

the FARMER'S ADVOCATE

AND HOME MAGAZINE

FOUNDED, 1866.
WILLIAM WELD, - - EDITOR AND PROPRIETOR.

VOL. XIX.

LONDON, ONT., SEPTEMBER, 1884.

Whole No. 225.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

Circulation over 20,000 Copies.

The FARMER'S ADVOCATE and HOME MAGAZINE

Is published on or about the 1st of each month, is handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for dairymen, for farmers, gardeners or stockmen, of any publication in Canada.

Any intending subscriber should send for a sample copy.

TERMS:

1. \$1.00 per year, in advance, postpaid; \$1.25 in arrears. Single copies, 10 cents each, postage prepaid.
2. Subscriptions can commence with any month.
3. Remittances at the risk of the subscriber unless made by registered letter or money order.
4. Subscribers who desire to change their P. O. address will send both old and new address.
5. The FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance, and all payment of arrearsages is made as required by law.
6. DISCONTINUANCES.—Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped. All arrearsages must be paid.
7. The date against your name shows to what time your subscription is paid.

The FARMER'S ADVOCATE has the largest circulation among the best people in Canada. Its advertisements are reliable and are read. Send for copy of our Advertising Rates.

Address—
THE FARMER'S ADVOCATE,
360 Richmond Street,
LONDON, ONT., CANADA.

Subscribers to the FARMER'S ADVOCATE visiting London will find themselves welcome at our editorial rooms.

FARMER'S HAND BOOK FOR 1885 will be issued early in December next; price, paper, 25c., and in cloth covers 50c. each. Orders can now be sent in.

We are now prepared to get up first-class engravings of live stock, buildings, implements, etc. These illustrations will be brought out by the best artists and engravers in Canada, and inserted, with appropriate descriptions, in reading columns of the ADVOCATE. Satisfaction guaranteed; extra copies supplied. Write for further and full particulars.

The Ladies' Manual of Fancy Work.

The price of above useful work is not 30c. as stated by a printer's error in July number, but 50c. per mail.

Our Monthly Prize Essay.

A prize of \$5.00 will be given for the best essay on "Women as Farmers." Essay to be handed in not later than Oct. 15.

A prize of \$5.00 will also be given for the best essay on "The best Methods of Encouraging Tree-Planting on Farms." Essay to be handed in not later than Nov. 15.

1885.

The remaining numbers of the FARMER'S ADVOCATE for the present year will be sent free to those new subscribers for 1885 who send in their names now.

Choice Premiums.

Our subscribers should read our list of choice, new premiums offered in another column of this issue for sending in new subscribers. They consist of the latest varieties of fall wheat, strawberry plants, flower seeds, etc.

Correspondents.

Correspondents from all sections are cordially invited to send us their favors, when they have something to say; short, practical and readable articles, as well as seasonable ones, are always acceptable.

We want live, energetic agents in every county to canvas for subscribers to our paper, believing it will be of mutual advantage to patrons as well as to publisher. We pay a liberal commission to agents who devote their time to our work. Write about it and send for specimen copies. Address—
THE FARMER'S ADVOCATE SUBSCRIPTION DEPT.,
London, Ont.

Sheaves from Our Cleaner.

- Waste no straw.
- Trees draw rain.
- Study boom collapses.
- Haul dry muck for litter.
- Read about the fall shows.
- Pay as you go; no pay, no go.
- Talk farmer's clubs, not politics.
- Exercise your bulls and stallions.
- Inquire into the forestry question.
- Don't lounge about town when marketing your grain.
- Don't learn to go to the exhibitions unless you go to learn.
- Don't depend upon boom prices for your thoroughbreds this fall.
- If you have \$5,000, invest it in a farm and not in a cow. In other words, run no risks.

The Farmer's Advocate for 1885.

We are now approaching the completion of another volume, and it is with pleasure we look back and notice the great improvements that have been made each year in this journal. We are happy in being able to state that the subscription list continues to increase, and therefore enables us to still further improve and we hope to make Volume 20 better than any of its predecessors. The FARMER'S ADVOCATE being the only really independent agricultural journal published in the Dominion, it has never hesitated to expose frauds and uphold the farmers' interests, notwithstanding the influence that has been brought to bear upon it to try and suppress the truth; and the endeavors made by interested parties to deny the accuracy of the statements made in its pages, the increased circulation proves that the plain, unbiased farmer appreciates the efforts that have been made in his behalf. Being pledged to neither political party nor secret organization, it is justly looked up to as the leading agricultural authority in Canada. The articles in its pages are extensively copied by the press in the United States, Europe, and even in the antipodes, thus tending to prove the superiority of the FARMER'S ADVOCATE. It has been truthfully remarked that wherever the FARMER'S ADVOCATE is read the most improved farming is to be found.

