountains, and the patient worker thereof wins health, peace and competence.

CALIFORNIA WHEAT.—It is said that there are sixty-six vessels now en route to Great Britain from San Francisco with cargoes averaging one million seven hundred thousand sacks of wheat, besides eight vessels for domestic Atlantic ports with a hundred and sixty-six thousand sacks, and ten vessels to Rio Janeiro with fifty-one thousand barrels of flour. The California wheat and flour now afloat for China and other countries, is valued at four millions of dollars. This is the country that twenty-five years ago was a barren waste, and that twenty years ago, when it first began to be settled by mining adventurers, was regarded as being unfit for agriculture and only valuable for its minerals.

REMEDY FOR THE TURNIP FLY.

As soon as the young plants can be seen, let a light sprinkling of dry wood ashes be sifted over the rows. It will not injure the housewife's sieve that is used to sift Indian meal. Ashes can not be applied satisfactorily with the bare hand. The aim should be to simply cover the minute leaves with fine ashes sufficient to prevent their being devoured by the turnip fly. When ashes are applied by hand without a sieve, which should be held down close to the ground, careless operators are very liable to throw them on so bountifully as to smother the tender plants."

Mr. A. Young, 9th concession, Howick, has lost by disease eleven old sheep and eleven lambs. The disease is spreading. Mr. James Strong's sheep have been attacked, and some of them died. Mr. Addison lost four old ewes and twenty lambs.

TO FANNING MILL MAKERS.—Mr. R. Manning of Exeter offers double the price now paid for the fanning mills in use in his neighborhood, for one that will clean 30 bushels of wheat per hour, and not throw over more than a half bushel of good grain.

Mr. C. W. Crossman of Rochester, will please accept our thanks for the seeds so kindly presented. We will give them a trial, and if we find them as good as reported we will give information about them next season.

An exchange says:—The largest rose-bush in France is at Toulon. It covers a wall 75 feet long by 18 in height, and near the root measures 32 inches round. In the months of April and May it produces 50,000 roses.

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NOTICE.

Whereas some have made great complaints to us for striking off their names as soon as their time had expired. We therefore continue to send the paper to all until ordered to be stopped. As there is always a loss in a credit business, we have made our terms to cover such loss, which have been duly published. Our terms are to Agricultural Societies \$60 per hundred when paid in advance, in clubs of 4 or more 75c in advance, single subscriptions \$1 per annum in advance, to delinquents 12½ cents per month. We will accept the \$1 per annum from them if paid in reasonable time, but delinquents of two years standing must now settle the same. We strongly advise you to send in your payments at once. We do not wish to add one cent of cost to one of you. One, two or three dollars may appear a very small matter to you, but when we have them by the 100 or 1000, it amounts to a large sum. We have expended a large sum to incur these credits, and gain our present position, and do not wish to loose. The returning of a paper does not stop your liability, after you have run in debt. The papers will be sent and charged for till arrearages are paid up. We allow ample time for all persons and all clubs to renew before we charge our highest rates. If you pay double as long a time in advance, as you are now in arrears, you will not be charged the 12½ cts. per month. Delinquents will please attend to this notice.

Mr. Samuel Corbett of Oak Hill, County of Victoria gained the five varieties of show Potatoes presented by Mr. McKenzie of Lambeth. We look on Mr. McKenzie as the potato king of Middlesex.

Youth's Department.

Answer to Enigma in last Paper.

Agricultural Societies.
Correct answers sent by R. J. Potter, East Nissouri; H. Ayerst, Wyandott; Jas. Fennel, West Williamsburg; Miss S. L. Harvey, Maryboro; Miss M. R. Cotsworth, Romney; Miss E. M. McCormick, Penetanguishene; D. E. Rogers, Penville, and some little friend from West Zorra, who forgot the signature.

To the Editor of the Farmer's Advocate.

CHARADE.

BY D. E. ROGERS, PENVILLE.

My first crawls slowly on,
But still it has its use,
Though many cruel boys,
Oft treat it with abuse;
More useful still's my second,
As everybody knows,
We could not do without it,
I very well suppose;
My whole's a noted shrub, I ween,
Which you perhaps have often seen.

ANAGRAM.

Lela em larey ni het groinmn,
Hewn eht ewd si no teh nawl,
Ree lte uns singbe sit nising,
Lacl em ta teh eepp fo andw.
Acll em realy Anylyheve Heartf,
Atht I amy ym ydtu od.
Dan thiw lal hatt yalre sepair Ehte,
I yma ovel nad esirpa Hete oto.

CROSS-WORD ENIGMA.

My first is in stab, but not in cut;
My second's in hovel, but not in hut;
My third is in door, but not in sill;
My fourth is in mountain, but not in hill;
My fifth is in seek, but not in find.
My sixth is in thought, but not in mind.
My whole is an island.
Answer next month.

A BOY'S EVENINGS.

Joseph Clark was as fine looking and as healthy a lad as ever left the country to go into a country store. His cheek was red with health, his arm strong, and his step quick. His master liked his looks, and said that boy would make something. He had been a clerk about six months, when Mr. Abbott observed a change in Joseph. His cheek grew pale, his eyes hollow, and he always seemed sleepily. Mr. Abbott said nothing for a while. At length, finding Joseph alone in the counting-room one day, he asked him if he was well.

"Pretty well, sir," answered Joseph.
"You look sick of late," said Mr. Abbott.
"I have the headache sometimes," the young man said.
"What gives you the headache?" asked the merchant.
"I do not know as I know, sir."
"Do you go to bed in good season?"
Joseph blushed. "As early as most of the boarders," he said.
"How do you spend your evenings, Joseph?"

"Oh, sir, not as my pious mother would approve," answered the young man, tears starting in his eyes.
"Joseph," said the old merchant, "your character and all your future usefulness and prosperity depends on the way you pass your evenings. Take my word for it, it is a young man's evenings that make him or break him."

The warning was a timely one, and proved effectual. He realized that he was exposing himself to influences that would inevitably work his ruin, and at once changed his course.

HOW TO MAKE A CLOCK FOR 25 CTS.

Yes, boys, a real clock. Now you try it, and we know you will say we spoke truly.

First you get a sheet of stout mill-board, such as is used by bookbinders. This will cost from six to ten cents. Get size twenty-seven by twenty-two inches. Draw two lines the longest way equally distant from the edge and each other. This divides it into three parts of the same size. Now from the top measure off ten inches for the face, and then with your knife partly cut the board through the rest of the lines below the face, and bend them back and glue together by putting a strip of cloth over the edges where they meet. Mark out the face of your clock

and make a hole for the hands. Go to your tinmam, and he will make you a funnel-shaped spout, which you must glue on the bottom. Then make a spool like a cone—running to a point on one end—and eight inches across on the other. Wind a string on this cone, commencing at the large end, and winding down just as you would a top. Tie to the end a conical ink bottle filled with sand. Make some wooden hands, and put them on the face. Then fill your box, now made, with sand, and when it is hung up the sand will run out slowly at the bottom, and as the sand goes out the weights lower, and turn the wheel, which makes the hands go around. It will depend upon the size of the hole at the bottom as to how fast it runs. You can paint it, and make it quite an ornament and curiosity in your house.

WHAT A BLIND MAN MAY DO.

The biography of James Gale, inventor of the non-explosive gun powder process, and other devices, which have just appeared in England, shows that a blind man may accomplish some apparently impossible things. Mr. Gale, who is a blind man, was not trained in the ordinary way, at a school especially for the blind, but by dictation of the knowledge to be imparted, and without being made to feel that he belonged to a separate class; and his biographer contends that there is no insuperable difficulty in a blind boy being educated in an ordinary school,—that he can read, cipher, and even write from dictation with his class. Of the many blind men who have distinguished themselves, hardly one is known to have been educated at a school designed exclusively for the sightless; and not one in twenty of those so educated in Paris is able to earn a living.

As the result of the independent mode of training, by which the students' powers are very much stimulated, Mr. Gale has ridden a horse race, and won it. Returning once in carrier's van from Plymouth to Tavistock, when the driver lost his way through the darkness of the night, his acute sense of hearing enabled him to detect the fact that they were on the wrong road and to lead them into the right one. He has succeeded in concealing his blindness so effectually, that he has actually acted as a guide to more than one person who happened to be unacquainted with the locality, and concealed the fact of his blindness until the Journey had been concluded. He had ridden a blind horse over several miles of ground, and he has even shot pigeons at a shooting match. He possesses remarkable shrewdness and energy in business affairs, and is widely known in England as a philanthropist. He has much regard for the poor, and founded the South Devon and Cornwall institution for the instruction and employment of the blind.

In 1864, he began to experiment with gunpowder, and the next year announced that this dangerous material, when mixed with fine powder made from fine glass, could be carried about like other merchandise and not explode. He also invented an ammunition slide and a rudder ball cartridge, by which a very great rapidity in firing may be obtained; a fog shell, which, when thrown upon the upper deck of the ship, generates a vapor so impenetrable, that the sailors and marines on the boats are entirely unable to see any object not immediately close to them; and a balloon shell, when thrown from a height, clears a space of a hundred feet from every thing except very ponderous objects.

