

umber, beech  
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lway station;

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k; frame and  
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on, 1 1/4 miles.

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# FARMER'S ADVOCATE

PERSEVERE & SUCCEED.

VOL. XI.

LONDON, ONT., OCTOBER, 1876.

NO. 10

## The Farmer's Advocate!

PUBLISHED MONTHLY BY WILLIAM WHELD.

OFFICE: RICHMOND STREET, EAST SIDE, BETWEEN THE MARKET AND G.W.R. STATION, LONDON, ONT.

### TO SUBSCRIBERS:

TERMS.—\$1 per annum, postage paid; \$1.25 when in arrears. Single copies 10 cents each.

We cannot change the address of a subscriber unless he gives us his former as well as his present address.

Subscribers should always send their subscriptions by registered letter, and give their name and post office address in full. Subscriptions can commence with any month.

Subscribers who do not give express notice to the contrary, are considered as wishing to continue their subscriptions.

### TO ADVERTISERS:

Our rates for single insertion are 20c. per line—\$2.40 per inch, space of nonpareil (a line consists on an average of eight words).

Manufacturers and Stock Breeders' cards inserted in "Special List" at \$1 per line per annum.

Condensed farmers' advertisements of agricultural implements, seeds, stock or farms for sale, or farms to let, not to exceed four lines, 50c. prepaid.

Advertisements rendered quarterly.

Advertisements, to secure insertion and required space, should be in by 20th of each month.

Letters enclosing remittances, &amp;c., only acknowledged when specially requested. Our correspondence is very heavy, and must be abridged as much as possible.

### Editorial Notes.

Mr. John Nixon, of Westminster, said to us: "Why did you not come to our Township Show? It was a capital show; you ought to have been there." This same remark—"you ought to have been there"—has been often made to us. We know it is true we ought to have attended the Ohio Exhibition just across the lake; we ought to have attended the Quebec Exhibition, at Montreal, and the exhibition of horses at the Centennial, the Cheese Fair at Ingersoll, and they all took place the same week. We get away from our office as often as time and circumstance will permit. We should be pleased to attend every exhibition and visit many of our subscribers' farms, but we cannot gratify ourselves or all our subscribers, to the neglect of our duty. We go where we think we can gain the most information, that will be of utility to your paper.

### London, Huron and Bruce Railway.

This is a new line only opened about a year ago. At present it extends to Kincardine, a thriving town situated on the shore of Lake Huron, about 35 miles north of Goderich. The journey along this line of railroad convinced us that no one could form a correct idea of the great agricultural capabilities of Ontario so well as by a trip over this line, as it passes through a larger extent of rich, unbroken land than can be found in any other part of Ontario. The land is composed of clay and loam, having no more slope than sufficient for drainage; no swamps or hills, and abundance of good water is attainable. The farmers in this section will soon have gravel roads to every man's house; they have now more good roads than we have seen in any other part of America. We consider that 100 miles square of good farming land can be taken in this locality that will surpass any other 100 miles on this continent. We have not yet seen our Saskatchewan Valley nor California, but we have been in Michigan, Illinois, Missouri,

Kansas and Nebraska, through New York and Pennsylvania, the eastern and northern part of Ontario, and Quebec, through England and into France, and now say that we have never seen such a large extent of first-class land with natural advantages equal to this. No visitor to this Dominion, desiring to form a correct idea of the capabilities of our country, should leave the country without travelling over this line. No part of the Grand Trunk or Great Western, or any other line, passes through any agricultural district at all to be compared with this. Numerous villages and towns are springing up along the line; the best portion lies south of the G. T. R. and north of the G. W. R. Good farming land can yet be had in this, the heart of America, for from \$40 to \$100 per acre, while far inferior land in some of the Eastern States now brings \$300 per acre, and some California land brings \$600 per acre. The land in this section must rise in value.

To show the progress of this locality, one week's notice of

### A Trial of Gang Plows.

brought eight gang plows made by different manufacturers. We doubt if such a notice would have brought out half the number in any other locality. We were present at the trial. It took place two miles from Brechon Station, on the farm of Mr. Richard Gibson. The judges were selected on the ground, and gave their awards according to the merit of the work done; no entrance fee was charged or cash prizes awarded, but the merit numbers of the judges stood thus: 1st, to George Jackson, London (Gray's pattern); 2nd to Moore & Greeson, St. Mary's (Gray's); 3rd, Levi Cossitt (Richardson patent); 4th, J. Varey, Strathroy (Gray patent); 5th, G. Moore, an Uxbridge plow; 6th, Wright, Gray plow; 7th, Richardson plow. Paxton & Tate, of Port Perry, sent a new plow, but it arrived on the ground after the work was done by the other plows. The judges did not classify its merits, but reported that it did very good work. We thought each plow did good work, and any farmer having either must have a great advantage over those that have none. The awards given at this trial have been different from other awards in other counties, as the last has been first and the first last in two other counties. We anticipate a gang plow war. The principal contestants are Cossitt, of Guelph, and Jackson, of London; they both make really good implements. In fact all the plows were good, efficient implements. These trials do good, but more defined regulations should be made for judges to act on. This match had been arranged between Mr. Cossitt's agent and Mr. Jackson, Mr. Gibson kindly offering the ground. But Mr. Gibson exceeded the expectations of the contestants, as he prepared a sumptuous repast for the judges contestants, &c.

While the plowing match was in progress we walked over the farm to see the

### Lions and Elephants.

We had heard a good deal about his stock and

fancy prices. Judging from the prices that we have seen miserable looking animals knocked down at at public sales, our faith in high prices had been considerably checked; but the fact that there is something in breed cannot be denied, and here it was exemplified. Mr. Gibson has a world-wide reputation among stock men, and well he deserves it, as he has animals on his farm that he claims (and we believe correctly) to be the best in the world. He has fine specimens of the Gwynne, the Craig and Duchess tribes, but the product from his bull, "22nd Duke of Airdrie," is most remarkable. Among his fine cows he has some that are only inferior looking animals, but have good pedigrees. The calves and yearlings from these cows are as fine animals as you could find at the Centennial or any other exhibition. This is the result of the judicious use of breeding animals; these calves are the results of keeping a bull for which ten thousand dollars was refused. While in the stable looking at this noble animal, an illustration of which appeared in our March No., several farmers stepped inside the door. One farmer asked his price for the service of the animal; Mr. Gibson replied—"One hundred dollars!" Up went the eyes and down the mouth, and very shortly they cleared out.

The animals on this farm are not overburdened with fat, but are kept in good, healthy breeding condition. Mr. Gibson does not exhibit his animals; a good farmer may learn as much, perhaps more, by paying a visit to this farm, than viewing a show ring or an exhibition.

We also took a trip to Guelph in quest of useful information from

### The Government Farm.

It was too wet to get on the farm the last time we were there; this time it was too dry. The scholars are home for the holidays. We had a long talk with Mr. Johnston, the present master and principal. Mr. Johnston is indisputably far superior to his predecessors; he appears desirous of making the institution useful and eventually self-sustaining, that is, if the Government will grant sufficient to make a permanent income for it or its equivalent. Mr. Johnston informed us of the different modes of instructing the scholars and the plans he had adopted; they appeared to us about as good as could be under existing circumstances. Mr. J. appears to try and get as much done for the money appropriated as possible.

They have improved the appearance of the grounds in front of and on one side of the buildings. A Mansard roof has been put on the house that Mr. Stone built. A new building has been erected for the veterinary department. The lecture hall is commodious and well adapted for its purpose, as well as the witnessing of any operation before the students by the professors in charge. It is seated on the gallery principle, the seats raising above each other in tiers, from the speaker's stand upwards.

(Continued on page 189.)

### A Word About Weeds at the Close of the Season.

If there be one duty more urged upon farmers for at least six months of the year, than another, it is that of destroying weeds, root and seed. We know that a plot of ground will only nourish a certain number of plants, and so that they grow to perfection, these plants, whether beneficial or injurious, must have food and air and light. Now, it is evident that if there be plants enough of grain to occupy the soil and produce a good return, any other plants growing with them on that soil consume plant food that is required by the grain plant, thereby impoverishing the soil and preventing the luxurious growth of the crop. This is what weeds invariably do. They take for their own sustenance the food intended for the sustenance of grain, grasses or roots, and also prevent the needed access of light and air, needed in vegetation.

The labor of destroying weeds is not yet ended for the season. Thousands of seeds of weeds are disseminated from the tail of the fanning mill throughout the farm. Some are conveyed by fowl to a seed bed; some left as they lie, with the expectation that they will not grow; but nothing is more tenacious of life than the seeds of hardy plants. We have before us an article from the *London Examiner*, giving an instance of the surprising vitality of seed, in the germination of seed two thousand years old. Seed preserved from air and moisture will retain its vegetative power for an unlimited period of time. This has been repeatedly proved by experience.

A most interesting observation referring to the power of germination in seed which is hundreds and even thousands of years old, is said to have been made by Professor Heindrich, in Greece. In the silver mines of Lamium only the slags left by the ancient Greeks are at present worked off in order to gain, after an improved modern method, silver still left in that dross. This refuse is probably a thousand years old. Among it the seed of a specimen of poppy was found, which had slept in the darkness of the earth during all that time. After a little while, when the slags were brought up and worked off at the smelting oven, there suddenly rose a crop of glaucium plants, with a beautiful yellow flower of a kind unknown in modern botany, but which is described by Pliny and others as a fragrant flower in ancient Greece.

The only effectual way to prevent the farm being overrun with weeds from seed is to burn the seeds from the tail of the fanning mill, and also the weeds that have been allowed to mature their seed among hood crops, as they sometimes are late in the season. All weeds maturing their seed should be burned.

### Planting Trees.

Trees, whether evergreen or deciduous, may be planted in October, but let it be as early in the month as possible. As soon as the sap begins to descend in the tree, it may safely be planted, and when that time comes the earlier we plant it the better, in order that the tree may be fully established in the ground and have taken root well before the winter comes with its storms. When planted with sufficient care in September or early in October, the sap will ascend in spring, and the growth commence as if the tree had never been disturbed by transplanting.

The first thing to be attended to in the planting of trees is the preparation of the ground where they are to be planted. If the hole be merely made in hard, untilled earth, and the young tree thrust into it, the planter should not be disappointed if it die; nothing else could be expected. The ground should be well cultivated the previous

season, so that the soil be rich and friable. This should especially be the case in planting fruit trees. Another thing necessary, fully as necessary as the preparation of the soil, is the taking up of the trees from the nursery with as little injury to the roots as possible. When the roots are hacked and mangled, the trees cannot make vigorous growth, if they grow at all. We have seen trees so treated in digging in the nursery as to make their growth impossible. When taken up, let not the roots be dried by exposure to the air; cover them at once. Let the holes dug for them be so large that the roots and rootlets be not bent or cramped unnaturally, but be placed in their former position. If the ground be moist, they do not need watering; if dry, water them well at planting.

If planted with the care we have directed, there need be little fear of the trees not growing, if planted as late as October. They may occasionally suffer from a very severe winter, but if planted in spring they may suffer from a long drought. We cannot prevent such casualties. Fall planting, however, has many advantages. In the fall the ground is generally in better order for planting than in spring. It is easier to spare a day in the fall for the planting. The roots of trees planted in the fall can supply the trees with the necessary food from the moist earth earlier than those planted in the spring. The injury from frost may be guarded against by mulching with litter, leaves of trees or sods. This should not be at all neglected.

### Our Markets in England.

The question of supply is one that interests alike producers and consumers, and now that the English journals pay so much attention to the probable sources whence the needed supply of meat for English beef-eaters will come, we would keep before the minds of our readers the fact that for all the cattle that can be exported in good condition from the pastures and stalls of Canada, there is a constant demand in the free markets of Britain. Under the significant heading, "Will the beef-steak become cheap?" the *London Spectator* comments on the falling off of the quantity of meat imported. The imports of tinned meat from Australia had decreased from 327,000 cwt. in 1872, to 111,000 last year. Notwithstanding the increasing demand and high prices of meat, the English people will not have the canned meat, though the quality is "excellent and the price not excessive." They must have their beef fresh killed, and this Australia cannot supply them with.

The writer says:—"Apparently, therefore, the experiment (of importing tinned meat) is not successful. And the importation of the live stock teaches the same lesson. In addition to our stock in Great Britain our supply is practically limited to Ireland, the Netherlands and Germany. The British Colonies, with their boundless pasturage, are grouped together in the returns under 'All other countries,' and last year they sent us only one head of cattle for every two hundred we received from other foreign lands." We see the demand for our fat cattle is so great that we need have no fear of overstocking the market. In feeding and purchasing cattle for England let us bear in mind that they who would be our customers will not have half-fed meat. They find themselves well-to-do, and liking well-fed, succulent meat, they insist upon gratifying their taste. In order to reap the benefits within our grasp in supplying the English markets, we must feed cattle of a superior quality—not the old country stock, but high-bred or good grades, and we must feed well. In this too there is an additional source of profit. Feeding good stock as they require to be fed, implies improved agriculture.

### Tobacco From the Potato Field.

How little do they who luxuriate in the use of tobacco think that a large proportion of it is from as common a vegetable as the potato plant! That tea is adulterated is no longer a secret to any one. It is well known that in the cup "that cheers but not inebriates" there is a large admixture of other matters, and the adulteration is said by analysts to be not one iota less deleterious to the human constitution than the drugs in the intoxicating dram. The manufacture of green tea makes it especially injurious to health. But few, perhaps, who enjoy the soothing influence inhaled through the tobacco pipe, or the more fashionable cigar, have any idea that what they purchase and use as tobacco is in great part the leaf of the potato vine, dried and prepared for the purpose of adulterating the genuine "Havanna." A small proportion of tobacco cunningly mixed with the dried leaves of the *solanum*, to give it the required flavor, makes the deception imperceptible; and the purchaser receives in return for his cash his due weight—if not of tobacco, of a compound of which tobacco forms a part. However, we have high medical authority for believing that the adulteration inflicts no injury on the consumer, further than the fraud in selling potato leaves for tobacco. When adulterated it is not more unhealthy than when pure. A member of a College of Medicine in Stockholm says that the dried leaves of the potato vine would answer all the purposes for which tobacco is used, and would be better for smoking than tobacco of the coarser sorts. Much of the tobacco sold at Hamburg and Bremen is mixed with potato leaves. Nor is the adulteration confined to Europe. Some American grown tobacco is peculiarly suited for the purpose. That which comes from Maryland seems especially suited for it. We are told that it can be mingled with the potato leaf imperceptibly, and the adulteration can hardly be detected. Now, would it not be well for farmers if they must have tobacco, to grow it for their own use. They would then at least have the pleasure of knowing what they use. In the Province of Quebec this is generally practiced, and why should it not be grown here as well? A large amount of money is sent out of Canada every year for the purchase of what might be easily grown on our own farms. To keep within our own country much of our money that we pay to foreigners, as well as to guard against the frauds from adulteration, it is well to encourage home industry.

### Australia a Market for Canadian Produce.

One great hindrance to agricultural improvement in Canada has been the want of good, accessible markets for the general produce of the farms; hence the uninterrupted cropping the land with wheat and its consequent impoverishment. The farmer not unreasonably asked why should he follow the improved systems of agriculture as so successfully practiced in England, when there was no market in which he could dispose of his meat and cheese and his manufactured wool at remunerative prices. This state of affairs is passing away, and good markets for every product of the farm are being opened up. We have already referred to the English markets for meat and cheese, and the success attending the speculation of shipping fat cattle to Liverpool and London. Now we have tidings of a market in Australia open for our products. The Australian Commissioners to the Centennial Exhibition saw and admired the goods exhibited in the Canadian Department. They say they are such as to make an intercolonial trade between the countries very advantageous to both. The Australian colonies import to the extent of \$200,000,

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000 a year, and many of the articles imported are of the very kind produced or manufactured in Canada. The quality of our goods they declare to be superior to anything in the United States, and fully equal to articles of English production or manufacture, and the prices very reasonable, much lower than prices in the States. Our ready-made clothing and our wooden ware pleased them both in price and quality. They were equally well pleased with our salt, our cheese, and our railway cars. Agricultural implements, furniture, sewing machines, and even our woolen goods are to be sent. Such a market as is promised to us must stimulate trade and industry. A demand for cheese implies improved dairy-farming; a demand for ale gives a good market for barley. The salt prospects in our northern counties will be brighter. Sheep husbandry will pay better. In short, every branch of industry will reap the advantages of a renewed demand for our products.

## October on the Farm.

October in Canada is a pleasant month. Much of the labor of the year has been completed. We have our grain crop secured, and no small part of it exchanged for hard specie, or, what is of equal value, Canadian bank notes. Our fall grain is mostly, if not all, committed to the ground. There is a feeling of ease, and the quiet calm of the fall, so unlike the blustery October of Britain, adds to this feeling. There is a beauty in the hoary locks of Autumn and not even the fresh young beauty of Spring can excel the glory with which October crowns our forests. We may miss some of the invigorating sports that cheered our country life from Michaelmas-tide onward in Great Britain—the stirring pleasures of coursing and shooting, and the music of hound and horn—still our country life here is not without its pleasures, and they who throw their whole energies into pleasure for a time are more likely to be the better farmers and more successful men of business. There is a time for pleasure, a time for relaxation as well as a time for work. Let us then, while we may, enjoy the pleasures of country life in the pleasant days of October.

The farmer is the better for the enjoyment of a holiday when he can have it, but he cannot even now say his year's work is at an end. If he is ever idle from want of employment it is not now in the fall. Let us, then, to our farm work, and see what to put our hand to, in the field, the garden, and the orchard.

Fall wheat and rye are sown before this throughout the country, but if any be still behind with this very important work, it may not yet be too late. The general rule here is: Sow your fall wheat in September, but sometimes working independent of the rule may succeed. Mark, we say *may*. They who have had experience of our rather capricious climate, prefer sowing in September. In England this work is done a month later, but the climate differs. Let us see to it that the furrows, water-cuts and drains in our sowed fields be well cleared up, so that no water may make a lodgment in them. Sometimes even the drill in which the seed wheat is sown becomes a receptacle for the water, and causes serious injury to the young plant by scalding it, or if frozen by winter-killing, as is said to have been the case last winter. This shows us how important it is that there be no obstacle to the free discharge of the water from every part of the ground.

Digging and storing potatoes is generally a part of the work of the month. This season the maturing and consequently the saving of all crops has been unusually early, owing to the excessive heat and drought; but many prefer not digging potatoes any season till October, as they are said to keep fresher in the earth as long as the weather

continues dry. The greater care we have taken in the cultivation of our potato crop, so much the less labor does it take to dig them, whether they are dug by the four pronged digging fork or by that labor-saving machine "the potato digger." Unless when planted on a large scale, some farmers prefer the fork, though the work is not so expeditious; they say the "potato digger" bruises and injures many of the potatoes. We never had potatoes kept better than when stored in pits, but they may be safely kept either in root-house or pit if taken up dry, stored carefully, and secured from frost and light.

Turnips need not be harvested till next month. It is better that they remain in the ground, as they will continue growing during October. Their greatest growth is with cold weather.

Keep the plow going. Fall plowing serves to render the ground in better condition—richer in ammonia and more friable. Fall plowing lightens the spring work.

Let us attend well to our live stock. They should not be suffered to fall away in their condition. It is always easier to keep up the condition of animals than to regain it if fallen off. Cows require food in addition to the pasture, grass being now less nutritious than earlier in the season. As the weather gets colder, more nutritious food is needed to supply the necessary animal heat. Hogs should be penned early, well supplied with food, and be kept clean and well littered. Much less food is required to fatten hogs before the weather becomes cold than after winter has set in. Above all, let the horses be well fed and well groomed. Feed him for the present and the future.

## Use of Dynamite on the Farm.

There is no greater obstacle to successful farm operations in newly settled portions of the country than the great difficulty of removing stumps from the ground. So great is the labor attending their removal, and so heavy the expense, that the stumps are usually allowed to remain till they become so decayed that they can be taken up with little trouble. The waste ground occupied by them during the time, and the loss of time in plowing and tilling round them are too well known to farmers. The new explosive, Dynamite, gives fair promise of aiding us materially in removing those stumps, so that the reclaiming of land from the forest may be attended with less labor and ultimate expense. An experiment was lately made in Scotland by invitation of the East Lothian Agricultural Society to demonstrate the power and utility of the new explosive in clearing land from large stones and stumps of trees. The experiment was quite successful. Not less than forty were blown up by the force of the explosions in an hour. The process was simple, and there was very little labor attending it. A spadeful of earth at the side of the stump was removed and a hole made in the stump with a crowbar. A cartridge of dynamite was pressed by means of a wooden ramrod into the hole; a detonating percussion cap with a fuse attached was squeezed into a small cartridge of dynamite and put into the trunk in contact with the charge. The hole was then filled with loose earth, a portion of the fuse a foot long being left uncovered. A match was applied, and the operators retired to a distance. The work was soon completed; the explosion took place; the trunk was burst out of the ground, some of the fragments being thrown a distance of over 300 feet. The discharge was complete in every instance. Large boulders were blown into fragments as small as walnuts by simply placing the dynamite on the top of the stone, covering it with wet sand, and firing it with a fuse. The great advantage to those clearing their land from stumps must

be apparent to those who having cut down the timber, and done their logging, could not for years to come say their farms were cleared while the stumps remained such obstacles to cultivation. In pine lands especially, the stumps remain undecayed for almost a lifetime. We have known a farmer pay fifty cents each for taking out pine stumps thirty years after the forest had been out down.

## The Crop Reports.

It is betimes no easy matter to form a correct estimate of the crops of so extensive a country as Canada. In many instances the reports are hastily collected and sometimes conflicting, and to this is to be taken into account the very different yield of crops in different localities. The failure of crops, of which so much has been said, has not been confined to one section of the country. The same climatic influence that has so reduced our returns in this Western Section has had the same effect more eastward. The wheat crop, it is true, has suffered most. The reports are general that it is a very light crop. There are very many complaints of rust, and in some places the midge has done much injury. In some good wheat sections the average yield of wheat is said to be not over ten bushels. There are many exceptions, and some farmers have a good yield. In the vicinity of Kingston, for instance, though the crops have not turned out so well as was anticipated, on account of the dry weather, very little damage was done by fly or rust, as is complained of in other parts; wheat, large quantity sown, yield about 25 bushels per acre. The other crops are reported to have done well also in that locality. Where 25 bushels is the average the yield of some fields and some farms must have been heavy. Throughout the counties of Middlesex and Perth the average is reported as from 10 to 25 bushels, though there have been good crops on not a few farms. At Guelph the fall wheat has been almost a total failure, caused by excessive heavy rains and scalding heats followed with blight; spring wheat, early sown, about 15 bushels per acre, late sown, very poor yield. From the Eastern District—Portland, River Du Loupe, and Quebec to Montreal, the general report is, wheat, not much sown, but fair crop. The wheat crop on the whole may be said to be below an average—the fall wheat very much below, and the spring wheat not so much so.

Barley, though a heavier yield than wheat, is much below the crop of last year. The report is pretty general:—Barley bright in sample but light in weight; average yield from 20 to 40 bushels in the different sections of country. Some farmers report a yield of 50 bushels. From the locality of Dunnville we have a report of 65 bushels. Taken as a whole, barley is under an average crop in yield, with a sample lighter in weight, but brighter than that of 1875.

Oats are a heavy crop, though not so heavy in some places as was anticipated. The yield is above an average, and the quality good. In the vicinity of London there is reported an average of 35 bushels; at Lucan, from 50 to 60; Mount Clement, 55 to 65; at Kingston, 40, with a good crop throughout the Eastern district.

Peas, a good crops this is the report generally; yield 25 to 30 bushels.

Flax, a very good crop, but the cultivation as yet confined to a few localities.

Root crops are reported as promising well, though potatoes are said to be generally smaller than usual, and the turnips have in some places been injured by a grub. From Island Pond, in the Eastern section, we have the following report:—Potatoes, about 1,200 acres under cultivation, and from present appearances will average 225 bushels per acre. The reports of other crops from that place are very favorable.

### Editorial Notes — The Government Farm.

(Continued from page 185.)

With D. Guthrie, M. P. for Wellington Co., accompanied by a Scotch gentleman, editor of a paper in Paisley, Scotland, we ascended to the top of the house. The scenery is very pretty from this spot, as it commands a very fine view of the town of Guelph and surrounding country; but scenery will not fill a hungry stomach, and neither would the Government Farm, if wages were paid from it, if we might judge from this outlook. The fields appeared brown or sere, except the turnip crop; this field appeared to have great blanks on it, and most of the turnips looked blue instead of green. The grass in front of the building showed from its browned and sickly appearance that the drouth had effected it much worse than it had effected the land on Mr. Gibson's farm. A good, rich, green bite could be found in London Township, but on the Government Farm it would be hard to find a green blade. The drouth has been as severe at one place as the other. A piece of Lucerne appeared the most luxuriant crop growing; this plant may prove to be of use to the country.

This visit has confirmed our former conviction, that the site has not been well selected. No one pretends to claim it to be a first-class farm now, but before purchasing it was all O. K. If cost is to be considered and good land is wanted, we believe it would not cost the country half as much to purchase good land and erect good buildings as it will to manure this land and get it into a good state of cultivation.

Young men may gain knowledge they would not otherwise obtain. The fall session of the College will open on the 1st October. There are some vacancies, and any farmer's son can, with great advantage, take the course, if he will conform to the rules and attend carefully to the lectures and instruction of the Principal and staff, as the Principal intends giving farmers' sons the first opportunity to enter the institution.

We particularly wished to know the results of trials of seed that we had forwarded to this institution for trial and reports, but we failed to gain any important information regarding them. There is a book kept, but there is room for great improvements regarding information about seeds.

The Government is importing stock for this farm. Among other importations, are the polled Aberdeen cattle and the Windsor pigs. We are not aware that either of these breeds of stock are now in Canada. They intend keeping five different classes of cattle and eight of sheep. From experience we know this will not be profitable. It may or may not be more beneficial to the country than attaining perfection in one line.

We trust our friend the Paisley editor visited other parts of the western province and of the County of Wellington before forming an opinion of the appearance agriculturally of Ontario.

The town of Guelph is more rapidly improving than any other town we have seen. A very fine block of stone buildings is in course of erection. The Government is also expending a large sum for erecting a Custom House and Post Office. The cedar swamps about Guelph that were formerly despised, are now the most valuable lands; they will grow grass, and grass is King for making the princely roast beef for which Guelph has long been celebrated. The Central Exhibition is to be held here, beginning on the 2nd October.

#### Provincial Exhibition.

This Exhibition, which has just closed in Hamilton, has been a grand success in some respects. The weather has been fine and a goodly number of visitors have attended. The display of agricultural implements has exceeded that of

any previous exhibition; there were twelve steam engines on the ground. The sheep display excelled any ever before held in Canada. The show of horses, cattle, swine and fruit was very good. The stock men, mechanics and fruit growers who aided this exhibition deserve the thanks and support of all, as all must be benefited by the improvements made, or high standard maintained in the above departments; there has been a greater weeding out of anything inferior from exhibition than ever before.

The display of seeds, dairy products, flowers, vegetables and roots was not equal to other exhibitions; in fact, the Board of Agriculture, we believe, have neglected their duty in not paying proper attention to the prize list, or we should see specimens of their Gold Medal wheat; these we could not find, neither could we find the Seneca or Clawson, nor the Silver Chaff varieties. Surely the most valuable varieties of spring or fall wheat should be seen at such an exhibition. The Canada Company's prize has again been awarded to the wheat that has caused greater loss to our farmers than any other variety. Perhaps some member of the Board or some reader could explain why this should be.

In passing through the Horticultural Department, our attention was drawn to a very important display made by Mr. S. McLaughlan, of Burford P. O., Ont. It consisted of a display of wheat, oats, barley, corn, grass, cabbages, beets, turnips, potatoes, &c., &c., from Winnipeg, Manitoba. The wheat was of good quality and was grown on land on which wheat had been continuously grown for upwards of 58 years in succession. The Early Rose potatoes were much larger than any on exhibition, grown in Ontario. We asked Mr. McLaughlan who paid him for his trouble. He said no one; he did not even expect a prize; he brought the products with him at his own expense, and devoted his time in giving accounts of that province. He should be rewarded in some way, as such an exhibition and description as he gave would tend to direct the attention of those seeking homes towards that most fertile part of our Dominion. He also brought specimens of the soil, which would please every farmer that saw it.

We consider it our duty to call attention to anything that we believe to be wrong, or on which improvements may be made. We shall make other remarks. They are not written to injure the Provincial Exhibition or members of the Board, but for the benefit of the yeomen of our country.

We expected to have seen many foreigners here, but were disappointed, as we found a rather less number than usually attend this Exhibition than when held in this western part of Canada.

The Board sent four of its members to the Centennial expressly to look after the interests of this institution, but what have they done? We know what they have not done. They did not make arrangements with the railroad companies to grant visitors from the Western States excursion tickets good for thirty days, with the privilege of stopping at Hamilton and seeing our great Exhibition, either on their way to or from the Centennial. Had this been done, and cheap excursion tickets granted from Philadelphia and return, and the attention of strangers at the Centennial been called, as ought to have been done, to our Provincial Exhibition, we might have had many hundreds, perhaps thousands of Americans and other strangers, as many from even California and all the Western States would liked to have seen our productions. Perhaps it might have done as much good as all the money we have expended for the American Exhibition. This we think the greatest omission.

The lack of seats for the tired sight-seers was an error or oversight. One or two thousand feet of

plank would have cost a mere trifle, but not a seat could be found anywhere, except on the ground. The filth from the cattle stalls should have been removed daily; farmers would have taken it away without cost to the Association. The exhibition ground was infested with those yelling, bellowing quacks who claim to cure all the ills that flesh is heir to, mend a crock, or sell brazen jewelry. We do not consider the admission of this class of exhibitors tends to elevate the position of this institution.

The several varieties of implements should be kept together; this would afford spectators a better opportunity of comparing one with another. The Exhibition building appeared to us to have more of a repulsive than an attractive look both inside and out; the outside was surrounded with rubbish and litter, and lacked paint or whitewash; the interior lacked cleanliness and order.

The conglomeration of things appeared to us to have reached its climax when we entered the main building; the mass of visitors were crowding and crushing from opposite directions, and no one attempted to keep them going in one direction.

Perhaps our visit to the Centennial has spoiled our taste for such mixtures. This may do you all some good; some may grumble at these remarks, but they cannot gainsay them. Let us hope that they may lead to improvement.

Every year there is some improvement to be seen at these exhibitions. This year our attention was more taken up by a new reaping machine; it is called the Royce Reaper, and is made by Green & Co., of Waterford, Ont. This machine is much lighter than any of the machines now made; the lightening of it is occasioned by abandoning the old complicated machinery that drove the rakes, and substituting a new light and efficient rake weighing about 150 lbs. less than the old one. We had thought that our reapers were as complete as they could make them. Every farmer and nearly every manufacturer admired this new reaper, and a great consideration is that this machine can be sold for \$90. This is a vast reduction from the prices we have been accustomed to pay. Another noticeable feature in this exhibition is the absence of the herds of many of our noted breeders of Shorthorns. We would like some one to explain the reason why neither the Hon. D. Christie, Hon. G. Brown, Hon. H. M. Cochrane, George Miller, John Miller, Snell, Stone, Craig, Gibson or Col. Taylor were not to be seen. Notwithstanding the absence of these noted breeders, the exhibition was about as good and useful as ever.