The correspondence columns are open to our subscribers for the discussion of any subject interesting, and for the benefit of agriculture.

The prize essays which appear from time to time are upon subjects of vital interest to the agriculturist, being written by farmers or their families, and based upon actual experience.

It is very gratifying to us to know that during the past twenty years most of the best grain, potatoes, &c., which have been of such immense value to the country, were first introduced and distributed as premiums by the publisher of this journal, who hopes to be able in the near future to still add to the list. The proprietor being a farmer, knows exactly the requirements of the farmers, and is always working for their welfare, and not for speculators.

The Home Department contains reading matter of the most suitable character, causing it to be eagerly sought for both by old and young.

The advertisements which appear in its columns are of the highest standard, and form a reference for the wants of the farmer, thus rendering it of additional value to both subscribers and advertisers.

Editorial.

Is a Breeder's Good Name Better than Pedigree?

BY MARSHFIELD.

What constitutes a breeder? If every man who breeds stock were a breeder there would be a revolution in our beefing and dairying industries. There are many preliminaries to be learned before the art of breeding should be put into practice,—such for example as the art of feeding and management. Scrub stock is the legitimate offspring of scrub pastures and meadows, and these again can often be traced back to scrub intelligence. The alphabet of the art of breeding is a knowledge of the best methods of rearing animals for the various objects sought, and then follows skill in the principles of selection. The best test of the breeder is the improvement of his herd with each succeeding generation. To attempt this with an entire dependence upon pedigree would be a most risky undertaking. Pedigree is book-breeding, and yet farmers scoff at the idea of book-farming. The breeder sees evidence of pedigree in every movement and in every point of the well-bred animal; even records are of no consequence to him, these also being delineated on its features. Stockmen, judges at fairs and agricultural college experts have yet much to learn before they make us a nation of breeders. For educational purposes, points and other indications of performances should be weighed on the balance with the practical results. Many of our so-called experts have mistaken their calling; they judge by current prejudices instead of substantial realities. The time is fast approaching when our tastes will become so perfect that we cannot distinguish beauty from utility; the unsightly, ill-favored breed of to-day will be the favorite of to-morrow. The days of judging milk animals by beef points will soon be numbered. Call it by what name we may, the principle inculcated upon our minds by our show experts is that of breeding for tallow alone; they have merely forgotten that the days of tallow candles now belong to the dark ages. I might even go a step further and say that we are breeding for oleomargarine. What is the result? "Oleo. must go," they pitifully exclaim; it is ruining our dairying interests; laws must be passed for its suppression, and an army of analysts and other government officials must be enlisted for the purpose of executing the law. All these ills arise from awarding prizes on a false principle. Even the municipalities sometimes become affected by the scourge, offering to duplicate the prizes given at the big shows, thereby duplicating the intensity of the madness.

The real secret of the pedigree boom is that a vast majority of our stockmen have gone into the business without first studying the preliminaries. The result is that many of our scrubs are becoming scrubber, and many of our well-bred animals are degenerating into scrubs faster than they can be kept improved by fresh importations. We have the material all ready; the builders are wanting. Let the breeder's good name be pedigree. In a few short years he will know the great grand sires and dams of all his herd, and then most danger of reversion will be past. His self-interest will be to pro-

tect his good name—like men in other pursuits. Granting that pedigree is a protection against liability to variation from a well-marked ancestry, let it be thoroughly understood that under our average mode of selection and management, there is a greater tendency to variation than there would be under a complete system of selection and management with unpedigreed animals. Besides, why not protect the farmer all round? Why should not the dishonest seedsmen who defraud the farmer by changing the name of his wheat, be called upon to produce his pedigree? There is scarcely an article which we eat, drink or wear but should be pedigreed on the same principle—even for stronger reasons; for the practiced eye can more easily detect a false pedigree than a false variety of seed or a false superphosphate. Pedigree is the parent of booms with all their attendant iniquities, and so long as it is encouraged, the breeding art will remain undeveloped. If the names of England's aristocracy are to be perpetuated through our herds and flocks, let it not be at our expense. Lock up the pedigree libraries.

Preservation of Our Forests.

We have been honored with a visit from Mr. R. W. Phipps, clerk of forest preservation, who is employed by the Ontario Government to conduct the bureau of forestry lately established by them. At the request of the Provincial Treasurer, he has addressed a circular to each of the county councils urging them to take the subject into careful consideration, and forward him the conclusions they shall have arrived at. Having dilated on the necessity of checking the rapid destruction of our forests, he dwells on the common practice of allowing cattle free access to our timbered lands, whereby they destroy the underbrush, and the larger trees become more and more subjected to the mercy of the winds. Grass grows up and every influence tends to aid the destructive hand of the axeman.