Flower Department.

The time for sowing seeds is now nearly passed, but there are a few kinds of field and garden seeds yet to be sown, but now is the principal time for planting. We as farmers at least have but little time for floriculture, but there are very few of our wives daughters or sisters but really love to see flowers, and many take great pains to have a few. Those that have not been able to raise plants from really good seed or good varieties can now procure them at our Wareroom. We have some raised from the choicest seeds procurable in England and in the States. You can put a few even in pots about your windows, if you have not a well fenced garden. They look pleasant, and give a house a cheerful endearing appearance.

We have given you numerous illustrations of different kinds of flowers, and now present you with representations of some of Mr. Vick's Cockscombs. They are deserving a place in each garden. They also make a nice potting plant for the windows. When you come to London call at the Wareroom, and take fifty cents worth of choice plants home.

Green House and Window Plants.

There is no set time for bringing out plants; it must be governed by the season, and the nature and condition of the plant. So many plants have been injured by injudicious sudden change, in removal to the open ground, that some of our best cultivators prefer to leave them in-doors altogether.

Plunging Plants means bedding the pot in the soil of the border without removing the plant. When this is done, a flat stone, coal ashes, or other matter, should be put at the bottom of the excavation, to prevent worms from finding their way through the hole in the pot into the ball of earth.

Turning out means that the ball of earth is to be removed from the pot, and planted in the border. Many things that are turned out to

fill up the borders are not taken up again, but a new and much more vigorous stock is propagated from cuttings.

Camellias, and other broad-leaved evergreens, should be placed under a lattice work where they will be shaded during the heat of the day.

Window Plants which are neither plunged nor turned out in the border need shelter from the sun, plenty of water, and care in respect to insects.

Ivy that has been kept in doors may be set in

a shady place, or the plants may be turned out. Do not allow the branches to lie upon the ground.

IMPROVEMENT IN THE GLADIOLUS.

Since florists have turned their attention to the Gladiolus, a marked improvement in the form and color, as well as the texture of the flower, is manifest. Instead of the one-sided flower with the petals all pointed we have now flowers quite symmetrical in shape, and of great substance. The Gladiolus is one of the plants that need to be popularized, for we seldom see it in the gar-

To TRANSPLANT SUCCESSFULLY.—Allow plants to suffer for water for sometime before moving, give the bed a thorough wetting, draw, and then set out in the afternoon, pouring one pint of water on each plant. Little rootlets shoot out in three hours, and the plants wilt but little. This is not new but it is so important that it is worthy of presentation.

Correspondence.

To the Editor of the Farmer's Advocate.

THE VETERINARY DEPARTMENT.

The Liver is occasionally the seat of disease in the horse. Hot weather and hot climates are influential in its production.

Heppatitis or inflammation of the parenchyma or substance, or the whole of, or part of the liver, is a disease which is clearly recognized in practice.

SYMPTOMS.—They are generally indicated by the horse becoming very dull and moping, and his head hanging low, refusing his food and not laying down; a very small quantity of dung is ejected by the Rectum. The Membranes of the eye, mouth, and nostrils, are of a deep yellowish tinge; the urine is very high colored, if allowed to stand, it throws down a thick deposit of a brick red color; upon pressure being applied to the right side he evinces great pain, one foot will be pointed, principally the off fore one, pulse quick and bounding, and the breathing more or less disturbed.

Causes of this disease are Plethora or a superabundance of blood in the animal system, over feeding, over exertion, more particularly in hot weather, injury to the gland itself. Worms or other parasites in the Biliary passages or bile tubes, or inflammation of those organs in the immediate

vicinity of the liver.

The probable result of this disease is favorable, but the chief danger to be apprehended is that of the liver becoming gorged with blood and bile, and its occasionally bursting, more especially if the gland is at all unsound at the commencement of the inflammatory attack.

The treatment in this disease must be of



COCKSCOMB—PLANT REDUCED.

COCKSCOMB— $\frac{1}{2}$ NATURAL SIZE.

dens of the people at large. Good bulbs can be bought for \$2 00 a dozen, but the new and choicest varieties sell for 50 cents or more each. They will flourish in any garden soil, and all the better if it is rich and light. The bulbs may be planted this month or next, and when the leaves begin to wither in autumn they are taken up and kept in a cool place, free from frost. The old bulb produces one or more new ones, according to the variety.

an active nature. Bleed by general abstraction, that is, from the jugular vein, to the extent of from four to six quarts, following up immediately after by the administration of a strong purgative, in the shape of a ball composed of Aloes Barb, eight drachms; Ginger, one drachm; made up with a little lard. Throw up injections of soft soap and tepid water three or four times a day. The physic having set, and your seeing any occasion for it, you may abstract a small quantity more of blood. Blister the sides as far forward as the place of girthing. One fact must be born in mind when treating this disease, and that is not to administer Calomel or any of the preparations of Mercury, they being powerful stimulants to the liver, and must be avoided. Give a drench night and morning composed of Liquor Potassi, two drachms; Iodide of Potassium, half a drachm; in a pint of cold water, and if the symptoms gradually subside to the above mode of treatment, and upon the whole you find the case progressing favorably, give the usual tonic powder, or ball which is a much better and more convenient way of administering nearly all the different classes of medicines to the horse, providing the ball is carefully compounded and neatly enveloped in thin paper. But that disgusting mode of giving balls should be carefully eschewed, namely: by rolling rosin and saltpetre in lard, and placing it in the horse's Molar Teeth or Grinders, causing nausea or sickness to a greater or lesser extent.

Rupture of the liver occasionally occurs from distention, some undue effort of the respiration, bodily exertion, an injury.

SYMPTOMS.—The horse becomes very dejected, loosing his appetite, and evincing excessive pain if made to move; he will make two inspirations to the one expiration; the membranes of the eye, mouth, and nostrils, become pallid, pulse small and quick, and it will be found almost impossible to feel the artery at the jaw. Cold sweats break out all over the body, staggering in his walk, falling in the stall, and convulsions supervening.

TREATMENT.—Apply cold water or ice to the right side, throw up cold water injections, small doses of styptic medicines must now be given, and some of the preparations of iron must now be brought into use with a view to their administration; also keep the animal as quiet as circumstances will permit.

Worms or Hydatids are sometimes found in the biliary ducts or passages of the liver.

Biliary Calculi or Bile Stones have sometimes been found in the liver of the horse, but of rare occurrence.

In my next I will drop a few lines upon an important organ in the abdominal cavity.

JOHN POETT.

Veterinary Surgeon and Fellow of the Edinburgh Veterinary Medical Society.

To the Editor of the Farmer's Advocate.

How to Prune Grape Vines and When to do it.



FIG. 1.

they spring up, by any kind of a stake four or five feet long, as in Fig. 4. This will answer for three years, until the permanent trellis is required. Shorten all laterals or side shoots back to one joint from the leader,

as in Fig. 1, leaving a leaf on it. This is called the first spur, as in letter A B C, dotted line, Fig. 1. Be sure and not hurt the tendrils. The second and third pruning is similar, shortening laterals after making five or six joints, leaving spur upon spur, and a leaf upon each spur as well as leader. In the last or Winter Pruning, cut all the leaders back, as in Fig. 2, and take off the spurs and tendrils. If it is a tender variety lay them down for protection, covering them with asparagus tops or straw litter.

MR. EDITOR.—Every grape vine requires four prunings during the year. It doesn't matter whether or the Spur or Revival system. I now propose to give the first three years' treatment, as illustrated in the subjoined cuts. Select strong plants, as in Fig. 1, and as soon as planted prune back to a strong bud, as in Fig. 2 and support the young cane as



FIG. 2.

SECOND YEAR'S TREATMENT.

As the buds push out, train them up as in Fig. 3; these are the leaders. Spraying them occasionally when the sun is off, with clear water. If there is any weak ones, rub them off as in Fig. 3. As soon as the laterals are long enough, shorten them as in Fig. 1, and so on as in the first year's treatment; after the leaves are off the vine will be as in Fig. 4. Commence the winter pruning as in Fig. 4, a a a; you see the spurs; take them all off and shorten the leaders back

to a strong bud. Protect them, if tender, as before.

THIRD YEAR'S TREATMENT.

You will now get fruit, and every year after if properly treated. The permanent trellis may now be erected of oak scantling, 4 ft. by 4 ft. and 7 ft. long, for posts, about 7 feet apart as in Fig. 5. Put two and a half feet in the ground, this part charred or burned a little. Nail slats or put wire across them to train the vines on.

If on the Revival system, train up every alternate leader, and strip the fruit from it to make it strong, looking after the laterals, as in Fig. 1, through the summer. The remaining leaders to be shortened one or two joints above the last



FIG. 3.