#### Orchard and Garden.—No. 8.

##### HINTS FOR THE MONTH, BY H. ORTI.

Gathering the fruit will be the principal operation in the orchard this month, leaving the late winter kinds to the last, or as long as there is no danger from very severe frosts. The weather is very uncertain after the 20th of October, and all fruits should be gathered as soon after that date as possible. Attention is directed to some of the hints contained in last ADVOCATE respecting the careful picking out and sorting of all bruised, small and worm-eaten fruit. Fruit growers of experience will not need to be told how the mixture of inferior fruit greatly lessens the commercial value of the finer samples. As directed before, the fruit might be laid in heaps in dry outbuildings for a few weeks, when it will be good employment on cold and rainy days to pack away in barrels or otherwise in the cellar. A good fruit cellar should be so constructed as to allow a low temperature, almost to freezing, capable of being ventilated when necessary; but a cold draught, which cause shrivelling. It should have one or two wide

shelves for the fruit available, to place a convenient turned to grow as we all drunkness

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shelves for the placing of small lots. In storing the fruit away, care should be observed, if possible, to place those the first to be disposed of in a convenient place. All the rejected fruit can be turned to good cider, a wholesome thing in its way, as we all know, and not provocative of much drunkenness, but of very good vinegar.

This has been a trying season on newly planted orchards, although the early part was exceedingly favorable for transplanting; still the great drought that has prevailed for the past two months (at this time of writing) over a large section of the country, and the excessive heat, have played sad havoc with trees that have not received any more care except the simple p'anting out at the start. Now is the time to count the blanks and doubtful ones, and order fresh trees to take their place; keep filling up, if you want an orchard. Take care to thoroughly clean out all weeds and rubbish; open all the drains so as to prevent any standing water; give the ground a good top-dressing, if it is only road dust.

Old apple trees are very often troubled with the borer, a very injurious insect and whose operations ought to be watched and put a stop to. A stout wire rammed in the hole will crush him; or else follow up with the knife, being careful not to injure the tree. Washing the trees in June and July with soft soap is recommended as being very effectual in destroying a host of insects, who, newly hatched out, are moving about preparatory to commencing mischief. Of course that time is not now, but it is well to remember these things and to do what we can when we have the opportunity.

It is remarkable how very few really fine orchards a person meets with in a trip through the country; in fact, where you will find one in good vigor and productiveness, you will notice dozens and more in a miserable condition. One would think from the thousands of trees annually sent out by nurserymen that the country would gradually be resolving into one vast orchard, but this idea is soon dispelled by a little travel. A farm without an orchard is only half a farm, and the sooner the farmer without one recognizes this and plants one, the better for himself and the country in general. Before planting the ground should be well prepared, as we have said before; and be careful to get good trees. It pays to get the best, and there is nothing like dealing individually with the nurseryman—getting up a personal acquaintance, as it were. It is an indispensable requisite in all young orchards, of whatever variety of fruit, to keep the ground mellow and loose by cultivation. Hoed crops are the best for young orchards, potatoes, roots, Indian corn, &c.

In the flower garden the September frosts will have nipped our favorites. Dahlias, as soon as their leaves are blackened, should have the stems cut back to within three inches of the ground, the label securely fastened and root placed away in a cool place secure from frost. Most of the tender plants that you wish to keep over the season, such as geraniums, heliotropes, &c., should now be lifted and potted, set in a moderately warm place, and watered; they will soon be ready for window adornment, or could be kept in the cellar in a dormant state, simply requiring an occasional watering; they will keep nicely. Gladioli bulbs, Madeira vines, tuberose, require shifting into warmer quarters. The flower beds, once so gay and beautiful, soon present a rough and forsaken appearance. A great many leave the beds in this condition till spring returns; it is nicer, however, to rake up all litter, using it for mulching herbaceous plants, &c., leaving the beds in a tidy condition; to relieve the barrenness, a few cedars or other evergreens dotted in here and there temporary till spring, will have a good effect.

Every one should raise some seedling fruit, either apple, pear or plum. It is very interesting to have some young seedling trees coming into bearing; there is a charm about it that is very fascinating to the ardent fruit grower. True, they may bring nothing but crabs, but what of that? a good crab is something down about Ottawa. But then they may bring forth some new fruit far superior to anything in cultivation, and the satisfaction of having introduced some really good fruit to the public should be a sufficient stimulant. Apple and pear seed can be sown any time before frost in drills two feet apart; cover with an inch of soil or less. Plums also similar; they sometimes take two seasons to come up. And now, do not waste this planting season; always make it a point to plant something, spring and fall. If you do not purchase from the grower, get them from the woods; elm, ash, maples, &c., all do well planted now. The horse chestnut should always be planted in the fall. It would be a good scheme to commemorate the Centennial year by those who are interested in it, and it is almost impossible for those who have seen the "Big Show" not to feel interested in it and speak of it as long as they live. To plant a tree, say an elm, to remember the time by, and call it the "Centennial Elm," might eventually form the "hub" for some historical matters to spin round on.

Office Receipts for October.

A very useful book entitled "American Dairying," a manual for butter and cheese makers, edited by L. B. Arnold, A. M. It is published by the Rural Home Company, Rochester, N. Y. Price, \$1.50. The book may also be procured at this office.

Vick's Floral Guide, for fall operations; very neat. It should be in the hands of all amateurs and florists. It is published at Rochester, N. Y.

Bruce & Co., of Hamilton, Ont., send their Catalogue of Bulbs.

McColl, of London, Ont.; Bulb Catalogue.

A very neat little book entitled "A Song of America, and Minor Lyrics," by Vener Valdo; published by Hanscombe & Co., New York.

The Whip-poor-will Music and Song Book, for Public Schools and Juvenile Classes; by Oliver Ditson & Co., Boston.

A very fine sample of spring wheat from J. C. Kerr, Grimsby; another from E. Vance, Collingwood. We will speak of these wheats in a future number.

Messrs. Pontey & Taylor, of St. James' Park Nurseries, send a fine specimen of Pampas Grass. It is ten and a half feet long, and very ornamental; it was grown in a bed on the lawn in front of Mr. Pontey's house.

"Angels' Hover O'er Our Banner," the great Centennial song and music, published by J. W. Helmick, Cincinnati.

Canadian Horses at the Centennial.

The exhibition of horses at the Centennial opened on the 4th inst. The New York Times, in speaking of the show, says it "is devoid of the international feature, except so far as concerns the exhibits from Canada, the residents of that country being the only persons outside of the United States who have made an entry direct. Of course there are a number of horses from abroad, but they are owned by residents of this country, who pride themselves on owning such famous stock. The contest for the prizes on all kinds of stock, is, therefore narrowed down to the United States and Canada, with the odds decidedly in favor of Canada and her heavy draught horses. The greatest interest in the exhibition, except to the professional horsemen, will centre, no doubt, in the draught and work horses, and the breeding stallions. In this particular the United States makes a good showing, but I fear it is far outstripped by Canada, especially in point of numbers. With very few exceptions the animals from across the border are larger-limbed than the Americans, this feature extending even to coach horses and driving animals. The greatest in weight in this department is a Clydesdale stallion named Donald Dinnie, standing seventeen hands high, and weighing 2,260 pounds. This animal only reached this country last month. Just here it is quite appro-

priate to mention the tall mule, the Queen of Egypt, twenty-one and a half hands high, and weighing 2,200 pounds. Out of the same 80 horses which Canada has entered, the most noticeable in the exhibit is Royal Tom, who is owned by William Long, of Lansing, Ontario. He has won 12 prizes in England, including the great Yorkshire prize for immensity, weighing nearly 2,300. The general cantour of the animal is such as to attract attention, notwithstanding there were dozens of the same sort, and some nearly as large in the arena. The only trotter from Canada is Royal Harry, a five year old stallion, by imported Saladin. A high-bred coach stallion is exhibited in British Splendour by Andrew Somerville, of Huntingdon, near Quebec. He is somewhat heavier in frame than is generally used in this country. In the list of matched teams which Canada exhibits are some that seem as if they could carry off half a small town if they were only made fast to it. Taking the exhibit of horses all through we may be somewhat disappointed, for the number does not reach 250 in all, but those that are here are the choicest that can be procured, so that in a measure atones for the lack of numbers. As it stands now the United States will undoubtedly reap the prizes for high-bred and carriage animals, while Canada will carry over the border the prizes for heavy draught, agricultural, and coach horses.

The Centennial Canadian Horses—List of Prizes Awarded.

The Judge was Mr. Parrington, the English Judge, a Yorkshire Squire, who was deputed to inspect the Canadian animals, and to award one gold medal to the best light horse and one to the best heavy horse, and as many silver and bronze medals as he judged the merits of the animals would warrant. The following is the list:

GOLD MEDALS.

William Clarke, Greenwood, Ont., Warmambie, 15 yrs.; thoroughbred stallion. T. & J. Little, Sandhill, Ont., Young Wonder, 5 yrs.; agricultural stallion.

SILVER MEDALS.

John White, Milton, Ont., Terror, 10 yrs.; thoroughbred stallion. Chas. Eallason, Clinton, Ont., Glenelg, 4 yrs.; thoroughbred stallion. Jas. & David Boag, Ravenshoe, Ont., an agricultural mare. Jas. McDonough, Carloss, Ont., Fanny, 7 yrs.; agricultural mare. William Long, Lansing, Ont., Royal Tom, 4½ yrs.; heavy draught stallion. M. A. Burgess, Weston, Ont., Honest Sandy, 4 yrs.; heavy draught stallion. Jas. & David Boag, Ravenshoe, Ont., Jean, 7 yrs.; heavy draught mare. Jos. P. Fisher, Benmillar, Ont., Pat Malloy, 6 yrs.; agricultural stallion. J. C. Sanderson, Galt, Ont., Duke of Newcastle, 5 yrs.; agricultural stallion. Jas. Somerton, Exeter, Ont., Glory of the Dominion; agricultural stallion. Andrew Somerville, Huntingdon, Que., British Splendour, 12 yrs.; agricultural stallion.

BRONZE MEDALS.

Jas. McSorley, Jarvis, Ont., Young Cumberland. A. Somerville, Huntingdon, Que., Gladstone, 6 yrs.; heavy draught stallion. Chas. J. Douglas, Oak Ridges, Ont., Marquis, 6 yrs.; heavy draught stallion. Jas. & David Boag, Ravenshoe, Ont., Dun Donald, 3 yrs.; heavy draught stallion. Jas. McDonough, Carloss, Ont., Scotsman, 4 yrs.; heavy draught stallion. Edmondson & Snyder, Brantford, Ont., Lord Fergus, 2½ yrs.; heavy draught stallion. Jeffrey Bros., Whitby, Ont., Dash, 4 yrs.; heavy draught stallion. W. H. Hurdman, Ottawa, Ont., Black Bess, 9 yrs.; heavy draught mare. John Snell, Raglan, Ont., Dash, 2 yrs. George Doidge, Columbus, Ont., Empress, 4 yrs.; heavy draught stallion. Alex. McEwan, Ashton, Ont.; a black mare, 5 yrs. Wm. Hurdman, Ottawa, Ont., Farmer's Fancy, 3 yrs. T. K. Hicks, Mitchell, Ont., Lord Logan. Wm. Long, Lansing, Ont., Emperor and Lord Zet, and carriage stallions, matched team. Wm. Boyd, Toronto, Ont., Tom and Bill. William Gerrie, Dundas, Ont., Polly and Fan. H. Kennedy, Birr, Ont., mare and gelding. George Currie, Ingersoll, Ont., mare and gelding.

Our Posters for 1877.

Our many friends—postmasters and others—who receive our poster for 1877 will kindly post it in a conspicuous place, and where it will remain. Any one who may wish to put up one of them, and thus aid their friend—the FARMER'S ADVOCATE—will send their address on a card to this office.

## Stock and Dairy.

### Short Weights in Cheese.

In an article commenting upon the action of the Utica Dairyman's Board of Trade in sending a committee to New York to investigate the subject of short weights, the *American Grocer* suggests some causes and remedies, among which are the following:—

The next thing is to trace the evil to its source and apply the remedy. It cannot justly be imputed to dishonesty on the part of the factorymen, unless it be in very rare cases. The fact that they sent a committee of their own number to investigate the matter, and their report confirming the complaints of dealers, shows that they had confidence in their own weights and wished to get at the truth, either for self-protection or honorable adjustment. The spirit manifested on both sides is to be commended.

There are several ways in which the evil of light weight might arise. The scales may be imperfect, they may not be correctly balanced, and there might be carelessness in weighing. But, doubtless, after so long and continued complaint, these sources of error have been guarded against. Then whence can come the discrepancies? One source is the natural shrinkage of the cheese, which is unavoidable, and is considerable where the cheese is quite green—say under thirty days' old. But buyers are not taking cheese as green this year as formerly, and if natural shrinkage were the only source of loss of weight, the fact ought to be apparent. The loss ought to be largest on the greenest lots, and proportioned to the time they have been out of the factory—the item of exposure to a dry atmosphere being duly considered.

This element in the problem is an important one, and should by no means be overlooked. But it does not account for all of the difficulty, especially as factorymen are in the habit of giving flush weight for the purpose of covering the shrinkage between the factory and the New York store-room.

There is another source of loss of weight which perhaps has been little thought of, and which may be the main cause of the evil complained of; this is dry cheese boxes. There is a large percentage of water in all good cheese, and this is most easily and rapidly extracted where the cheese is new. Supposing the boxes to be very dry—having stood some time in a dry place; if cheese is put into them the boxes will rapidly draw the moisture, and it would not be at all strange if a cheese in such a box should lose a pound between the times of weighing in the factory and in New York.

The fact that one factory had two lots all right, the third short one pound on five cheese, and the fourth short three pounds, would seem to indicate boxes containing a fair amount of moisture for the first two lots, somewhat dried for the third, and still more dried for the fourth lot; probably the same lot of boxes being used for all, some of them used before they got dry for the first two lots, the rest standing and drying before the third lot was boxed, and continuing the drying process until the fourth lot was boxed. If the lots tested were numbered according to the order of shipment, this conclusion is almost irresistible. The hint which it affords deserves careful consideration.

Of course the remedy for loss from dry boxes is the use of boxes containing a due proportion of moisture. A basement or some place where boxes will not dry up is a proper place in which to store them. By so keeping they will not only be prevented from absorbing an undue amount of moisture from the cheese, but be tougher and less liable to split and cause accident to the cheese from landing. Boxes made of some tough material that will not absorb moisture are a desideratum.

Great exposure of the boxes of cheese in transit, or their standing for some time in a hot, dry atmosphere, not only must heat up the cheese and injure its keeping quality, but rapidly expel the moisture. This is a matter which, therefore, doubly deserves attention both from dealers and factorymen.

It is to be hoped that the whole matter of short weights will be satisfactorily explained and adjusted. The character of the men having the matter in charge gives assurance of this.

### Thoroughbred Stock.

A writer in the *New York Times* puts the question plainly, in saying if a farmer is raising cattle for beef and he can add two hundred pounds to the

carcass of each by the time it is ready for the shambles, by the use of a Shorthorn bull, it will certainly be profitable for him to pay a good price for such a bull. This is the average result of using thoroughbred bulls on the native cows of the country, as estimated by the best stock breeders; and this two hundred pounds is a clear gain, for it is produced by no greater consumption of food. If the use of a thoroughbred ram on a flock of ewes increases the weight of fleece one pound on the average, certainly more than "five in a hundred can make it pay," whether more than five would or not is another question. And so with hogs. The difference between the common breed of the past and the improved breed of the present is beyond comparison.

Nothing can be more penny-wise than the practice of many of our farmers of breeding from scrub and grade boars. To the farmer who breeds ten or more sows a thoroughbred boar is cheaper at \$50 than a grade boar for nothing, even if the hogs are all to be fattened. A single dollar on each pig would make up the money, and I am confident that I have seen in many cases a difference of \$5 each, with the same care, between thoroughbred hogs and those that have been bred hap-hazard. On hundreds of farms to-day can be found stock hogs a year old that will not weigh over eighty pounds each, and that are not ten pounds heavier than they were in December. If offered for sale now they would not bring over five and a half cents a pound, and they have probably consumed as much grain as the breed of hogs that, at the same age, weigh two hundred pounds, and are worth seven cents a pound.

The man who is carefully breeding pure stock is a public benefactor, and ought to be well paid for what he offers to the public, for it is valuable. Such men should be patronized and encouraged, for the farmers cannot do without them. In the good time coming, more attention will be paid to this matter than at present. Not only should this question be discussed in the Grange, but the members should co-operate and purchase such animals as will improve their stock.

### Remedy for Foot Disease in Sheep.

Veterinary Surgeon Felizet draws attention to the continued success attending the employment of the caustic lime for the foot disease in sheep. It is very laborious to touch the feet of a numerous flock of sheep with the usual astringents—solutions of copperas, white vitriol, calcined alum or spirits of turpentine. Instead, form a species of enclosed "run," fifteen yards long by two wide. Make a well-trodden floor; raise a border with puddled clay round the enclosure, so as to secure the uniform depth of nine inches towards the middle of the run; pour into this bath four barrels of water, and distribute over the bottom two cwt. of quicklime, covering all with a dozen bundles of the refuse fodder from the racks, so as to form a carpet. Drive the sheep into this foot-bath, one hundred at a time, and compel them to well pass and re-pass from one end to the other. The spread fodder prevents the feet sinking too profoundly, and acts as a brush at the same time for forcing the caustic solution to enter the nails. The bath must be made entirely new once a week, as the lime, absorbing carbonic acid, loses its causticity. It is a common practice to wet the straw intended for thatching purposes with a solution of quicklime; the straw becomes thus more durable, incombustible, along with possessing sanitary advantages.—*Paris Correspondent American Farmer.*

### Where to Set Milk.

There is no doubt that immense quantities of poor butter are made from the milk set in improper places. The kitchen pantry, the living room, and the cellar used to store vegetables and other family supplies, will impart peculiar taints to the milk and cream, in such a degree as to be destructive to flavor, even though the butter in other respects be skillfully handled. Dairy room so situated as to catch the odor from the pig sty, the cess pool, or other decomposing filth, cannot be used for making good butter. There should be a freedom from filth and impurities of every description about the milk-house, and the milk should be delivered by the milkers in an ante-room, or some point outside the milk-room, and from thence conveyed to the place where it is to be set for cream. In this way the fumes and the litter from the stable may be kept from the milk-room.—*Practical Farmer.*

### Sheep in the Fall.

Old, experienced sheep men will not need the advice which follows, unless they have gone through life with their eyes shut; but young farmers, who are not yet too old to learn, may profit by it. Keep your sheep in good condition during the fall. If pasture has been good, they will now be in good condition, generally, and the owner must keep them there if he would profit by the business of sheep raising. I know by experience, that after killing frosts come and wither the grass, sheep will decline unless fed a little something extra. The grass, after frost, is not nearly as nutritious as before. Give a little grain once a day, feed pumpkins, turnips, or any other green food at command—anything to keep up the growing thrifty state all sheep should be in at the close of the vegetable season. I cannot impress this point too closely. Sheep must be kept up during the fall months, in order to winter well and easily, and become a source of profit to the owner. Especially does this advice apply to breeding ewes. If they are permitted to run down until they are coupled with the ram, they are hard to serve, and not by any means sure. Then the progeny are, evidently, greatly influenced by the condition of the ewes at and succeeding impregnation. Every careful sheep owner will adopt such methods as will improve his flock. Some men will spare no expense in procuring a ram, but at the same time pay no attention to improvement through the ewes. One is just as important as the other. Indeed, I prefer the sheep reared by a careful man who keeps them at all seasons in the most vigorous condition, even though the blood on the male side may be inferior.

Sheep do not pay very well now unless they are good. Poor sheep are a loss any time, and especially at this time. Common sense prompts prompts every man, then, to cull his flock. Take out the poor, the maimed, the halt, and the blind, and Spartan-like, sacrifice them to the good of the commonwealth. Those that from some cause or other have dropped back a little in condition, should be separated from the flock and especial care given them. Dispose in some way of all that are not worth taking special pains with, and thus have your flock at the beginning of winter, composed only of the best, and they in the best possible condition. Take the word of an old sheep man, who assures you that the next crop of wool and the lambs will fully demonstrate the wisdom of such a course.—*Ohio Farmer.*

### Glauber Salts and Its Use.

D. E. Salmon, D. V. M., in the *Country Gentleman*, in relation to sulphate of soda—Glauber salts—as a remedial agent, not especially popular among English veterinarians, but nevertheless generally in use among farmers on both sides of the ocean, says: It is equally effectual when given to horses, cattle, sheep, swine or dogs; though, from the dose having been imperfectly understood by us, the results are not always as satisfactory as they might otherwise be. Being kept at almost every country store, it is the most available medicine of its class, and costing but a few cents a pound, it is within the reach of all.

The dose as a purgative is as follows: Horses, one to two pounds, cattle, one-half to one pound; sheep and swine, three to five ounces; dogs, one to two ounces. In these doses it is always necessary to give it as a drench, dissolved in two or three times its weight in water; but when given to horses in smaller doses, as a condiment, diuretic or laxative, it is generally readily taken dissolved in a part of a pail of water.

*Effects and Uses.*—The effect of Glauber's salt differs with the dose in which it is given. In small doses it is a cooling salt, diminishing the plasticity of the blood, and increasing the action of the kidneys; in medium doses it increases the appetite and also the functions of digestion and assimilation; and in the large doses mentioned above, it determines a rapid purgation in each of the different animals, an effect that is always of short duration.

When animals have an unhealthy appearance—the skin tight, the coat rough and staring, the eyes dull and the appetite poor—with no particular ailment, this medicine, given with the ordinary drink, in doses of six to twelve drachms to cattle and one to two ounces to horses, once or twice each day, speedily relieves the condition. In the increased doses of from one and one-half to four ounces it is one of the most useful medicines at our command, acting as a cooling salt, diuretic and laxative. It is then of great benefit in the various inflammatory troubles, in discases of the skin

locomotive organs as in many fevers useful in the epidemic cases of founder and colic of the bowels and the unlooked-for so often seen.

As a diuretic, can use; and an over-purge the animal which is now m and the unlooked-for so often seen.

and bowels, from the commonest As a cheap, domesticated: the veterinary as a proof. It preference to a and Toulouse, cated above, w one of the mild effect without the flow of blood it is invaluable complicated w moner than to has already coo as in some kind in all such cas sulphate of sod even by our v which irritates gestion. Wit in all cases, or mand. Many of magnesia); because they prescribed for (Glauber's salt much safer. I especially ind and other par in acute ente solved in a qu

**A But**  
A corrosive the following making:—  
I keep sixt —six new mi week. The Jersey; but for the reason in quantity, Jersey. Of very best. and one qua I add to this cows are sup Water is giv ing hay. B ings and sav winter card I treat m with them, do with a g ing season r ing, not bec to such mus relish it mu Doubtless i pastures ar a western s 20 acres of tons of nice soil deep, e early. I We scald o middle of kettle of b I put into Milk stand it warm in so that the night from three rack post, eight cans en, each on ca times a w possible w it is warm mass in th

locomotive organs and digestive apparatus, as well as in many fevers, and febrile conditions depending on surgical operations. I have found it especially useful in the epizootic influenza, and in many sporadic cases treated since, also in plethora, founder and constipation. In all these maladies it keeps the bowels open, diminishes the temperature of the body and increases the urinary secretion.

As a diuretic, it is one of the safest the farmer can use; an over-dose can do nothing worse than purge the animal. Not so with saltpetre, however, which is now most commonly used for this purpose, and the unlooked-for effects which the practitioner so often sees. In fact, inflammation of the kidneys and bowels, from over-doses of saltpetre, is one of the commonest occurrences.

As a cheap, certain, safe, and efficient purgative, there is no more desirable medicine for all of our domesticated animals, if the united testimony of the veterinary profession in France can be taken as a proof. It is used continually for horses, in preference to aloes, at the schools of Alfort, Lyons and Toulouse, and when given in the doses indicated above, will produce the desired effect. It is one of the mildest of purgatives, and produces the effect without irritating the bowels or increasing the flow of blood to these organs. For this reason it is invaluable in cases of congestion of the bowels, complicated with constipation. Nothing is commoner than to be obliged to purge a horse which has already congestion of the stomach or bowels, as in some kinds of colic, gastro-conjunctivitis, etc.; in all such cases, nothing is as safe and efficient as sulphate of soda. Much harm is done in these cases, even by our veterinarians, by always giving aloes which irritates the intestines and increases the congestion. With cattle, sheep, swine and dogs, it is in all cases, one of the best purgatives at our command. Many seem to prefer Epsom salts (sulphate of magnesium); why, it is impossible to say, unless because they are more expensive and are generally prescribed for people. Experience has shown that Glauber's salts are less irritating, and, therefore, much safer. From the large amount of liquid which this purgative removes from the system, it is especially indicated in serious effusion in the brain and other parts of the body. It is also very useful in acute enteritis in fowls, one ounce being dissolved in a quart of water and given as a drink.

#### A Butter-Maker's Experience.

A correspondent of the *New York Tribune* gives the following account of his method in butter-making:—

I keep sixteen cows; am milking ten this winter—six new milkers. I make 63 pounds of butter a week. The cows are a mixture of native with Jersey; but I should prefer they be half of each, for the reason that the milk is just as good, more in quantity, and the cows more hardy than all Jersey. Of course the native cows should be the very best. Hay is given three times a day, and one quart of cob meal and shorts twice a day. I add to this meal two quarts of skim milk. The cows are supplied with all the salt they will eat. Water is given twice a day, immediately after eating hay. Bed the cows twice a day with fine shavings and sawdust to keep them dry and clean. In winter card them regularly once a week.

I treat my cows with kindness, being very gentle with them, as such treatment has a great deal to do with a generous flow of milk. During the milking season my son favors them with his best whistling, not because he ever heard that cows are partial to such music, though he thinks that "our cows" relish it much and expect it morning and night. Doubtless it has a soothing effect upon them. My pastures are newly cleared, hilly, and rocky, with a western slope, and pretty good. I have about 20 acres of mowing land, and cut from 20 to 30 tons of nice English hay. My farm is on a hill; soil deep, strong and productive; first crop cut early. I cut several tons second crop in August. We scald our milk or heat it twice a day, from the middle of October to June 1st, in a tin pail over a kettle of boiling water. The pail will hold what I put into four pans, about three quarts to a pan. Milk stands 35 hours, then skim. In winter keep it warm in a room warmed by a soapstone stove, so that the temperature is about the same day and night from 50° to 65°. The milk is set on three racks, made in this way: An upright square post, eight feet long, six inches square, pivot in each end, slats across seven inches long; set 32 pans on each; skim twice a day, and churn three times a week. Cream is kept in as cool a place as possible without freezing. When ready to churn, it is warmed by pouring sweet skim milk into the mass in the churn to the temperature of 62°.

The butter is washed in three waters having the chill taken off; then weighed, allowing one-half ounce of salt to the pound. In winter we lump the butter the same day it is churned. We lump it over with a butter-worker, weigh it into one pound masses, lump it square with butter spatters, then stamp and send to market. I sell to a firm in Boston; have sold to them for four years, and got 55 cents a pound this winter, express paid by the firm.

#### How to Have Healthy Pigs.

Prof. Law, of Cornell University, writes as follows in regard to the proper treatment of swine for the prevention of disease:

Keep your hogs clean. Protect them from the hot, reeking bed of manure and close sleeping-place, where the emanations from decomposing dung, urine, straw and other organic matter are added to those of their own skins and lungs when huddled together in great numbers. See that both food and water are clean, in the sense of being free from disease germs and from the microscopic particles of decomposing organic matter which, within the system as well as outside it, furnish appropriate food for the disease poison, and favor its increase, while they depress its vital powers, and lessen the chances of the virus being thrown off. No less important is the purity of the air, since the delicate membrane of the lungs, perhaps more than any other, furnishes an easy mode of entrance for any injurious external matter. Finally, purity of the blood can only be maintained by a healthy functional activity of all the vital organs, which ensures the perfect elaboration of every plastic constituent of the blood, and the excretion of all waste matters that have already served their purpose in the system. By perfect cleanliness the poison, even if generated or introduced, will be virtually starved out, as surely as an army in a closely besieged fortress. But it will be observed that this implies the separation of sound from diseased animals, and the free use of disinfectants—solutions of sulphate of iron and chloride of lime, fumes of burning sulphur, etc.—to purify the air and other surrounding objects, as well as the simple clearing away of the filth. And it is here that the pork-raisers are most frequently at fault. Fifty or a hundred pigs are allowed to crowd together in a filthy manure heap, a rotten straw stack, or under a barn, subjected to the droppings of other animals as well as their own products. Their feeding troughs and drinking water are so supplied that they can get into them with their filthy feet, and they must devour the most obnoxious matter or starve. If under this abuse disease is developed, the healthy are left with the sick, as "they will all have it any way," and the result is usually a clean sweep. When hog cholera exists the sick should be placed by themselves under a special attendant, and under the free use of disinfectants; the healthy should be carefully watched, and on the first sign of illness or increased temperature, as ascertained by the introduction of a clinical thermometer into the rectum, they should be at once taken from the herd and carefully secluded. This, with active disinfection, will enable the owner to cut short an outbreak, and save, perhaps, the great majority of an already infected herd. Again, the sale of animals from an infected stock, to be removed from the premises alive, should be severely punished, and the disinfection of the buildings where the sick have been should be made imperative. We shall obtain the greatest success with this disease when we treat it as a contagious malady, and wherever it is found to exist give our main attention to prevent the further generation and dissemination of the poison.

#### Sugar Beets for Milch Cows.

Just looking over the article in your issue of January 1st, under the head of "Diary of a Ruralist," I find that he complains of the shrinking of at least 50 per cent. in the quantity of his cow's milk, from feeding her sugar beets; and then asks, "Are they good feed for milch cows?" For myself, I will answer, unhesitatingly, yes, better to produce an abundant flow of rich milk than any roots I ever fed, except parsnips; and especially far superior to turnips, being exactly the reverse of his experiment in feeding. I am satisfied something else is to blame in this, other than the beets; for whenever, for upwards of 30 years past, I have invariably cultivated the sugar beet and fed it largely to all sorts of my domestic animals, with the exception of hard working horses, both raw and cooked, and have ever found it highly beneficial for them.

No longer ago than last November, our family cow began to shrink somewhat in her milk, when we were feeding hay with an additional mess night and morning of Indian meal and wheat bran half and half, with a pint of oil meal. I then directed most of this mill feed to be stopped, and in place of it, ordered a peck of sugar beets for the cow night and morning. On this change of food she began to increase her milk, and in a few days gave the same quantity that she had done previously when on pasture, and before being put up in the stable on hay and mill feed.