These considerations have led to the suggestion that an act be passed under which any farmer by fencing in his bush or any portion of it against the ingress of stock, may enjoy tax-exemption of such enclosures.

We have on numerous occasions urged the necessity of encouraging tree-planting in every possible manner; but the matter must be considered from the beginning in all its bearings, else endless grievances may arise. There is scarcely a farmer in the Province who has not made some mistake in the laying out and clearing of his land, and this has arisen from the fact that he did not at first see far enough into the future. Similarly we already see evidence of blundering in our mode of tree-planting. In our tours through the country we observe many trees planted along the road-sides, some planted inside the fences, others outside, and where snake fences exist they are planted on the line, one tree in each fence corner. In the west the trees are mostly all maples, planted at very irregular distances apart, some growing in soils which would be better adapted to other kinds of trees. The young saplings are usually procured from neighbors who have been far-seeing enough to fence in their woods several years ago, and we have seen some farmers who have

saplings enough to supply their whole neighborhood.

It would no doubt be a laudable thing to agitate the encouragement of enclosed forests, and even the planting of seeds or saplings in those portions of our forests in which the trees have been too extensively culled out; but care must be taken that this mode will not be a source of discouragement to other branches of forestry, or clash with the scope of the question as a whole. If the Government can do anything to stimulate individual exertion, it will possibly be better than too long neglect; but Governments have yet to show that they are the most enterprising portions of the community. If an enterprise fails under the direction of the Government that is no proof that there would also have been a failure under private enterprise. Politically speaking, the magnitude of an undertaking bears a direct relation to the number of office-seekers amongst the members of the party in power.

The great objection to the scheme advocated by Mr. Phipps is the difficulty of enforcing such a law. Owing to a liberal culling out of the timber, the most of our wooded land is luxuriant with grass, and when it is considered that a great many farmers attempt to graze a cattle beast on every acre of shelterless pasture, the temptation to turn the herd into the woods for grass and shelter would be so strong that the law would be as dead a letter as the lately passed act relating to the destruction of noxious weeds. Besides, large acreages of bush lands are already fenced in, and their profits as pasture grounds are a much greater sum than any tax that would likely be remitted. It would require a whole army of Government officials to enforce such a law. These remarks, however, apply only to the older settled districts; where a large percentage of the district is wooded there is still less necessity for such a measure. Farmers who take no interest in posterity cannot be forced to do so by legislation.

There is another aspect of the question which demands special consideration. Is the question of tree-planting for wind breaks to be totally ignored? If not, what portion of the farm should remain wooded, and what area should be allotted to wind breaks? From which of the two systems are we to derive the chief timber supply of the future? The one question is so interwoven with the other that they cannot be discussed separately. If the one system is to receive Government support, why not the other?

It seems to us that if private capital were invested for the maintenance of nurseries, saplings of every description of trees could be supplied at very small cost, and planted either on sparely wooded lands, or in rows between fields as wind breaks. In this manner a uniform system of planting could be established throughout the Province, and such trees could be selected and planted by experts in the business as would be adapted to the climatic conditions and to the soil and aspect of the different localities.

The commonest kinds of weeds which abound in Manitoba are wild buckwheat, lambs' quarter, wild sunflower, cockle, mustard, wild oats and Canada thistle. The law relating to their destruction is vigorously carried into execution

The Exhibitions.

The Industrial, which will be held in Toronto 10-20 Sept., bids fair to be quite as successful as any previous show. It has always drawn an immense number of exhibitors and visitors, and the managers are putting forth every effort to make the affair even more successful than any of its predecessors. The British Association, which will visit this continent in its official capacity, will attend the exhibition. This is probably the largest and most important body of scientists that has ever visited this continent, and it is expected that no less than one thousand members will leave Europe to attend the annual meeting at Montreal.

The Western Fair Board are making unusual exertions to make the London Exhibition more attractive than ever. It has always been one of the most popular agricultural exhibitions in Canada. Its convenient location and superior facilities have added greatly to its popularity. London is admirably situated with regard to railway conveniences, trains arriving and leaving from and to all quarters at all times of the day, and the city is in the centre of one of the best agricultural districts in Canada. Fuller particulars will be found in our advertising columns.

The Provincial to be held at Ottawa from the 5th to 13th Sept., will receive \$5,000 from the Dominion Government, and this amount judiciously applied, together with the Ontario Government grant, should insure grand success, and enable the directors to offer such a list of prizes as will create keen competition amongst exhibitors, more especially when it is considered that arrangements have been made for greatly reduced rates on the Grand Trunk Railway.

How to Save the Manure.

NO. I.