FIG. 4.

bunch of fruit, with a leaf on each joint, and one beyond the last bunch of fruit, looking after the tendrils as before. If on the spur system, allow the whole of the leaders to bear a few of the strongest bunches, cutting the weak ones off, pruning back the leader to the last bunch of fruit, as before, looking after the laterals through the summer, as in Fig. 1, so as to mature the leader



FIG. 7.

bud for the next year's fruit, as in Fig. 7. This shows a bulbous bud, composed of three buds, the centre one being the fruit bud as in letter d, first crown bud; c, second crown bud; e, third or fruitless bud. Each leader bud contains this number when properly matured. Care should be taken not to injure the first bud. The summer pruning is very necessary to bring this leader bud to maturity, as the laterals would rob it and make it weak while the spurs feed and make it grow bulbous; but if you take out the lateral altogether and not leave any spur, all the sap will flow into this bud and make it grow out a year before its time, destroying its prospects for the coming year.

The last or winter pruning on the Spur System, the two canes a a must be cut out as in dotted line Fig. 5, the other five back to a strong bud as at c c b b and a a, if the buds are strong enough—if not, go to a strong bud. If on the Renewal system, as in Fig. 6, a a b b b, all vines ought to

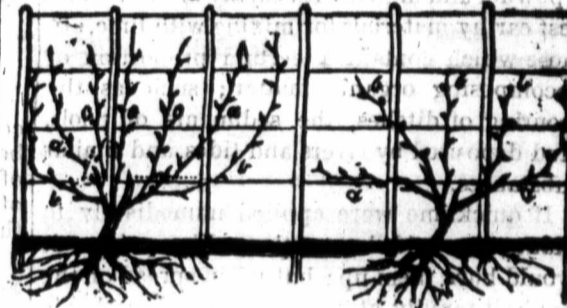


FIG. 5.

FIG. 6.

get their winter pruning before the last week in March, as they will bleed and often die. If, by accident you break a branch or cut any part so as to bleed, put a raw potato on the wound which will stop it effectually.

Any one growing grapes extensively, would find it to their advantage to go any distance to see each pruning done and have it explained, or pay an experienced hand. I would beg leave to call the attention of vintyardists and amateurs to the points here explained, believing them to be the only method in successful culture of the Grape Vine for their permanent prosperity and fruitfulness.

C. BAKER.

Landscape Gardener and Nurseryman.

To the Editor of the Farmer's Advocate.

MINERAL MANURES.

LIME.—It is well known that various substances belonging to the mineral kingdom, are capable of promoting the growth of plants. These substances have been termed stimulating manures, in contradistinction to manure derived from the animal and vegetable kingdom, which are called nutritive manures. This distinction, however, was applied before it was known that mineral substances are nutritive,

and the present theory is, that they act upon the soil by improving its texture, or by rendering soluble the parts of it which are insoluble, or by otherwise fitting it to promote the growth of plants; and, that they act immediately on plant itself, by being received into its substance. The process of this action, however, is not fully understood; nevertheless it is well ascertained that certain earths, oxides, and alkalis, combined with acids, pass into the substance of the plant, absorbed it may be, in part, from the atmosphere, but chiefly along with the aqueous portion of the sap from the earth in which the roots are fixed.

Of all mineral substances known to us, lime is that which performs the most important part in improving the soil and promoting the growth of vegetables. It is found in nearly all soils that are capable of sustaining vegetation, and in combination with different acids in nearly all vegetable substances. Lime, in its natural state, is called limestone, and by chemists, the carbonate of lime. As limestone, it is too hard and compact to be diffused in the soil, and even quicklime would be too solid, were it not that through its combination with water and carbonic acid from the atmosphere, it splits and crumbles to powder.

Lime exists in several different states; first, as a carbonate; second, as the hydrate of lime; third as the sulphate of lime, which is the same as the plaster of Paris, or gypsum, and fourth as mail, which is limestone reduced to a powder and mixed with earthy matter. The best earthy materials for mixing with lime, are those which contain a certain proportion of decomposing organic matter; such as the scouring of ditches, the sediments of pools, mud deposited by rivers and tides, and similar substances.

If quicklime were applied immediately to plants, it would be to them like poison, it would burn them up; but when spread on the earth, it rapidly attracts water and carbonic acid from the atmosphere, and it is only when thus modified that it promotes vegetation.

To obtain the greatest benefit from lime, it must be kept as near the surface as possible. The reason is this; its weight and minuteness give it a tendency to sink, and after a few years of cultivation a large portion of it will be found to have gone beyond the depth of its most efficient action. Hence it is advisable to spread it on the ground after ploughing; then harrow it well in, and allow it to remain in grass as long as good crops can be had. When the lime is settled down below the reach of a common plough, the subsoil plow will prolong its effect by enabling the atmosphere and the roots of plants to penetrate the subsoil likewise.

The quantity of lime applied to soils is various, and is dependent upon the nature of soils, the climate and other circumstances. In warm countries, a smaller quantity need be used than in those which are cold and humid. The stiff clays, for the most part, require a larger proportion of it than the lighter soils, and in case of such soils as contain much un-

decomposed vegetable matter, as peat, a quantity should be applied sufficient to decompose effectually the inert matter.

On common soils, the first dressing is ordinarily in the neighborhood of an hundred bushels per acre, and then in four or five years, half as much more. On some heavy clays abounding in vegetable mould, there have been applied six hundred bushels to the acre, with decided beneficial results to the land; yet it is not impossible nor improbable that half that quantity would have answered as well. Lime, as other manures, must be repeated, and the reason may be stated as follows; first, because the crops eat up and carry off a portion of the lime; second, because of its sinking into the subsoil, and thirdly, because the rains are always washing a portion of it out of the land, and carrying it away to brooks and rivers, where it becomes mixed with the mud and decaying vegetables.

Every plant that has been analyzed, with one exception, contains a portion of lime in some form or other, which it must have derived from the soil in which it grew. Wheat in flower, when ripe, the straw, the bran, all yield lime when analyzed; so likewise do barley, oats, vetches and the leaves, the bark and the timber of various trees. Indeed this substance is so universally present in all portions of the vegetable structure, that it may fairly be assumed to be an integral part of all, varying, however, according to the quantity existing in the soil in which plants are cultivated.

CHARLES MANLEY,
St. Catharines, Ont. D.C.

[We thank Mr. Manley for his practical contribution. It has that high value that ever belongs to articles that deal with facts instead of theories. We will ever welcome the labors of his pen to our columns, and feel assured that our subscribers will do likewise.—Ed.]

For the Farmer's Advocate

The Adulteration of Farm Seeds.

The adulteration of Farm Seeds has long been a subject less of suspicion than of actual undisputed fact. Farmers have complained and some have even prosecuted the seedsmen from whom they have bought the adulterated article. Scientific men have been employed to ascertain the proportion of the mixture of bad with the good, and have found it to amount to from twenty-five to fifty per cent. Mr. Buckman in his work on science and practice, has exposed the practice of adulteration with a vengeance, and shows that dead rapeseed is a regularly manufactured or rather manipulated article, sold for the express purpose of mixing without detection with turnip seed. Good unmixed seed ought to vegetate with a proportion of 90 as a minimum, and 95 to 100 as the maximum. Mr. Buckman found in ten samples of turnip seed procured from dealers, the range of inefficient seeds was from 48 to 26 per cent., and that the average of the ten samples 68 per cent. came up, and 32 failed. On the other hand, of ten samples of fresh unmixed seeds, the proportions were 92 per cent. grew, and 8 per cent. failed. These two specimens

which were selected from several, will give our readers an idea of the difference between good and bad seed.

Hitherto the seedsmen have maintained a discreet silence on the subject of adulteration, and have left it to conjecture; but within the last season a letter has appeared from a firm, in which they charge the practice of adulteration on the whole body of seedsmen, excluding of course, themselves, and treating the matter as a well known fact that cannot be controverted. This bold assertion has raised the wrath of a good many houses, and they declare that during the time they have been in the trade they have never mixed a sample of seed, or even had any rape or other seeds for that purpose in their warehouses, and that having commenced business on that principle they will never deviate from it.

There is no doubt that in some seasons even unmixed turnip seed will contain a large proportion of abortive seeds, and the same may be said of old seed that has not been carefully kept. But the silence of the trade is decisive on the subject of adulteration, and admits of little doubt or cavil. Indeed Professor Buckman's work contains a circular from a party, offering 000 (i.e. nought) seed killed by an improved method without chemicals, which by their unpleasant smell would lead to detection, and he likewise professes to sell the machinery for the purpose, with which a man can kill ten or twelve quarters of seed per day. This naive production is properly published at full length, but the name is unfortunately omitted.

We cannot abquit farmers themselves of all blame in the matter. They will purchase cheap seeds, and will not take the trouble to ascertain whether they are good or bad, or whether the party that vends them is a responsible and reliable person. Seeds can be easily tested by sowing fifty in a flower pot and notice how many vegetate. The fact is, they often sow double the number of seeds that can or are intended to stand, and although the mixing of dead seed may be so carelessly done as to occasion blank places in the field, it is ascribed to other causes than the real one, an undue proportion 000 lighting on these spots. We may add that all seeds of the Brassica tribe are liable to the same species of adulteration, by the 000 seed. Professor Buckman endeavored to procure a sample of this precious article, but the friend who was in the trade did not use it himself and could not obtain it then from any of the others; they were chary respecting it, and although perfectly well known and understood in the trade, they do not care to have it known beyond. There are secrets in all trades, and this system of adulteration was once a secret, but is so no longer. A person in the seed trade applied to a house for the price of turnip seed; they told him it would be according to the proportion of 000 he wished to have in it, which ranged from 20 to 50 per cent. As he wished for genuine seed, he justly concluded that after such an avowal he could not trust the trader.