Sugar beets must necessarily be superior feed to all domestic animals, and especially to such as are giving milk, for they abound in saccharine juice; and to show their value for feeding purposes as well as for making sugar, I will refer to several analyses recently made of them in England, reported on pages 24 and 25 of the *London Agricultural Gazette*, of Jan. 3rd. These give a water over 7 to 14 per cent. of solid matter. In our drier and hotter climate, I should suppose the average percentage of sugar and solid matter would be increased in the beet crop; but this would depend much on the size of roots and the soil where grown. To produce roots of the best quality, they ought not to be grown in too rich a soil, like that of river bottoms or the most fertile of prairies, nor should they be manured too highly in a poor soil, and what is of still more importance, probably; they ought to be grown standing so closely together in rows as not to exceed 5 or 6 lbs. in weight each. I prefer them even less than this, say 4 to 5 lbs. on the average. I would not give a dime per bushel for great, overgrown roots, weighing 15 to 20 lbs. each. I have occasionally grown detached roots of this weight, and for stock feeding found them little better than white oak chips. In fact, neither my pigs, sheep nor cattle would touch them cut up raw and placed before them, so long as they could find anything else decent to eat; while roots of a proper size they would devour with avidity, and grow fat or give great messes of milk from them.

I would suggest to "A Ruralist" to try sugar beet feeding again to his cow, but in so doing supervise the thing himself, and not trust it to any one else, as I have found that my man John, as well as Jack and Bill; occasionally made mistakes in one way or another.—*Cor. Rural New Yorker.*

#### Butter in the West.

In a report of the make and quality of butter in the West, this season, published by the *Chicago Commercial Bulletin*, the following information is presented:

Our replies in regard to the summer and fall make generally promise a tolerably good showing. From present indications the prospects are quite favorable, though probably not fully as encouraging as last season. In a number of sections our correspondents report very dry weather, and if this drought should continue, possibly a material falling off in the make would be the result. But at present pasturage, as a rule, is sufficiently fine; the grass is reported green, with a sufficient moisture to insure a good make of butter. The night dews of late have been unusually heavy, which afforded some moisture to guard against the drying of grass, and naturally was of some benefit to the preservation of food for cattle. Hence, it is fair to presume, from the indications at present before us, that fully an average fall make will be witnessed, and possibly a large one in the event of a season of rain.

The total amount of butter on hand at the points from which we have obtained information aggregates 1,150,500 lbs. for the season of 1876, against 1,245,300 lbs. last season.

THE PROVINCIAL EXHIBITION OF NOVA SCOTIA.—The *Sun*, Colchester, N. S., gives the following good advice to the Nova Scotians relative to the Provincial Exhibition. The advice is certainly one of general application:—"Let us do our best to make the affair a grand success. Let our farmers come to the front with their exhibits in every department. Our Agricultural Societies must do all in their power to forward to success the undertaking we have commenced. Every assistance that possibly can be given should come from the farmers in our own county, at least. This assistance can be shown in as liberal a vote of money to the prize list as the funds of the different Societies will permit, in making as many entries in all classes and as early as possible, and in working with the General Committee in every way to give success to the exhibition. Any indifference on our part must produce correspondingly greater indifference on the part of those living outside the county."

**Hints to Dairymen—No. 8.**

Written for the Farmer's Advocate by J. Seabury.

Since my last article in the August number, the dairy market has taken a great change. The market for cheese ruled very steady and quiet up to the first of September, when there was a great desire on the part of buyers to contract the season's make, August, September and October, at 8c. and 9c., 8c. for August, and 9 for September and October cheese; from that it has gradually crept up to 10½c., and 11 has been paid for fine September and October makes, and reports of even 12c. being paid. These prices are purely speculative, the idea and opinion being prevalent that the make of September and October will be very much short of last year's make. Whether these ideas will be realized time will tell; should there come a copious rain, with a few days of warm weather, we will have some fine fall feed, and these sudden advances will stimulate the make very much; and should such be the case, there will be a reaction. It must also be borne in mind that the state of trade both here, in the United States and England is very much against these high prices, and they will tend to check the consumption very much.

Butter has also advanced somewhat and holders are firm in their views, and many of the English shippers have firm offers at 100 shillings from their friends on the other side. Now one thing against a large quantity of the early butter in store here is that it has not kept at all well, much of it being rather greasy and strong; choice lots are held at 19c.

If dairymen are to make dairying a profitable business, they must keep their cows well supplied with a sufficiency of food, and that of the most suitable variety, according to the season. If they are allowed to fall away in their milk during the latter part of summer or early fall, they cannot be brought back to their proper flow again during the remainder of the season. This very important fact should not be lost sight of by dairymen, for they must remember that every gallon of milk lost in this way is so much out of pocket to them, and that, too, which would be clear profit. Pastures will fall off and lose their freshness, no matter how favorable the season may be, and dairymen should be prepared to meet this deficiency in some way or other. Though the aftergrass gives some feed, still it cannot be relied on to supply entirely this deficiency. The dairyman who has a few acres of sown or drilled corn will now find this a most advantageous time to feed it, and he will find that

it will be a good investment. Especially as both cheese and butter almost invariably command a much better price now than in the early part of the season. Corn fodder is now rich in those nutritive properties needed by dairy stocks; if still green, it should be wilted before being fed to the cows. It should be so with all grasses; with clover especially is this necessary. Beets, mangels and pumpkins may also be fed to good advantage, but by all means avoid turnip tops, as they invariably leave a strong odor in the cheese.

Those who have not a supply of these crops may substitute wheat or rye bran. I think a preference should always be given to green feed, as in it we are consuming the raw products of the farm, and the very cultivation of these, independent of their use as feed, is a source of profit. However, there is no better food for milch cows than wheat. Hon. L. A. Arnold, Secretary of the American Dairymen's Association, says of wheat or rye bran fed to dairy stock: "It is about as good as soiling

also be the means of putting very many thousands of dollars in their pockets.

In driving through the country we find a very large number of the curing rooms of the factories sadly deficient. Some of them are little better than sheds; in fact, I would just as soon have cheese on a barn floor as in some of them; if fast, they would be much better in the majority of barns. To all such I would say—prepare and have your curing rooms properly fitted up the coming winter. The day is not far distant when he who makes a poor article of cheese had better make none at all, because they will be bought at a very wide margin and at a serious loss, either to the patron or manufacturer.

**Hereford Bull, Sir Charles (3434).**

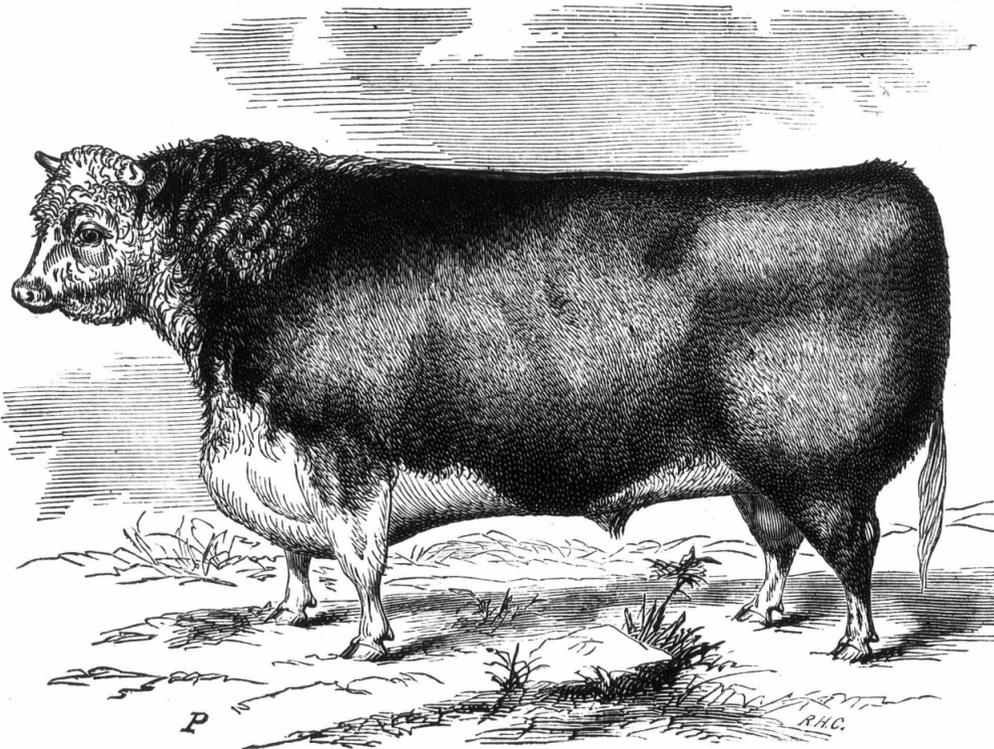
BRED BY F. W. STONE, GUELPH, ONT.

In 1860-61 Mr. Stone imported some choice specimens of Hereford cattle from the herds of Lord Bateman and Lord Berwick, noted English breeders

of Herefords; in July, 1871, he made another importation of 3 cows and 2 heifers from the herd of Mr. John Williams, Kingsland, Eng., and again in 1874 two bulls and one heifer, viz.: Governor 4th, 1st prize as a 3-year-old at the Provincial this year, and Portrait 3rd, 1st prize at the Provincial and Beauty 5th, 2nd prize at Provincial this year.

From the above importations he now has a fine herd of 50 head.

The characteristics of the Herefords are—Color, red. The face, throat, chest, lower part of the body and legs, together with the crest or mane, and



HEREFORD BULL, SIR CHARLES (3434), BRED BY F. W. STONE, GUELPH, ONT.

at any time, and is more convenient to feed. If not very much dried of their milk, five or six lbs. of the bran per day for each cow, wet and thrown on to some coarse fodder, will make a pound of milk or over for every pound of bran, and the milk will more than pay the cost of the bran and labor of feeding. We have generally to get from it more milk than from an equal cost of any other ground food."

With a good supply of green feed and wheat or rye bran, the dairy stock can be kept throughout the fall and early winter in as good condition as when the grasses were most luxuriant. This system of feeding will keep the cows milking right along up till Xmas, and no dairyman who understands his business thoroughly and keeps his cows for profit, will think of letting them go dry before this time of the year. If we could get the dairymen into a better system of feeding and keeping a better class of cows, it would be the means of their being milked nine months in the year instead of six, which is now about the average, and would

the tip of the tail, a beautiful clear white small red spot on the eye, and a round red spot on the throat, in the middle of the white, are distinctive marks which have many admirers. The horns are of a yellow or white waxy appearance, frequently darker at the ends; those of the bull should spring out straightly from a broad flat forehead, whilst those of the cows have a wave, and a slight upward tendency. The countenance is at once pleasant, cheerful and open, presenting a placid appearance, denoting good temper, and that quietude of disposition which is so highly essential to the successful grazing of all ruminating animals; yet the eye is full and lively, the head small in comparison to the substance of the body. The muzzle white and moderately fine, cheek thin. The chest deep and full. The bosom sufficiently prominent. The shoulder bone thin, flat, and sloping towards the chine; well covered on the outside with mellow flesh; kernel full up from shoulder-point to throat; and so beautifully do the shoulder-blades bend into the body, that it is difficult to tell in a well-fed animal where they are set on. The chine and loin broad; hips long and moderately broad; legs straight and small. The rump forming a straight line with the back, and at a right angle with the thigh, which should be full of flesh down to the hocks, without exuberance, twist good,

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well filled up with flesh even with the thigh. The ribs should spring well and deep, level with the shoulder-point, the flank full, and the carcass well and evenly covered with a rich mellow flesh, distinguishable by its yielding with a pleasant elasticity to the touch. The hide thick, yet mellow, and well covered with soft glossy hair, having a tendency to curl. Such are the requisite characteristics of a first Hereford.

The Herefords make famous beef animals, either pure or crossed on native stock, and two crosses of a pure bull on a native will bring out an animal showing all the fine points of the breed, both in quality and color. They are perfectly hardy, remarkably quick feeders, arriving early at maturity, and giving a smaller offal than any other breed. The cows, though not deep milkers, give milk of a very rich quality, as is shown by the fact that the calves are always fat, without any extra feeding. They make famous grazing beasts, as they fatten on grass.

**Cracked Heel in Horses.**

Cracked or chapped heels are due to cold, wet and dirt, perhaps chiefly the local injury which follows evaporation from the surface after washing the legs.

gent ointments and lotions—are exceedingly injurious to an inflamed part; and it commonly happens that the attendant, looking upon all cracks in the heels as identical in nature, tries his specifics in the first instance, and does not discover his error until the horse becomes excessively lame under the treatment.

Generally it is desirable to avoid using warm-water dressings, or poultices to the heels of horses, on account of the tendency to the relaxed condition of the numerous follicles which exist in that part, and which are always ready to pour out an abundant secretion on the slightest provocation; but when the skin is highly inflamed, it is absolutely necessary to apply fomentation in the first instance, and afterwards a poultice of oatmeal in which a little sweet oil has been mixed may be kept on for twelve hours; the heels should then be again bathed with warm water and dried with a soft cloth. By this time it may be expected that the inflammation will have subsided, and the heels will be in condition to benefit by the application of a liniment, composed of one part of solution of diacetate of lead with eight parts of glycerine. The compound is soothing in its action, and tends to keep the skin in a pliable state, and at the same time is sufficiently astringent to correct the ten-

**A Farm Scene in Canada.**

We are desirous of giving farm scenes in various parts of the Dominion; in our last number we gave you one in Oxford, and we now give one in Wentworth. This farm is celebrated for two important subjects; one is for hop culture. At the time of our visit we were shown the common hops generally grown in the country, and the Early Kent hops; they were both growing in the same hop garden. The Early Kents were nearly full grown, while the common hops were but just formed. From the appearance of the rampant growth of the vines and the large crop of hops on them, we should judge that hop growers would soon adopt the new variety. They are yet scarce in this country. The proprietor of this farm intends to plant none but the new variety as soon as he can raise sufficient plant to make new plantations. In the engraving you see the oast houses for drying hops, having the two cowls on the top; the cowls revolve, and are protectors against the wind, preventing it from obstructing the escape of heat, water and sulphur fumes during the time of drying the hops. Hops are not cultivated largely in this Dominion, the great outlay required for labor prevents our being able to compete suc-

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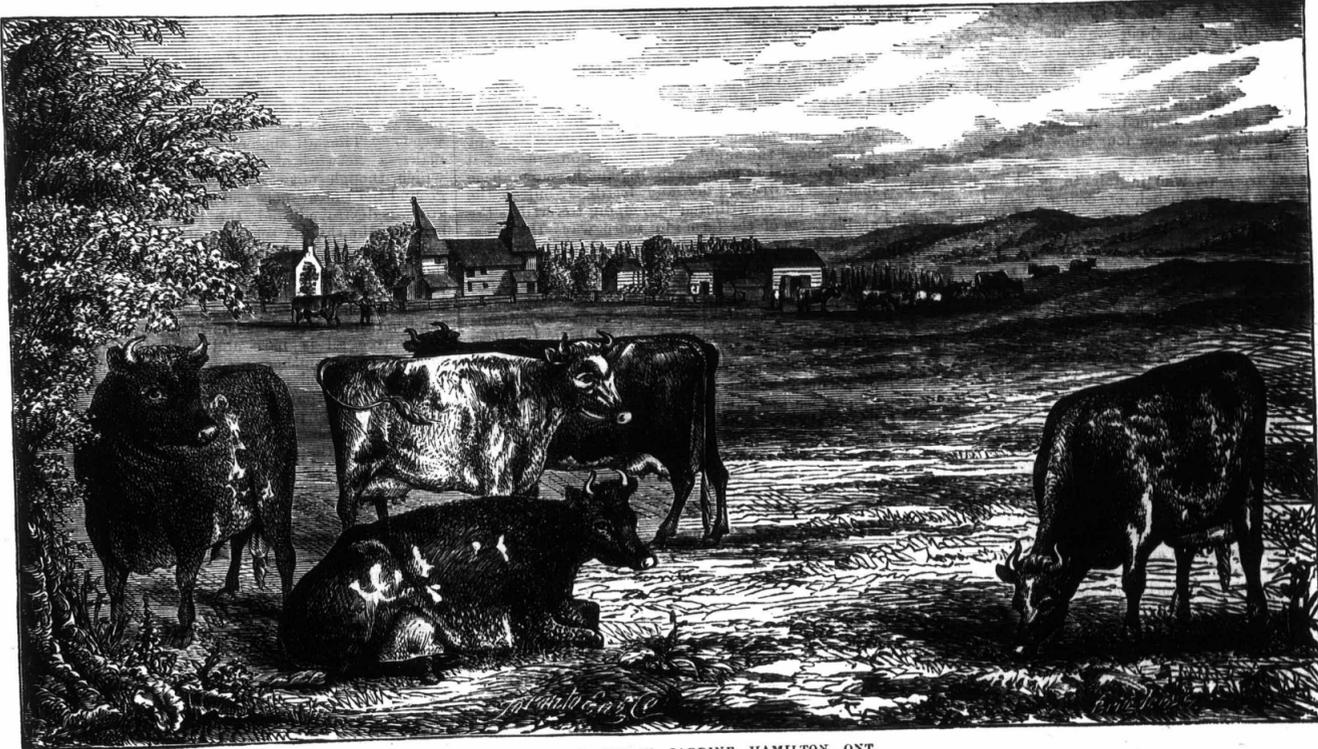
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THE FARM OF J. AND W. JARDINE, HAMILTON, ONT.

Besides the local influences, the state of the constitution must be taken into account; and there is, further, good reason to believe that some horses have a peculiar condition of the skin of the heel which predisposes them to the action of the exciting cause of the diseases.

Chapped heels occur in two distinct forms, which may, for the sake of convenience, be divided into acute and chronic. The acute form of the disease is generally seen among horses in full condition. Want of exercise and abundance of food are likely to render the system gross, as the carter will term it, and under such circumstances any trifling wound is inclined to assume an unhealthy character. If the horse be now exposed to the causes which are ordinarily concerned in the production of chapped heels, the result will be that the cracks of a fissure will present a red, "angry" appearance; the edges of the skin will be swollen and marked with an inflammatory blush, and considerable heat and pain will be present. Sometimes the local excitement is so excessive that the system sympathizes with the state of the part, and some amount of fever is present.

The acute state of cracked heels should always be carefully distinguished from the common form of the disease, because the usual remedies—astrin-

dency to excessive secretion from the follicles of the skin. Attention must be given to the state of the animal's constitution while the treatment which has been recommended is being steadily applied to the diseased part. In most cases it will be found necessary to diminish the rations; mashes and green food, or roots, should be allowed in moderate quantities; exercise would, under ordinary circumstances, be beneficial to an animal in high condition, but the state of the heel makes it impossible to move the horse for some days, and therefore a dose of purgative medicine becomes a necessity, and the dose may be repeated in a week with advantage, if the horse is in a very plethoric state.

**Arrears.**

Subscribers who are in arrear are reminded that this is the season when a farmer can pay up and should do so. As our circulation increases so do our expenses. Send along your arrears and subscription for 1877. Never mind waiting for the agent to call, nor for your neighbor—not even for the annual envelope to remind you. Send the amount at once, and a new subscriber for the coming year.

cessfully with other parts of the world. Hop growing is perhaps one of the most lucrative branches of farming when the crop is good and prices high; on the other hand, it is the most dangerous for farmers without ample capital to cultivate, as one or two years of bad crops or low prices would ruin them. We hope to refer to this farm again ere long on another topic.

**Returned Papers.**

No notice is taken of papers returned by subscribers unless accompanied with name and P. O. address. When a subscriber desires to discontinue, send a postal card; state your reasons for giving up the FARMER'S ADVOCATE. Our great desire is to know your complaints, your grievances and suggestions, and by such letters to improve your paper as much as possible. Never give up the ADVOCATE without a good reason. The next number may bring you a hundred fold return for your \$1 subscription.

Send for club rates and club sheets. Send for one of our large posters. Send for a sample copy of this journal and get up your club at once.

## Agriculture.

## Threshing and Marketing Grain.

No. 1 wheat should be bright, clean, and should weigh the required number of standard pounds per bushel. No. 2 is grain that from imperfect cleaning, or other causes, does not come up to the standard of No. 1. No. 3 is still more dirty and light, and rejected is such grain as from dampness, trash, and other causes, will not grade as No. 3.

A part of the profits of warehousemen and dealers comes from raising the grade of the grain they buy or receive, by careful drying and recleaning. Prices this season must run low. Advices from all parts of the world report the wheat crop as being excellent. California and Oregon has an immense surplus, and from most of the great wheat-growing districts, and particularly European points, the return will be large; hence there will not be a great demand for American wheat for export. Thus it behoves the Western farmer especially that no grain be sent to market but that in the best possible condition.

Every bushel of grain, of whatever kind, sent forward from the farm in anything but the most merchantable condition, costs the farmer a loss precisely in accordance with the freight on and the handling of the trash contained; the cost of recleaning, and the added depreciation in value from reduction in the weight of the standard bushel; added to this the lower price obtained, from the general inferior appearance of the grain from all these causes combined. Added together, the whole amounts to three or four times the cost of careful recleaning at home.

Threshers, who in fair to good grain, always work by the bushel, of course wish to make as much measure as possible, by rushing the grain through, often imperfectly threshed, and of course full of dust, dirt, straw and light grain. The first four causes constitute a dead loss to the farmer, whether he recleans or not. The light grain, if sold with the good, always causes depreciation in quality more than enough to counterbalance its weight. Thus the farmer really has no one to blame if he allows it to be so. A little intelligent supervision will obviate all but the latter evil of light grain. This may be made right by recleaning; for, if the grain be conscientiously threshed and cleaned, still a dead loss must ensue to the farmer if he allows the grain to go from him without recleaning, since all the light grain and trash, inseparable from the best machine work, counts as nothing to the miller who makes the flour. Retained at home, this is all available as feed in some shape, and will pay the cost of recleaning with a heavy percentage added. It will indeed pay alone in the freightage of the trash, since this never realizes the transportation charges; these charges are no inconsiderable item, when thousands of miles are estimated. Thus he saves in the light grain, and consequent freights, which light grain counts for nothing in the markets of the world. So he saves in the enhanced value of clean grain—the most important of all. Last, but by no means least, he has the satisfaction of knowing that he is reaping enhanced profits honestly earned, by sending his products to market in the best possible condition.—*Abridged from the Western Farm Journal.*

## The Wheat Crop of Minnesota.

From a careful survey of the different sections of Minnesota, Gen. Delaplaine estimates that the yield of wheat this year will be 62 per cent. of what would be a fair crop. In some places the yield goes below one-half; in others, two-thirds; so that the estimate above given is a fair average. In conversation with Mr. J. D. Green, of Faribault, an extensive miller, a very intelligent and careful observer, and a man whose statements may be relied upon, Gen. Delaplaine gave his own estimates, which Mr. Green thought liberal enough, judging from his own inquiry of farmers and the knowledge of the crop that he had been able to obtain. Mr. J. A. Christian, of Minneapolis, another well known and heavy miller, had made extended inquiries, and places the yield at two-thirds an average crop. The acreage is larger, and will, to some extent, make up for the deficiency. Mr. Mellen, of the firm of Cook, Mellen & Hurlburt, of Rochester, largely engaged in milling and grain operations, thinks that the yield will go about two-thirds the average crop—not to exceed that—considers Gen. Delaplaine's estimates very fair, and thinks results will show it to be so. Threshing has commenced

in some localities, and those who have threshed are disappointed in the yield. The berry is small and does not measure up to expectations.

Looking for the cause of the light crop, it is believed that some of the causes were within the control of the farmers and some were not. The small size of the berry is attributable in many instances to poor and imperfect seed. Gen. Delaplaine cited a notable instance. A farmer had two fields sown near Delano, one from his own seed and the other from seed obtained farther north, where it was entirely free from the late rains last harvest. The result is that the wheat from this seed is plump, full and perfect, while the other is small, shrunken and stunted. It is a well settled fact that a vigorous growth cannot be obtained from seed in which the germ has once started, however slightly, in the previous season. Similar instances to the one above might be mentioned in Winona County, in which the fields of grain from different seed show the same significant difference in the yield. This cause, let it be emphatically repeated, is within the control of farmers, and merits their careful consideration.

The new grain is considered No. 1 in soundness and hardness; the berry not so large as usual, rather retarded and feeble, but still perfect, though under size.—*Winona Republican.*

## Milk Cows Impoverishing Pastures.

There must be a deal of ignorance, misapprehension and misrepresentation on this subject, for I am well acquainted with thousands of acres of grass land which have been grazed by cows, from whose milk butter has been made, without having experienced the slightest deterioration—in fact it has improved in many respects, and has never been manured or dressed by any fertilizer, but on the contrary has contributed in helping to fertilize the arable parts of the farm in more ways than one. For instance, every autumn, or during the open winter season, the bunches of coarse grass, the ant hills and every tuft of herbage not looking as it should do, are cut off the sward, and carts come round and take all this matter to make bottoms for dunghills on the plowed land, and to be afterward mixed up when the heaps are turned over, as all manure is in England before being applied; also, where the dairy fields have been brought to a fine, even face, and the surface requires no clearing in the way stated, carts will go around and take away the droppings, which are picked up with a fork and thrown into the carts. In my time, I am ashamed to say, I have seen these cakes of dung hauled to the homestead and used as fuel in the back kitchen of the farmhouse.

The land I am alluding to lies from Banbury, Oxfordshire, to Daventry, Northamptonshire, and from the latter place on to Newport-Paguel, Buckinghamshire, and the burning of the cow dung I witnessed between Aylesbury and Bicester. None of this land has been plowed for more than a hundred years, and some of it for a much longer time, though a good deal of it has been plowed some time, as is evidenced by the ridges of the lands, which vary in different localities from eleven to fifteen yards in width, and are three or four feet higher at the ridges than at the furrows, in consequence of the old practice to plow one way.

I have farmed grass lands, etc., in the cheese making districts of England, also, and have dairied for fourteen successive years on a fine estate, where the finest of double Gloucester cheese was manufactured, and I sold the cheese, six tons at a time, in market at Stow-on-the-Wold. The pasture on which I made this cheese had been in grass, without any plowing, since 1632—two hundred years, and perhaps longer—and that had not run down, but was so rich that the grass grew very heavy. Many nettles also grew among the grass, and to cause their destruction I mowed and made hay in alternate years, cutting three tons of hay per acre and mowing the first week in June; and this alternate mowing and grazing did not injure the set of grass, but improved it, although no returns were made in measure, except by wintering part of our flock of breeding ewes upon it, for it is customary to clear up all the grass left by the cows when they are put in the straw yards or placed in the cow stables for the winter. Some sheep racks are moved about the dairy fields and a little hay given early in the morning.

As some Englishmen are scattered here and there over the United States, and a few have been in the agricultural districts and witnessed the dairying there, it would be easy for any one to satisfy himself by enquiry about the permanency of the dairy fields, which are all old, long ago estab-

lished grass. But it is not general to mow a dairy field, and it is seldom done, as mowing will reduce the fertility, and very much so, if the grass gets old before it is cut. In the case mentioned by me, the grass was mowed so very young that it had not fed much on the soil, gaining its chief support from the atmosphere, and then the ewes which lay on the grass in autumn and winter, eating hay at day-break, returned more in their droppings than they took from the land in grass.

In questions of this kind argument should be cool and with a view to get at the truth, not to support one set of men's ideas, nor another's theory; and here I would call on every fair, honest mind to think whether it is not generally admitted, and if he does not himself believe that herbage, up to the time it commences to form seed, takes very little from the soil; therefore, in grazing, if it can be cropped off without ripening stems or seed, the fertility is not decreased, and all the manure voided by the animals adds to the plant food, so that instead of the land being impoverished, it annually becomes richer. But look at the case if the grazing is done in the accepted American way, where half the grass is left to ripen and thus suck the fertility out of the ground, and the dung and urine which the cattle would drop on the land while eating this moiety of the herbage is lost, thus robbing the soil, and the dead-ripe old thatch makes the pastures look very bad; besides which, the cattle do not leave it regularly, and the thick mass in places, instead of benefiting the set of grass by shade, completely kills all the fine, shorter grasses, just as heavy crops of sown herbage are known to smother and totally destroy weeds. Thus all the sweet dwarf grasses which make a network of thick set bottom grass, and which, though not two inches high, shade the ground ten times more effectually than the tall grass, is destroyed and the bare ground exposed between the thinner set roots of the timothy.

A pasture grazed according to the practice in the United States, and one according to the prevailing custom in England, puts the contrast as strong as that between two pieces of woodland—one from the tall trees has nothing under, and from tree to tree all is bare and harsh, no dews, no damps. On another piece of woodland indiscriminately cut off and kept down, there is such a thick-set brush that it is one mass of living, green, tender twigs, etc., through which the rays of the sun cannot penetrate nor the air circulate fast enough to dry the soil. Thus, under the thick dwarf herbage there is genuine shade, and the blueish-green leaves, twigs and stems, full of sap, are in striking contrast to the bare, withered looking surface under the tall trees.

The ridiculous custom of yarding cows at night is a great injury to a pasture, because of the loss to the land in the manure thus taken away, and then in this country sheep are put on the pastures and fetched up at night, and often driven home out of the rain, so that pastures are robbed enough, without reckoning the butter and cheese as coming from them.

The fact is, there is no genuine, old, natural pastures in the Eastern States on land suitable for rich grass, and in the West, directly the timber is all cleared off, and the blue grass, with other natural varieties, begins to flourish and give evidence that it would make a permanent green sward that would not run out, the owners plow it up and crop the land with corn and wheat, till the soil is unfit for making the kind of pastures which will bear breeding and grazing at any season and will not run out under the roughest usage.—*A Working Farmer, in Rural New Yorker.*

## Sale of Growing Crops.

The sale of growing crops by the acre is quite commonly practiced in England. The English *Agricultural Gazette* of Aug. 7th gives the following account of an annual sale made by Mr. Prout, on the first Friday in August:

"This annual meeting took place for the sale of the growing crops on Blount's Farm, Sawbridge-worth, on Friday last, when about 200 visitors attended and partook of Mr. Prout's hospitality. The long wet winter and spring, followed as it has been by two months excessive heat without rain of any value, have told on the crops this year; still, they are remarkably good, considering that many of them are from the eighth to the eleventh in succession. The wet autumn would not admit of more than 200 acres being sown with wheat, so there was a large breadth of spring corn. The barley was sold first, and averaged £8 per acre. The wheat made from £8 10s to £10 17s 6d per

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acre. The oats made from £6 7s 6d on a field where they were nearly drowned after sowing, to £9 15s where they were sown in better condition. Twelve acres of mangel were offered, but the sale of these was declared to be optional, and as there was no more than £23 10s per acre bid for four acres, and only £23 per acre for the remaining eight acres, they were not sold. This shows that Mr. Prout's practice is even more valuable for roots than for cereals."

**Permanent Pastures.**

W. C. S., in an exchange, says:—I will say that I have always said it takes 20 years to thoroughly establish a permanent and rich old pasture. That being done, of course the herbage will be affected by a dry season. A permanent pasture or meadow cannot grow without moisture either in America or England, for grass will burn up all the world over when there is no source of moisture. It seems as if 3½ tons of hay per acre removed from a field must reduce its fertility very much, and that also the allowing of the grass to stand so long, must have caused the coarser grasses to have smothered and killed the finest and richest of grass, thus leaving a thin stand without the fine dwarf herbage, which ought to have filled the interstices; as overpoweringly heavy crops are known to destroy weeds. If the grass had been eaten with sheep and young cattle, and when becoming short and scant the animals had all been removed into another field, the under grass would have been saved from suffocation, and the whole herbage have received such stimulation from the droppings and urine of the animals, that the result might have been different.