One of the greatest losses which occurs on the farm is the prevailing practice of treating the farm-yard manure. Before the farmer makes up his mind by which method he should restore the fertility of his land, whether by an improved mode of manipulating the manure heap or by the use of special fertilizers, he should make a careful calculation as to the waste incurred, so that he will be able to form a guide as to the amount of expense he will be justified in incurring. Not many years ago the value of farm-yard manure based on chemical analysis was ignored by our farmers, but now that artificial fertilizers, if judiciously applied, have been proved to be a profitable investment, the chemical standard can no longer be rejected; for if the farmer allows so much nitrogen, phosphoric acid and potash to run to waste in the form of farm-yard manure, he must pay a marketable price, based on chemical analysis, for these identical materials in the artificial form. But the question to be settled is, Will the price of the extra labor incurred in saving the farm-yard manure pay for an equivalent in artificial fertilizers? This is what we wish particularly to introduce to the farmer's notice in such a manner that he will be able to make calculations to suit his own particular circumstances.

Analysts have found that the difference between the values of the solid and the liquid excrements of cattle is but a trifle, the small bal-

ance being in favor of the solid voidings. Farmers usually urge that farm-yard manure is the best kind of fertilizer, as it contains all the elements necessary for plant food. This would be sound logic providing none of the constituents were permitted to run to waste; but some portions being more soluble and volatile than others, it is plain that manure, under the existing mode of treatment, cannot preserve its well balanced character. The urine of our domesticated animals holds nearly all the nitrogenous compounds, with some phosphoric acid, potash and soda, and all the urine is usually wasted, so that our farm-yard manure is deficient in this most valuable part of plant food. The solids hold the phosphoric acid, lime and magnesia. It has been shown by analysis that a ton of liquid manure contains 17½ lbs. of nitrogen, 10 lbs. of phosphoric acid and nearly 16 lbs. of potash. Counting each at the market price, it will be found that a ton of urine is worth \$5.30; and a ton of solid manure, as before stated, has about the same value. A cow well fed will void four tons of liquid and ten tons of solid excrement in a year, which according to the above figures, would be worth \$42.40. At these figures it is no wonder that shrewd farmers are satisfied with the manure of their stock as clear profit.

It has further been estimated that three-fourths of the manure in this province, under the ordinary mode of management, is wasted. This stands to reason; for nearly all the urine runs to waste, and it is a low calculation to estimate that one-half of the remaining juices is washed away by the rains of an average season. Let us now reduce the average farmer's stock to its equivalent of cows, and suppose the number to be fifteen. These are usually stalled seven months in the year, and counting from the data already given, it will be found that the total loss amounts to \$278.

Should the farmer think this valuation too high, or the loss too great, let him make a comparison between the above figures and the market price of farm-yard manure. The average price which the farmer or the gardener pays for livery-stable manure is about \$1.00 per load or ton, and on the average of distances it will cost him .5c. to haul it. But he pays \$4.00 for a load of manure of which three-fourths of the substance has been wasted, making the original load worth \$4.00, without including the cost of teaming; and this amount is almost exactly \$1.00 per ton more than the chemical valuation, based on the analysis of the manure, reckoning a ton to be the solid and liquid portions mixed in the proportions in which they are voided. It will thus be seen that the farmer who purchases manure from town or city stables at \$1.00 per ton pays a higher price than its equivalent in artificial fertilizers would cost. In other words, a ton of barn-yard manure at 75 cents has the same fertilizing value as 75 cents' worth of chemical fertilizers, and the cost of carriage would almost invariably be in favor of the latter.

For the benefit of those farmers who can now calculate the profits that would accrue from an economic mode of treating their manure heap, we shall describe the different systems of treatment in our next paper.

Private Dairies vs. Creameries.

The existing practice amongst country storekeepers of paying the same price for all classifications of butter from their customers has a most pernicious effect. Bad butter being more easily and cheaply made than good, the real competition is in the production of bad butter. The farmers who make the first-class article soon get to know that the storekeeper makes no discrimination in their favor, and they would be acting detrimentally to their financial interests if they continued making genuine stuff; but in some instances the storekeeper has made the desired discrimination, and the effect has been an elevation in the butter tone of the whole neighborhood.

Before the age of creameries many farmers had select customers in the surrounding towns or cities for the consumption of their butter, and in this way many a pound of gilt-edge butter was made for which fancy prices were received. This led to the establishment and improvement of many a private dairy on an extensive scale, out of which large profits were derived. The names of these private dairies soon became widely known, and their stamp was a guarantee of the superiority of the article.