Clover and other seeds of that kind, are adulterated by mixing old with new, and there

is little doubt that the failure of this plant might, in many instances, be ascribed to such a cause. The old seed may vegetate, but the plant has not strength of constitution to withstand the severe frost, and being frost bitten dies off in the spring. All small seeds should be tested before they are sown.

RUSTIC.

To the Editor of the Farmer's Advocate.

HAMBURG BARLEY AND OATS.

On the first of March I received from the Department of Agriculture, Washington, D. C., one pound each of barley and oats, with request to test and report. The barley is called the Probststein barley; the oats are called the White Schonen oats. They are both imported from Hamburg. The barley is a beautiful sample, the berry is very large and plump and light in color. The oats are also remarkably large and plump, the berry very long and of rather a yellowish shade. I have to-day (May 6) sowed them for the purpose of testing in our Canadian Climate and soil (as requested by the Department at Washington). The ground selected is a sandy loam, and is in good condition, it being sod summer fallowed. Last season I drilled the seed in by hand. When harvested and thrashed, if spared, I will report to you, and if requested, I will send a sample of the grain.

H. M. THOMAS.

Brooklin, Ontario.

We shall be pleased to have your report, and to receive a sample.

We particularly request persons that have any good seed of any kind that will be of benefit to the Dominion, to report to us.

We have a free space in our paper for all communications relative to our agricultural prosperity, and solicit information from those that have it to impart.

To the Editor of the Farmer's Advocate.

EARLY ROSE POTATO.

SIR:—In cutting some "Early Rose Potatoes" purchased from two first class American establishments this Spring, I was very much struck with the marked difference to be found in the two lots.

Three fourths of one package were of a pinkish color in the skin with a shade of bright pink running through the potato wherever cut, which I took for the true Early Rose, the remaining fourth were of a dull white or pale yellow skin, entirely without the pink shade in the inside, only resembling the others in the formation of the eye, and generally of a larger size. All of the other package resembled what I considered the mixture in the first lot. Can this have been caused by the potatoes having been grown upon different kinds of soil, or were the white skinned ones not true to name. Perhaps some of your readers may have noticed something similar to this with their Early Rose Potatoes, and can throw some light upon it. If so, I and many others would be glad to hear from them through your columns.

Seventy-five cents a pound is too much to give for potatoes and then not get the true thing.

ALEX. PONTEY.

Westminster, May, 26, 1869.

There undoubtedly has been a great temptation to practice fraud and imitate genuine

articles, and it is surprising what numbers of persons have called on us to expose such practices that has been carried on in this city in the potato business.

The seed grain business has been disgracefully tampered with, and the stock business has its votaries to tricks and deception, and the least we can say is, dishonorable practices. Perhaps we may devote a little more space in a future number, on this subject.

Miscellaneous.

A small boy out west, one cold day was assisting his father to mark sheep with a paint brush. The father would catch a sheep and say to the boy "Mark that." After the job was done he started for home, which was some distance off, and was overtaken by a minister on horseback, who, seeing the boy was bare-footed, invited him to ride behind him. After the lad was seated, he began to catechise him thus: "My lad do you attend Sabbath school?" "No," was the reply. "You should attend Sabbath school, mark that. All good children attend both church and Sabbath school, mark that." Many other good things the minister told the boy, always ending with the order to "mark that," when at last the boy shouted out: "Mister, don't tell me any more, for I've got your back all marked over now, and it looks like thunder."

THE THIMBLE.—The name of this little instrument is said to have been derived from "thumb," being at first thumble, and afterwards thimble. It is of Dutch invention, and was brought to England about the year 1605, by John Lofting, who commenced its manufacture at Islington, near London, and pursued it with great profit and success. Formerly iron and brass were used, but latterly steel, silver and gold have taken their places. In the ordinary manufacture, thin plates of metals are introduced into a die, and then punched into shape.

SALT YOUR CHIMNEYS.—In building a chimney put a quantity of salt into the mortar with which the intercourses of brick are to be laid. The effect will be that there will never be any accumulation of soot in that chimney.

SAVORY POTATO CAKES.—Quarter of a pound of grated ham, one pound of mashed potatoes, and a little suet, mixed with the yolks of two eggs, pepper, salt, and nutmeg. Roll it into little balls, or cakes, and fry it a light brown. Sweet herbs may be used in the place of ham. Plain potato cakes are made with potatoes and eggs only.

ASPARAGUS PICKLES.—Fill your jar with asparagus, make a strong brine, pour it on hot. When you wish to use them for pickles, take them out and boil them done; then cover them with vinegar. They can also be used for sauce by boiling them tender, and then butter and season with salt and pepper.

RICE PANCAKES.—Boil half a pound of rice to a jelly; when cold mix it with a pint of cream four eggs, a little salt and nutmeg; stir in eight ounces of butter just warmed, and add as much flour as will make the batter thick enough; fry in as little lard as possible.

TO KEEP BRITANNIA BRIGHT.—Wash the ware every time it is used, in hot suds of fine soap; rinse with boiling water inside; when hot, pour over it boiling water, and dry while hot with a soft towel. Once each week rub the metal with wash leather and very little whiting. Take care of silver in the same manner.

CLEANING OF GLASS.—To clean a glass thoroughly and restore its original lustre, after the ordinary methods have failed, recourse may be had to hydro fluoric acid, such as is sold by the chemical establishments, in small gutta-percha

bottles. This is to be diluted with four or five times its volume of water. A few drops of the solution on a wad of cotton, and the surface thoroughly rubbed over with it, and then washed off with a good deal of water. The surface of the glass will be dissolved by this application and a new one laid bare. This process is well adapted to restoring the brightness of lenses of spectacles or spy-glasses, dimmed by age. If a concentrated solution of this acid be allowed to remain for some time upon glass, a cavity will be produced remarkable for its brilliant lustre. Care should be taken that too much of the solution is not used and that the ware be finally well cleansed by water.

BAKED SOUP.—Take one pound of lean beef, chop rather fine, place in an earthen pot which will hold five quarts of liquid. Slice and add two onions, two carrots, two tablespoons of rice, well washed, a pint of whole or split peas, a tablespoon of black pepper, and a tablespoon of salt; pour over all one gallon of cold water; put the lid of the jar on it, or a close fitting plate, and bake four hours. This is a nice, wholesome dish.

SODA JELLY CAKE.—Two teacupfuls of sugar, one teacupful of sweet cream, one teaspoonful of cream tartar, one-third teaspoonful of soda, two eggs. Spread thin on tin, when done, spread jelly between each layer. This will make a cake five tiers high. It is much improved by adding half a teaspoonful of wintergreen essence to the jelly.

CREAM BISCUITS.—Break six eggs, separate the yolks and whites; beat the former with six ounces of powdered sugar and the same of flour; whisk the whites, and then mix them together; add to it whipped cream in proportion to the sugar and flour; stir it carefully; pour this into molds, or paper cases, and bake.

RUSKS.—Beat seven eggs well and mix with half a pint of new milk, in which have melted four ounces of butter; add to it a quarter of a pint of yeast and three ounces of sugar, and put them, by degrees, into as much flour as will make a very light paste, rather like a batter, and let it rise before the fire half an hour; then add some more flour.

A Housekeeper writes:—having some stone jars in which lard had been packed until they became unfit for use, I made them perfectly sweet by packing them full of fresh earth, and letting it remain two or three weeks. This is an experiment with me, and I suspect it would be equally effective in any case of foul earthen or stone ware.

WORLD'S FAIR IN RUSSIA.—Russia, it is rumored, will have an Agricultural Exhibition next year, open to all the world. Implements, beasts, etc., sent for show, will be bought in by the Government at a price fixed on beforehand. All expenses of transit will be paid in advance. Odessa has recently had a trial of steam plows, (English) and mowing machines, (American), with the most happy results. Southern Russia and its rich wheat lands cry aloud for cheap labor, where the population, already sparse, is reduced in its effects by the demands of the Greek Church, which, on the average, admit not more than twenty workable days per month.

THE ENGLISH MARKET FOR WHEAT.—In considering the inducements offered to American farmers for the production of Wheat, we must know something of the probability that exists for a constant foreign demand; since, if the export trade which has existed of late is to be regarded as exceptional, there may be reasonable ground of fear that prices will decline below a point at which we can advantageously maintain our present yield. We find many of the older settled portions of the country already producing less of it than they consume, owing partly to the better profit that is obtained on other products.

THE ORIGIN OF THE POTATO.