On rich bottom land, which is overflowed with water, if the inundation is periodical, and does not occur in June, hay might be made advantageously, because these freshets generally leave a sediment which acts as manure, thus obviating the necessity to renovate otherwise. The soil must in all cases be suitable for pasture, and there is no difficulty in keeping the grass in a flourishing condition. When established, if from circumstances hay is required, a good crop could be cut without serious injury in the future, and with no ill result at all if a light dressing of compost or manure is spread over in the autumn, but the coating need not be light if there is plenty to be had.

**Effect of Salt on Wheat.**

In an interesting series of experiments recently made on the farm of the Royal Agricultural Society of England the manurial value of salt was unmistakably indicated. An acre of wheat dressed with three hundred pounds of common salt yielded thirty-nine bushels of grain, with a proportionate amount of straw, while an adjoining acre, left unmanured, produced only twenty-nine bushels per acre, with the straw imperfectly developed, showing an increase of ten bushels per acre. The entire cost of the crop is not stated, but this experiment shows that the additional ten bushels resulting from the salt were produced at a cost of thirty cents each.

In another case a piece of ground intended for wheat was plowed the preceding fall, and again in May, when it was sowed with salt, and afterwards plowed before seeding. On the 1st and 2nd of September wheat was sown at the rate of two bushels to the acre. The crop, when harvested, yielded, according to the estimate of the owner, Mr. John Parke, not less than forty bushels of grain to the acre, with a luxuriant growth of straw. From these and many similar cases the inference seems to be that salt is a specific for the wheat crop, imparting solidity to the grain and firmness to the straw.

**Plaster and White Clover.**

A correspondent writes to the *Country Gentleman* that he has been lately inspecting a farm devoted to the natural grasses and to white clover, as the land is hilly and the soil is a yellow clay loam, a sort of light drift, with a capacity for production below the average. Though cleared of timber for seven or eight years, it has never been plowed.

He says:—Two years ago the land changed owners. The present proprietor, Jacob C. Nellis, of Fort Plain, proposing to continue the land in grass, sowed it with plaster. He applied about 150 pounds per acre. There was a decided improvement in the feed, principally white clover. What is interesting is the effect of the plaster on this creeping trefoil. You could not only see distinctly where the plaster had missed, but the difference was all dif-

ference. The plaster brought out a thick set of the clover, and the missed places had for the most part no clover at all, and little else. This lot had the cows on it during the time it afforded pasture till three weeks ago, or the latter part of May, when the cows were turned out and plaster was sown. The chief effect was produced the last eight or ten days, when the white clover, as by a miracle, seemed to have been drawn out of the ground. This was aided by a couple of fine rains. But what surprised me most was about an acre of ground which had had potatoes grown on it when it came into Mr. Nellis' possession. Whether the ground had been manured or not Mr. Nellis does not know. But not being able from a crowd of work to plant it, he left it in the condition he found it. It produced some grass and weeds, which were helped by plaster. The plaster was renewed this spring in a good dressing, which started at once into life a crowd of white clover, the equal of which I have never seen. It is but three weeks since the stock was turned out and the sulphate applied, and the growth now is as thick a stand as it is possible to be, and over ankle high, the ground a net-work of roots and vines.

**Beet Sugar in the United States.**

It is some time since we had the pleasure of receiving from a subscriber a sample of sugar made by him from beets grown on his own farm. He did not succeed in establishing the beet sugar making. There are difficulties attending it, heavy expenses to be borne, and encouragement needed to establish it successfully. The following extract from an editorial in the *Western Farm Journal* on the subject as connected with the United States must have an interest for agriculturists generally:

Undoubtedly the cheapest sugars now in the market are the cut, lump, and those granulated grades showing the largest crystals; and this, from the fact that all starch and fruit sugars are weak in their granulation and notably small in their crystals.

Fully one-third of the sugar product of the world is manufactured from the beet—produced chiefly in Austria, Germany, France, Belgium and Russia. California manufactures 3,000,000 pounds yearly. England has experimented to some extent in its manufacture, but not as yet to such an extent as to render the product of much importance commercially. Illinois was the first State in the Union to undertake this manufacture, at Chatsworth; but, after ten years of continued disaster, and failure to make it profitable, the works were removed to Freeport, Ill., where no advance has been made, as showing the investment profitable.

Lately considerable interest has been manifested in Maine in the direction of enquiry into the feasibility of the cultivation of beets for sugar. The Governor of that State has called attention to the subject at considerable length in a message, and an agent of the State has been sent, we understand, to the Centennial Exposition, to Freeport, Ill., and to California, to investigate the method in operation, the product, and profit therefrom. Rhode Island and some other States, and even Canada, had moved in this matter more or less. Investigations, however, in the manufacture of beet sugar, in the United States, will result in nothing but loss, whether in New Jersey, Illinois, or Wisconsin. No more, however, than would be shown from the history of beet sugar manufacture, during its infancy, in any of the European countries in which it was undertaken. In California, if we may credit statements received, results have been satisfactory.

We have but slight hope that the present attempt to reinvigorate the manufacture of beet sugar in the United States will result in success. In its infancy in Europe it was not only protected largely, but fostered in many ways, by the Governments of the countries in which it was undertaken. Since it has been able to stand alone, and, particularly of late years, the industry has been taxed, and increasingly so, until now the tax exceeds the price per ton that would be required to raise the beets in the United States. On the other hand, the companies organized here had not only to labor under the disability of importing the machinery for the works, and pay duty thereon, but also had to depend upon such labor—not always that of experts—as could be procured for its manufacture. There is no question that we have ample scope of soil for growing a superior quality of beets; ample water privileges for washing and treating the crop, in the process of manufacture, and capital to carry the industry. We can also buy skilled labor. Nevertheless all these essentials must be first

brought together and a fair prospect of success assured before capital will again undertake the industry. If it could once be made successfully, it would become one of the most important industries in the United States.

**Value of Young Clover.**

A few farmers are plowing up fields of young clover of last year's seeding. This practice was quite common a year or two since, and though not to be recommended, has some good arguments in its favor. Of course the clover has not nearly got its growth of top, and still less of root. In fact, I find that clover roots do not get their largest size until their second growth after the first mowing. It is this which makes growing clover seed so advantageous to the soil. During the hot, dry weather of July and August the strong clover roots strike more deeply into the subsoil than at the previous time; and though the second crop, including seed, is taken from the soil, there is an increase of fertility by the operation. That is to say, there is more fertility available than before. Of course there is no absolute gain by taking something from the soil; but what the deep tap roots draw from the subsoil more than balances what is taken away in the hay and seed. In plowing under young clover most of this advantage is lost; but if plowing is delayed until nearly the last of May, there will still be time for planting corn or potatoes. The clover, at this early stage, is very succulent, and immediately begins to decay, making the soil warm and light. There is no trouble from sod in after cultivation where the young clover has been plowed under, and the speedy decay of the plants under the corn is, for the first few weeks, even superior to a dressing of manure. In a heavy rich soil this may be all the fertilizing needed. On the whole, the practice is not nearly so wasteful as it appears, and is certainly much better than leaving the field unseeded because the farmer expects to plow it the following season. Some even argue that it pays to seed spring grain which it is intended to plow and sow in the fall. But this is very doubtful. Clover the first summer makes a very small growth of either top or root, and as stubble for fall sowing should be plowed as early as possible, or the clover can be of very little value. The oats or barley shelled on the ground while harvesting are worth nearly their market value as grain for manure when the field is plowed early. I am not sure that it would not pay to sow oats on stubble ground, to be cultivated under just before drilling in the wheat. Such land will be a better, moister seed bed than if left bare during the month of August and early part of September. We have learned during the past few years that the crop of wheat depends mainly on the growth and vigor of the plant the preceding fall. Anything which secures this, whether it be clover or other succulent plants plowed under, is of great benefit to the crop.—*W. F., in Country Gentleman.*

**Plowing in Rye.**

On the farm of President Clark, at Amhurst, was a poor, gravelly field of six acres, which yielded only one-half ton per acre. Last fall the field was plowed, and one ton of rectified Peruvian guano applied to the whole and harrowed in. The piece was then sowed to winter rye, resulting in a crop this year averaging nearly five feet in height when plowed under, and which good judges estimated would yield, if harvested, nearly thirty bushels of grain to the acre. But President Clark is one who generally induces nature to produce about as she wills, by following out the principles she has herself laid down. The soil here was lacking in organic matter as well as in plant food, and this was the readiest means of supplying the deficiency. The rye was plowed under just before blossoming, though on general principles the better way is to turn it under when nearly ripe, at the time when the crop has taken into itself the largest attainable amount of atmospheric and soil matters. A large-sized Holbrook's swivel plow was used, plowing to a depth of seven inches, and was followed by a subsoil plow stirring seven inches deeper. Next autumn another ton of rectified guano will be applied to six acres and harrowed in, and then seeded to grass and winter rye. Thus the lot will be quickly and effectually supplied with a large amount of organic and mineral elements of plant food. If allowed to mature, according to the estimate, the crop plowed in would add to the soil of available plant food about 227 pounds of nitrogen, 200 pounds of potash, and 121 pounds of phosphoric acid, which would nearly equal in value the two tons of guano.

Correspondence.

This department of the FARMER'S ADVOCATE is not so varied the present number as it generally is. Farmers are just now too fully occupied with their agricultural operations to give up much of their time to letter writing. Our correspondence, however, will be found very interesting. The letter, "Manitoba Wheat for Seed," treats very fully on a subject of the greatest importance to farmers, and, we may add, to the country at large. We hope to hear from the writer frequently. The trip of our old contributor, Mr. Disbrow, from London to Manitoba, is the first of a series of communications he promises to send us from that country that is of such great interest to Canadians. From our Michigan contributor we have another interesting communication—but our readers will be able to judge for themselves of the great interest of our Correspondence department.

MANITOBA WHEAT FOR SEED.—SIR,—In looking over a late number of your valuable paper my attention was attracted by the number of advertisements of "Seed Wheat for Sale"; this, with other circumstances, leads me to suppose that it has become a matter of importance to the farmers of Ontario to renew their seed by the trial of new kinds of wheat.

Assuming this to be the case, I would recommend your seedsmen to introduce to their customers the flinty white wheat of the Red River Valley, and will promise that the trial will repay them.

It is only within the last year or two that this valuable grain has reached the Eastern market pure, in consequence of its admixture with other grains in the elevators of St. Paul, Chicago and Milwaukee, generally; laterly small quantities, comparatively, have been shipped via Duluth to Eastern millers for the manufacture of the fine flour to meet a demand created by the introduction of the superior brands of Minneapolis flour, and for use as seed. Since the completion of the Northern Pacific, and St. Paul and Pacific railroads to the Red River Valley in the American territory its wheat has sensibly affected the St. Paul market, and I am informed that last winter it was bought up rapidly at 10 cents per bushel over any other variety, for seed.

It is now safe to say that the hard, flinty white wheat of our Red River Valley is designed to complete a revolution in the flour trade which was commenced by the introduction of the product of Northern Minnesota into the market; which latter is as inferior in the particular qualities which make it valuable to that of the Red River Valley as it is superior to the product of the Western States further south.

On this point we have the opinion of a very high authority on the subject, viz.: J. W. Taylor, Esq., U. S. Consul at Winnipeg; than whom no man has studied the subject with closer attention. He says, "That on a recent visit to the East he was surprised to find that Minnesota spring wheat when forwarded and sold separately in the Eastern market commanded ten per cent more than the wheat of Canada and New York State. Further, that spring wheat raised on the line of the Northern Pacific, and St. Paul and Pacific railroads, brought 5c. per bushel more than the same wheat raised 150 miles further south. His inference is that Manitoba wheat, when there shall be a surplus over local consumption, will bring 15c. per bushel premium; almost enough to cover cost of transport to Montreal or New York. This appreciation in price is owing to the increase in weight and gluten of the flour attributable to the northern climate, and other favorable circumstances. Manitoba wheat is already in demand as a desirable change of seed in the adjoining States, and the Department of Agriculture at Washington proposes to distribute 200 bushels in small parcels over the United States."

Also, that of one of the most experienced scientific millers of the North-West, viz., J. S. Archibald, of Dundas, Minnesota, whose brands are purchased largely in New York city for shipment. He says in a letter to me:—

"DUNDAS, Minn., Oct. 7.

"A. W. Burrows, Esq.

"DEAR SIR,—Yours of the 28th ult. to hand, and will cheerfully send a small box of flour as

you request, and answer your inquiries. The flour is known to the trade as 'Archibald's Extra,' the highest standing grade in the U. S. The present selling rate in New York and Boston is \$10.50 to \$11, which is about \$1.50 to \$2 per bbl. higher than the best white winter wheat flours known in our Eastern markets. The wheat from which it is made is Scotch Fife, a hard or flint wheat. The question of wheat production has had my attention practically and experimentally for over thirty years. The conclusions result in the firm belief that the hard varieties belong north of the 44th parallel of latitude, except, possibly, in high elevations of mountain ranges. White soft wheat belong south of 44. Production from where soft wheats are sown north of that line, a single crop may chance to be good, but seldom two crops, and all is liable to chance casualties, such as rust, smut; blight, &c., which, if our hard wheats are sown south of 44, the result is well illustrated by the opinion given me by Mr. Low, of Low Bros. & Co., Chicago, 'the first year, if sown in Central Ill., may be good, but the second crop would not weigh forty-eight pounds to the bushel.' Apart from the question of production and certainty of good yield in bushels per acre, the northern soil on being especially adapted in climate and soil to produce hard wheat, has a double advantage; firstly in producing more to the acre, with greater certainty of yearly averages in good crops; secondly, the wheat is more glutinous; the flour of first and second grades take the preference in all markets, where properly known. It being more absorbent, makes more pounds of bread on any given quantity of flour compared with the southern soft wheat flours, and is more nutritious. These facts establish the question of preference, as being with us, north of the line before named, with special reference to spring wheat, as no other can be relied on. Very few places grow high grade white wheat successfully, and the best of these produce a flour of less market value than that made from our hard spring wheat. White, red winter wheats are all inferior. A hasty visit to Winnipeg in August of 1872, gave me an opportunity to notice the soil and the wheat then harvesting. The crop harvesting by the old Selkirk settlers was truly astonishing on land under cultivation fifty-nine years. The stand of wheat would have been no discredit to the virgin soil of Minnesota as a first crop, the wheat being bright and plump. My opportunities were too limited to justify conclusions in regard to the question of kinds best and most reliable then, so far as average yield, or average safety in production is concerned, touching the question of soft or hard wheat, which experience establishes as before stated, in all our north-western States. In the great future, one thing to me seems certain, the great wheat belt of this continent lies north of the southern boundary of Minnesota, and North-West. The British possessions North-West occupy a large, if not the much larger part of that field. Railroads are wanted to connect, for the present, with ours via Duluth. In time, after the settlement and production of the country justifies, as they will, the more difficult work of a railway through all British territory will be accomplished. To the producer, it is the market he wants, caring little how reached so long as available. This can be had for some years via Duluth. Being myself a Canadian, although a resident of Minnesota, I have yet the old home interest and love of country. If my views, here given hastily, are worth note, they are at your service.

"Yours, etc.,  
"JOHN S. ARCHIBALD."

Blodgett (an American authority) states that "the basin of the Winnipeg is the seat of the greatest average wheat production on this continent, and probably in the world." The limestone strata of this region, with its rich, deep, calcareous loam and retentive clay subsoil, is always associated with a rich wheat development, while its hot and humid summers fulfil all the climatological conditions of a first-rate wheat country. Some fields on the Red River have been known to produce twenty successive crops of wheat without fallow or manure, and the yield has frequently reached as high as forty bushels per acre. An important feature in the soil of Manitoba and the Northwest is, that its earthy materials are minutely pulverized, and the soil is everywhere light, mellow and spongy. With these uniform characteristics, the soils are of different grades of fertility, according to local situations. A general ingredient of the soil is sand, of which Silica is the base, as of all good soils. It plays an important part in the economy of growth, and is an essential constituent in the organism of all cereals. We are

told that about 67 per cent. of the ash of the stems of wheat, corn, rye, barley, oats, &c., is pure silica, or flint. It is this which gives the glazed coating to the plants and gives strength to the stalk. Now, this silica is an acid and is insoluble, but readily combines with lime, soda, magnesia, potash and the other ingredients of our soil, and in this condition is readily available to the use of the plant and forms an essential element in the growth of the cereals; from this and other causes is attributable the superiority of our wheat over all other grown east or south.

From Spence's pamphlet I quote the following interesting remarks and tables of comparison:

"The average yield of wheat in Manitoba, deduced from the aggregate of local estimates, is twenty-five bushels to the acre, the range of ordinary yields being from fifteen to thirty-five. Experience has taught us to allow largely for the disposition to base general inferences on the most striking and notorious instances, and for the general habit of confounding a usual result with an average one.

"A comparison of the yield of wheat for past years at Red River, with the best districts of the United States, will show its superiority over them, viz.:

Red River Spring Wheat, av. production, 25 bush. per acre.			
Minnesota	do	do	20 bush. per acre.
Wisconsin	do	do	14 do
Pennsylvania	do	do	15 do
Massachusetts	do	do	16 do

"The weight, as compared with that of the following States, is:

Manitoba Spr. Wheat—63 to 66 lbs. to the bushel		
Minnesota	do	60 to 65 do
Illinois	do	55 to 58 do
Ohio	do	57 to 60 do
Pennsylvania	do	57 to 60 do

"The soundness and fullness of the grain is unmistakably indicated by the fact that it will command a higher price than any Western State grain, when it goes to market unmix'd and well cleaned."

Another recent writer, referring to the crops of this season, says:

"The estimated average yield of wheat for the season is forty bushels per acre, and this, we believe, to be by no means too high an estimate. Though the excess of the present crop may be attributed in some measure to the partial fallowing of the land during the last two years, the true cause of the heavy annual yield of grain must rather be sought in the natural presence of soluble phosphates, and which may be readily traced to their real source in the numerous small shells, some of almost microscopic dimensions, that for the most part, and especially in the lake districts, enter largely in the composition of the soil. The value of a natural supply of so rich and comparatively inexhaustible a manure can hardly be over estimated, and it must take many years of continuous and exhaustive cultivation before the standard yield can fall to the level of the older provinces; with good and careful farming it need never do so. From the extreme luxuriance of color and growth of the cereals, and from their strong resemblance, in appearance and in yield, to those grown with mineral and alkaline manures in Mr. Sawe's experimental fields at Bothamsted, England, we are led to suspect the presence of ammonia or other alkali salts, though nothing has as yet been done satisfactorily to determine the point."

The above estimate of yield for the whole province will probably prove too high, as so much of our crop is the result of a first year's experience on the part of the farmers, some of whom, having chosen their land in an unusually dry season, found their crop flooded and thereby reduced; others made the mistake of sowing on the sod freshly turned. These instances will of course reduce the average, probably to thirty bushels per acre for the whole.

To return to the point first discussed, from which I have deviated somewhat. Given, that the wheat grown in the Red River valley makes the best flour now known in the market (It may be news to most of your readers that A. W. Ogilvie, of Montreal, one of the most extensive milling firms in the Dominion, has been the past two years a very large purchaser of Northern Minnesota wheat for their mills), it now remains to be practically tested whether it will in your soil produce as well, or nearly so, for a few years. The magnificent crops of the present year, which will, I think, average thirty bushels per acre sown, will be available for shipment in time to be distributed

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and stored in Ontario for spring sowing. U. S. Consul Taylor has given it as his opinion, "that our surplus crop of wheat for the next ten years will be absorbed for change of seed in the older provinces and States." Our neighbors are making the test; do not let the Dominion lag behind.

In conclusion, I would say, as I have elsewhere, that the coming Exhibition of the Provincial Agricultural Society, to be held in this city Oct. 4th and 5th, will call forth a more than usually good exhibit of our resources, and offer a good opportunity to spy out the land.

Winnipeg, Man. A. W. BURROWS.

MY TRIP FROM LONDON TO WINNIPEG. - I left London on the morning of the 18th of August, and having transacted some business in Stratford, arrived in Sarnia at 7 p. m., and got on board the boat at 10.30 the same night. We arrived in Goderich at 5 a. m., and did not leave till 10, as we had a good deal of stuff to load, amongst other things four threshing machines from Clinton to Winnipeg; we had on board besides them, three other small "Giant Threshers." Leaving Goderich, we coasted along the shore, which is very pretty, till we came to Kincardine, the terminus of the southern extension of the T. G. & B. Railway. From here we steamed for Southampton, 32 miles north. We left Port Elgin to the right, as our boat, the "Quebec," could not get in there on account of the shoals. From there we could see Southampton; there are also shoals going in there, but the channel is marked by two light-houses. It was half-past five now, and we had to wait for the train from Toronto. There was nothing of interest till we came to the Ducks, at 7 a. m., on the 20th (Sunday); they are a group of small islands which look very picturesque. At 9 a. m. we passed the monster lake island, Manitoulin, which is a hundred miles long, and covered with small spruce fir along the bank, and large pines tower up behind. At the north end of the island there is a light-house, which is surrounded by beautiful green, grassy land, with a few trees dotted about; they are of a light green color, resembling the grass, and behind you see the large trees with a dark color, which give a beautiful effect to the whole. On our left we have Cockburn Island, with its white shores glistening from the rays of the sun on the spray and rock. The passage between Cockburn and Manitoulin Island is called the Missasuya Straits; both of these islands are partly settled. At about 12 o'clock we passed Salfur Island and light-house, with very nice buildings connected with it. A little further on there is a small island, perfectly round, with trees on it tapering off to a point. While passing it the "Sovereign," of the Windsor Line, passed us. We saluted one another and went our ways. Looking to the left again, we see the northern end of Cockburn Island, with a splendid bay. By the use of a glass I could plainly distinguish fishing boats along the shore and a sawmill on land. On the left we see the renowned Bruce Mines. I am sorry not to be able to give you a long account of them, but we did not call.

Leaving them to the west, we have to take a round-about course up a channel, which is bayed out, and round the shores of St. Joseph's Island. A little further on we met the "Francis Smith," of the Collingwood Line.

We arrived at the mouth of the St. Mary's River at about half-past four, and a lovely spot it is, from there to Sault Ste. Marie. On entering the river there are villages on both sides, one flying the Union Jack and the other the Stars and Stripes. Steaming up the river you see nothing but a network of small and large islands, composed of huge boulders. The longer we go through this scenery the more are we enchanted by it; it is worth any one's while to take the lake trip, were it only to see it. About half way to the Sault we came to a small vessel called "Nebeih," and a little further on we came to the Government Surveying party, with their tug and dredge. We signalled them to come off and get a letter, but they did not move, so we left them to their fate. Next we passed the "Shingwauk Home," a large stone building built by the Church of England to educate Indian children.

There were a few very pleasant passengers on board, especially so a gentleman who was in some way connected with the Atlantic Emigration, a Mr. K., and a gentleman and his wife from Hamilton. Mr. K. was so much delighted with the scenery that I believe he has made up his mind to spend a few weeks next summer there.

We arrived at Sault Ste. Marie at 6 p. m. We only stayed a few minutes, just to put off the mail and take one on. The town consists of about forty houses and three or four churches; it is in the Algoma district, and the courts are held there, I believe. They can boast of a prettier church than many larger towns. We then struck across the river to the U. S. town of Sault Ste. Marie. Here they have barracks, but at the present time there are no soldiers there, as they were sent off to fight "Sitting Bull."

I must break off here and reserve the rest for your next, if you think it worth printing. We are now just outside the locks, and next time I finish I hope we shall be inside Winnipeg.

W. H. DISBROWE.

SIR,—I see by the press that certain enterprising dealers are exporting horses to England, and I hope they will be well paid for their courage and enterprise. But the question I wish to ask them is this: What kind of horses would suit the English market, and ones that will make a ready sale, that we farmers and breeders may breed such to suit the market and pay both the breeder and exporter, and give the best satisfaction to the purchaser in England. I would just make a few suggestions, hoping some one more competent will take up the pen and describe to us in your paper the breed and kind of stallion that by crossing with our Canadian mares, will produce the kind of horses best adapted to the English market.

I am of the opinion that a good general-purpose horse that will weigh from twelve to fourteen hundred pounds, with good rein, clean head, sound, flat, broad legs, strong and sound feet, to stand the wear and tear on the stone roads of the English cities, would be the kind of horse to find a ready sale. To obtain this kind of a horse from our common Canadian mares, we must breed from large sires, but of what breed or kind I leave for some one else to describe. I am of the opinion that it is a great mistake, as well as a detriment to the stock of our country, to cross our mares with some of the large horses which, I am sorry to say, that some have imported, and which might be described as follows: Being greasy heeled, pumised soled and flat footed. These are sure to leave colts not suited for those markets, nor will they be suited for our own work, being prone to bog sprain, thorough-pin, greasy-heeled farcy and rotten thrush, these being more or less hereditary.

If the farmers and breeders would adopt the English system, by keeping the best mares to breed from and not allow them to be taken away by the American buyers, in a short time, with a careful selection of good, sound sires, we should soon have plenty of good horses suitable for any market, as well as ones more able to do our own work.

It is the duty of all Canadian breeders to unite in assisting to foster a trade with the English markets, so that we may stand independent of the Americans, who so unjustly force us to pay such a heavy duty on all horses sent to their country and all raw materials, cereals, &c., grown on Canadian soil. It is the duty of our Government to place the same duty on all animals, cereals, &c., grown in America, to contribute to our revenue, as they compel us to contribute to theirs.

C. B. RUDD & TENNENT,  
Veterinary Surgeons, London.

CROPS OF MICHIGAN—FARMERS' CLUB.—The crops of Southern Michigan are not promising as good for 1876 as was hoped in the early part of the season.

The months of May and June were excessively wet, so that although there was a fair acreage of corn planted, the ground was too wet to admit of its being marked. Much of the early clover was lost, the growth being immense and the burden on the ground was more than could have been desired even in good weather. Before the harvest was over, however, dry weather set in, and since then it has been as much too dry as it was too wet before. The wheat crop is turning out light, as well as are oats. Fruit of all kinds raised here are abundant, and the price, as a consequence, very low. The low prices for all farm produce makes many wry faces and calls forth many complaints.

The County Farmers' Club organized here is doing good work. At its last meeting, the 9th of August, wheat culture was well discussed. Reports were made also by the committee on soils and their improvement, which called out quite a lively discussion, and much good was the result.

It is composed of the most enterprising farmers in the county, and the result of its deliberations must work much good to the agricultural interests of the country.

Apple culture will be the regular question of the next meeting, which will be held on the second Wednesday of October.

The officers of the Club are Hon. Jacob Walton, of Racine, President; S. B. Mann, of Palmyra, Secretary; and Madison Graves, of Palmyra, Treasurer.

Adrian, Mich. Aug. 30th, 1876.

SOWING WHEAT ON FRESH PLOWED SOD.—"J. H. R." says in the September number of the ADVOCATE that he has tried an experiment by sowing wheat on fresh plowed sod, and thinks he will not try it again. Now I have tried the same experiment this year and I am very much pleased with the crop it has produced. It has proved to be as good, or the best yield in this vicinity. The variety sown was the Rio Grande. Wheat of all kind, as a generality, has been a very poor crop in this section.

J. M. T.  
Kimberley, Co. Grey, Sept. 6th, 1876.

[We have no doubt the result of your sowing wheat on fresh-plowed sod and also that obtained by "J. H. R." are correctly stated—in one instance a failure, in the other a success; but why the results were so we have no means of ascertaining. The quality of soil, the state of the sod, the mode and depth of plowing, the length of time that elapsed between plowing and seeding, may each or all have led to this result. Without some acquaintance with the particular circumstances of the culture of each crop, any attempt to account for it would be merely "groping in the dark." We are obliged to Mr. T. for his communication. The comparing of the statements made in agricultural papers with our own experience must lead to a real practical knowledge of agriculture, both in theory and practice.]

SIR,—Can you inform a subscriber to your paper of the best method of growing Hawthorn seed. I got some last fall, but did not sow the seed until spring. I put them in drills about three inches deep. Some person told me to put boards on them, which I did, but found soon after that the red ants were busy under the boards. I took them off. By giving your advice you will bestow a favor.

JOHN S. WALLACE.

Holbrook, July 28, 1876.

[I grow the Hawthorn from seed. The Haws should be gathered when ripe, bruised, and the seed separated from pulp by washing; mixed in sand and buried in a box under a foot of soil, in some shady corner for a year. They will be then ready to sow the following fall in drills, thinly, the drills 18 inches apart, and cover with an inch of soil; mulch the bed with any coarse litter for the winter, removing it in spring. This is a certain method, if carried out.—H. ORT.]

SIR,—Near me is a slaughter house which is quite a nuisance, as the blood and offal are left for stray pigs. I have applied to the Township Council about it, but they are uncertain if they have any power to act in the matter. They say that the Act speaks about incorporated towns and cities having the power over such matters, but says nothing about Township Councils.

Will you, in the first issue of the ADVOCATE, instruct me how to act in the case?  
Thedford. GEO. SUTHERLAND.

[Go to a Magistrate and make your complaint; the case must then go for trial. If you establish the fact, the person creating the nuisance must be fined and the nuisance removed.—Ed.]

**J. C. Weld—An Impostor.**

Joseph Brothers & Co., of Milton, write that they have been duped by a person calling himself J. C. Weld, and pretending to be an agent for the FARMER'S ADVOCATE. In January, 1874, the public were reminded of a person so styling himself, and that he was no relation to the Editor and never had been, nor has he since been an agent for the ADVOCATE. Our friends will oblige us greatly by letting us know immediately whenever he appears in their neighborhood, so that he may be brought to justice.

## Garden, Orchard and Forest.

## Hardy Flowering Shrubs.

There is no class of flowers that produce so much elegant and fragrant bloom, with the same amount of labor bestowed upon them, as those known as hardy flowering bulbs. A bed properly made and planted with them will last many years with but little additional trouble and expense. Hardy flowering bulbs and tubers may be divided into two classes—wild and cultivated. The former are those found growing in our forests, of which I will speak in another chapter; the latter are generally known as "Dutch flowering bulbs," and can be bought in most seed stores at a small expense. As the bloom of many of these bulbous rooted plants are the first harbingers of spring, I will first speak of such of them as are the easiest cultivated, giving a few plain directions for making the beds and how to plant and take care of the bulbs.

If it be possible, select a sunny location for the beds, and one that is dry. A rich, sandy loam is always preferable. Spade the ground about twenty inches deep, and incorporate with it some well-rotted cow manure, thoroughly mixing the two together. Should the ground be a little damp or spouty, put a few inches of small stones, broken bricks or crockery in the bottom of the bed, to draw off the water from the bulbs, which, if not done, may cause them to rot. Raise the bed a few inches above the surrounding earth, and it is ready for planting.