This was the natural system of improvement, and there was then no thought of dishonest methods; indeed, the system did not admit of any trickery. Creameries, government interference, etc., are now destroying the natural channels of the trade. Creamery butter has a uniform quality, uniformly good, let us admit, and brings from two to five cents a pound more than privately made butter. Superficially considered, this appears to be a laudable result; but the objections to the system are almost insuperable. Under private gilt-edge butter-making there was a strong incentive to dairy improvements of every character, habits of cleanliness, quality of food and water, and many other items of a seemingly trivial nature, all having been of considerable importance in establishing the reputation and enhancing the profits of the dairyman, and the tendency was to make the manufacture of the inferior article a profitless pursuit. For all parties concerned this was the most desirable state of affairs that could be conceived. Under the creamery system there is a relapse to the shopkeeper principle. The tainted and the untainted cream is all one. There is a bidding for as many patrons as possible, and the farmer with the dirty, scrubby herd is usually the most anxious to become the leading patron, his milk or cream being put on the same footing as that of a superior quality, so that the tendency is again towards degeneration instead of improvement. Creamery butter being the boom, private dairymen receive no higher price even when their make is of superior quality, and the tendency is to degrade them to the level of their most reckless neighbor so far as the quality of their product is concerned.

Nor is this all. Both the system of selling cream and that of selling the milk to the creameries are attended with serious objections which would take a volume to explain in detail. In addition to the danger of obtaining unhealthy milk or cream from diseased, miserably fed cows, under the management of farmers of uncleanly habits in their dairy operations, there is

the incentive to adulteration and all kinds of trade tricks. There has not yet been a rule established whereby the advanced and honest farmer can obtain justice according to the intrinsic value of his milk or cream as compared with that of his neighbors, and in the cream system there is an uncertainty about the cubic inch method under a varying temperature, and other conditions, which method, however, is giving way to the more satisfactory but laborious practice of periodically testing the actual butter-making value of each customer's cream.

From the nature of the circumstances there cannot be a keen and healthy competition amongst the different creameries, there being a tolerably uniform system of manufacture, and the patrons and herds in the neighborhood of every creamery are uniformly a mixture of good and bad; but when the creamery boom begins to subside, so that there will be healthful competition between the creameries and private dairies, the price of butter being again regulated by the merits of the article, then we may expect another incentive to improvement in the management of our herds, including our pastures, which is the only permanent forerunner to the improvement of our dairy products. It is only by means of private dairying under personal effort that uniformly good herds can be built up, and with the aid of science individual energy need fear no competitor—not even the rivalry of associated systems or of joint stock concerns.

It must not be understood that we object to the establishment of creameries, or any other mode of competition, so long as it is free to all, and no undue advantage is given to any of the parties thereto; the creamery system has its advantages as well as its disadvantages, and if the objectionable features could once be overcome, there is no reason why it should not be able to go on its way rejoicing.

An Agricultural Editor Lives on His Wits.

Some of the spheres shine by virtue of their own light; others borrow their light. So it is with men—especially John.

There are people who could not earn their bread and salt, even when the times are booming, if they had not their wits to fall back on. In journalistic circles there are two styles of living on one's wits—one being the scissoring style, whereby the reader is left in darkness as to the source of the article he reads; the other is a scissoring style too, but the reader is given specially to understand that the article is from the pen, not from the scissors, of the scissor-head. "John is facile in both styles.

There is a sheet in Ontario purporting to be a farmer's paper, published by "JOHN FERGUSON, M. P., SOLE PROPRIETOR." The mental strain caused by scissoring from the *ADVOCATE*, after style No. 1, was apparently so great that any change would be a relief; and, moreover, the thing was getting too monotonous. In his issue of July 16 he tells his readers that our June editorial on "Dairy Cows," copied by him, was "BY A CONTRIBUTOR." We are not your contributor, John. While you are defrauding your readers out of an issue till your scissors come back from the scissor-grinder, could you not profitably employ your time in

scraping the rust off your pen, and answering our respectful letters? Eh, John?

We do not tremble before you, John, as our rival, for very few farmers enjoy basking in borrowed light.

Does Wheat Turn to Chess?

This question has been debated in this and many other publications, and all scientific men, whose views have come under our notice, have held that wheat cannot turn to chess, and

many of our practical farmers have also been convinced of the correctness of this doctrine. On the other hand, there are many farmers who take the opposite side of the question; they declare with positiveness that they have sown clean wheat on perfectly clean land, and have reaped chess, but believe that they would have had wheat had the season been favorable.

These remarks have been suggested to us by the following letter, which we recently received, and which is offered for the purpose of elucidating or perhaps mystifying the question:—



SIR,—Being a subscriber to the *ADVOCATE*, I take the liberty of troubling you a little. A few days ago I picked from a sheaf of wheat grown on my farm, a head of wheat growing upon which is a spikelet of chess. The head is all perfect, with this spikelet growing on it. Now, in common with most naturalists, I have always been of the opinion that wheat can never produce chess, nor can chess produce wheat, that like always produces like, is an established law of nature; but this head of wheat has rather staggered me. I would feel obliged to you if you would investigate it, being a matter of public interest, as often asserted as it has been denied. I think Mr. Saunders, of your city, the eminent naturalist, might possibly assist in the matter. I write this in advance, not being allowed to enclose a letter in a parcel by post.