The common potato (*Solanum tuberosum*) was found growing wild in Virginia at the time of its first settlement, and was introduced into Europe in the year 1545, by Sir John Hawkins.

Gerarde, an old English botanist, mentions in his Herbal, published in the year 1597, the fact of his having planted in his garden a potato, which did as well there as in its native soil.

Queen Ann, wife of James I, in a manuscript account of family expenses, mentions the purchase of a few pounds of potatoes, at two shillings a pound.

In 1663, the Royal Society recommended their cultivation as a means of preventing famine.

Previous to the year 1624 they were only planted in the gardens of the nobility; during this year a small portion was planted in an open field in Lancashire.

The potato will not thrive within the tropics, except at an elevation of from three to four thousand feet above the level of the sea; their natural climate is the temperate zone.

CASTING THE WITHERS.

Casting the withers, or inversion of the uterus, is a serious trouble of frequent occurrence among cows after calving. Mr I. B. Puffer, of Putney, Vt., informs us that himself and two of his neighbors have each saved cows when in this situation by tying a cord tightly around the protruding mass, near the body, and cutting off the part below the cord, and afterward fattening the cows. If the entire uterus protrudes, and the cord is tied above it, around the membrane connecting it with the vagina, and the section is made so as to remove the entire womb, we think it may succeed. No part of the womb should be left. If the uterus cannot be returned, it may be well to try this method to save the life of the animal. The "casting of the withers" is caused by the womb becoming turned inside out, as when a man in taking off his coat turns the sleeve wrong side out. The way to replace the withers is precisely that which a man would take to return his sleeve to its proper condition. He would take hold of the cuff and push his arm through the sleeve to the whole length of his arm. So here, the hand must be placed on the fundus or upper end of the womb, which will now be at the bottom of the hanging mass, and be pushed up through the cavity of the womb into the vagina, and this process must be gently persisted in, until the organ is replaced in its natural position. It generally requires the arm of the operator to be pushed into the body its entire length. It would do no good in returning a sleeve to re-turn it half its length. The work must be done completely. So in this case, if the inversion is partially done the womb will inevitably fall again. When properly restored to its place, it generally remains without further trouble. It will hardly be safe to allow a cow that has once had inversion of the womb to have another calf.

One who understands the true nature of the difficulty, and the anatomy of the parts, will have little difficulty in restoring the inverted organ if done before the parts become swollen and cold. Before any attempts to restore the organ, it should be carefully cleaned by bathing in warm water.

TREATMENT OF LAMBS.—Correspondents of the Mark Lane Express testify to the efficacy of a slight application of common-tar around the navel a few hours after the birth of the lamb to prevent inflammation, which is often fatal to a great extent on many farms.

SEXES OF ANIMALS AT WILL.

Much inconvenience and loss is felt by all breeders of cattle for the dairy, in having such a large proportion of male animals. These are not wanted for working animals or for beef, and so are fattened as rapidly as possible and sold out of the way. The consequence of this is, that the number of calves which the farmer has to select from to keep up his dairy stock, is reduced more than one-half, which frequently induces him to raise heifer calves that are defective in some points, or, at any rate, do not come up to the standard which he would like to preserve.

We present below an article on the subject of "producing sexes at will," not because the theory is entirely new, but as a timely suggestion to those who have cows to provide for at this particular season of the year. If careful observation is made, and the facts recorded, what must seem to many now as a mere theory may be so corroborated by a multitude of instances as to remove doubt from all minds, or fail in so many as to prove that the whole matter is still veiled in uncertainty.—For many years eminent naturalists have been satisfied of the necessity of a practical way to produce the sexes at will. M. Thury had the good luck to be the first one in putting the law in practice, as the following certificate and remarks, which we copy from the correspondence of the "Southern Cultivator" shows, translated nearly in its full extent:

I, the undersigned, George Cornaz, the overseer of the estate of my late father, M. A. Cornaz, President of the Societe d' Agriculture, de la Suisse romande, Mont nt. Canton de Vaud, do hereby certify, that having received from M. Thury, a Professor at the Academie de Geneve, on the 18th day of February, 1861, some confidential directions for the purpose of verifying by experiments the law regulating the production of sexes amongst the animals, I used with my herd of cows the directions given by M. Thury, and I obtained, immediately, without any variation, all the expected results and successes.

In the first place, on twenty-two successive occasions, I desired to have heifers. My cows were of Schwitz breed, and my bull a pure Durham.—I succeeded in all these cases. Having bought a pure Durham cow, it was very important for me to have a new bull, to supersede the one I had bought, at great expense, and without leaving to chance the production of a young male. So I followed, accordingly, the prescriptions of Prof. Thury and success has proved once more the truth of the law. I have obtained from my Durham bull six more bulls (Schwitz Durham cross) for field work; and having chosen cows of the same color and height, I obtained perfect matches of oxen. My herd amounted to forty cows of every age.

In short, I have made in all twenty-nine experiments after the new method, and in every one I succeeded in the production of what I was looking for—male or female. I had not one single failure. All the experiments have been made by myself, without any other person's intervention; consequent-

ly I do declare that I consider as real and certainly perfect, the method of Prof. Thury, &c.

Done at Montet, February the 13th, 1867.
Signed, G. CORNAZ.

On the 17th of August, 1863, M. Thury submitted a memorial to the Academie de Sciences de Paris, and the French Emperor ordered the renewing of the experiments in several large "fermes modeles." These curious trials have been made also with equal success in the case of other animals as horses, sheep, goats &c. It is also known that with hen's eggs, the first laid give female and the last laid give male products. The law is general till the end of the laying season, when the number of female production exceeds the male, under circumstances not yet sufficiently ascertained to be reported.

It is on account of this new practical law that the people can explain why the stock-raiser must give young bulls to his cows. The bull, when young, is more prompt, and meets the female at the beginning of the heat; instead of a bull old or exhausted, or lazy by long service, which meets the cow only at the end of the heat. The first gives heifers—the second produces generally males.

The law for stock raisers and farmers is as follows: If you wish to produce females, give the male at the first signs of heat; if you wish males, give him at the end of the heat.

T. DE R.

Thibadeaux, La., March, 1867.

FRUIT GARDEN.

GRAPE VINES.—Those grown with horizontal arms will need to have the ends of the arms bent downwards, to cause all the buds to start equally. With vines planted this spring, allow but one bud, which should be the strongest, to grow. Two buds may grow from vines planted last year.

LAYERS may be made by bending down a cane of last year's growth, placing it in a trench six inches deep, and fastening it there by means of hooked pins. When the buds have started, and the shoots have made a few inches' growth, gradually fill the trench with soil.

CURRENT BUSHES.—The currant worm appears this month and next. No better application has been suggested than dusting with the powder of White Hellebore. Keep the ground well cultivated, or put a heavy mulch between the rows.

STRAWBERRIES.—Where the winter mulch still remains on, it should be parted over the plants if not already done. Set plants, and if they show any blossom buds, remove them. Beds without mulch should have the surface thoroughly cleaned, without moving the soil so as to disturb the roots; then put on a thick mulch of bog or salt hay, straw, tan-bark, or whatever is most convenient.

PICKING AND MARKETING.—Procure baskets and crates in good season, and have them distinctly marked.

INSECTS.—Hand picking is the only remedy for rose-bugs, as it is for the leaf-rolling caterpillars.—AMERICAN AGRICULTURIST.

VELOCIPEDES.

The two-wheeled velocipede appears likely to over-ride all old fashioned prejudice, and become a really expeditious and useful means of locomotion. Setting aside the saving of time by the use of those inovators, the exhilaration and exercise, and the ease with which they can be managed, are undoubtedly strong and convincing arguments in favor. Among the novelties are monster velocipedes, in which parties of half a dozen or more can ride, but these have the disadvantage of expense, and of requiring a full complement of passengers for their proper propulsion. Velocipedes of two, three, and even four wheels are being produced to meet special requirements, such as those of artists, commercial travellers, invalids, amateur tourists. In other velocipedes, accessory motive power is being provided in mounted steam-engines, which will probably be superseded by those working with oil and gas. Again there is the sail velocipede revived. A recent marine velocipede consists of two cigar-shaped iron cylinders connected with rods, the paddle wheel between being worked by the feet in a small iron and glass raised aloft. There is also the skating velocipede, placed on wheels and on which a terrific rate of speed may be attained on a wide sheet of ice. With a good machine the average rate of speed attainable is from eight to ten miles an hour. The exertion is very inconsiderable, and when once under way, the speed is very easily maintained. An extraordinary American invention, being nothing less than a two-wheeled velocipede, without anything approaching to a canoe or boat, to go on water, has just been patented by the eminent Patent Solicitors, Messrs. Hazeltine & Co. It is adapted to rivers and lakes, and is said to be capable of beating our ordinary Thames boats, according to the trials made on the Hudson and New York Bay. The buoyancy is secured by air chambers in the wheels, which are of great breadth, whilst a weight attached to the centre of gravity secures an upright position. It is worked in the ordinary method, by cranks and rods, and is steered by a species of rudder, the rider having complete command of the tiller. Instead of mounting on the ordinary waves of tideless waters, it cuts through them. Much interest is already excited respecting the trials to come off.—[European Mail.