The planting of hardy flowering bulbs should be done in the months of October and November. Any time in the fall, before the ground is frozen, will do for planting most of them. The old White Lily (*Lilium Candidum*) and the Lily of the Valley (*Convallaria*) should be planted during the early part of August. It gives the bulbs time to make strong fall growths, which is essential to obtain fine flowers the following summer. The Snowdrop, Crocus, Scillas, Hyacinth, Tulip, Narcissus, Jonquil, Fritillaria and hardy Lilies should be planted in the fall, and as follows: Snowdrops, which are the first flowers of spring, often coming before the snows are gone, may be planted in clumps along the borders of the bed. Set the bulbs about three inches apart and four inches deep. The Crocus and Scillas are the next to bloom, and should be planted as the Snowdrop. Hyacinths and Tulips may be planted in every conceivable shape over the bed. The bulbs should be planted about six inches deep and eight inches apart. I know of no flowers that give so great a diversity of brilliant colors and rich perfume as the Tulip and Hyacinth, and none that afford the cultivator so much pleasure for the small amount of labor and care bestowed upon them.

The bulbs of all the plants I have spoken of multiply rapidly at the root by offsets. They may remain in the ground for a number of years without being taken up, and continue to improve, except the Hyacinth. To insure large and fine flowers, this plant should be taken up soon after it is done blooming, and laid away in a cool, dry place during the summer, and in the fall, after taking off all the small shoots, the bulb should be planted as before. If so treated, it will continue to produce large spikes of fine flowers for many years.

After planting the bulbs, and before the ground is frozen, cover the beds with a little unrotted manure or coarse litter; it will protect the bulbs from the severe cold of winter, enabling them to produce larger and more abundant bloom the next spring. As soon as the weather becomes a little settled in the spring, rake the litter from the bed, being careful not to injure the long spikes for the young flowers, which in a few days will become very beautiful.—G. F. N., in *Ohio Farmer*.

## Coal Ashes.

I have received so much benefit from the use of coal ashes in my fields and garden, that I would like to suggest to others that they be saved and used. I know that some scientific gentlemen have informed us that they contain absolutely no fertilizing matters or elements, and that therefore they are as destitute of power to support or sustain vegetation as pure coarse sand. But experience has taught me that they are a valuable addition to the soil of the garden, and that their influence for good is particularly felt on tomatoes, potatoes, cabbages and vegetables generally; and among the market gardeners of my acquaintance I find many of the same opinion. Moreover, near the conclusion of that excellent treatise on horticulture

contained in the fifth volume of the *Maison Rustique du sixième Siècle*, printed thirty years ago, I find in the chapter entitled "Coup d'œil sur le Jardinage en Europe," the following paragraph. The writer, having Holland under notice, says: "We encounter on the banks and borders of canals and rivers many boats loaded with coal ashes, which come from Belgium, Antwerp, Ghent, Brussels and a large number of other cities and towns which send to Holland the excess of their coal ashes, of which a part only is used in the agriculture and horticulture of Belgium. This very exciting fertilizer (amendment), when carefully rid of the half-vitrified scorias with which it is always mixed, is, for the gardeners of Holland, a powerful means of forcing (active) vegetation." The soil of Holland is very sandy, if not all sand; the earth so saturated with moisture, and the climate so humid, that the use of the watering pot is unknown.

The soil of Illinois is composed largely of clay, the climate is dry and the sun a burning one, and starting plants require to be watered, or they perish. But coal ashes have been found of great value in moist and cool situations with sand, and in dry and hot ones without it, and the benefit conferred by them in two such opposite conditions of soil and climate would seem to warrant a trial of them in almost any and all intermediate places. The cost of coal consumed in the United States and the quantity of ashes produced, are almost beyond calculation in sum and quantity, and if agriculture and horticulture find in the latter a powerful fertilizer, it will practically result in cheapening food and fuel both.—Correspondence of the *Cultivator*.

## Hen Manure in the Garden.

A correspondent of the *American Agriculturist* tells how he uses hen manure, as follows:

One of the best fertilizers within easy reach of the farmer and villager, is the contents of the henery. This often goes to waste, and the hens find their own lodging in trees, and in sheds and other outbuildings. But on most farms there is a roost under cover, where the droppings accumulate, and are kept in a dry state. As a rule, not much care is bestowed upon it. Often it lies upon the floor without absorbents, the ammonia constantly escaping, to the injury of the fowls. Sometimes it has an annual cleaning, but oftener it lies for years only wasting. Analysis shows it to be exceedingly rich in nitrogen, worth a cent a pound, or more, in the state in which we usually find it. If all its good properties were carefully gathered, and saved by the use of absorbents, it would be worth much more than this. There are two ways of doing this, equally effectual—daily sweeping and gathering into barrels or boxes, or by frequent deposits of absorbents under the perches. The former method involves a good deal of labor, and is resorted to only by those who insist upon the utmost neatness in the hen-house. The droppings deposited in the barrels are covered daily with plaster, dry peat, or some other good absorbent. Our own method is to apply the absorbents frequently under the roosts. The henery has a cemented floor, and is built into a bank, fronting on the south, with a large supply of windows to give light and heat. Spring water is brought into the poultry-house by a pipe, and by the turning of a faucet a constant supply of fresh water is secured. The whole floor is covered with absorbents of various kinds, in which the fowls scratch and dust themselves as freely as they please. The staple absorbent in summer is dry garden soil or road gathered as the state of the weather permits. In addition to this, sea weed and the wrack from the shore are frequently thrown in, which furnishes food for the fowls, as well as helps the manure heap. As soon as the smell of ammonia is detected more earth is added, and thus the pile of manure grows gradually through the year. It is removed as often as manure is wanted in the garden, at planting, or to assist growing crops. It needs to be used with caution, either in the dry or liquid state. We have large faith in the economy of liquid manure, applied to fruits and vegetables in the summer. It is very good in dry weather, and not much less good in wet, if the soil is well drained. The quantity of water that plants will take up in the growing season is wonderful. We keep a large tank, which is supplied with manure and water from the henery, and frequently applied to cucumbers, squashes, melons, tomatoes, cabbage, and to grape vines and other small fruits. The liquid manure adds much to the vigor of the plants, and the size and quality of the vegetables and fruits. To those who have never tried it, we think the free

use of liquid manure will open a new revelation in gardening. Try it on the flower borders, and on all the growing crops.

## Apple Wine.

Apples appear to be the especial fruit of Britain, as Oranges are of Spain, or Grapes of Italy; they grow and flourish from Land's End to John o' Groats, every district having its especial favorite, which is looked upon as peculiarly its own; yet, though the North boasts its Keswick Codling, the East its Norfolk Biffin and Fair Maid of Kent, the Western Counties are, *par excellence*, the home of our national fruit. Devon and Somerset have for centuries been famous for the quantity and quality of their Apples; in the latter county, indeed, was situated the famous Valley of Avalon, which Tennyson immortalized in verse, and which was first planted by the Benedictine monks when they landed in England and built the monastery at Glastonbury. The name Avalon was given to the vale because the numerous varieties of the Apple which the monks had brought with them took so kindly to the soil, Avalon signifying the Vale of Apples; and the fame of the district has descended to our days, for the Devonshire Vintage Company, Broadclyst, has bestowed the name of "Sparkling Avalon" upon a champagne-like wine which they have succeeded in producing from the must of the Apple.

The wholesome and nutritive properties of apples have long been acknowledged, and it is a matter of great satisfaction that the Company has been able to remove the one great difficulty which has always prevented the successful production of wine from Apples. It has only been accomplished after long and laborious scientific research, but the reward of their conscientious work is great, for they will not only be directly repaid themselves, but they will raise up a new industry in a remote country, and thus indirectly benefit the whole community. Already the most experienced cellarers from the Champagne districts of France have been engaged, and the produce of the Devonshire orchards is treated in all after processes in a manner exactly similar to that pursued with Epernay and Rheims—much resembling these wines, and possessing like them excellent keeping properties, brilliancy, fine colour, good body, and bouquet.

It is some time since that the Americans started a theory that Apples were a certain cure for all diseases, human as well as animal; indeed, one enthusiastic Yankee, having a sickly cow, put it upon an Apple diet. The animal recovered, and the owner was so impressed with his success that he determined never to use any other remedy. Under the extremely pleasant form of "sparkling Avalon," it will be no great matter of astonishment if the Apple cure becomes as popular in England as the milk cure is in Poland, or the Grape cure in Germany, and then we shall have our farmers—who think Wheat does not pay, and barley not worth growing—turning all their land into orchards of Apple trees; and, reversing the late order of things, we may end by producing our wine at home and importing all our corn from abroad.—J. J., in the *Gardener's Chronicle*.

## Bark Louse on Fruit Trees.

Most of the experiments made for destroying this insect appear to have been rather unsuccessful. At a late meeting of the Pennsylvania Horticultural Society it was a subject of consideration. T. M. Harvey said, however, that he had succeeded by placing pieces of whale-oil soap in the tops of the tree from which the dissolved matter ran over branches and trunk. J. H. Bartram had cleaned the trees by washing with a strong potash solution in winter. Mr. Sprout had put his trees in fine order by placing a bag of the following mixture in the forks of the trees, namely, two pounds copers, half pound blue vitriol, four pounds, common salt. Others recommended whitewashing, soap and sand applied with a cloth, fish oil, &c.

FOREST PLANTING IN FRANCE.—The past spring has been very favorable to the large areas in France lately planted in forests. It is stated that 5,000,000 hectares or 12,350,000 acres—about half the area of Ohio—have become unproductive as agricultural lands. Pine trees, without any cultivation and a very inexpensive supervision, can be made to grow upon these barren acres, netting about \$2.50 per acre of annual profit. This would add to the productive capacity of these lands about \$30,000,000 per annum. Other trees have been planted with similar economic results, and now landed proprietors are looking to tree planting as a means of utilizing their unproductive acres.

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**The White Grub.**

Last week a Kenosha correspondent, spoke of the ravages of the white grub in his locality and asked for information about the natural history of that insect. An answer to his inquiries was inadvertently deferred.

The ravages of the white grub have caused complaint in various portions of the Northwest this year. It has been described in the columns of the *Western Rural* in former years, and its natural history given, but our Kenosha correspondent doubtless has never met with information concerning it. The white grub is the larva of the May beetle, that large black insect which comes in May, (known quite generally as "pinching bugs," and in this latitude it remains until the latter part of June. The May beetle, (the *Phyllophaga quercina* of Knoch), is of a chestnut brown color, smooth, but covered with little impressed dots; its average length is nine-tenths of an inch. Its food is the leaves of the trees especially those of the cherry tree. When the sexes have paired the male dies, and the female descends into the earth to deposit her eggs. From these are hatched the white grubs which devour the roots of plants. So great is the damage sometimes to pastures, by reason of the myriads of these grubs, that the sod, as our correspondent remarks may be rolled up and lifted off like a roll of cloth. These grubs remain in the ground three years. At the close of the third Summer they cease their depredations, descend two feet into the earth, change to pupa, and come out the following Spring in the perfect state as beetles.

In the larva stage or grub form, these insects are greedily eaten by crows and other fowls. Moles also destroy them. Skunks eat them greedily in the beetle stage, and hogs devour them in any form. Where a pasture is being badly injured by them, hogs are sometimes turned in and prove useful in mitigating the evil.

The beetles sometimes do much injury to the foliage of fruit trees. It is not difficult to destroy them. In the morning they do not attempt to fly. A sheet or cloth should be spread under the trees on which they are lodged and the branches well shaken. The beetles thus collected may be killed by throwing them into boiling water, after which they may be given to swine.—*Western Rural*.

**White Willow Hedges.**

In a late number an inquiry is made with reference to willow hedges. Near here (in Lee Co., Ill.) are many miles of them, which are good fences against and farm stock except hogs. Some of them are over twenty-five years old. They are growing steadily in favor, especially for low land. The white willow is the variety used. Formerly small cuttings were planted in well prepared soil, a foot apart, or less distance, and good cultivation was given for about three years. Of late, stakes five and a half feet in length, and from one to three inches in diameter, are pointed, and opening a hole with a crowbar when necessary, are driven early in spring, one and a half feet into the ground. Six inches from the top a pole or three inch strip of board is secured to each stake to keep them in line. By mulching heavily, good success is attained without previous plowing or cultivation after setting.

The efficiency of willow hedges, as made in this vicinity, depends upon the strength of the body of the tree, not upon a mass of branches. When grown to a size rendering them valuable for using in making sheds, corn cribs, or fuel, they are cut off as high as convenient, generally a little over four feet from the ground, in the spring. This operation can be repeated every four to six years, and the amount of timber yielded by a mile of the hedge is surprising.

If poles are peeled and seasoned, they are one of our durable varieties of timber. Hon. Jesse W. Fell, of Normal, Ill., brought some years since from Chester Co., Pa., a piece of white willow rail which had been in a fence twenty seven years, and he saw ordinary fence stakes which had been eight years set, and were not badly rotted. They were seasoned before setting. A cutting of it set by me at the Evergreens in 1875, is now over four and a half feet in diameter above the swell of the roots. It was set on a bank of a sod fence, and never had any cultivation. As a timber tree for low land in this region, I consider it the most valuable of any known to me. It also succeeds well on any of our soils except sandy knolls, of which we have very few. Cuttings of it can be had in abundance for the cost of putting up, say 50c. to \$1 per 1,000 as to quantity, or bundled without cutting into lengths

at half the above rates. European larch is our most valuable timber for upland.—*Cor. Country Gentleman*.

**Canadian Pomology.**

The Erie and Ontario lake shore region of Canada contains a considerable amount of territory, where the principal fruits of the temperate zone may be raised with fair success. Even peaches do tolerably well at particular points. The Montreal Agricultural and Horticultural Society is an organization how some thirty years old, and would seem to stand in the same relation to the Dominion that our State Horticultural Societies do to individual States.

The first report of the fruit committee of this Society, now in print, contains a list and description of well tested and approved varieties of fruit—apples, pears, grapes, cherries, and plums.

Of pears, Easter Beurre is said to ripen well at Montreal. White Duyenne is well spoken of, but Flemish Beauty is regarded as unquestionably the finest pear known to the climate.

Of apples, Fameuse is regarded to be the most profitable near Montreal. Fifty-five bushels is recorded as having been gathered from a single tree. It is said to vary so much as to give rise to the belief by some that there are two varieties.

No single variety of the grape is named pre-eminently. Lake Kentish is regarded as being the most successful cherry. Plums are considered uncertain. Blue Orleans is mentioned as being grown largely on the isle of Orleans, below Quebec.

For the Province of Quebec the following apples are reported as most profitable, in the order named: Fameuse, Red Astrachan and Alexander, Duchess of Oldenburg, St. Lawrence, Peach (of Montreal) and Golden Russet of New York.—*Homestead*.

**Apple Tree Borer.**

A farmer correspondent of the *New York Tribune* gives that journal his method of ridding his orchard of these pests, as follows:—

I have waited for a long time for some one to invent an easy way of killing the apple tree borer; but the chisel, mallet, knife and wire only are recommended, and in using them I have had to cut a six-inch apple tree until I could see daylight through it, to kill a single borer. My way of getting at this "worm of the dust" is an easy one and more effectual. I cut a sumac, or elder, one foot, more or less, long, punch out the pith, cut one end with a slope, hunt the borer's hole, clean it out at the entrance with a wire, place the beveled end of my tube against it, take some putty-like clay that I get in our spring branch, plaster it water tight around the end next to the tree, fill with very strong soap-suds, and the thing is done. No matter how crooked the hole is, or whether it goes up or down, the suds in the tube will force itself to the end. I have tried it two years, and have not failed once. Of course any kind of small hollow tube will do, anything that will make it water-tight will do to plaster it with.

**The Effects of the Heat.**

It is interesting to note in our woods and orchards the extraordinary effects of the heated term. It is quite possible antiquarians may turn up some musty records showing the highest leap of the thermometer, and prove that the mean temperature had been just as great long, long ago, but we feel sure that no heat ever did the mean things which the late temperature did. In some cases cherries were actually dried on the trees, and in a large number of cases the whole of the upper half of the trees had their foliage scorched. Indeed the most of the large old cherry trees in the vicinity of Philadelphia presented a most singular appearance, the branches looking as if they had been treated to a visit from the elm slug or some other insect. The fruit in some cases dried on the trees and hung there long after they were ripe, when under ordinary circumstances they would have fallen at maturity. Some instances that came before us were of apples with long stems, and these were dried completely while the face of the fruit exposed to the sun was partially roasted and in time the apple decayed just as if roasted. They were indeed roasted apples.

In evergreens, especially some arbor vitas, the side of the plants next the sun was burned, and there are many instances of a whole side being completely scorched.

All this is not from the plants drying up, as we see sometimes in a dry time when things wither from want of water in the ground. The earth was never in better condition to support vegetation than it has been the past season. The rains and snows in the mountains last winter kept the sources of the springs well supplied. The water was not low in the earth, and by attraction it readily came up as the top dried. It was sheer heat and not lack of moisture that did the fatal work.

All this is seen by the condition of some trees in the forests. It is very common to see trees apparently dead, the leaves all brown, among living green trees, as if they had been struck by lightning, but on examination it is seen it is generally only the upper branches, which were exposed to the great heat are scorched. Of course the roots must have been in a poorer condition to supply moisture to the burning leaves than the neighboring trees which did not get hurt, or they would not be singular in these results, but still it shows the force of the "burn."

These are but a few of the instances that might be adduced to show the wonderful summer we have passed through. Whatever the average heat may have been, it is tolerably sure that in many respects the season was unique.

**Setting Strawberry Plants.**

The question of whether fall or spring is the better time to set out strawberry beds is raised in certain quarters, when they run out of topics for discussion, and are bound to discuss something. In this region of country nobody, we believe, thinks of setting out new beds of strawberry at any other time than in the fall, and during the month of September. With some care in planting firmly, and covering slightly when cold weather comes on, with some light stuff, there need be little fear of a good crop the following season—better, in many instances, than if planted four or five months previously. A gentleman near here took a first premium at the Centennial Exhibition for strawberries planted last September. We had ourselves an excellent crop from plants set out in that month.—*Germantown Telegraph*.

**CATERPILLARS IN NOVA SCOTIA.**—By a late issue of the *Monitor*, I was sorry to learn that the caterpillars have committed great depredations on the orchards in Annapolis County, this season. In the city of Boston a few years ago, caterpillars made sad havoc among the trees, particularly among the public parks, gardens and on the common. (I do not remember which), imported a number of sparrows from England and placed them on the common; they increased in number immensely, and are now the means of keeping the trees completely clear of destructive insects. I think it would be impossible now to find a caterpillar or grub in or near any of the beautiful parks in Boston. The citizens take great delight in feeding the pretty and useful little birds; they are about as tame as chickens. Now, sir, I would suggest, as a remedy for the caterpillar pest in Annapolis County, that a small sum of money be raised by subscription among the farmers—say \$100; the amount would be superficial to pay for and import a large number. They are perfectly hardy and will stand our winters like snow birds, and they multiply so rapidly that, in a year or two, from a commencement of a couple of hundreds, their number would be so great that a caterpillar or cabbage worm would be a curiosity in the county; each sparrow is certain death to many thousands of insects in a season. I am not now a resident of the county, but I take, and have always taken, a great interest in its welfare, and if my suggestion should be carried out, I hope I may be allowed to become a subscriber to the fund.—*W., in Monitor, Truro, N.S.*

**CORN PRICES.**—The *Indiana Farmer*, examining the average prices paid for hogs during the past fifteen years, says it has been \$5.40 per 100 lbs.; this would give the farmer, who feeds his corn, about 60 cents per bushel, whereas the average price of corn sold on the market in the West has not exceeded 30 to 35 cents, in the same period, on an average. This is a strong argument in favor of raising stock and feeding the surplus corn. The stock can be taken to market on foot, and the corn has to be transported. Notwithstanding the rapid increase in the growth of hogs, the prices have been well maintained, and are likely to be.

The Story.

A Proud Wife.

A STORY IN TWO PARTS—PART THE FIRST.

(Continued.)

THE YOUNG COUPLE.

"Have declined it. It was impossible, under the circumstances, that I could accept it."

Under the circumstances that he was married, that it would necessitate breaking up home, perhaps, and leaving me!

"Tell me all about the post which has been offered you, Gilbert?"

Then I heard all the truth, and guessed that the first great disappointment of his life had come. A post had become vacant abroad, a post of some hardship, connected with the construction of a foreign railway, necessitating not alone considerable talent, but requiring strength of constitution to combat an insidious climate, and much strength of character to fight against the opposition which was to be encountered there.

"Why not accept this post, then?" I said at last.

"Oh, Nell, I am sure that you would not like me to leave you for a year—probably two."

"I will try and bear your absence if you think it is necessary for your advancement in life—if you are dissatisfied with your position here."

"This is a small progress. I may be well-off years hence, when a dozen people have died to make room for me. I may be talked of by my set when I am old and feeble, not before."

"You are not content, then, with your present position?"

"No—I am not," he confessed.

"Had you been a single man, you would have gone?" I asked.

"I should not have hesitated one instant."

"Then return to Charles Ewell, and tell him that, if it is not too late, you will accept the proposal that he has made you."

"Become a single man for a year or two again; you will never forgive yourself if you hear of another man's success in that sphere which you would have chosen—you will never forgive me."

Heaven knows whether I meant him to jump so readily at my offer—whether I had not rather designed it in my heart as a test of his affection, and had expected him to say that he would remain content with his wife and with the position which he had secured, rather than dash at the chances offered him abroad. He did not seem to accompany him, never as a helpmate and a comforter, as I knew that I had been in our English home together, and my pride rose at last and held me tongue-tied.

He went away to seek Charles Ewell; he found the appointment had been almost promised to a second person; he spent the next two days in excitement and suspense, which rendered him more churlish and irritable than I had ever known him, and he broke forth into a childish delirium of joy when the news came that it was not too late, and that the post was open to him still.

It was all settled; Gilbert was to relinquish a good home, a certainty of rising in the world, and a wife who loved him very dearly, for the chance of a fortune abroad. I did not believe that he would attain it, though I would not damp him with my prophecies. It was arranged that I was to go back to my mother, and that the home wherein we had been happy together was to be broken up for ever. Presently Gilbert was to return, and with his riches to build up a new home for us both—he said so, but I did not answer to his promise. The tears were in my eyes, and I could not see the new life beyond for the mist that gathered there, and shut out the fairer prospect which his hopes portrayed.

END OF PART THE FIRST.

PART THE SECOND—CHAPTER THE FIRST.

THE WELCOME HOME.

What a blank seemed to have come to my life after Gilbert had gone. Even looking forward to the worst—trying to realize the worst—I had not imagined that dead sense of despair which followed his departure from me. It had seemed to me a commonplace trial that I should go back to my mother's home, and there wait patiently for his return; and it had seemed to me an ordeal that I could undergo and live, having the one hope of his return to build on also. A year, even two years, I thought, would not be a very long period to strike from my youth and youth's happiness. Looking back at the past, how quickly two years seemed to have melted away from me!

But that dull country home, that quiet village, the still life which ensued, my good mother's orderly habits and prosaic ways, after the feverish ambition of my husband, told upon me more than I had bargained for, and robbed me of much of my natural lightness and brightness. I could not see to the end; I felt alone and guideless in the world. I did not even know how completely my life was bound up with Gilbert's, until after he had left me. I was alone in my mother's home with a host of grave thoughts for company. There was not much to treasure up, to shed happy tears over as the days went on, and my heart sank more and more. Gilbert had been glad to depart. I saw it in his flushed cheeks and glistening eyes. He had tired of home's pleasant monotony, and of the slow increase to his income awarded him by his first employers. He had believed in Charles Ewell's assertion that I was his rock-a-head, that without me there was a prospect of a fortune awaiting him, and then, thinking but little of my wishes, he had gone forth to seek it.

I was not even sustained by his writing to me frequently. His avocation had placed him in an out-of-the-way part of the world, and the letters which he sent me came at odd intervals; and some out of the few which he wrote I learned afterwards were lost. At the time of his stay abroad, there were great gaps in his interest in me, it seemed, and those letters which came now and then to hand were full of his own struggles, his own hopes or disappointments, and did not ask, after a while, how I was existing without him. I had written to him twice, offering to join him, begging to share his trials with him again; and he had quietly ignored this portion of my letters, and by his silence crushed the one hope that I had had—that he had missed me too much not to second my request.

How the first year passed I cannot call to mind. It seems an age even now to look back upon. At the second, wherein I received two letters; the latter saying not a word of his return, but speaking of his success at last, of the esteem in which everybody held him, and of the fairer prospects that were dawning for him now that he was acquainted with the country, and resolved to push his way therein. Would he never come back? Would he never be satisfied with his present? Would he never, never write for me to join him?

Yes, I was a desperately proud woman, and when that last letter came, my first instinct, after its perusal, was to tear it to pieces in the deep indignation which I felt against him. Six months without a letter, and then to write like this, I thought, with throbbing temples and a choking in my throat—thus to treat me as the common friend to whom his commonplace news would be sufficient! That he wrote more often to Charles Ewell than to me, was a painful fact that added to my grief; for once or twice a year, about as often as my husband's letters came, this gentleman called, and patronized me till my blood was at fever heat, and I longed to insult him. He was a man of miserable tact, who let me see that he came to oblige Gilbert, and not from any interest in me; who explained that he had promised Gilbert to look in upon me now and then, and to make sure that I was well; and who beguiled his complimentary visit by telling me of the new investments he had found for his money, of his influence in society, and the great friends that he had secured therein.

"I shall write and tell Gilbert that you are happy, and looking your old self," he would say, as he shook hands coldly with me before departure; and I would answer, "Very well," and think to myself that if my own letters to Gilbert did not prove the contrary, there was no truth to be conveyed by correspondence.

Two years and three months of this strange isolation, and then my mother died and left me alone in the world. I wrote to Gilbert telling him of this, simply apprising him of the fact, and leaving it to his own consideration to bring about his return, or my journey outwards in search of him; and when his letter came it was full of regrets at the loss I had sustained, and of advice to bear up against my grief, and keep strong for his sake, nothing more.

Then I became prouder, colder, harder, as a woman will become who has nothing but herself and her own morbidity to dwell upon. I resolved to write less frequently, to let my letters simply be an answer to his own to arouse, if I could, within him in the far distance some curiosity or anger at my silence. But his letters commented but once on the infrequency of mine, and he did not seem to miss my correspondence. "I suppose, as I go further inland, so your letters have a greater difficulty in following-me," he wrote on one occasion; and then followed four pages of his successful march in life, his joy at having adopted this profession, his luck at having seized the right moment to advance in it. He was becoming a rich man, he should return and fear not holding his head up with the best of them, he said; but he never gave out a hope of his returning soon, and my pride had grown so strong that I could not ask him to come back. Once or twice he had begged me to let him know what money he should send me, and I had answered that the seventy-five pounds a year was quite sufficient for my wants in the little village where I had taken up my abode; and I thought, very bitterly—I had grown full of bitter thoughts then—that it was not difficult reasoning to persuade him to take me at my word. How long would it have taken me to induce him to give up his pursuit of wealth, and have mercy on my desolation? I thought scornfully. Would not a lifetime have been unavailing against his miserable ambition?

At last a letter came that broke me down completely, and yet that seemed to harden my heart still more against him. It spoke of an offer that had been made him to superintend the construction of another railway; of the wealth that it held out to him, and of the time that it would keep him from England. Four years more he calculated that he should be away from home, and he left it for me—for once in his life, he left it for me—to decide whether he should accept the post or not. And yet in that letter I could see where his wishes lay, and how far back they were from mine; and I wrote to him coldly, telling him that he was to please himself in this matter, and study his own future, not his wife's. I spoke even satirically of his riches, of how fortunate he had been in the world from the moment that he had only himself to study, and then I left him to his own decision, which I learned soon enough was to remain away from me.

It was at this period that the principal of the money from which I derived my little income was swept away by a trustee's negligence, and that my pride—my sinful, awful pride that I now see so clearly—would not let me show the world how poor I was, or how much I needed help. I had a miserable pleasure in keeping this secret to myself—in telling no one of my loss, in turning once more to the pursuit of literature as a profession wherein I might earn a few pounds.

poor writer as I was, unless the trick of writing had been lost to me by long disuse. So I struggled on, baffled very often, met at every turn by a disappointment that in old times would have wholly daunted me; fighting still in the face of difficulties, finally making a stand amongst the rank and file of letters, and becoming by degrees not wholly unknown to the reading public, whose fickle favor I sought persistently.

My hair was sprinkled with grey at eight-and-twenty, and I looked at it grimly in my dressing-glass, and wondered whether my husband or my books were to be credited with the early snows there. On my eight-and-twentieth birthday it would be time for Gilbert to come back, I had reckoned; but I was not looking forward to his coming then—I had outlived my hopes, I had taught myself to think that I did not care to see him. His letters had almost died out by that time, mine had ceased completely for the last nine months, and Charles Ewell had given up the trouble of making sure that his friend's wife was doing well. I read in the papers that he was Member of Parliament for some small borough, and I tore the paper into shreds that told me the news. I knew that Gilbert Graham would return a rich man. I felt that he would face me presently with the history of his rise in life, and my heart was like a stone within me, it had so narrowed in my isolation.

It was in the summer-time that he returned at last, and he found me in the home where he had placed me with my mother close upon seven years ago.

I had been prepared for his coming by a letter sent to me twenty-four hours before, and therefore I had steeled myself for that interview to which I had looked forward, and which over and over again I had rehearsed to myself, until the part I had resolved to play seemed in the abstract very easy to me.

I was not quite sure that I was perfect in my part when he stood before me after all the long past, my boy lover; my husband who had left me years ago. He had aged like myself a great deal—probably it had been a life of much excitement and privation—and there were deep lines about his face and across his brow, which ten years later might have been more fitting time-marks. My own wan looks and altered mien struck him as forcibly—more forcibly, for he paused in his step towards me, and said as he came on again—

"Why, Nell, how changed you are."

He had in his heart expected to find the bright-faced young girl who had shared his home before he went away; I saw the disappointment in his face at the old-looking woman who had risen up trembling a little, for all her self-possession, as he held out his arms towards her.

I did not shrink from his embrace, I let him kiss me and hold me to his breast; and then we stood apart and looked sadly enough at one another. Something in my manner suggested to him at last that I was a woman who had nursed a wrong, and had been too proud to give voice to her complainings; but he affected not to notice it in the impulse which had brought him face to face with me.

"Will you not sit down?" I asked, as though he were a visitor who had paid me the compliment of his presence for a few moments. There was a bewildered look towards me, then a steady stare, that sought to fathom a new mystery to its depths at once, before he took the seat that I had pointed out to him. It was a bright summer afternoon, and there were bees humming round my plants upon my window-sill, and amongst my roses at the half open door. All was peace and brightness save in our two hearts.

"So here we are at last, Darby and Joan again," he said, with a forced cheerfulness that did not become him; "and poor Joan, I fear, has grown grey waiting for the truant."

"Yes, grey enough," I answered.

"But Darby has come back the rich man that he prophesied he would be, and yet Joan does not say how glad she is to see him."

"I seem to have outlived all gladness, Gilbert. You forget how long you have been away."