ROBERT DUNLOP, M.D.

Boston P. O., Ont.

In due time the parcel arrived and the head found to be as described, of which the accompanying cut is a true representation. We have shown it to several experts, including our eminent townsman, Mr. Saunders, and most have declared the spikelet to be chess. It will be seen that the spikelet occupies the space which should naturally have been filled by a grain of wheat, the chaff of such grain being perfect and in its proper position, and there is no sign of any fungoid growth.

We have not yet completed our investigation, and meanwhile we should be glad to hear from scientists and practical farmers on this important subject. Might not the chess have been produced by inoculation? We shall sow some of the chess seeds to ascertain if they will produce their like, and we should like to hand a few of the grains to some specialist in this branch of science.

Women Farmers: Where are They?

We read about women's rights, the higher education of women, women in the professions, business, etc.; but these questions appear to be getting exhausted in the hands of our advanced writers. The elevation of women to the profession of agriculture would mark the commencement of a very important epoch in the history of their rights, but this is not the phase of the question upon which we wish to dwell at present. We could mention the names of famous women in certain branches of scientific agriculture, such as botany, entomology, etc., but the limits of our space forbid. The class which concerns us practically is typified by those women farmers whose pleasing and instructive prize essays have appeared in the *ADVOCATE* from time to time.

It would be instructive to inquire into the origin and influence of our women farmers. There is no other sphere of life in which women's influence has been more powerfully felt, or in which they have stamped such impressive power. Our country's boast is that her sons of the greatest integrity and renown have sprung from the farm; but we are negligent in rendering honor to whom honor is due; we are apt to forget how much we owe to the soft but potent influence of our mothers. There springs in the breasts of our former "hardy sons of rustic toil," who are now engaged in building up Canadian history, a feeling of pride as their minds revert to the olden times of the old forest homestead, when perchance the family were cradled in a sap-trough, or pillowed on a sheaf in the harvest field,—not that vainglorious pride which too often swells the breasts of their compeers of more illustrious birth, but a pride in the recollection that their compatriots have intrusted them to aid in moulding the destinies of a country which their own hands have been instrumental in reclaiming from the primeval forest. This is the natural incentive which moves them to answer duty's call and brave duty's strife.

Those were the days when husband and wife were one indeed. There was scarcely an operation in field, barn or forest in which she was not identified. Household duties became affairs of after hours and rainy days. The coffee-mill performed the gristing for the more advanced farmers, and for the greater portion of the year all were strict vegetarians. The family hen and cow were more precious than the jewellery, and when they became superannuated the flesh was as savory as that of the most aristocratic breeds of to-day. Commerce, even between the farmer and the village store-keeper, was then in its very incipience. There was scarcely a family want, whether of victuals or covering, but was supplied by the busy hand and through the never-wearying care of our mothers. And yet they still tell us that those were the proudest and happiest days of their lives. Then were the pleasing days of the bright family circle.

Times have changed. The good father and husband, burdened by the weight of years and cares, sleeps, not with his fathers far away beyond the sea, but in the country churchyard. No marbled slab is required to mark his resting-place, his spot and memory being endeared to every passer-by. How gracefully his yoke sits upon his once beloved wife! Where is that family now? One member is the country

schoolmaster, being the successor of his brother, who is now practicing his profession or controlling the affairs of state. The means by which they have risen is the legacy of their mother—an inheritance of invincible courage and constitutional vigor, not that sordid pelf which is the mother of artificial eminence, or perhaps only a transient notoriety. Another member of the family has gone west to live over again the parental days of yore. The married daughter of the neighborhood still occasionally brightens the remaining members of the family circle. The old homestead is still under the supervision of the mother with the aid of the younger boys, and the dutiful young daughter is the joy and life of the household. Accustomed to a busied life, the mother has not lessened her sphere of usefulness. While her neighbor is wasting his time in talking up politics, or in other futile pastimes on the market or in the saloons, she busies herself in perusing her agricultural paper and applying, or instructing the boys to apply, the knowledge thus acquired to profitable occupations in the garden or field, while the daughter is taught the practical appreciation of the lawn and flower garden. Such is the brief history of our typical woman farmer, and every loyal farmer of Canada should seek to rescue it from oblivion, banishing the vile thought that great ends are to be despised because they had humble beginnings.

On the Wing.