MULCHING GRAPEVINES.—A correspondent of the "Country Gentleman" speaks of freshly cut grass as a "new" mulch for grapevines; and he also thinks ashes a good thing. I have used the cut grass and the ashes, and have no doubt of their service. But this is only practicable on a small scale, without considerable expense. As to the ashes, it is much to be regretted that so much of both coal and wood ashes is wasted. It ought all to go on the land, either for grapes or some other crop. A good mulch for vines could be got by planting the pruning thickly, and cutting the branches when in full leaf. But either this or a grass mulch would become dry, and a spark might destroy the vineyard. In our dry summers a mulched vineyard would be in great danger.

The only easy and safe mulch is good cultivation. I am not sure that it is not the best of all mulches. But as the vine furnishes in its own leaves and branches an excellent manure for itself, it occurs to me that waste cuttings thickly planted would furnish branches and leaves that might with advantage be mowed off and composted as manure. Liebig has a pleasant story of a poor Dutchman, not able to purchase manure, who kept his vineyard flourishing by means of its own clippings; but he buried them in the ground.—R. S. Elliott, St. Louis Journal of Agriculture.

In 1868 the United Kingdom devoted a million and a half acres to potatoes, Great Britain more than half a million, and Ireland more than a million.

Parsley was first known in Sardinia.
The pear and apple are from Europe.
Spinach was first cultivated in Arabia.
The sunflower was brought from Peru.
The quince came from the island of Crete.
The nettle is a native of Europe.
The citron is a native of Greece.
The pine is a native of America.
Tobacco is a native of Virginia.
Celery originated in Germany.
The pear and apple are from Europe.
The gourd is probably an eastern plant.
The walnut and peach are from Persia.
The mulberry originated in Persia.
The cucumber came from the East Indies.
The radish is a native of China and Japan.
Peas are supposed to be of Egyptian origin.
Rye originally came from Siberia.

RACING FOR THE IMPROVEMENT OF HORSES.

—A paper has been published by Prof. Ferguson, apparently at the instance of the British Government on this subject. He says:—"But the weight-carrying characteristic has gradually diminished, generation after generation, until now, instead of being the prevailing stamp, as it was at the commencement of the present century, it is the marked exception. Of late years, the distances run are short, and the weights carried but light. Horses are bred accordingly, for such very moderate requirements. Speed is the great desideratum; weight-carrying power is not required. As a general rule, power must be sacrificed to obtain an increase of speed, and such is the case in the present mode of breeding race-horses. There are certainly some well-marked exceptions, but they are so rare that their existence does not affect the argument. In former years there were Royal Plates run in heats of four miles each. The weights were also heavy. Not infrequently there was one dead heat, and four heats (sixteen miles) had to be run before the race was won. A reference to turf statistics will show how numerous the entries frequently were for such races, and how desperate were the contests. How many of our modern race-horses would be capable of such feats?—particularly the carrying of the weight, for which they would be generally unfitted, from the inability of their limbs to support it during such an ordeal."

The London Agricultural Gazette, in commenting on this paper, expresses the opinion that "racing authorities" have done their best to encourage the production of 'weedy' animals, that in almost every respect are the reverse of 'sound and stout' thorough-bred horses. The greatest difficulty which a breeder of horses now has, is to find a suitable thorough-bred horse to put to his light cart-mares. The subject is clearly one of the first that ought to receive legislative attention."

The winter wheat of Central Illinois, it is said, never looked better at this time of the year than now.

A large meeting of grain merchants, in St. Louis, seem to have been of the opinion that the best and cheapest avenue to the sea for the grain of the north-west, was the route to New York, via New Orleans.

The Cedar Rapids Times claims the championship for a young girl, "sweet sixteen," of Linn county, Iowa, as follows: For six weeks last winter, during the sickness of her father and mother, she attended forty-eight head of sheep, eight head of horses, twelve head of cattle and two calves, besides milking three cows, driving the cattle one quarter of a mile every day to water, cleaning the horses' stable, doing the house work and taking care of her sick parents.

A GLUE WHICH WILL UNITE EVEN POLISHED STEEL.—A Turkish receipt for a cement used to fasten diamonds and other precious stones to metallic surfaces, and which is said to strongly unite even surfaces of polished steel, although exposed to moisture, is as follows:

Dissolve five or six bits of gum mastic, each of the size of a large pea, in as much spirits of wine as will suffice to render it liquid. In another vessel, dissolve in brandy as much isinglass, previously softened in water, as will make a two-ounce vial of strong glue, adding two small bits of gum ammoniac, which must be rubbed until dissolved. Then mix the whole with heat. Keep in a vial closely stopped. When it is to be used, set the vial in boiling water.

SCOURS IN COLTS.—A correspondent of the Iowa Homestead says:—"Colt raisers, don't dose your young colts to death with strong medicine, when they take the scours. Just take a string (buckskin or soft leather is the best,) and cord the tail as close up as you can conveniently; that will give relief in half an hour and cure in from six to twelve hours. I have tried the same on two old horses, and it cured them in a few hours, and I have been told the same remedy is as good for calves, but have never tried it myself. Let us try to do away with dosing stock with strong medicine as much as we can, when something simple will do just as well.

TO EXPEL WORMS FROM HORSES.—Inquiry is made in the "Country Gentleman" for a receipt to destroy worms in horses. As the writer has given us so good a horse liniment, I propose to pay him in kind. Here is the unfailing receipt: Take equal quantities of alum, sulphur, and copperas; pulverize them, and give one heaping tablespoonful every alternate day for ten days. It may be mixed with dough and shoved down the throat.

LOSS OF CUD.—I have a heifer that has been drooping around with her head down for about two weeks. To-day I noticed that she did not chew her cud, and I got some elder bark and made two balls according to Mr. Wadsworth's directions, and gave them to her in the morning, but it did no good. At noon I gave her four balls, and in half an hour I had the satisfaction of seeing her chew her cud.

CROP PROSPECTS.—We believe there never was before so large an area of our country in Wheat at this season as now, and that sowed last fall is looking remarkably well. Unless some disastrous blight shall yet be experienced, we shall harvest more wheat in 1869 than in any former year. And on all this Atlantic slope, a very large breadth has already been sown to spring grain, while much land is now in course of preparation for Indian Corn. Our orchards are just bursting into bloom, and the promise of fruit—especially of peaches—is remarkably good.—NEW YORK TRIBUNE.

VERMIN ON CHICKENS.—A correspondent of the Journal of Agriculture at Kirkwood, states that for some seven years his chickens have been kept free from lice by strewing small branches or spray of cedar about the hennery. Previous to the use of this simple remedy, they were badly infested. No whitewashing or other means to expel vermin have been used.

KIDNEY WORM IN SWINE.—Many cures have been effected by this remedy. Give from $\frac{1}{4}$ to $\frac{1}{2}$ teaspoonful every day. I knew of a teaspoonful given at one dose. It cured the hog. The most convenient way of giving it is to cut out holes in an apple, put in the arsenic, then plug the holes. Don't be afraid; hogs, it is thought, will fatten on arsenic.

According to experiments made in England by Mr. Lawes, the proportion of offal to each 100 pounds of live weight, made on the bodies of sixteen oxen, two hundred and forty-nine sheep, and fifty-nine hogs, was as follows:—In oxen, 38.9 pounds; sheep, 40.3 pounds; hogs, 16.7 pounds. The proportion of the stomach and contents was, on an average, in oxen, 11 1-2 pounds; in sheep, 7 1-2 pounds; in hogs, 1 3-4 pounds; of the intestines in oxen, 2 $\frac{3}{4}$ pounds; in sheep, 3 $\frac{1}{2}$ pounds; hogs, 6 $\frac{1}{4}$ pounds.

Advertisements.

LONDON MARKETS, LONDON, May 26th, 1869

Fall Wheat, per bushel.....	\$0 80	to	\$1 00
Spring Wheat do	80	to	95
Barley do	65	to	75
Oats do	48	to	50
Peas do	60	to	62
Corn do	75	to	80
Beans do	1.00	to	1 55
Clover do		to	
Timothy do		to	
Rye do	75	to	80
Hay, per ton.....	10.00	to	12 00
Butter, prime, per lb.....	13	to	15
Eggs, per dozen.....	10	to	11
Potatoes, per bushel.....	40	to	60
Apples	1.50	to	2 00
Flour, per 100 lbs.....	2.00	to	2 25
Mutton, per lb., by quarter.....	6	to	8
Beef, per pound (on foot).....		to	
Pork.....		to	
Wool, per lb.....	25	to	30

100,000 Cabbage Plants for Sale.