"No, I do not—seven years: seven long years they have been to me."

"Try and think what years they have been to me, then, stretching on for ever like a desert, with nothing but the barrenness of life to take one's coloring from. Yours have been seven years of energy and adventure, of the excitement of overcoming obstacles, and of amassing wealth in your progress; mine have been years of sitting here."

His great dark eyes looked away from mine for the first time. For the first time in his life he was beginning to comprehend me.

"Yes, it must have been a dull life, Ellen," he said, looking down; "but please heaven we will brighten it from this day."

"Please heaven to give me strength to keep me where am, to let our lives flow on as they have begun, now that we have served our apprenticeship to separation."

"I do not understand."

"Ah, yes, Gilbert, you do; you must see that it is best for you and me now."

"Ellen," he said reproachfully, "is it possible that you contemplate living apart from me, that the necessities of your profession have seemed so many offences against your pride—so many deliberately chosen reasons for my absence from you?"

"What does it matter what I think now?" was my reply. "I have formed a resolution which no persuasions of your own can make me swerve from, and I am fixed to my resolve."

"You are an enigma, Ellen. In what way have I offended you, that you insult me by this cruel reproach in the first moments of our meeting? Could I have remained in England? could I have taken you with me?"

"Why put these questions to me?"

"Because they demand an answer; because, for this extraordinary decision at which you have arrived, I demand an explanation."

"If you insist upon it, I will say Yes to both those questions, then."

"Yes," he repeated wonderingly.

To be continued.

Uncle

My DEAR Nephew, I am approaching, and of time for me to do his or her part in the gray-headed knee, doing I knitting quiet. No doubt you be trying which Great credit is such a number from some of not seeing the my part, I beggers, one might frequently recitals; also published. James H. Gro in answering month corrected previous number your old Uncle for November

DEAR UNCLE George H., constructive acc ter. I am su

My friend My friend My friend My friend My friend My friend

A letter of A small des A Christmas vexed This age of these A piece of bite, The pinnacle This letter, end, Read down we Across, an may

117—My friend My friend My friend My friend My friend My friend

118—My friend My friend My friend My friend My friend My friend

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Ancle Tom's Department.

MY DEAR NEPHEWS AND NIECES.—Here we are again ready for a frolic with you. Winter is fast approaching, and the long evenings afford us plenty of time for indoor amusement. How pleasant it is for every family to unite in one circle around a cheery fire in the evenings, and each one ready to do his or her part to make a home happy! Yes, the gray-headed father with the little one on his knee, doing his part, and the mother with her knitting quietly looking on with amusement. No doubt many of my nephews and neices will be trying which one will find out the most puzzles. Great credit is due to all who succeed in answering such a number of them. We are sorry to hear from some of our little ones who were disappointed, not seeing their names published. If neglect is on my part, I beg to apologize; amongst so many letters, one might be easily forgotten or mislaid. I frequently receive letters without any name or initials; also puzzles without answers, which cannot be published. An apology is due to Edith Cutten, James H. Cross and E. Elliott, who all succeeded in answering the same number of puzzles last month correctly, and whose names should have been marked with a star, as was promised in the previous number. Try again; all try. Also help your old Uncle Tom by sending him some puzzles for November. UNCLE TOM.

DEAR UNCLE TOM.—I hope your clever nephew, George H., who wrote such an interesting and instructive account, will favor us with another letter. I am sure it will be well appreciated. I remain an old subscriber, JAMES WADE.

Puzzles.

- 115—VERBAL CHARADE. My first is in man but not in boy, My second in sadness but not in joy, My third in cock but not in sparrow, My fourth in broad but not in narrow, My fifth in every but not in all, My sixth in top but not in ball, My seventh in heat but not in cold, My whole is a favorite play I'm told. PUZZLE BOY. 116—DIAMOND PUZZLE. A letter of the alphabet industriously inclined, A small destructive animal, repulsive you will find; A Christmas should be this, or else the host is vexed. This age of progress all large towns have one of these annexed; A piece of cork in fishing, used to index when fish bite, The pinnacle, or highest part, of any hill or height; This letter, though it is the last, is middle of the end, Read downwards now, a word it gives, by which we may ascend; Across, and now the means you see by which friend may meet friend. CHARADES. 117—My first is worn by man and woman, "It" is my second you will find; My third a vowel, in all that's human, My fourth is generally behind; My whole, 'tis sad, most sadly true, Is what the French have had to do. 118—My first is quite dark, 'tis true, For nothing darker was ever seen; My next is white, and sometimes blue, And sometimes very green; My whole is now a subject of consultation For every European nation. MYRA. 119—DECAPITATION. Whole, I am found in the Parliament building; behead, and I am a covering for the body; behead again, and I am a necessity. E. E. 120—NUMERICAL ENIGMA. I am composed of twenty-eight letters: My 10, 4, 2, 12, 13 is a girl's name. My 13, 8, 3, 27 is a wild animal. My 16, 6, 1, 10, 28, 12 is a boy's name. My 7, 18, 15, 20 is a useful article. My 23, 6, 11, 25 is a useful animal. My 24, 15, 2, 14 is the name of a lake. My 28, 22, 5, 14 is the name of a flower. My 26, 10, 8, 15, 21 is what we all have. My 19, 6, 9, 16, 24, 27 is a beverage. My 23, 22, 17, 4 is a kind of coin. EDITH H. C.

- 121—CHARADE. My first is what you're doing now, My second is procured from stone; Before my whole you often stand, But mostly when you are alone. J. H. C. 122—CROSS-WORD ENIGMA. My first is in stool but not in chair, My second in show but not in fair; My third is in spring but not in fall, My fourth is in short but not in tall; My fifth is in grain but not in flour, My sixth in minute but not in hour; My seventh you may find in snow, My whole is a place in Ontario. WM. BROUGHTON. 123—NUMERICAL ENIGMA. I am composed of thirteen letters: My 5, 11, 8, 3 is an animal. My 10, 6, 11, 4, 2 is to show. My 13, 11, 1, 12, 7, 3 is original. My whole is a native of the East Indies. T. M. T.



- 124—GEOGRAPHICAL PUZZLE. 125—I am the terror of mankind, My breath is flame and by its power I urge my messenger to find A way into the strongest tower. J. H. C. 126—To that which near the heart its station keeps Put what we find where stagnant water sleeps, And there at full the name will be displayed Of a large town renowned for wealth and trade. M. McC. CONUNDRUMS. 127—Why is a boy that is learning to cipher like a dog with a broken leg? 128—When will there be but 25 letters in the English alphabet? J. E. LOVEKIN. 129—What smells most in a chemist's shop? 130—Why is a parson bathing in the river in Paris like a madman? 131—Why is a widow like a gardener? 132—What heavenly thing and what earthly does a rainy day most effect?



Answers to September Puzzles.

- 103—Contentment. 104—Clock. THE ISAAC SIMPSON CHARLIE BEGG BELIEVING HUSBAND CHESS EGG 106—Whim, Agatha, Traytrip, Embryo, Ryal, Lyre, Or-thando, Omen. 107—Ontario Commercial College. 108—Upstart, start, tart. 109—Separable, parable, arable, able, Abel. 110—Drover, rover, over, Rev. 111—Nothing. 112—The Wind. 113—Wellington. 114—The Sweet William; the Calceolaria; the China Aster; the Virginia Aster; the Virginia stock; the Carnation; Lily of the Valley. Names of Those Who Have Sent in Correct Answers to Sept. Puzzles. Martina Martin, Joseph Rots, Jas. H. Cross, Janet Hartley, Thomas M Taylor, E. Elliott, Geo. McKenzie, J. Habbottle, A. J. Taylor, C. Rankin, J. E. Lovkin, C. Broughton, W. Broughton, Charley King, Lizzie Metcalf, J. Winlow, J. Shore,

Eleanor West, J. Reynolds, S. Scott, A. Spenser, R. Finch, Jane Mason, A. Minkler, L. Jarvis, Sarah Iness, Wm. Gould, A. Simson, Fred. Low, Samuel Evans, J. C. McAlpine, Octavius Craig, Leonora Smith, Kate Jeffrey.

Centennial—No. 2.

DEAR UNCLE TOM.—I regret binding myself in my last letter to write on foreign affairs and a trip to the ocean. Mr. Weld's able and comprehensive account of his Centennial trip leaves me little to say, so I will confine further remarks to my ocean trip. We left Philadelphia at 9 a. m., and reached Cape May at 5 p. m., a distance of 98 miles. The shipping to Philadelphia is very extensive. Every short distance vessels are to be met with, and wherever the eye is cast ocean-bound vessels and crafts of every description can be seen plying to and from the "City of Brotherly Love." Philadelphia has an immense harbor; it extends for miles along the river. The tide prevents ice from forming, making it navigable at all seasons of the year. The river varies from one to three miles in width. In the Gulf land is scarcely discernible to the naked eye, on either side; it is dotted with islands, and altogether the trip is a very enjoyable one. The steamer lands on the Gulf side of the Cape, and the journey to the Atlantic (about one mile across) is made by street cars. Cape May is a favorite seaside resort. It has a population of about 1,500, but in the summer it is increased four-fold. Nearly every dwelling in it is a boarding house. The hotels, which are numerous, do a rushing business; July and August is their "harvest." Merchant princes have private residences here, which they occupy during the hot weather. Cape May is destitute of parks, pleasure grounds, &c., common to such places. Its chief attraction is its beautiful beach—one of the finest on the continent. Horses and carriages can travel for miles along the seaside, within two feet of the water's edge. My first view of the Atlantic brought vividly to my mind the poet's words, familiar to every schoolboy:

Thou glorious mirror, where the Almighty's form Glasses itself in tempests!—in all time— Calm or convulsed, in breeze or gale or storm. Icing the pole, or in the torrid clime Dark-heaving—boundless, endless and sublime! The image of Eternity!—the throne Of the invisible!—the throne Each zone Obeys thee! Thou goest forth, dread! fathomless! alone!

Bathing is the most expensive item here. At the bathing houses they furnish you with a suit and key to your room, which is a stall about 5 x 5. To this you retire, to appear again donned with your bathing apparel. The costume consists of a tight-fitting jacket, knee breeches and sea-gress hat. To one used to bathing in nature's garb they appear very uncomfortable. You then hand the key to the attendant—plus fifty cents, for use of bathing suit for one hour—who watches your clothes and valuables, and you travel for the ocean. My first plunge in the Atlantic not only forcibly impressed it on my mind, but also forced it down my throat, that the sea was salty. A wave caught me, or rather, I caught the wave with my mouth open, and after swallowing some of it, I am now convinced it is very salty. When not floundering in the ocean, bathers amuse themselves rolling in the sand on the beach, or making mud-pies as in their infantile days. Ladies and gents, young and old, here mingle together at the sea shore. Life-boats are in attendance daily between 11 a. m. and 1 p. m., to accompany parties anxious to try how far they can swim in the Atlantic. But further remarks on bathing are now out of season, and I fear will cause some of your readers to shiver, so I must hasten to a close. We left Cape May at 9 a. m., and reached Philadelphia at 7 p. m. The next day we were on our homeward-bound journey, running from Philadelphia to Buffalo in 29 hours. I reached home in safety, after a pleasant trip, feeling prouder of our Dominion after seeing it in competition with the world, and am fully persuaded it is yet destined to rank among the first nations of the world. GEORGE H., Toronto.

Humorous.

"Here, John," said a gentleman to his servant, on horseback in the rear, "come forward and just take hold of my horse while I dismount; and after I am dismounted you dismount too. Then, John, ungirth the saddle of your horse, and put it down; then also ungirth the saddle of my horse and put it down. Afterwards, John, take up the saddle of your horse and put and girth it on my horse; next, John, you must take up the saddle of my horse and put and girth it on your horse. Then, John, I will seat myself in your saddle and we will resume our journey." "Bless me, master," said the astonished servant, "why could'nt you have simply said, 'Let's change saddles?'"

SOLILOQUY.—A person in company said in a violent passion to another: "You are a liar! a scoundrel!" The other, with great composure, turned round to the company and said to them: "You must not mind what this poor fellow says; it's a way he has; he was only talking to himself."

"Plaze, sir," said an Irishman to a traveller, "would yez be so oblayging as to take me great coat here to Boston wit' yez?" "Yes," said the man in the wagon, "but how will you get it again?" "Oh, that's mighty aisy, so it is," said Pat; "for shure I'll remain inside uv it!"

CONVALESCENCE IN THE CITY.—A wealthy merchant who had become bankrupt was met, some time after his misfortune, by a friend, who asked him how he was getting on. "Pretty well," said he; "I am upon my legs again." "How—already?" "Yes; I have been obliged to part with my carriage and horses, and must now walk."

## Minnie May's Department.

MY DEAR NIECES,—Our flowers in the garden are now decaying, and to make home cheerful during the winter, there is nothing that can compare with flowers. They are a constant, ever developing delight, each day brings forth new leaves and buds, and we look and wonder and admire. Yes; how pleasant it is to be able to give a fond brother, friend, or sweetheart, a button-hole bouquet in the winter, grown and trained by our hands, when all flowers are so rare. We know all our nieces have not brick houses and double windows to protect these winter beauties from "Mr. Jack Frost," but many have, who, if they once endeavored to keep winter plants, would be repaid for their trouble and would be unwilling to part with the enjoyment they afford. We have seen some of our nieces who live in frame houses have their windows filled with as nice, healthy looking plants those as in a greenhouse. It is a good plan to have a large frame made to cover all the plants; have the frame covered with paper (as that is a good frost protector), and just before retiring for the night place all your little pots on a stand or table in the warmest part of the room, then cover with this frame; flowers have been kept in this way in an ordinary frame house through very severe winters without being frozen. Now, my little friends, I will endeavor to name a few plants suitable for winter flowering. The ivy, Maderia vine, are graceful climbers, and will bear any amount of bad treatment. Such very fine plants as ten weeks, stocks, wall flowers, geraniums, mignonette, sweet alyssum, fuschias, and many others, are satisfactory house plants. Do not undertake to keep too many at first, better to have a few looking well; all your friends will admire your flowers and will not detract any of their advantages from you, but will carry to their homes pleasant recollections.

We now give you a pattern window from Mr. James Vick's Floral Guide, who can give you far more information about flowers than I can.

MINNIE MAY.

MY DEAR NIECES,—As the season for choosing our autumn and winter costumes is again with us I will endeavor to give you some idea of the styles and shades of goods which are to be worn. Although dark shades still remain fashionable, there is not such a great difference in color to be noted. Myrtle green is the most fashionable shade. Seal brown and navy blue polanises have apparently superseded basques and over-skirts. The polanise is made so long that the skirt beneath is only visible on the sides; many of these have the polanise open on the sides almost to the waist, so as to show the under-skirt. A conspicuous feature of these garments is an immense bow placed behind, half way down the skirt, and which, in many cases, takes the place of all drapery. The front is the plain princess shape, with one or with two darts, and sometimes with a long side form. The back may be the French shape without side bodices, and without any added fullness, merely ornamented by the great bow and long pocket. The sleeves are coat shaped, with narrow cuffs. The first importations of bonnets have close fitting capote fronts with high pointed crowns. The new shade that is tinted with green. Navy blue of a dark shade is most fashionable when associated with cardinal red. The favorite colors are the Russian greens and the new bronzes. Fuzzy feathers are more used than ostrich tips or plumes; although feathers are used extensively, flowers are used in greater profusion.

## FRUIT CAKE.

Three eggs, two cups brown sugar, one cup sour cream, one cup butter, five cups flour, one teaspoon soda, two and one-half cups raisins stoned and chopped fine, one teaspoon cinnamon, one of cloves. This is excellent. M. M.

## TO MAKE COCONUT CAKE.

Peel off the brown coat, then grate the nut with a bread grater; add half the weight of the nut in pounded loaf sugar, two eggs well beaten, to one coconut, one tablespoonful of flour; mix all together and make them up in small, round, rock

cakes. Bake in a slow oven three-quarters of an hour. The milk of the cocoa must not be used.

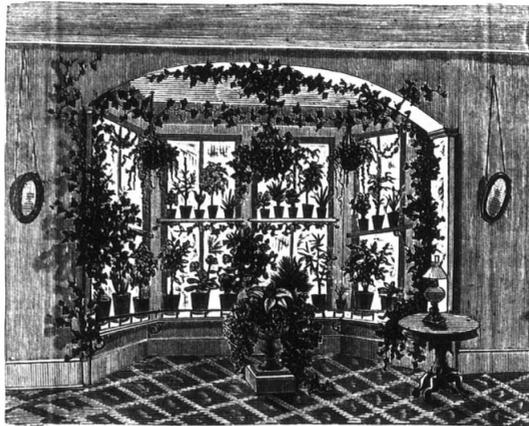
MRS. P.

## COUGH AND SORE THROAT.

Take one cup honey, half cup ginger, one small teaspoonful Cayenne pepper.

## FEVER SORE THROAT.

Put a lump of honey in a plate and surround it with vinegar (not the very sharp vinegar we sometimes meet with, but good vinegar). Let the sick

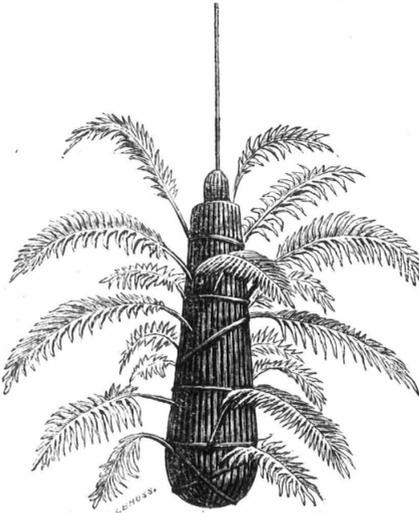


PATTERN FOR WINDOW DECORATION.

eat as much as they can at the time, and the throat will soon be well. MRS. J. P.

## BAKED BEANS.

All working men are fond of a nicely baked dish of beans, but no dish is more susceptible of skilful handling in the preparation. The beans should be washed after careful picking and put to soak over night. Parboil early in the morning in plenty of water put on cold. Have a piece of sweet pork, not too fat, parboiled separately. Then put pork and beans together and boil till the skin of the beans begin to crack. Put in your baking pan, a deep milk pan or crock, with the scored surface of the pork just showing above the beans. Bake slowly as long as your dinner hour will allow.



A JAPANESE FLOWER BASKET.

A relish of mustard, grated horse radish, catsup or some of the prepared sauces, goes far towards making pork, in any of the forms used on the farmers' table, palatable and inviting.

## RICH APPLE PUDDING.

Pare, core and chop five or six apples, or enough to make half a pound; shred a quarter pound suet; blanch and pound one dozen sweet almonds; half a pound of currants, a small cup of sugar, half a nutmeg, equal quantity of bread crumbs and flour, teaspoonful of salt, the whites of three eggs beaten

to a stiff froth; just milk enough to mix; a wine-glassful of brandy the last thing. From ten to twelve ounces of bread crumbs and flour make a good sized pudding, but if more flour is liked add a teaspoonful of baking powder sifted dry in the flour.

## TO CAN TOMATOES.

Scald them so that the skin will peel off readily, and cut them up in a colander to drain, removing all hard and inedible portions. Boil them in a porcelain or brass kettle till done, which will be in about five minutes from the time they begin to boil. Then dip them into cans and seal immediately. The liquor which has been drained off may be spiced and boiled down to catsup.

## GRAPE JELLY.

Pick the grapes from the stems, simmer them till soft in just water enough to cover them, pour into a jelly bag and drain. Measure the clear liquor, pour it back into the kettle and boil twenty minutes, skimming constantly. Then add for every pint of juice, as measured, a pound of white sugar, and boil till it is hard when cold. Heat the glasses and pour it into them while hot. Cover with egg paper.

## SWEET PICKLE GREEN TOMATOES.

Slice one peck green tomatoes into a jar, sprinkle a little salt over each layer, let stand twenty-four hours, drain off the liquor; put the tomatoes into the kettle with a teaspoonful of each of the following spices, ground ginger, allspice, cloves, mace, cinnamon, twelve large and three small red peppers, one teaspoonful scraped horse radish, one teacup brown sugar, vinegar enough to cover all. Boil slowly three hours.

MY DEAR MINNIE MAY,—I cannot be admitted into the family circle of your nephews and nieces (unless I were to apply for admission as an honorary member), you will perhaps allow me to add my recipes, which I can recommend, trusting some of your nieces will be benefited by them. From an old subscriber. MRS. JAMES.

## RICE CAKE.

Take three ounces of flour and eight ounces of loaf sugar, both well sifted, and add to them the grated rind of a fresh lemon; beat the yolks of six eggs and the whites of three separately, then mix them together and beat again. Take four ounces of ground rice, mix with the flour and sugar, and let these ingredients drop gradually through the fingers into the eggs, beating them all the time. When the whole is mixed, beat it thoroughly for a quarter of an hour. If baked in a round tin mould, place a buttered paper inside, allowing it to project an inch and a half beyond the tin. Bake in a moderate oven for three-quarters of an hour. When taken out of the mould, place on a sieve to cool.

## ROAST SHOULDER OF MUTTON.

Put the joint down to a bright clear fire; flour it well and keep continually basting. About a quarter of an hour before serving draw it near the fire that the outside may acquire a nice brown color, but not sufficiently near to blacken the fat. Sprinkle a little fine salt over the meat, empty the dripping-pan of its contents, pour in a little boiling water slightly salted, and strain this over the joint. Onion sauce or stewed Spanish onions are usually sent to table with this dish, and sometimes baked potatoes. Shoulder of mutton may be dressed in a variety of ways, boiled and served with onion sauce, boned and stuffed with a good veal forcemeat, or baked with sliced potatoes in the dripping-pan. MRS. JAMES.

## A JAPANESE FLOWER BASKET.

In the Japanese Building at the Centennial Exposition is to be found a variety of hanging baskets, containing ornamental plants. One of the most graceful designs is shown in the annexed engraving, the basket being made of the roots of trees, laid parallel and encircled by hoops. Ferns and other plants, judiciously selected, are placed with their roots inside the basket, the flowers and foliage hanging down outside. It would be difficult to imagine a prettier ornament for parlor or conservatory. Just try and you may form this idea. Make one, and be the first in your locality to introduce a new and beautiful plan. It would be admired by all and copied by many. (See cut.)

The annual (Dairymen's Assn) the 14th and 15th been the most Among the str Arnold, Sec. J. Rochester; J. Fearman, Hamilton; they were tion. There exhibits were of ful competitors

Class A—1st Jas. Elliott, B town (Messrs. H. Farrington, oming; 6th, A. Harris, Newbr 9th, J. E. Hop Thorndale; 1 Wm. Waddell rietsville; 14th

In the other as follows:—

Class B—A. Wilkinson, V. Acacia. Clas C. B. Lamber Morrison, Ne Mary's. Cl K—Robert N Nichol, Niles

ANNUAL MEET

The annual held in the C Wm. Saunde

The follow ing year:— Vice-President Port Hope; London; co Reed, Lond Montreal; s

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On the ev meeting of the Court officers, Rev President; Vice-Presid Secretary-T Magill, Ost Freed, Har Melvin, Gu ders, Lond Directors; land, Ham

AGRICULTU

At the a Arts Assoc attended, Ira Morga on agricul splendid p the Cente play of h also touc cheese tra

Messrs. Guelph, s Auditors.

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Canadian Agricultural Notes.

Ontario.

PROVINCIAL CHEESE EXHIBITION.

The annual Cheese Exhibition of the Ontario Dairymen's Association was held at Ingersoll on the 14th and 15th of September. It was to have been the most successful ever held by them. Among the strangers present were Messrs. L. B. Arnold, Sec. American Dairymen's Association, Rochester; J. G. Cohoe, Fredonia, N. Y.; W. Fearman, Hamilton; and Geo. A. Cochrane, Hamilton; they were appointed judges by the Association. There were two hundred entries, and the exhibits were of excellent quality. The successful competitors in class were as follows:—

Class A—1st prize, Peter Dunn, Ingersoll; 2nd, Jas. Elliott, Brownsville; 3rd, J. A. James, Nilestown (Messrs. Foulds & Cahoon, makers); 4th, H. Farrington, Norwich; 5th, J. Anderson, Wyoming; 6th, A. J. Herrick, Acacia; 7th, E. C. Harris, Newry; 8th, E. Hunter, Mount Elgin; 9th, J. E. Hopkins, Lyons; 10th, Wm. Agur, jr., Thorndale; 11th, Adam Bell, Innerkip; 12th, Wm. Waddell, Tilsonburg; 13th, R. Facey, Harriestown; 14th, E. N. Hopkins, Tilsonburg.

In the other classes the first prizes were awarded as follows:—

Class B—A. J. Herrick, Acacia. Class C—Jno. Wilkinson, Verschoyle. Class D—A. J. Herrick, Acacia. Class E—E. Harris, Newry. Class F—C. B. Lambert, St. Thomas. Class G—Margaret Morrison, Newry. Class H—M. Ballantyne, St. Mary's. Class I—Wm. Dunn, Ingersoll. Class K—Robert Nichol, Nilestown. Class L—Robert Nichol, Nilestown.

ANNUAL MEETING OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO.

The annual meeting of the above Society was held in the Court House, Hamilton; the President, Wm. Saunders, Esq., of London, in the chair.

The following officers were elected for the ensuing year:—President, Wm. Saunders, London; Vice-President, Rev. C. J. S. Bethune, M. A., Port Hope; Secretary-Treasurer, J. H. McMechan, London; council, J. M. Denton, and E. Baynes Reed, London; J. Pettit, Grimsby; Wm. Cooper, Montreal; and R. V. Rogers, Kingston.

ONTARIO FRUIT GROWERS' ASSOCIATION.

On the evening of September 19th, at the annual meeting of the Fruit Growers' Association, held at the Court House, Hamilton, for the election of officers, Rev. R. Burnett, of London, was elected President; Judge McPherson, of Owen Sound, Vice-President; D. W. Beadle, of St. Catharines, Secretary-Treasurer; H. E. Bircke, Ottawa, John Magill, Oshawa, Geo. Leslie, jr., Toronto, John Freed, Hamilton, Rev. C. Campbell, Niagara, R. Melvin, Guelph, Chas. Arnold, Paris, Wm. Saunders, London, and Rev. W. F. Clark, Welland, Directors; Robert Roy, Hamilton, and A. Sutherland, Hamilton, Auditors.

AGRICULTURAL AND ARTS ASSOCIATION OF ONTARIO.

At the annual meeting of the Agricultural and Arts Association of Ontario, which was largely attended, held in the Court House, Hamilton, Mr. Ira Morgan, President, delivered a lengthy address on agriculture and arts, in which he referred to the splendid position Ontario had made for herself at the Centennial Exhibition, by the magnificent display of her products, cattle, horses, fruit, etc. He also touched upon the condition of the crops, the cheese trade, Granges, etc., etc.

Messrs. Beadle, of St. Catharines, Murton, of Guelph, and J. Johnson, of London, were elected Auditors.

Mr. Stephen White, of Kent, moved that the next Provincial Exhibition be held in London. Mr. James Fraser, of Glengarry, seconded the resolution.

Both gentlemen spoke strongly in support of the motion, urging it on financial grounds as a necessity to the welfare of the Association.

Mr. B. M. Britton, of Kingston, moved in favor of Kingston, seconded by Sheriff Ferguson, of Kingston.

Mayor Macdonald advocated the claims of London, mentioning that the City Council had instructed him to guarantee the necessary accommodation.

Mr. Stoddard moved in favor of Toronto, but did not receive a seconder.

The vote was then taken and resulted as follows: London, 98; Kingston, 24.

CHEESE EXHIBITION.

A Cheese Exhibition in connection with the North Riding of Perth Agricultural Society is to be held at Stratford, on the 5th and 6th of October next. First prize, \$25 in money and \$25 in material; 2nd prize, \$25; 3rd prize, \$10; 4th, 5th and 6th, \$5 each. Cheese for competition to be made third week in August and second week in September.

HORTICULTURAL EXHIBITION.

The Fall Show of the Goderich Horticultural Society, considering the unfavorable season, the intense heat and the long continued drought, far surpassed expectation. The root crop suffered most, but some of the potatoes exhibited were very fine, especially a new variety, the Allen Hybrid. Plums were hardly up to the mark; pears below an average; peaches very poor. The display of apples could not be surpassed, and the grapes, especially those grown in hothouses, were very fine.—Star.

HORSES FOR ENGLAND.

A fine batch of well bred, heavy-weight hunters, selected by a gentleman of Toronto, chiefly from the counties of Oxford and Northumberland, left Saturday morning by the Grand Trunk for Montreal, whence they have been shipped for Glasgow in the Phœnician. They are destined to show their quality with the Fife hounds, and their looks warrant the expectation that they will give a good account of themselves. A lot of the finest of the animals came from this county. The gentleman alluded to above advertised for them through the columns of the Review.

In the last seven months the value of live animals imported into England was as follows: Oxen and bulls, £1,841,531; cows, £498,383; calves, £128,184; sheep and lambs, £1,226,767; and swine, £83,309.

TAVISTOCK FALL SHOW.

The East Zorra Agricultural Society held their annual exhibition at Tavistock, recently. This was the first show of the season in this section of Ontario, and was a very successful one. There was a large crowd of people on the ground. The entries were in excess of last year, and we believe of any previous show.—Stratford Herald.

SOUTH OXFORD UNION EXHIBITION.

At Ingersoll, on Sept. 14, the Union Exhibition of the South Riding of Oxford, and the North and West Oxford Agricultural Societies and Cheese Fair of the Dairymen's Association, opened with the largest number of entries for years. The display of horses, cattle, implements and carriages was the largest and best ever seen here. The exhibition of cheese was also very large. Altogether, this was one of the most successful exhibitions ever held in Ingersoll. The attendance was very great.

PRESENTATION.

During the Provincial Exhibition, Mr. Ira Morgan, President of the Provincial Board, was presented with a massive gold watch and chain, given by his friends of the Agricultural and Arts Association, as a slight acknowledgment of his services in connection with the agricultural interest of the Provinces and at the Centennial Exhibition in Philadelphia. On the dome of the watch was engraved an appropriate inscription.

SHEEP AND CHEESE FOR OUR ENGLISH MARKET.

Six hundred sheep have been shipped from Guelph by Mr. John Black, of Fergus. This is a new venture, and may prove very profitable; it may be even more so than the shipment of cattle.

Eight hundred and forty packages of butter and eight hundred boxes of cheese were shipped from Guelph on Sept. 22nd for London and Glasgow.

Quebec.

THE PROVINCIAL EXHIBITION.