In the latter part of July we spent a few days in the counties of York and Peel, to examine into the state of the crops, stock, etc., of this, the centre of probably the best general farming and stock raising counties in Canada. We procured a horse and buggy, and drove up Yonge street as far as Mr. Russell's farm, at Richmond Hill. We saw Mr. Marsh's celebrated Southdown sheep, which all know are hard to beat. Mr. Russell is highly pleased with a heifer calf from his cow that carried off the gold medal at the Centennial Exhibition at Philadelphia. He anticipates the calf will make a better animal than its dam; he has many other calves that will be hard to beat if he exhibits, but perhaps he may not exhibit, as his aged and honorable father, an old gentleman between 80 and 90, with a remarkably clear and apparently sound head, speaks in very reasonable, mild, but convincing terms against the management by controllers of some exhibitions, and the furnishing of information in advance to some from head sources. Mr. Russell's voice should be heard and heeded by every one desirous of fair play. Whether Mr. Russell exhibits or not, he has a stock of Shorthorns that must command the admiration of the most fastidious judges, for such a herd is hard to surpass.

We called at Mr. Wm. Rennie's seed farm, situated about 12 miles from Toronto—100 acres clay soil, a row of maple trees along the fence side by the road approaching the house, and building about quarter the length of the farm from the road. Farm buildings in good order; farm is divided by four straight fences across the farm; road in centre of the farm from buildings to rear end; no cross fences except at the buildings and surrounding his test plot. Three of Mr. Rennie's sons are on the farm.

We were shown into the test plot. Here we found Mr. Burgess, whose name has for many years stood at the head of all competitors as the most successful exhibitor of mammoth roots, carrying off all the leading prizes for mangels, carrots, turnips, etc. He is now an old man, but his energies are still devoted to raising monstrous roots. Roots of his growing have been sent to Europe and brought honors to our country. We find him at work raking an artificial manure which he has just sprinkled on the ground around the mangels. The manure was composed of guano and dried blood. The land is in fine tilth, mellow and rich, and we notice the rows are unusually wide apart, six feet, and are also plowed into unusually high ridges, 14 inches, and broad on the top. We found Mr. Burgess very communicative and ready to impart a fund of information about his successes and failures. He said it was from mistakes we learned, and in answer to inquiries he said: "This land is a hard, stubborn, plastic clay, and hard to work; I spent a great deal of hard work to get this in its present order. It must not be worked or touched when wet. This ground and the whole farm are well underdrained and have been well manured. Ridges are made wide and high to keep the land dry and admit as much of the sun's rays to the soil as possible. The mangels, when in full growth, stand four and five feet apart in the rows, the smaller and weaker plants being thinned out so as to leave the best and give them all the space they require to spread their leaves. They are watched and attended like children, everything they can take being supplied and every insect guarded against." The farm buildings are near by. The year's manure is lying in the yard many feet deep. A drain from the bottom of this yard runs into the test plot; there is a receptacle for this drainage, from which it can be dipped; there is also a soakage from the pit running over a part of the ground. Close by where this liquid fertilizer is running are squash plants growing, they being well supplied. He is devoting his attention to raising a mammoth squash this year, as there is a great prize offered for one in Toronto. The carrots are thriving as well as the mangels and squash. Mr. Burgess says that it is no use for farmers to try to raise turnips in Markham, or on stiff, plastic clay soils; that the turnip fly is much more destructive to plants on clay land. Mangels and carrots thrive on such land, but in Pickering and Whitby, and on all loamy and light soils, turnips thrive better than in this locality. Mr. W. Rennie, of Toronto, accompanied us over the other portions of the test plot and over the farm. Everything appeared in good order and the crops were excellent. We examined the grain, grass and vegetable plots. In regard to winter wheat, we have not much to add to last month's report except that here we see the Valley wheat looking promising.

We called at Mr. Milliken's farm, near Hagerman's Corners. Here we found that a hail storm of unusual severity had fallen on his farm, completely destroying his wheat, oat and barley crops, breaking down the straw and threshing the barley out, cutting the leaves of the peas, potatoes, turnips and mangels, and making a most complete wreck; it destroyed 80 acres of crops. We never saw such destruction caused by hail. The hail

stones, we are informed, measured six inches in circumference, and in some places were lying a foot deep on the ground. Mr. Milliken has our sympathy and that of all his neighbors, but sympathy only does not restore a loss to which any of us might be liable, and one against which we cannot insure. Many other farmers had their crops badly damaged in the vicinity.

We called upon the Hon. D. Reesor, and at the farm of Mr. Wm. Ralph. Here we found the Jerseys luxuriating in their bountiful pastures. They really have good pastures in this part of Canada, at least where we saw the Jerseys. Well, you have yet to learn an unteachable lesson—to produce good butter without good feed, or large productions without plenty of good nourishment. Mr. Reesor and Mr. Ralph furnish records of butter production that appear almost incredible to farmers who only judge an animal by its size, and can scarcely believe that it is possible for a cow so small to produce 18 lbs. per week, when one double the size will not produce five. We all have something to learn. Mr. Ralph informed us that he had sold \$30,000 worth of Jersey stock since the boom.