Early York per 100.....	15c
Early Winningstadt	20c
" Schweinfurth Quintal, "	50c
Large late Drumhead	20c
" " Quintal "	25c
" " St. Denis "	25c
Marblehead Mammoth Drumhead, per dozen.....	1 50
" Drumhead Savoy "	25c
Red Cabbage for Pickling "	50c
Cauliflower, extra early Paris "	50c
" " Denaidur, per dozen.....	25c
" " Erfush, per dozen.....	25c
" Lenormand, extra fine per dozen.....	1 50
Tomato, Large Smooth Red, per dozen.....	12 $\frac{1}{2}$ c.
" Keyes' Early per dozen.....	1 00
" Cedar Hill, very early per dozen.....	25c
Celery dwf., White, Incomparable.....	50c

PONTEY & TAYLOR, Westminister. Near Ivy Green Tavern

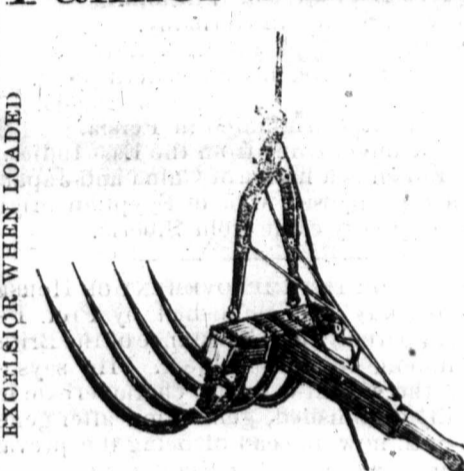
PLUMMER & PACEY, MANUFACTURERS OF J. B. Lazier's Patent Revolving Horse Rake. Price eight Dollars.

TO GARDENERS, FLORISTS AND OTHERS.

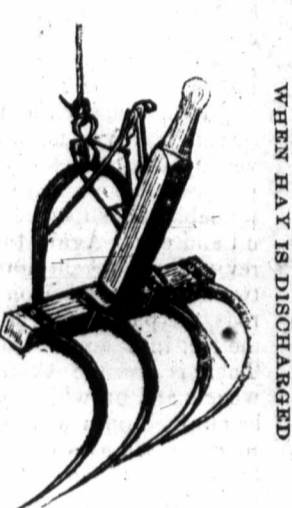
TWO Inch Flower Pots	\$1.00 per	Hundred.
3 " " " " " "	1 50	"
4 " " " " " "	2 00	"
5 " " " " " "	2 50	"
6 " " " " " "	4 00	"
7 " " " " " "	5 00	"
8 " " " " " "	6 00	"
9 " " " " " "	7 00	"
10 " " " " " "	9 00	"
11 " " " " " "	10 50	"
12 " " " " " "	12 00	"
13 " " " " " "	13 00	"
14 " " " " " "	14 00	"
15 " " " " " "	15 00	"

Saucers from 12 $\frac{1}{2}$ cts. to 25 cts per dozen. Charles Sibley, London, Manufacture of Draining Tiles, Flower Pots, Vases, Chimney Pots and earthenware of all kinds. Orders shipped punctually to all parts. Samples may be seen and orders taken at the Agricultural Emporium Ware-room.

GREAT PROVINCIAL TRIAL OF HORSE HAY FORKS FOR 1869
HELD IN HAMILTON, SEPT. 22, 23, AND 24.
TWENTY DIFFERENT KINDS OF FORKS TESTED.
Palmer's Excelsior wins First Prize



GREAT TRIAL OF Horse Hay Forks for 1867. In the State of New York. Sixteen Different kinds of Forks Tested. **Palmer's Excelsior** Wins the First Prize, after a Trial of two days.



Palmer's Excelsior Sickle Tined carried off the first prize.—American Agriculturist

This Fork is now offered to the public as the **ME PLUS ULTRA** of Horse Forks. It has been in practical use for three years, and met with a success unparalleled in the history of Agricultural Implements. Last summer a large number were used in this Province, and recommendations have been received from those who have used them speaking in the highest terms of its utility. In fact it has proved itself to be one of the few implements the farmer possesses that will save its price in one year. Since it has been introduced, more of them have been sold than all others put together, showing that the farmers prefer it. Since last year several important improvements have been added, and I can now confidentially recommend it as the best in the market. With the improved set of pulleys which I furnish, the Fork can be rigged to work in any barn, and not only unload, but carry the hay and grain to any part of the mow, perfectly, at the will of the operator. It is equally adapted to stacking. The handle being short, it is out of the way going over and under the beams, through sheds, windows, &c., The bale folding to the handle when the hay is discharged, it occupies very little room. Many other Forks have parts made of cast iron, which is very liable to break, and making them extremely dangerous to use. The head of the Fork is protected by Palmer's Patent Self Tightening Bands, through which the tines pass, making it impossible to break. Although very strong, it is small and compact, and can be used by a boy. It will take off an ordinary load of hay in from seven to ten minutes. I could give testimonials from hundreds of practical farmers who have used it in different parts of Canada, but I think the names of those who used it last year a sufficient guarantee. The EXCELSIOR will also load manure with great rapidity if a crane be made, or if yards be enclosed with sheds, so the pulleys can be fastened, or any means to raise the fork above the wagon.

CERTIFICATES.

From A. S. EMERY, London—"I take much pleasure in recommending the Excelsior Hay Fork to be the best for general use that is made; for simplicity and strength, none excels, being quickly worked, and will carry its load over and under beams; can be worked outside of sheds; will stack where preparations are made; will work in loose grain or straw; it will complete all that could be expected of any Fork. No farmer should be without it. Price \$12 with hooks and improved pulleys; guaranteed not to cut the roof. Orders taken and samples seen at the Agricultural Ware-room, London. Manufactured by B. O'BYRNE, London.

C. MOOREHEAD, Manufacturer of Furniture, Upholsterer, &c. King-St., London.

W. McDONOUGH'S IS the best place in the city for Teas, Sugars, Tobaccos, Fruits, Wines, Spirits, Cordials, Cigars, &c., wholesale and Retail. Terms Cash. Chequered Store, Richmond Street.

DAIRYMAN'S GOODS. Vats, Heaters, Press Screws, Hoops (RED CHERRY), CANS, &C.,

OF the latest improved styles, and of the best quality, sold cheaper than any house in the trade. Small Vats, complete, suitable for thirty cows and under, sent to any address in Canada, free from rail expenses, for thirty dollars. Send for price list, and address. H. PEDLAR, Box 100 Oshawa.

F. S. CLARKE, Richmond St., London, Exchange Broker, Insurance Agent, and Agent of the National Steamship Coy., from New York to Liverpool, Calling at Queenstown. Prepaid Certificates issued to bring out from the above places, or Germany. m-c-y.

CENTRAL DRUG STORE, No. 113 Dundas St., London. **E. PLUMMER & CO., CHEMISTS,** etc., dealers in Drugs, Chemicals, Dye Stuffs, Patent Medicines, etc., etc.

H. SELLS' DOMINION WASHING MACHINE Patented Feb. 16th, 1869.

THIS MACHINE NEEDS ONLY TRYING TO BE APPROVED BY ALL.

IT is on an entirely novel plan, having a corrugated revolving pressing roller, and the fabric or clothes being washed are forced under this roller by being placed in a swinging circular box. It washes thoroughly, without damage to the finest of fabrics, or injury of buttons. It will also speedily wash the heaviest of bed-clothes, and that too with the greatest of ease, requiring no more than half the power that drives other machines. PRICE TEN DOLLARS. May be seen at the Agricultural Emporium Ware-room London, Ontario. Vienna, 1869.

RAILWAY TIME TABLE.

—:O:O—

G W R		Sarnia Line		GTR		L & P S R	
LEAVE LONDON.							
WEST	EAST	A.M.	A.M.	A.M.	A.M.		
2 55	6 25	6 00	6 35				
	7 20	8 55	3 30	11 25		7 30	
	A.M.	P.M.				A.M.	
12 40	1 40					3 00	
5 55	4 10						
P.M.	1 30						M

FOR SALE. E. lot 24, 14 con. Aldboro, 50 acres, unimproved; price \$750. Terms easy, enquire at the "Advocate" office.

TEALE AND WILKENS
MARBLE CUTTERS
 DUNDAS STREET LONDON, ONT.

THOMAS'S
FIRST-PRIZE BEE-HIVE

MAY be seen at Agricultural Emporium Ware-room, London. For the Fourth Edition of the Bee-keeper's Guide. Price 28cts., post paid.
 Address, J. H. THOMAS, Brooklin.

NOW IS THE TIME
 TO ORDER ONE OF
GRANGER'S PATENT
PORTABLE
SMOKE HOUSES.

WE are now supplying all orders by rail, to various parts of the Province at the reduced price of SIX DOLLARS on board the train.

N.B.—Any person making for their own use or for sale, will be prosecuted according to Sec. 23d of the Patent act. Send for circular. A sample may be seen at the Agricultural Ware-room, London, and orders taken there.
GRANGER & THOMAS,
 Manufacturers, Brooklin, Ontario.

Sample may be seen at the Agricultural Ware-room, London, and orders taken there

COUNTER-BALANCE
ROCKING CHURN,
 PATENTED by H. SELLS, Dec. 29th, 1868.