The Exhibition just held at Montreal was very successful. The live stock and agricultural products of the Province were very well represented in every department. The display of cattle was excellent. In heavy draught horses the animals exhibited were of a superior standard. Hon. M. C. Cochrane exhibited in several classes, gaining

several first prizes, with his thoroughbred stallion and shorthorns. Among the prize-takers we also see the names, for horses, of W. F. Kay, Phillipsburg; Dawes & Co., Lachine; Andrew Allan, T. Irving and L. Bearbier, of Montreal; B. Vannick, St. Martins; Thos. Brown, Mile End. For shorthorns, Hon. C. Dunkin, Knowlton; Jos. Hickson, Montreal; Hon. M. Cochrane. In Ayrshires, T. Irving, Wm. Rodden, Messrs. Dawes and others. In Alderneys, R. H. Stephens, Wm. M. Gibson. Joseph Hickson, J. H. Panyman. Of sheep the show included the leading English breeds—Leicester, Cotswold, other long woolled sheep and South-downs. Of Swine there were exhibits of Yorkshire, Suffolk, Berkshire, Essex, and other breeds. Of Poultry there were no less than 56 sub-classes. Of Agricultural Productions, Dairy Produce and Agricultural Implements, the exhibits were large and excellent. The same remark is applicable to the Horticultural Department, and to the Industrial and Fine Arts. But our space is limited, and we cannot dwell on this great exhibition as we would wish.

New Brunswick.

THE PLASTER ROCK.

Gypsum is not the least profitable of the stores of wealth in our sister Province. Whether applied to their land or shipped to other places, either as plaster of Paris or as land plaster, it is of great value to the country. "L," in a "Trip to the Tobique," in the Telegraph, St. Johns, N. B., briefly describes the Plaster Rock as follows:

"I will give it a slight description. Looking from one side of the river to the other, the change is wonderful—the high, red, perpendicular cliffs of plaster on the one side, rising abruptly to a height of 100 feet, and on the other a long interval stretches off in the distance. This plaster has no superior, and would be a profitable investment if worked, provided a means of shipment could be effected. It is now taken down to Tobique, and worked on a small scale at Three Brooks."

AGRICULTURAL EXHIBITIONS.

The King's Central Agricultural Society's exhibition will be held at Hampton, on the 10th and 11th of October.

The Kingslea Agricultural Society hold their fair on Wednesday, the 25th of October.

The Northumberland Agricultural Society have consolidated their ploughing match, cattle show, and Exhibition, and will hold it this year on the 19th October.

Nova Scotia.

The farmers of Nova Scotia have been complaining of the want of rain. The second crop of hay promised to be a failure (date, September 20). Wells and springs were all drying up. In some places water for the cattle had to be carried as far as two miles. It was feared that cattle feeders would not be able to fatten beef, and that meat would be scarce in winter unless the desired rain would fall soon.

A Halifax manufacturer shipped a few days ago a large consignment of boots and shoes to Newfoundland.

A Halifax dealer advertises a car load of furniture received over the Intercolonial from a factory of Toronto. We are not isolated Provinces, but one Dominion.

The Nova Scotia exhibition opens at Truro on the 20th of October, and the fruit growers' show at Wolfville on the 4th October.

Manitoba.

THE MENNONITES AND THEIR FARMS.

The Manitoba Standard, in describing the farms, fields, kitchens, cattle and crops of the Mennonites who settled in that Province last year, says: "The quantity of land yielding crops this year will average about twenty acres per family. Most of the settlers have good frame barns erected, some of them quite large, measuring 20 x 52 feet. A large number of apple trees were planted last spring which were brought from Waterloo County, Ont., and are growing well. Harvesting commenced on the 11th September. The land that had been ploughed twice before sowing is expected to yield from 25 to 30 bushels of wheat to the acre, and that which was only ploughed once will scarcely produce 15 bushels per acre. The wheat, oat and barley harvest is large for a new settlement, and of excellent quality. The hay crop has been well

cured and gathered in large quantities. All kinds of root crops, potatoes especially, are cultivated with great care and pride. The products of the gardens have grown chiefly from seeds ripened on Russian soil, amongst which are found many fine samples of the potato. The grain fields are not enclosed with fences, but the crops are protected by herds. About twenty farmers club together and hire a young man to herd their cattle and other animals while the crops are growing. Great care is taken with all kinds of farm stock, and particularly cows, which they treat with great kindness. The large number of calves and young pigs seen in the settlement is an indication that they intend to devote considerable attention to stock-raising."

The Winnipeg *Free Press* crop reports for 1876 give the total yield of Manitoba as follows: Wheat, 480,000 bushels; barley, 173,000; oats, 390,000; peas, 45,000; other grains, 5,000; potatoes, 460,000; turnips and other roots, 700,000; with statistical returns from crop viewers in 34 settlements, showing an average production of wheat, 32½ bushels per acre; barley, 42½; oats, 51; peas, 32; potatoes, 228; turnips, 662½. All the crops are one sixth less than expected, on account of the very wet season, and a large proportion of the land only once ploughed.

Amongst the arrivals in Manitoba this summer are a large number who left here one or two years ago to live in Ontario, and have now returned to the Prairie Province to settle down for the rest of their days. It is the same old story with all who have had a taste of western life; they can't live in the east.

### Patrons of Husbandry.

#### Grangers' Picnic at Thornhill.

The members of the Longstaff Grange held their annual picnic in Seagres' Grove. At noon the members of the Order with their friends were fast assembling. After partaking of the feast provided for them, and enjoying for some time the music from the bands, they repaired to the stand erected for the speakers. The number present was between seven and eight hundred. Mr. D. James, Master of Longstaff Grange, presided at the meeting.

Mr. Robt. Marsh spoke of the principles of the Order. Their objects were to encourage the communication of their thoughts and ideas to one another, and to improve themselves socially. They discussed subjects connected with the farm, and benefited by each others' experience. He spoke of the remarkable growth of the Order; and he advised the young men to stick to the farm.

Mr. A. J. Hughes spoke of the origin of the Order and its objects, and the necessity for concentrating their energies for doing away with the superfluity of agencies. He referred to the evils of the credit system, and spoke of the proposal to form a Grange Insurance Company. He believed they were right in forming a society for their mutual improvement and elevation, without going into politics, a society where they could extend the right hand of fellowship without any reference being made to political questions or private opinions.

Mr. J. G. Bull said that when it was known the farmers composed seven-tenths of the population of this country, it was not very extraordinary that the Order had increased rapidly. The farmers had other societies, such as the Agricultural, but they did not meet all requirements, and it was felt necessary to protect and promote their own interests. It had been said that they ought to have a greater representation in the Legislature, too. As to the farmers' interests in trade, &c., how was it in the neighboring Republic? They could not send stock over there, or a bushel of grain, but they had to pay duty on them. But the Americans could send their produce here without paying one farthing of duty. There were higher motives than the pecuniary, which actuated the farmer; and one was the desire to elevate themselves in society.

Mr. Lane, M. P. P., said that while the agricultural interests were the greatest they were not antagonistic to those of any other in the country, but the reverse. The farmers required men to make instruments and implements for their use. Mechanics were just as necessary, in his opinion, to the farmer, as the farmer was to the mechanic or manufacturer. He thought they would advance

the country to a state of fruitfulness which was scarcely believed at the present time. He believed they should make an effort to get the best prices possible. He believed the agricultural calling was the best that any young man could enter into. They should say to their sons, learn. If young farmers do not attain to high position, it is for the want of industry or intellect. While he did not wish to pander to the prejudices of the farmer, he wished them to consider that they were members of the body politic; that member was necessary to the welfare of the community.

After some remarks by Messrs. Duncan and McConnell, and an invitation from the Chairman to those who differed from the objects of the Society to come forward and give expression to their opinions, the proceedings were brought to a close by the band playing "God Save the Queen."

#### Festival of the Markham Grangers at Victoria Square.

The members of Victoria Square Grange held their festival in the grove of Mr. James Stowenburgh. The table was early loaded with delicacies, and at noon several hundred guests partook of the sumptuous feast, the band of the 10th Royals from Toronto performing a fine selection of music. At 2 o'clock the assembly, about 600 in number, took up their places around the stand prepared for the speakers.

Mr. H. B. Crosby presided. He congratulated the Patrons on their fine turn out, notwithstanding so many other attractions. He did not think it improper for them to unite for the purpose of conferring about farming matters, and comparing notes.

Col. W. M. Button said the Grangers were introduced into the States on account of various rings, such as the corn ring and others, which ground the farmers down so low that they had to burn their corn for fuel. He did not think it right that the American farmers should send their corn into this country free of duty, and the farmers of Canada, when they shipped barley to the United States have to pay a duty of 15 per cent. He thought the Grange meetings very beneficial in instructing farmers' sons and daughters. He did wish the Grangers to crush out the retail storekeepers, but he wished to see their business conducted on cash principles.

Mr. Robt. Moss said the objects of the society were to bring farmers together for the purpose of communicating their thoughts and ideas to each other, and to elevate their standards. They also discussed all subjects connected with the farm. Another object was to teach their sons and daughters by example. If the latter saw their parents throwing an interest into their calling they would no doubt learn to stick to the farm. The sum of \$60,000 in taxes was raised every year in the County of York, and the agricultural community paid it. They should therefore see that it was properly expended. He advised the young men to stick to the farm. If they did not attain to riches they could at all events live in comfort. If the sons stuck to their calling they would be able to surpass their fathers.

Mr. James said objections had been raised against the movement by those who said the Grangers would ruin the retail trade, but that was not one of the principles of the Order. They desire that when they paid cash they should be allowed a discount and not be taxed for the losses incurred on account of the credit system. There were benefits to be derived from belonging to the Grange Society. Farmers, by meeting in the Granges, got into each other's society, and were thereby improved. The movement was claiming the notice of politicians, whom they should judge on their merits and not by what each party said. In conclusion he advised them to be cautious in what they did. (Cheers.)

Mr. J. Manning stated that he desired not to have anything to do with the Grange while it was under the protection of a foreign country; but on the establishment of the Dominion Grange he was made a member, the first north of Toronto. The Society gained in members very rapidly, and he was very anxious for the honor of the agricultural class. Look at their relation with, and the position they occupied, to the Government. When Dr. Orton brought up a resolution for a committee to be appointed to enquire into the agricultural state of the country, it was laughed at. He did not believe in the opinion that farmers would never be largely represented in the Legislature. He was looking forward with delight, old as he was (seventy years) to see a number of their young men in Parliament

to represent them. They (the farmers) had made the country what it was now, building and blossoming as the rose. They did not move from place to place the same as others, but had their property in a settled place, and it was their's to control its destiny. The farmers were the bone and sinew of the land, and the backbone of the country. He knew that the theory of Free Trade was a very pretty one, and it was nice to talk of Free Trade. He thought that as soon as another nation compelled them to pay duties, of a necessity, they must for their own protection compel that nation to pay duties also. If they could get reciprocity from any country, they would give them reciprocity in return. He did not think that the United States did right in imposing a duty of twenty-five cents for a bushel of wheat, and fifteen cents for barley, their's being imported into this country free of duty, and he asked his hearers whether they believed it right or not (Cries of no, no). They would compel the Government to give them Protection, because they were able to demand it at the polls. He was astonished that every farmer of the country did not ally himself with the Grange movement. Their interests were identified. The country would be safe in their hands, because they made the country, and it was their interest to preserve it. It could not rise without raising them, or sink without sinking them. The Grange movement was causing a mighty revolution. In conclusion, the speaker referred to the social benefits derived from, and the rapid growth of, the movement.

Mr. Hughes then made a few remarks upon the necessity of concentrating their forces and doing away with a superfluity of agents.

Mr. Ira Morgan, the President of the Agricultural and Arts Association of Ontario, made the following remarks in his address at Hamilton:—

One of the most modern developments of farming is the sudden rise and spread of this potent organization. At first originating in the United States, it seems to have found a congenial soil in the hearts and intellects of our Canadian farmers. The truth is, the organization and its principles are rapidly spreading and taking deep root among us. Some are afraid of its efforts, others see in it the salvation of the farming interests of Ontario. We wish God speed to every effort put forth to improve and foster farming interests. If it need regulation, why let the wise and prudent among us lend a helping hand; if it need encouragement, let the members of our Association look to it that the Grangers receive every encouragement.

#### Grangers in Nova Scotia.

The order of Patrons of Husbandry, which since its organization in the Western States, has outgrown the most sanguine expectations of early members, has its branches established here in Nova Scotia. I lately met a brother here, and on his learning that I belonged to the order in the western part of Ontario, he extended to me a hearty invitation to attend a grange meeting there that night. I accepted it with pleasure, and spent a very pleasant evening, we all enjoying ourselves socially. There were aged men and women, and young men and women, enjoying themselves to their hearts' content. The young men came to get information from the old, and the old to see the improvement and prosperity of the young. All sought both information and pleasure, which are so easily obtained when we put our shoulders to the wheel, and say, "Let us make life pleasant by extending our acquaintance among our brethren." Half of the people in farming districts know little of their neighbors. This is not as it should be; it is not the way to make life pleasant and useful.

Truro, N. S., Sept. 16. SCRUTATOR.

#### Visit to the Centennial by Patrons of Husbandry.

The Patrons of Husbandry of the Middlesex District left London, on Monday, Sept. 11, for the Centennial. There were, it is said, not less than 1000 persons who availed themselves of the low fare charged by the railway authorities. While at Philadelphia their headquarters was the Grange Encampment, a mammoth building capable of accommodating 4000 guests. The charge is \$1 a day for lodging (a double bed in each room), and 50c for each meal. They returned home quite pleased with their trip and satisfied that they had received good value for their money.

PROVINCIAL EXHIBITION FOR 1876.

Prize List.

HORSES.

CLASS 1—THOROUGHBRED HORSES.

Best thoroughbred stallion, 4 years old and upwards, James O'Connor's Stockwood, London, \$40; 2nd, J. Lawrence Lyon's Hyder Ali, Toronto, \$28; 3rd, Geo. D. Morton's Extra, Bradford, \$17.

CLASS 2—ROADSTER HORSES FOR DRIVING, OR THE SADDLE, NOT EXCEEDING 15 1/2 HANDS.

Best roadster stallion 4 years old and upwards, J. Enright & Bros, Dundas, imported horse, \$44; 2d Jas Ker, Caistor \$33; 3d Jas Goodie, \$22.

CLASS 3—CARRIAGE HORSES—ANIMALS THREE YEARS OLD AND UPWARDS, TO BE 11 1/2 HANDS AND OVER.

Best carriage stallion 4 year old and upwards, N.E. McKellar, Alvington \$44; 2d L. Hunter, Osborne \$33; 3d Jos Vance, East York \$22.

CLASS 4—AGRICULTURAL HORSES, EXCLUSIVE OF PURE CLYDESDALES AND SUFFOLKS.

Best agricultural stallion, Geo Teesdale, London \$44; 2d H Russel, Weston \$33; 3d W Dunce, Bradford \$22.

CLASS 5—HEAVY DRAUGHT HORSES, INCLUDING CLYDESDALES AND SUFFOLKS.

Best heavy draught stallion, four years old and upwards, Richard Graham's Royal Exchange, Pickering, \$44; 2nd, Andrew Harvey, Ontario Chief, Beverley, \$33; 3rd, Thomas Colquhoun's Lord Haddo, Gibbert, \$22.

CATTLE.

CLASS 6—DURHAMS.

Best bull, 4 years old and upward, J.S. Armstrong's Young Heir, \$44; 2nd, W.M. Calder's Earl Gray, Ermosa, \$33; 3rd, James Gardhouse's Count Grindelwald, \$22.

CLASS 7—MERREFOULDS.

Best bull, 4 year old and upward, F.W. Stone's Crown Prince, Guelph, \$35; 2nd, George Hood's Victor 2nd, Guelph, \$25.

CLASS 8—DEVONS.

Best 1 year old bull, George Rudd's Dandy, Puslinch, \$65; 2nd, W and J Peters' Red Jacket, London, \$25.

CLASS 9—AYRSHIRES.

Best bull, 4 year old and upward, Thos Guy's Bismarck, \$30; 2d, James Lawrie's Sealoid 2d, Scarborough, \$27.

Best bull calf under one year, M. Ballantyne's Columbus, Blanchard, \$22; 2d Jardine and Sons' Alexander \$16; 3d Thos Guy's Comet \$11.

CLASS 10—GALLOWAYS.

Best bull 4 years old and upwards, Wm Hood's Black Jock \$32; 2d Wm Hood's Robin Hood \$32; 3d Wm Hood's Major Gray, Guelph, \$25.

CLASS 11—GRADE CATTLE.

Best grade cow, Henry Lentz, Toronto Township \$33; 2nd J and W Watt, Nichol \$22; 3d Thos Webber, Glandorf \$17.

CLASS 12—FAT AND WORKING CATTLE, ANY BREED.

Best pair of fat cattle of any age, Henlock Young, silver cup, value \$40; 2nd, John West, Guelph \$33; 3d N H Wickett, Seneca \$20.

SHEEP—LONG WOOLLED.

CLASS 13—COTSWOLDS.

Best flock of Cotswolds, consisting of 1 ram, 1 ram lamb, 5 ewes, and 5 ewe lambs, prize presented by his Royal Highness the Prince of Wales, J. Russell, Richmond Hill, \$60.

CLASS 14—LEICESTERS.

Best ram, 2 shears and over, A and A Stewart, Lobo, \$24; 2nd, Jeffrey Bros, \$19; 3rd, T. Cameron, Acton, \$13.

CLASS 15—LINCOLN SHEEP.

Best ram, 2 shears and over, S. Langford, Biddulph, \$22; 2nd, Jas Anderson, Westminster, \$17; 3rd, C. S. Smith, Acton, \$12.

Best 2 ewes, 2 shears and over, S Langford, \$20; 2nd, S Langford, \$15; 3rd, Jeffrey Bros, \$10.

SHEEP—MEDIUM WOOLED.

CLASS 16—SOUTH-DOWNS.

Best ram, 2 shears and over, R Marsh, Markham, \$17; 2d R Marsh, \$12; 3d, R Marsh, \$7.

CLASS 17—SHROPSHIRE, HAMPSHIRE, AND OXFORDSHIRE DOWNS.

Best ram 2 shears and over N Bethel, Thorold, \$15; 2d R Shaw, Glanford, \$10.

SHEEP—FINE WOOLED.

CLASS 18—SPANISH, FRENCH, AND SAXON MERINO.

Best ram 2 shears and over A Teeler, Wooler, \$12; 2d Platt Hinman, Haldimand, \$8.

PIGS—SMALL BREEDS.

CLASS 20—IMPROVED BERKSHIRES.

Best boar one year and over, Thos. Chisholm, North Dumfries, \$17; 2d Jas. Hogan, King, \$14; 3d Jas. Hewer, Guelph, \$10.

CLASS 21—SUFFOLKS.

Best boar, one year and over, Edmondson & Snider, Brantford, \$17; 2d Joseph Featherston, Credit, \$14; 3d A Frank & Sons, Caledon, \$10.

CLASS 22—ESSEX PIGS.

Best boar, one year and over, Wright & Butterfield, \$17; 2d James Main, \$14; 3d Wright & Butterfield, \$10.

CLASS 23—OTHER SMALL BREEDS, EXCLUSIVE OF BERKSHIRE, SUFFOLK AND ESSEX.

Best boar, one year and over, James Main, \$17; 2d Joseph Featherston, \$14; 3d Jas. Hewer, \$10.

PIGS—LARGE BREEDS.

CLASS 24—YORKSHIRE AND OTHER LARGE BREEDS.

Best boar, one year and over, Wright & Butterfield, \$17; 2d C Edmondson, \$14; 3d C Edmondson, \$10.

POULTRY.

CLASS 25—DORKINGS, POLANDS, GAME, &c.

Dorkings, best pair, white (not imported from Europe), Jno Aldous, Berlin, \$4; 2d John Boyne, Westminster, \$3; 3d Jno Aldous, \$2.

Game, best pair pile, white or blue, H M Thomas, \$4; 2d W M Smith, Brant, \$3; 3d Thomas Stephens, Hamilton, \$2.

Spanish, best pair black (white faced), R McMillan, Galt, \$4; 2d Duncan Kay, Galt, \$3.

Leghorn, best pair white, W M Smith, \$4; 2d Harry Bryant, Hamilton, \$3; 3d John Aldous, \$2.

Hamburgs, best pair golden pencilled, R McMillan, \$4; 2d H & F Waddell, Hamilton, \$3; 3d R McMillan, \$2.

Hamburgs, best pair silver pencilled, John Boyne, \$4; 2d H M Thomas, \$3; 3d H & F Waddell, \$2.

Hamburgs, best pair golden spangled, Fred Sturdy, Guelph, \$4; 2d H & F Waddell, \$3; 3d R McMillan, \$2.

Hamburgs, best pair silver spangled, John Boyne, \$4; 2d Wright & Butterfield, \$3; 3d John Boyne, \$2.

Creve Coeur, best pair, W M Smith, \$4; 2d W M Smith, \$3; 3d W M Smith, \$2.

La Fleche, best pair, H M Thomas, \$4; 2d W M Smith, \$3; 3d W M Smith, \$2.

Houdans, best pair, John Boyne, \$4; 2d H M Thomas, \$3; 3d E R Grant, Wesleyville, \$2.

Bantams, best pair game, black red, Daniel Allen, \$3; 2d J Tindal, \$2.

Bantams, best pair game, duckwing, W H Cooper, Hamilton, \$4; 2d Daniel Allen, \$2.

Best pair Sibirig bantams, Geo F Simpson, Falkland, \$4; 2d James Brayley, Barton, \$2.

Best pair bantams, white feathered legs, Geo F Simpson, \$4.

Best pair colored dorkings (not imported), John Weld, London, \$3; 2d John Weld, \$2; 3d H M Thomas, \$1.

Houdans, best pair, W M Smith, \$4; 2d John Aldous, \$2; 3d Geo F Simpson, \$1.

Hamburgs, best pair silver or golden spangled, John Boyne, \$3; 2d F Sturdy, \$2; 3d John Aldous, \$1.

Hamburgs, best pair silver or golden pencilled, R McMillan, \$3; 2d D Kay, Galt, \$2; 3d D Kay, \$1.

Polands, best pair white crested, black, John Boyne, \$3; 2d John Boyne, \$2; 3d W M Smith, \$1.

Polands, best pair silver or golden, John Boyne, \$3; 2d Jno Boyne, \$2; 3d John Boyne, \$1.

Game, best pair reds, (black, brown or blue), not imported, Perley & McCummins, \$3; 2d Daniel Allen, \$2; 3d Perley & McCummins, \$1.

Game, best pair 'duckwing', Perley & McCummins, \$3; 2d Perley & McCummins, \$2; 3d Daniel Shaw, London, \$1.

Best pair game, pile, white or blue, W M Smith, \$3; 2d Thos Stephens, \$2.

Extras—Pair game chickens, W H Doell, Toronto; pair bantams, W H Doell, Toronto; pair African bantams, Daniel Allen; pair white game, Perley & McCummins.

CLASS 26—ASIATIC FOWLS, TURKEYS, GEESE, ETC.

Best pair Cochins (cinnamon or buff) not imported from Europe, H M Thomas \$4; 2d Wright & Butterfield \$3; 3d Daniel Allen \$2.

Best pair partridge Cochins not imported from Europe, H M Thomas \$4; 2d H M Thomas \$3; 3d W Amor, Hamilton \$2.

Best pair Cochins, white or black, not imported from Europe, H M Thomas \$4; 2d H M Thomas \$3; 3d Wright and Butterfield \$2.

Brahmas not imported from Europe, best pair light, Wright & Butterfield \$4; 2d J W Buck, Brantford \$3; 3d W M Smith \$2.

Brahmas, not imported from Europe, best pair dark, H M Thomas \$4; 2d Fred Sturdy \$3; 3d W H Doell \$2.

Turkeys, best pair bronzed, Thomas Boak, Trafalgar \$4; 2d Thos Boak \$3; 3d Allen & Boyes, Appleby \$2.

Turkeys, best pair black or grey, J L Horning, W Flamboro \$4; 2d G F Simpson \$3; 3d S Smith, Glanford \$2.

Turkeys, best pair white or yellow, Chas Foster, Milgrove \$4; 2d G F Simpson \$3; 3d James Main \$2.

Best and heaviest turkey cock, Thos Boak \$4; 2d T Boak \$3; 3d Chas Foster \$2.

Geese, best pair common, Alton & Boyes \$4; 2d Alton & Boyes \$3; 3d S Smith \$2.

Geese, best pair China, G F Simpson \$4; 2d A Ferrill, Worther \$3; 3d John Hewer, Guelph \$2.

Geese, best pair Bremen, A Ferrill \$4; 2d Jas Main \$3.

Ducks, best pair Aylesbury, John Boyne \$4; 2d W Jackson, Caledonia \$3; 3d Daniel Allen \$2.

Ducks, best pair Rouen, A Ferrill \$4; 2d F Sturdy \$3; 3d T Boak \$2.

Ducks, best pair Muscovy, W M Smith \$4; 2d Platt Hinman, Haldimand \$3; 3d Chas Foster \$2.

Ducks, best pair any other variety, W M Smith \$4.

Guinea fowl, best pair, Chas Foster \$4; 2d H Dummond, E Flamboro \$3; 3d W M Smith \$2.

Pea fowl, best pair, H Drummond \$4; 2d H Cooper \$3; 3d Chas Foster \$2.

Any variety of fowl not specially classified, best pair, Duncan Kay \$4; 2d Wright & Butterfield \$3; 3d H Bryant \$2.

CHICKENS AND DUCKINGS OF 1876.

Brahmas, best pair light not imported, J W Buck, Brantford \$3; 2d Wright & Butterfield \$2; 3d Wright and Butterfield \$1.

Brahmas, best pair dark not imported, W H Doell \$3; 2d F Sturdy \$2; 3d F Sturdy \$1.

Cochin, best pair cinnamon or buff not imported, Wright & Butterfield \$3; 2d Wright & Butterfield \$2.

Best pair colored Dorkings, John Weld, London, \$4; 2d H M Thomas \$2.

Best pair black, blue or brown red game, Daniel Allen \$4; 2d do, \$2.

Extras—Pair wild geese. W M Smith; a live owl, D McMillan; pair game bantams, W H Doell; pair lop eared rabbits, E R Grant; pair white game bantams, Perley & McCummins.

AGRICULTURAL IMPLEMENTS.

The display of agricultural steam engines, threshing machines, and reaping machines, has never been equalled. Each exhibitor deserves more favorable remarks than we have space to give in this issue. Many will be heard of in a future number of the ADVOCATE.

CLASS 28—IMPLEMENTS FOR CULTIVATING AND SOWING THE SOIL, HORSE, STEAM OR OTHER POWER.

Best portable steam engine for agricultural purposes, McPherson, Glasgow & Co., Fingal, \$30.

2nd do, Wentworth Implement Co, Hamilton, \$20.

3rd do, Jno Abel, Woodbridge, \$10.

Best two-furrow plow, W A Hardy, Churchville, \$30.

2nd do, Uxbridge Agricultural Works, \$20.

Best iron plow, Joseph Lowrey, Sarnia, diploma and \$15.

2nd do, George Marley, Thorold, \$10.

3rd do, W Kirkbride, Goderich, \$5.

Best wooden plow, George Morley, diploma and \$12.

2nd do, Joseph Lowrey, \$10.

3rd do, Copp Bros, Hamilton, \$4.

Best iron beam plow, with steel mould board and wooden handles, Fraser & Gillies, Teeswater, \$15.

2nd do, Copp Bros, \$10.

3rd do, B Bell & Son, St George, \$5.

Best subsoil plow, George Morley, diploma and \$12.

2nd do, Joseph Lowrey, \$7.

3rd do, A Eggleston, Ancaster, \$4.

Best double mould plow, Geo Morley, \$10.

2nd do, Fraser & Gillies, \$8.

3rd do, Deterler & Shanman, Preston, \$5.

Best horse-hoe or single horse cultivator, iron, Copp Bros, \$4.

Best horse-hoe or single horse cultivator, wood, B Bell & Son, \$4.

2nd do, Wentworth Implement Company, \$2.

Best pair iron harrows, Copp Bros, \$10.

2nd do, George Skinner, Bartonville, \$8.

Best pair wooden harrows, S F Piper & Co, Stratroy, \$6.

2nd do, Thos Reid, Cainsville, \$2.

3rd do, Copp Bros, \$10.

Best wooden roller, D Maxwell, Paris, \$10.

2nd do, B Bell & Son, \$5.

Best stump extractor, Wm Gilmore, Waterdown, \$8.

CLASS 29—IMPLEMENTS AND MACHINES FOR HARVESTING, PREPARING PRODUCTS FOR USE, CARRIAGE, &c, HORSE OR OTHER POWER.

JUDGES—James Repford, Stratford; D L Lowry, St Davids; Thomas Bains, Nain; E A Powers, Port Hope.

Best sulky horse-rake, G M Cossit & Bro, Brockville, \$8.

2nd do, Paterson & Bro, Paterson, \$6.

3rd do, Mason Manufacturing Co, Oshawa, \$4.

Best horse pitchfork and tackle, Peter Grant, Clinton, \$6.

Best implement or machine for cutting, pulling, or otherwise harvesting peas, Luke & Tolin Bros, Guelph, \$15.

2nd do, George McLeod, Rodgerville, \$10.

Best potato digger, Thos Head, Copetown, \$10.

2nd do, Thos Hird, Beverley, \$5.

Best straw cutter, David Maxwell, Paris, \$8.

Best straw cutter, \$10.

2nd do, Hagg, \$10.

Best machine, \$10.

2nd do, Thom, \$10.

Best churn, \$10.

2nd do, Corie, \$10.

Best cheese, \$10.

2nd do, Wm I, \$10.

Best bee-hive, \$10.

2nd do, J W, \$10.

Best half dozen, \$10.

2nd do, Corie, \$10.

Best set horse, \$10.

2nd do, C R, \$10.

Best ox-yoke, \$10.

2nd do, Hen, \$10.

Best specimen, \$10.

Best wooden garden reel, \$10.

The Canada wheat, the growth of the nation, R I, \$10.

Best 2 b, \$10.

Best 2 b, \$10.

Best 2 b, \$10.

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Best 2 b, \$10.

Best 2 b, \$10.

Best straw cutter, D Maxwell ..... 4  
 2nd do, Haggart Bros, Brampton ..... 3  
 Best machine for cutting roots for stock, D Maxwell ..... 6  
 2nd do, Thomas Forfar, Waterdown ..... 4  
 Best cheese press, John Amor, jr, Hamilton ..... 3  
 Best churn, McMurray & Fuller, Toronto ..... 3  
 2nd do, Coridon Lewis, Salford ..... 2  
 3rd do, Wm Divell, Toronto township ..... 3  
 Best bee-hive, A C Attwood, Warnock ..... 2  
 2nd do, J Walterhouse, Hamilton ..... 1  
 3rd do, Henry Lutz, Salford ..... 1  
 Best half dozen axe-handles, John Kelly, Percy ..... 2  
 2nd do, Coridon Lewis ..... 1  
 Best set horse shoes, Thomas Patterson, Hamilton ..... 3  
 2nd do, D McKenzie, Guelph ..... 2  
 3rd do, C R Bell, Parkhill ..... 2  
 Best ox-yoke and bows, Henry Bugner ..... 2  
 2nd do, Henry Reid ..... 1  
 Best specimen of farm fence wood, Wm Grundy, Lucan ..... 3  
 Best wooden pump, John L Swartz, Jerseyville ..... 4  
 Extras—Best suspension bag holder, Richard Collins; best garden reel, A McIlwraith, Listowel.

AGRICULTURAL PRODUCTIONS.