THIS Churn is superior to all others in use; it makes more Butter from the same quantity of Cream; it is worked with three quarters less power; a child six years old can easily churn with it; it makes better butter, as it gathers it in Solid Rolls and works all the milk out of it. All this is done in less time than can be made with a dash churn, and it is quite as easily cared for and cleaned as a common dash churn. Manufactured by H. Sells & Co., Vienna, Ont., price \$5.00. All orders will receive prompt attention. Agents wanted.
 Address H. SELLS & Co
 Vienna, Ont.

May be seen at the Agricultural Emporium.

SPECIAL NOTICE TO
ADVERTISERS!
The Best Opportunity ever offered to Business Men.

300,000!

THREE HUNDRED THOUSAND Copies of the "Experimental Farm Journal" will be issued for the months of July and August. One Hundred and Fifty Thousand each month. They will contain my great Seed Wheat Advertisement, and will be sent as far as it is possible to do so, to farmers in the United States and Canada. This will give business men and Manufacturers a splendid opportunity to advertise among the best class of customers and dealers, at very low rates. I know of no chance equal to this for advertising so widely and successfully. The "Experimental Farm Journal" is issued monthly, its articles are carefully prepared it is handsomely printed, and is prized by those who receive it. Advertisements in it will not be thrown aside and destroyed without being read, as is the case with circulars

Advertisements for the June, July and August numbers inserted for \$2.50 per line of eight words. Those for July and August numbers for \$2.00 per line.

ADVERTISING RATES for the JUNE NUMBER.
 One Line eight words, 60cts. One inch, \$5. Extra display and cuts, \$8.

Advertising Rates for July and August No.'s each
 One line, eight words, \$1.50. One inch, \$10.00. Extra display, per inch, \$15.00.
 Advertisements should be received by the 10th of the preceding month to secure insertion. Address
GEO. A. DEITZ,
 Chambersburg, Pa.

Jas. FERGUSON & Co.,

PORK Packers, King Street, London, Ont. Highest Cash Price paid for Pork alive or dressed.

Manufacturers of Mess and Prime Pork,
 BACON, SHOULDERS, LARD, &c.

Hams and Shoulders Sugar-Cured,
 And cured in all other forms.

STEEL AMALGAM BELLS

ARE the cheapest, most durable and best toned. One thousand of our make are now in use in different parts of this Dominion, and are giving entire satisfaction. There is a lower-priced bell manufactured in the States, but our bells are found to be the cheapest, when compared in quality, durability and tone. We warrant them for one year.

PRICE OF BELLS.

No. 1 Bell 45 lbs. 25 inch diameter, \$10. No. 2, 55 lbs. 16 inches diameter, \$12. No. 3, 95 lbs. 19 inches diameter \$22. No. 4, 235 lbs. 26 inches diameter, \$60. No. 5, 300 lbs. 30 inches diameter, \$65. No. 6, 550 lbs. 36 inches diameter, \$120. Orders punctually attended to. Address

JONES & Co.
 Markham, Ont.

Sample bells may be seen at the Agricultural Emporium, London, Ont.

TO THE TRADE.

W. W. KITCHEN'S
PURE GRAPE WINE!

PORT and Sherry—so well known for many years past, for which Diplomas were always given at previous Exhibitions—was awarded TWO SILVER MEDALS at the last Grand Exhibition.

TERMS CASH, AT FOLLOWING PRICES:

Port Wine, from Dark Grapes.....\$2.00 per gal.
 Sherry, from Delaware Grapes..... 3.00 " "
 10 Gallons of either kind 15 percent. off.
 20 " " " or over 20 " "
 40 " " " or over 25 " "

Call and examine W. W. Kitchen's Wine Cellars. From 15 to 20 thousand gallons constantly on hand. Over 6,000 gallons produced yearly. It is sold by most of the principal Grocers, Chemists, Physicians and Hotel Keepers in the Dominion. Also, in the season, a great quantity of

PURE GRAPE VINES,

Delaware, Concord, &c., at \$10 per hundred, \$80 per 1,000.

The above Goods will be sent as ordered on receipt of cash in registered letter, or by Express to C.O.D. Terms strictly Cash.

Address, **W. W. KITCHEN,**
 Vine Grower,
 Grimsby, Ont.

J. M. COUSINS, LONDON, ONT.

MANUFACTURER OF

Self-Acting Cattle Pumps,

COMMON PUMPS, FANNING Mills and Straw Cutters. 1-0.

D. DARVILL,

DEALER IN:

FARM IMPLEMENTS

MACHINE OIL, &c.

SAWING and all kinds of Machines sold and made to Order. Talbot Street, opposite the Market, London, Ontario.

W. W. GARLICK, VETERINARY SURGEON
 and John L. A. Poett, member Royal College Veterinary Surgeons, England, and graduate of the Edinburgh Veterinary College, late Veterinary Surgeon to the Royal Horse Artillery and First or Royal Dragoons
 Horses and cattle attended to, and medicine always on hand for Ring Bone, Spavin, Curbs, &c. Office, next door west of engine house, North street, London Ont.

MACDONALD'S

CHEAP Boot and Shoe Store, 2nd door from Market Lane. Mr. Wheeler's old stand. A-1f

FRED. ROWLAND,

GROCER, PROVISION DEALER

AND

SEEDSMAN,

CORNER DUNDAS & RICHMOND STREETS

London, Ontario.

Clover Seed,

Timothy Seed,

Field Seeds,

Garden Seeds,

Seed Grain,

Super-Phosphate,

Land Plaster,

Bone Dust.

MOUNT HOPE NURSERY,

Westminster, near London.

C. BAKER, Botanical and Landscape Gardener, Florist and Nurseryman. All kinds of fruit and ornamental trees, shrubs, flowers and roots, supplied to order. Grafting, budding and pruning done in their seasons. Now is the time for grafting. All kind of scions kept on hand. Any one requiring to get any done, apply on the premises or by post.

EVERY FARMER WANTS FREEMAN'S

CORN & BEAN PLANTER

The Lightest, Cheapest, Simplest, Best and most useful little Agricultural Implement, and the greatest Time-Saver ever invented.

Can be attached to any hoe handle and taken off in a minute. Hangs just right, and does not perceptibly add to its weight. It is so simple a child can use it. It will not get out of order; drops the grain exactly where it is wanted, in plain sight, counts the grains itself, will pay for itself in half a day, and will last for years; the very thing needed. Try it. Sent by Express, price \$1.50
 Address **ISAAC FREEMAN, Rodney,**

BURKE'S

PHOTOGRAPH GALLERY.

First Door South of McBRIDE'S Store and Tin Shop

Richmond Street, LONDON.

THE BEST SHEEP MARK YET INVENTED.—It is made of flat tinned wire, stamped with name of owner and number. It is cheap; it looks well; it does not wear out. Prepaid by mail to any address on receipt of 3 1/2 cts. each. Liberal terms to agents. Sample sent free. **ARCHIBALD YOUNG, Jr. Barrie Ont.**

CITY HOTEL,

CORNER Dundas and Talbot streets, (Market Square) London Ont. **J. & T. MOSSOP,** Proprietors. Best stabling in the Dominion, and attentive Hostlers and the best accommodation.

JOHN ELLIOTT,

PHOENIX Foundry, London, manufacturer of Reaping Machines, Threshing Machines, Lay Furrow Ploughs, Cultivators, Guage Ploughs, &c. 1-0.

E. A. TAYLOR & Co.

Booksellers and Stationers,

Richmond Street, London, Ont.

SCHOOL BOOKS, MAGAZINES,

Office Stationery, etc., always on hand. m-c

GEORGE GRAY,

PLOUGH AND

Agricultural Implement Maker,

Fullarton Street, London, Ontario. m-c

Joseph Hall Machine Works, Oshawa, Ontario.

Established
1851.

Joseph Hall
Manufacturing
COMPANY
Proprietors

The business carried on

AT OSHAWA,

by the late

Joseph Hall,

and more recently by his

EXECUTORS,

has been purchased in-
cluding

SHOPS,

Machinery, Patterns &c.

by the

JOSEPH HALL

MANUFACTURING Co'y.

who will continue

THE BUSINESS,

in all its

BRANCHES

with increased

ENERGY

AND

VIGOR.

OUR

FACILITIES

will be very much

INCREASED

by the addition of new

Machinery,

and a more thorough

ORGANIZATION

Through our

Connection

with the

GLEN & HALL
Manufacturing Co.
of Rochester. We shall
continue to receive all
valuable improvements
introduced in the United
States.

We shall offer this
season our well-known
Machines with many
valuable improvements,
and shall, as usual, keep
constantly on hand du-
plicate parts of all our
manufactures, thus en-
abling us to supply the
wants of our customers,
and save them from de-
lay in case of accidents.

MR. F.W. GLEN

Will continue to give
his time to the Manage-
ment of the Business.
We are determined that
all that capital, skillful
workmen, improved ma-
chinery, perfect organi-
zation and division of
labor can do, with the
best material, shall be
done to put into the
hands of our patrons the
best machines made in
Canada, at the lowest
possible price.

For further particulars
address

F.W. GLEN,

President,

OSHAWA, ONT.