CLASS 31—FIELD GRAINS, FIBRS, & C.

The Canada Company's prize for the best 25 bushels of fall wheat, the produce of the Province of Ontario, being the growth of 1876, W P O'Neil Nelson \$100; 2d by the Association, R Inksetter, Beverley, \$40; 3d by the Association, D Rockliff, Barton, \$20.  
 Best 2 bushels of white winter wheat W Tuck, Nelson, \$10; 2d W P O'Neil, Nelson, \$8; 3d David Carstairs, Haldimand, \$6; 4th R Tuck, Nelson, \$4.  
 Best 2 bushels of red winter wheat W M Smith, Fairfield Plains, \$8; 2d R Rose, Dumfries, \$6; 3d R Tuck \$4; 4th Jas Little, Nelson, \$2.  
 Best 2 bushels of Fyfe spring wheat T Manderson, Reach, \$8; 2d J Rymal, Hamilton, \$6; 3d J White, Scarborough, \$4.  
 Best 2 bushels spring wheat of any other variety W P O'Neil \$8; 2d R Tuck \$6; 3d J L Horning, West Flamboro', \$4.  
 Best 2 bushels barley (2 rowed) W Thomson, Raglan, \$6; 2d R Tuck \$4; 3d W M Smith \$2; 4th J White \$1.  
 Best 2 bushels barley (6 rowed) W Tuck \$6; 2d J White \$4; 3d P Gage, Barton, \$2; 4th David Carstairs, trans.  
 Best 2 bushels winter rye J D Lafferty, W Flamboro', \$6; 2d M Harrison, Cooksville, \$4; 3d J Charles Foster, Millgrove, \$2; 4th J Little, trans.  
 Best 2 bushels of oats, white, D Carstairs \$6; 2d C Collatson, Scarborough, \$4; 3d T Manderson \$2; 4th W D Stoddard, Bradford, trans.  
 Best 2 bushels of oats, black, W D Stoddard \$6; 2d T Manderson \$4; 3d W M Smith \$2; 4th J White, trans.  
 Best 2 bushels of small field peas B Curtis, W Flamboro', \$6; 2d W H Brookling, Ancaster, \$4; 3d W D Stoddard \$2; 4th A Robertson, W Flamboro', trans.  
 Best 2 bushels of marrowfat peas, D Carstairs \$6; 2d Henry Howard, Beverley, \$4; 3d Jas Carey, Millgrove, \$2.  
 Best 2 bushels of any other kind of field peas T Manderson \$6; 2d J Easton, Wilson, \$4; 3d J Carey \$2; 4th H Howard, trans.  
 Best bushel of small white field beans C Lewis, Salford, \$8; 2d R Shearer, Niagara, \$4; 3d W Riddell, Cobourg, \$2; 4th B Fielder, W Flamboro', trans.  
 Best bushel of large white field beans R Shearer \$6; 2d C Lewis \$4; 3d J Rymal \$2; 4th H Howard, trans.  
 Best 2 bushels of Indian corn in the ear (white) C Ross, Malahide, \$6; 2d J D Lutz, Salford, \$4; 3d W J Brown, Niagara, \$2; 4th F Morrison, Hamilton, trans.  
 Best 2 bushels of Indian corn in the ear (yellow) C Ross \$6; 2d F Morrison \$4; 3d P Gage \$2; 4th E Blagden, W Flamboro', trans.  
 Best bale of hops not less than 112 lbs Jardine & Sons, Salford, \$20; 2d Coolidge & Dunning, Demorestville, \$15; 3d S Conner, Credit, \$10.

CLASS 32—SMALL FIELD SEEDS, FLAX, HEMP, ETC.

Best bushel Timothy seed C Lewis \$6; 2d J Carey \$4; 3d J G Ten Eyck, Grimsby, \$2; 4th J Richardson, St Catharines, trans.  
 Best bushel of clover seed Henry Lutz, Salford, \$6; 2d J Smith, Burford, \$4; 3d S Smith, Glanford, \$2; 4th J G Ten Eyck, trans.  
 Best half bushel of Alsike clover seed J Smith \$6; 2d H M Thomas, Brooklyn, \$4.  
 Best bushel flax seed J Richardson \$6; 2d Mr Harrison, Cooksville, \$4.  
 Best Swedish turnip seed from transplanted bulbs, not less than 12 lbs A Crumb, Darlington, \$6; 2d J Crumb, Darlington, \$4.  
 Best greystone turnip seed 12 lbs A Crumb \$6; 2d J Crumb \$4.  
 Best 12 lbs white Belgian carrot seed J Crumb \$6; 2d A Crumb \$4.  
 Best 12 lbs of long red mangel-wurtzel seed A Crumb \$6; 2d J Crumb \$4.  
 Best 12 lbs yellow globe mangel-wurtzel seed J Platt \$6.  
 Best bushel of tares 2d W Riddell, Cobourg, \$3.  
 Best bushel buckwheat W M Smith, Fairfield Plains, \$4; 2d J Smith, Burford, \$2; 3d T Head, Beverley, trans.  
 Best bushel of millet W M Smith \$4; 2d J Smith, Burford, \$2; 3d D Rymal, Barton, trans.  
 Best bushel of Hungarian grass seed W M Smith \$4; 2d J Smith, \$2; 3d C Foster, Millgrove, trans.  
 Best 10 lbs cured tobacco leaf growth of Ontario A Shearer, Niagara, \$4.

CLASS 33—FIELD ROOTS, ETC.

Best bushel of climax potatoes C Foster, Millgrove, \$3.  
 Best bushel cup potatoes C Foster \$3.  
 Best bushel garnet chilis B Fielder, W Flamboro', \$3.  
 Best bushel early rose potatoes D Patterson, Beverley, \$3; 2d N Ryckman, W Flamboro', \$2; 3d B Fielder \$1.  
 Best bushel Brownell's beauty W Acland, Wellington Square \$8; 2d J A Bruce & Co, Hamilton, \$2; 3d E C Fernside, Hamilton, \$1.  
 Best bushel of any other sort of potatoes T Head \$3; 2d W Acland \$2; 3d J A Bruce and Co \$1.  
 Best collection field potatoes half peck of each sort named J Hewer, Guelph, \$6; 2d C Foster \$4; 3d E C Fernside \$2.  
 Best 8 roots Marshall's improved Swede turnips W Burgess, Etobicoke, \$3; 2d J S Armstrong, Eramosa, \$2; 3d J R McQueen, Pilkington, \$1.  
 Best 8 roots Carter's Sweet turnips J Thompson, Cote-town, \$3; 2d J Carey \$2; 3d N Ryckman \$1.  
 Best 8 roots Skirving's Sweet turnips J Weir, W Flamboro', \$3; 2d D Patterson, Beverley, \$2; 3d J Card, Guelph, \$1.

Best 8 roots Sutton's champion turnips E Blagden, East Flamboro', \$3; 2d W Ryckman \$2; 3d C Foster \$1.  
 Best 8 roots Westbury turnips D Patterson \$3; 2d J Carey \$2; 3d W J Thompson \$1.  
 Best 8 roots white globe turnips J J Flate, E Flamboro', \$3; 2d J Hewer \$2; 3d A Gerrie, Dundas, \$1.  
 Best 8 roots grey stone turnips J Card \$3; 2d F H Miller, W Flamboro', \$2; 3d R Carey \$1.  
 Best 8 roots Aberdeen yellows R Carey \$3; 2d J Hewer \$2; 3d J Card \$1.  
 Best 12 roots red carrots W Burgess \$3; 2d N Ryckman \$2; 3d J Carey \$1.  
 Best 12 roots white or Belgian carrots N Ryckman \$3; 2d W Burgess \$2; 3d J Carey \$1.  
 Best 8 roots mangel-wurtzel, long red, W Burgess \$3; 2d Carey \$2; 3d S Platt, E Flamboro', \$1.  
 Best 8 roots red globe mangel-wurtzel W Burgess \$3; 2d C E Brown, Mimico, \$2; 3d R Carey \$1.  
 Best 8 roots yellow globe mangel-wurtzel W Acland, Wellington Square, \$3; 2d J Drew, Clifton, \$2; 3d J Retzner, West Flamboro', \$1.  
 Best 8 roots long yellow mangel-wurtzel W Burgess \$2; 2d J Drew \$2; 3d C E Brown \$1.  
 Best 8 roots khol rohi W Burgess \$3; 2d J Carey \$2; 3d A W Taylor \$1.  
 Best 8 roots white sugar beet W Burgess \$3; 2d S Platt \$2; 3d W Acland \$1.  
 Best 12 roots parsnips N Ryckman \$3; 2d J Carey \$2; 3d W Burgess, trans.  
 Best 12 roots chicory J Carey \$3; 2d C Foster \$2; 3d W Burgess, trans.  
 Best 2 large squashes for canteen J Curnig, W Flamboro', \$3; 2d L Lamont Barber \$2.  
 Best 4 common yellow field pumpkins E Blagden, \$3; 2d J L Harning, W Flamboro', \$2; 3d H Drummond, E Flamboro', trans.  
 Extras—J S Armstrong, Eramosa; D Patterson, Beverley; J Hewer, Guelph; N Ryckman.

DAIRY PRODUCTS, ETC.

CLASS 34—DAIRY PRODUCTS, ETC.

Best 3 firkins of butter fitted for exportation, not less than 56 lbs in each firkin, made by the exhibitor, J McLung, Lotto \$20.  
 Best firkin of butter in shipping order, not less than 56 lbs, J and R McQueen, Pilkington, \$14; 2d J McLung \$12; 3d M McArthur, Lobo, \$10; 4th J Liddle, Ancaster, \$8; 5th H E Bush, Lunenburg, Stormont, \$6; 6th D Clark, Morristown, \$4.  
 Best butter not less than 28 lbs in firkins, crocks or tubs J McLung \$10; 2d J Liddle \$8; 3d P Lumpman, Ancaster, \$6; 4th W Herbison, Goderich, \$5; 5th J Vassie, Dundas, \$4; 6th G McCulloch, Dundas, \$2.  
 Best 6 factory cheeses not less than 45 lbs each with statement of number of cows and management of factory W Dunn, North Oxford, \$70; 2d R A Agur, Westminster, \$40; 3d R R Crampton, Oneida, \$25; 4th Howell and Mullin, South Dumfries \$15.  
 Best cheese, dairy, not less than 30 lbs J Calder, Blandford, \$12; 2d G H Clark, Haldimand, \$10; 3d M Ballantyne, Blanchard, \$8; 4th John Rowat, North Dorchester, \$6.  
 Best 2 Canada Stilton cheeses not less than 8 lbs each Mrs E Parsons, Guelph, \$8; 2d J Calder, Blandford, \$6; 3d Howell and Mullin, South Dumfries, \$4.  
 Best 3 Canada Gloucester or Wiltshire loaf or truckle cheeses not less than 8 lbs each J Calder \$8; 2d M Ballantyne \$6; 3d J Rowat \$4.

CLASS 35—HONEY, SUGAR, BACON, ETC.

Best honey in the comb not less than 10 lbs McEvoy, Woodburn, \$4; 2d J McEvoy, Woodburn, \$2; 3d W D Stoddard, Bradford, \$1; 4th D H Huffman, Burford, trans.  
 Best jar of clear honey G S Simpson, Falkland, \$4; 2d W McEvoy \$2; 3d J McEvoy \$1; 4th W D Stoddard, trans.  
 Best 30 lbs maple sugar, soft or powdered, Platt Henman, Haldimand, \$2.  
 Best side of cured bacon N Bathel, Thorold, \$4; 2d W Harrison, Cooksville, \$3; 3d J Wilson, Hamilton, \$2.  
 Best ham, cured, S Barber, Guelph; 2d S Barber \$2; 3d J Wilson \$1.

CLASS 36—DOMESTIC WINES.

Professional and Commercial List.  
 Best half-dozen dry wines W Haskins, Hamilton, \$12; 2d J Forsyth, York township, \$8.  
 Best half-dozen sweet wine W Haskins \$7; 2d Vincent Casci, Toronto, \$5.  
 Best half-dozen sparkling wine W Haskins \$12; 2d V Casci, \$8.  
 Best half-dozen Canada claret V Casci \$7; 2d J Daly, Salford, \$5.

General List, Professional and Commercial Winemakers excluded.  
 Best 3 bottles of dry wine, R Y Howes, Hamilton, \$7; 2d C Campbell, Niagara, \$4; 3d H Lutz, Salford, \$3.  
 Best 3 bottles of dry wine, red, A G Howes \$7; 2d H Lutz \$4; 3d J Symonds \$3.  
 Best 3 bottles sweet wine, white, J Forsyth, York township, \$5; 2d H Lutz \$3.  
 Best 3 bottles any other sort grape wine H Lutz \$5; Miss A Lyons, Dundas, \$3.  
 Extras—Miss Gilkinson, currant wine; D Clark, ginger liqueur and red currant wine; W H McDougall & Co, Toronto, wild cherry wine.

HORTICULTURAL DEPARTMENT.

Fruits, Vegetables, Plants and Flowers.

CLASS 37—FRUIT—PROFESSIONAL NURSERYMEN'S LIST.  
 Best 30 varieties of apples, correctly named, 6 of each A M Smith & Co, Grimsby, \$12; 2d C Arnold, Paris, \$8.  
 Best 20 varieties of apples, correctly named, 6 of each A M Smith & Co \$8; 2d C Arnold \$2.  
 Best 6 varieties of fall table apples, named, 6 of each A M Smith & Co \$3; 2d C Arnold \$2.  
 Best 6 varieties fall cooking apples, named, 6 of each A M Smith & Co \$3; 2d N Sunley, Guelph, \$2.  
 Best 6 varieties of winter table apples, named, 6 of each A M Smith & Co \$3; 2d C Arnold \$2.  
 Best 6 varieties of winter cooking apples, named, 6 of each A M Smith & Co \$3; 2d C Arnold \$2.  
 Best collection 15 varieties pears, correctly named, 3 of each A M Smith & Co \$8.  
 Best 6 varieties pears, correctly named, 3 of each A M Smith & Co \$5; 2d N Sunley \$3.

Best collection 6 varieties plums, correctly named, 6 of each N Sunley \$5; 2d C Arnold \$3.  
 Best 3 varieties plums, correctly named, 6 of each N Sunley \$3; 2d C Arnold \$2.  
 Best collection peaches, correctly named, 6 varieties A M Smith and Co \$5; 2d J C Kilborn \$3.  
 Best 3 varieties peaches, 6 of each A M Smith and Co \$3; 2d J C Kilborn \$2.  
 Best collection grapes, grown in open air, 12 varieties, 2 bunches each, named A M Smith and Co \$8; 2d C Arnold \$6.  
 Best collection grapes, 6 varieties, grown in open air, 2 bunches each, correctly named A M Smith and Co \$5; 2d C Arnold \$3.  
 Best 3 varieties black grapes, grown in open air, 2 bunches each, correctly named J C Kilborn \$3; 2d A M Smith and Co \$2.  
 Best 3 varieties grapes any other color, grown in open air, 2 bunches each, correctly named A M Smith and Co \$3; 2d J C Kilborn \$2.  
 Best display of fruit, the growth of exhibitor, distinct from other entries, 3 specimens of each sort, named, grown under glass and in open air A M Smith and Co \$10.  
 Best collection of 1 dozen each of 6 varieties of crabs, cultivated A M Smith and Co \$3.

CLASS 40—GARDEN VEGETABLES.

Best 12 roots of salsify A Taylor, Barton, \$2; 2d R Pollock, Barton, \$1.  
 Best 3 heads cauliflower W Syer, Barton, \$2; 2d A Williams, Hamilton, \$1.50; 3d R Pollock \$1.  
 Best 3 heads cabbage, Early York, S Frickler, Hamilton, \$2; 2d J Wild, Hamilton, \$1.  
 Best 3 heads cabbage, Wilmingsstadt, J Lewis, Hamilton, \$2; 2d J Thomas, Hamilton, \$1.  
 Best 3 heads cabbage, Oxheart, D Lamont, Barton, \$2; 2d W Burgess, Barton, \$1.  
 Best 3 heads cabbage, St Dennis, A Taylor \$2; 2d A Williams \$1.  
 Best 3 heads cabbage, Quintal, R Pollock \$2; 2d W Burgess \$1.  
 Best 3 heads cabbage, Drumhead, A Williams \$2; 2d Mrs Grant, Hamilton, \$1.  
 Best 4 sorts winter cabbage including Savoys, 1 of each sort A Williams \$3; 2d A Taylor \$2.  
 Best 3 heads red cabbage R Pollock \$2; 2d D Lamont \$1.50.  
 Best 12 carrots for table, long red, A Taylor \$2; 2d A Williams \$1.50; 3d J Drew, Clifton, \$1.  
 Best 12 intermediate or half long carrots A Taylor \$2; 2d J Davis, Hamilton, \$1.50; 3d A Williams \$1.  
 Best 12 early horn carrots J Davis \$2; 2 A Taylor \$1.50 3d D Ewing, Barton, \$1.  
 Best 12 table parsnips W Burgess \$2; 2d A Pollock \$1.50; 3d A Ryckman, W Flamboro', \$1.  
 Best 6 blood beets, long, A Crumb \$2; 2d J Rush, Mimico, \$1.50; 3d H Drummond, E Flamboro', \$1.  
 Best 6 turnip-rooted beets, J Thomas, Hamilton \$2; 2d D Burnett \$1.50; 3d J A Bruce & Co \$1.  
 Best peck of white onions, W Burgess \$2; 2d R Pollock \$1.50; 3d C E Brown, Mimico \$1.  
 Best peck of yellow onions, R Pollock \$2; 2d W Burgess \$1.50; 3d J Drew, Clifton \$1.  
 Best peck red onions, W Burgess \$2; 2d R Pollock \$1.50; 3d D Burnett \$1.  
 Best 2 quarts pickling onions, R W Taylor \$1 50; 2d R Pollock \$1.  
 Best 12 white turnips, table, R Pollock \$2; 2d A Williams \$1.50; 3d C Foster, East Flamboro \$1.  
 Best 12 yellow turnips, table, R Pollock \$2; 2d A Williams \$1.50; 3d C Foster, Millgrove \$1.  
 Best 12 ears sweet corn fit for the table, John Lewis, Hamilton \$2; 2d J A Bruce & Co, Hamilton \$1.50; 3d J Thomas, Hamilton \$1.  
 Best quart French beans, R Pollock \$2; 2d D Ewing, Barton \$1.  
 Best 6 winter radish, R Pollock \$2; 2d C Foster \$1.  
 Best 3 Scotch kale, A W Taylor \$2; 2d S Burner, Hamilton \$1.  
 Best collection pot and sweet herbs, A W Taylor \$2; 2d E C Fernside \$1.  
 Best 6 varieties of potatoes for garden cultivation, half-peck of each sort, named, C Foster \$4; 2d A Williams \$3; 3d E C Fernside \$2.  
 Best 3 varieties table squashes, D Burnett \$2; 2d J Thomas \$1.50; 3d D Ewing \$1.  
 Best 2 vegetable marrow, A Williams \$2; 2d Jas Wyld \$1.  
 Best and greatest variety of vegetables, distinct from other entries, each kind named, A W Taylor \$4; 2d R Pollock \$3.

VICK'S FLORAL PREMIUMS.

Special prizes offered by James Vick, Esq., Rochester, N. Y., for the purpose of encouraging the culture and love of flowers.  
 Best collection of cut flowers, W Fearnside \$20; 2d P B Barnard \$10; 3d C H Gloch, Brantford \$5; 4th W Fricker, floral chromo. These prizes are offered to amateurs only.  
 Best ornamental floral work, either bouquet or floral ornament, E J Townsend \$5.  
 Extras—N Lumley, Guelph, for three collections of flowers.

A new enemy of fruit has made its appearance in the orchard of Mr. John Keisling, of Bengal Township, Mich., and other orchards in that locality, in the form of a green worm nearly three inches in length, and about three-fourths of an inch in diameter, with horny projections at either end—those at one end being red, and the other yellow. These mammoth worms will strip the leaves from an apple or plum tree in a very short space of time.

An English paper says the trade in Canadian horses and cattle bids fair to affect the home market, as it is increasing in importance. Recently the Canadian steamer Dominion landed at Liverpool 110 very fine beasts in splendid condition. The Dominion also landed three thoroughbred, nine harness and nine cart horses, all very fine. The last importation of these horses brought, by auction, from 75 to 100 guineas each.

### Stock Notes.

By our late English exchanges we note that at the sale of the Kilbow Herd, belonging to John Foster, Esq., on the 15th Sept., the following stock was purchased by Mr. John Hope:—

Docile, roan, calved 22nd February, 1874, for 205 guineas. Desting, roan, calved 3rd May, 1874, 170 guineas. Duchess of Clarence 12th, roan, 20th January, 1875, 210 guineas.

The following bulls were secured by Prof. Lawson, and go to Nova Scotia:—

Lord of Braemar (Earl of Dunmore's), red, calved 20th January, 1875, for 71 guineas. Wetherby Star (Duke of Devonshire's), roan, calved 11th May, 1875, 63 guineas.

On the 7th ult., at the sale of the Brayton Herd, belonging to Sir Wilfred Lawson, the well known shorthorn breeder, Mr. J. Hope secured Waterloo 36th, red and white, calved 24th Aug., 1872, for 120 guineas; and Prof. Lawson, Cambridge Wit, roan, calved 6th July, 1869, for 50 guineas; and Fortune Teller, red and a little white, calved 8th March, 1874, for 41 guineas.

On the 8th ult., at the sale of the Newbie shorthorn herd, Mr. J. Hope purchased Bessie Lee, calved March, 1871, for 31 guineas.

The Canada West Farm Stock Association have just imported for their Bow Park Herd

Polly Gwynne 9th, and her roan cow calf Elmhurst Gwynne, with Lady Fawsley 6th, and Lady Geneva Fawsley, from the celebrated Elmhurst Herd; 38th Duke of Oxford, with his foster mother, from Holker, and Royal Kent Charmer, purchased at Mr. Slye's sale. Two Clydesdales (an entire co't and filly), both two years old, and 50 shearing Cotswold ewes and two rams.

#### MORE THOROUGHbred CATTLE FOR CANADA.

A consignment of thoroughbred cattle left Liverpool for Nova Scotia on the 16th inst., from Mr. Fleming, of Strathaven, whose Ayrshires were liked so well last year. There are some six or eight animals of that breed, including bulls, cows, and heifers. Mr. Fleming, in writing about them, says he made a selection just to suit the Nova Scotia taste. Mr. Brebner, the manager of Her Majesty's Norfolk Farm, near Windsor, has selected for us two Devon heifers from the Royal herd, also a number of Berkshire pigs of the Windsor strain, and, at last writing he was endeavoring to obtain a few Southdown rams really worth sending. Mr. Cole, of Cirencester, has selected five Cotswold rams from one of the largest and finest Cotswold flocks on the Cotswold Hills. The Earl of Ellesmere's manager has set aside three splendid large sows of the finest of all strains of the Yorkshire breed, the same as the young ones that excited so much admiration last year. One of the principal features of the importation will be the shorthorns. They will be selected by Mr. Thornton, of Princess Street, Hanover Square, and as authority was given him (if necessary to secure really good animals) to reach a higher average price than was paid last year, there is no doubt but that an excellent selection has been made. There will be at least eight shorthorns in the importation—four bulls and four cows. On arrival at Halifax the cattle will be conveyed at once to Truro, kept till the time of the Provincial Exhibition, in the second week of October, and then sold at public auction in the same manner as former importations.

The old established firm of Ellwanger & Barry, Rochester, N. Y., send their Fall Catalogue of fruits, ornamental trees and plants. It is hardly necessary to state that their stock is the most extensive in the U. S.; that they bear the highest character as nurserymen, and that their orders are most faithfully filled. By the way, their display of fruits at the Centennial has eclipsed all competitors in their line, and has received marked distinction.

F. K. Phoenix, Bloomington, Ill., send their catalogue of tulips, hyacinths, crocus, &c.

Hovey & Co., of Boston, Mass., also in their Bulb Catalogue announce novelties of great merit. If you wish beautiful winter blooming plants, spring flowering bulbs, &c., send for any of the above catalogues.

### The Foot and Mouth Disease.

To the Managers of the Globe, Mail, Free Press, Advertiser and other papers:

In our last issue we requested that they should correct the erroneous impression caused by them regarding our position about the Foot and Mouth Disease. We again respectfully request them to make proper corrections.

### To Our Correspondents and Readers.

The FARMER'S ADVOCATE has hitherto been favored with contributions to its columns from those for whom it is designed—the farmers of the country. We hope we shall have the pleasure of adding to our list of contributors many new names. Reports of experiments in farming; of the trial of new seeds; of the yield of different varieties of farm produce; of meetings of farmers' clubs, granges and leagues, for the discussion of agricultural subjects—all add greatly to the value of an agricultural paper. We hope to make the ADVOCATE more than ever a thoroughly Canadian agricultural paper.

Our columns are still open to farmers to express their opinions on Protection or Free Trade. We have had several contributions in favor of Protection. We must request any of our readers who may be favorable to Free Trade to express their opinions through the ADVOCATE. It is a question of the greatest interest to us as farmers—not less than to any other class.

### The Centennial Exhibition—Agricultural Department.

An exhibition of roots, grown for cattle feeding, onions, potatoes, &c., will be held in the Pomological Department of the Agricultural Building, from Oct. 2nd to 7th, inclusive. Roots, Bulls and Tubers may be exhibited in lots of nine specimens of each variety. The awards will consist of a special report by the judges, and a diploma and bronze medal from the U. S. Centennial Commission.

Any person sending in *Four* new subscribers for one year will receive a copy of the ADVOCATE *Free* for the balance of 1876 and the year 1877. Send them along with the cash.

Agents wanted to canvass every county in the Dominion. Send for circulars, posters and sample copies.

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### Notice to Subscribers in Prince Edward Island.

Our subscribers in Prince Edward Island will kindly notice that Mr. H. A. Harvie, Book Dealer, of Charlottetown, is authorized to receive subscriptions for the FARMER'S ADVOCATE, and to grant receipts for the same. He will be pleased to receive new subscribers, and their subscriptions can commence with any month desired.

### The Canada Agricultural Insurance Company.

The attention of our readers is directed to the advertisement of the above Company, which appears in this issue. Its capital of \$1,000,000, held by our leading and most reliable men throughout the Dominion, is sufficient guarantee of prompt payment of loss and of ability to meet all calls. Its business is confined to the Dominion. The Company makes a speciality of insuring only farm property, private residences, and non-hazardous property against fire and lightning, and refuses mills, shops, tanneries and hotels, and such risks. It pays losses by lightning, whether a fire ensues or not; and live stock is insured against death by lightning, either in the building or elsewhere on the premises.

Farmers are really neglecting their best interests if they have not their premises insured, and in a company offering good security.

We have much pleasure in recommending the Canada Agricultural Insurance Company to our friends. Every information can be procured from W. T. Fish, Esq., General Agent, at Cobourg, Ont., or from the head office, Montreal, Que.

### Additional Correspondence.

SIR,—We have mostly finished harvesting. Both hay and grain crops are very good. Wheat is not much sown here, but what we have is very good. Potatoes never were better; turnips are looking splendid; corn is going to be good; oats are good, the Hulless especially proving good, and superceding the old kind. In spite of the backward spring we never had a more bountiful harvest. J. B., Richmond, P. Q.

[Communications to the FARMER'S ADVOCATE should be sent in such time that we may have them ten days before the first of the month. Your section of country seems to be peculiarly favored in good crops this season. Hulless oats, as far as we have been able to ascertain, have proved a great disappointment to every one who tried them. We always had doubts of their being valuable, and our doubts have grown into conviction. We have had no reports favorable to them but this one from you.—Ed.]

SIR,—Will you give me information as regards the use of superphosphate. Would it be beneficial to sandy soil; how is the best way to use it, and will it pay? J. M. L., Strathroy.

[Perhaps some of our subscribers who have used it would oblige by giving their experience with it.—Ed.]

SIR,—In your next issue please tell me if rye is good for fattening pigs, if so, how should it be used? Also, does plowing under buckwheat renovate a sandy soil, and what do you consider the best plan of manuring such land? Lakefield, 12th Sept.

[Rye is good for fattening pigs. From its nutritive properties it must be good food for animals either growing or fattening. It is a good food, though not equal to oats, for horses, for which it is much used in some countries. It is used to a great extent for bread by the rural population of the North of Europe; and even in good wheat growing countries it is also used for bread, but generally mixed for the purpose with wheat flour. It is said by farmers and farm laborers to make better bread, more nutritive and strengthening than wheat flour by itself. To feed rye or other grain to pigs, it is well to either crush it or cook it. We always found it profitable, in feeding pigs with the coarser grain, as rye, or with the light grain from the fanning mill, to feed it steamed with roots.

Ploughing under buckwheat serves to renovate a sandy soil, though it is not so fertilizing as clover. Sandy soils are quickly exhausted of humus by cropping, and green manuring serves to restore it. Though clover is more enriching, buckwheat has some peculiar advantages. It will give a crop on worn out soil (though it may be a light one) where clover, if sowed, would be a failure, and by being ploughed under may be a preparation for clover. We prefer manuring a sandy soil with a root crop, and seeding with clover the first succeeding crop. If your sandy soil be pasture land top dress it in the fall.—Ed.]

Small hogs of from 200 to 300 pounds' weight command a better price in English markets than larger ones, which certainly shows that the pork eaters on the other side of the Atlantic know the difference between a coarse and fine grained article.

### Commercial.

#### EUROPEAN MARKETS.

The tone of the English market is firmer and more buoyant than it has been for some time. The receipts continue large, yet the improvement in the price of wheat, flour and provisions, except pork, is reassuring. The improvement in prices and the greater demand for breadstuffs will stimulate the sending forward of larger shipments.

#### CANADIAN MARKETS.

Montreal.—In wheat, prices nominal; flour, fine, \$4.00; spring extra, \$5.10 to \$5.70; butter, 18c. to 24c.; cheese, 11c. to 12c.

Toronto.—Flour in demand at downward prices; wheat, \$1.10 to \$1.15; oats, 35c.; barley, 65c. for No. 2, and 77c. for No. 1.

#### AMERICAN MARKETS.

New York.—Wheat quiet and firm, \$1.15 to \$1.22; oats, 33c. to 52c.; corn, 57c. to 58c.; butter, 22c. to 36c.

Chicago.—Wheat, \$1.08 to \$1.10; barley, 86c.

Ottawa.—Wheat, \$1.07 to \$1.12; peas, 50c.; oats, 35c.; beans, \$1.10 to \$1.10; butter, 20c. to 25c.

London, Sept., 30.—Dehl wheat, per cental, \$1.85 to \$1.88; Treadwell do., \$1.75 to \$1.88; Red Winter do., \$1.60 to \$1.81; Spring Wheat, \$1.65 to \$1.78; barley, \$1.00 to \$1.58; peas, \$1.12 to \$1.18; oats, 96c. to \$1.00; corn, \$1.00; butter, 18c. to 20c.; potatoes, 50c. per bush; apples, 20c. to 40c.; hay, \$8.00 to \$10.00 per ton.

The feeling of the market is firm and buoyant.