We next called on Mr. Jno. Miller, the oldest importer of pure-bred cattle now in Ontario. He is now advanced in years, but his energies and ardor in stock raising appear unabated, despite many reverses from sources from which encouragement should have been received. The way in which the old herd book was manipulated was not in conformity with his views. We have always looked on Mr. Miller as one who has done much good to the stock interests of this country, and a gentleman having a good knowledge of right and wrong—one whose voice is deserving of attention. Mr. Miller, we presume, has the largest number of the finest Clydesdales to be found on any farm in Canada. He has Shorthorns, of which our space will not allow us to particularize. He also has about 100 Shropshires, and a few Cotswolds and Southdowns.

We next called upon Mr. J. I. Davidson, at Balsam, Ont. The scenery in this locality is unusually grand; the land is high and rolling. We feel inclined to call this locality the Highlands of Scotland. The rich, flat pastoral lands, the clumps of trees and numerous orchards, the cultivated slopes waving with grain, and a view of Lake Ontario in the distance, make this a charming spot to those who have an eye for the beautiful and grand scenes of nature. In addition to these attractions, we see the fine "Cruickshank" strain of Shorthorn cattle on the farm, and a fine stock of Clydesdale mares, colts and horses. One of his Clyde mares produced twins, both mares; these two mares now have both fine colts by their sides, confuting the opinion of some that twins are apt not to breed. We paid a visit to his son's farm, who has erected a barn that is the admiration of all stockmen, and cost \$2,400.

We next paid a visit to Mr. W. Heron's farm. Here we found Shorthorns, Clydesdale horses and Shropshire sheep. A few days previously he had the misfortune to have one of his buildings struck by lightning. Two Clyde stallions and the sheep he was preparing for exhibition were in the building; the two horses were removed, but the sheep were all burned. There had fortunately been a very heavy rain and water was plentiful. About 200 men who were raising a barn about half a mile away saw the lightning strike the building. They hurried to the spot, and by their exertions the main buildings which were connected with the one by a straw stack and low shed, were saved; it was almost miraculous how they succeeded in saving the other buildings.

(Continued on page 264.)

Special Contributors.

A Chatty Letter from the States.

[FROM OUR CHICAGO CORRESPONDENT.]

Not a little confusion and some consternation was created here a short time ago by the arrival of several hundred head of western range cattle affected with the so-called Texas fever, whatever that may be; for it is a fact that some of the best veterinarians in the country are unable to ascertain the exact nature, cause and cure of the disorder.

There was one lot of about six hundred and sixty half-bred cattle from the Indian Territory, which were sick and dying on arrival at Chicago. It so happened that the cattle came here at a time when the receipts of cattle of all kinds were very large, and, as can be imagined, the market for some time was very much depressed in consequence of the scare. There was some reason for the advantage which the buyers took to lay in large stocks of cheap beef, but as subsequent events proved they made more of it in depressing values than was fair to the selling interest. About that time, for instance, Texas cattle were selling at prices equally good as one year ago, which was remarkably satisfactory to owners, but in less than two weeks the market for that kind of stock declined at least \$1.50 per hundred pounds gross. Of course other grades of cattle suffered somewhat in proportion. To return to the subject: The cattle that were condemned as unfit for food in the drove mentioned above, numbered over four hundred head, and the total loss to the owners was not less than \$15,000, while the general loss in shrinkage of values in consequence of that shipment being on the market, was beyond computation for want of reliable data, but it was very great. The animals in the lot that were declared as all right for human food, some 200 head in all, were placed on the local meat markets and for a time caused quite a stampede among beef eaters. The papers had so much to say about the sick cattle that the mass of the people almost stopped buying beef for two weeks or so, until they thought the questionable stock had been entirely disposed of. A rigid inspection was passed upon the beef, and the health authorities declared that they had not allowed any but sound animals to escape their notice, but at such times the people are wonderfully sceptical.

Nothing further came of the Texas fever scare, however. Of the thousands of native cattle in the pens every day about that time, there was not one single case of the disease spread or communicated to other animals. There is something curious about the disorder in this respect. Apparently it never in the least affects native Texas cattle, unless there is an infusion of improved blood. The very cattle which suffered recently only had about one-eighth to one-fourth Shorthorn blood in their veins, but that much remove from the native Texan seemed to be enough to make them susceptible. Men of wide experience declare that cattle that are affected cannot communicate the disease to others, that it is only contracted by improved or northern cattle coming in contact with those direct from the far south. In other words the cattle native of Texas are never affected in

the least, while at the same time they seem to be the only kind capable of spreading it among other cattle.

During the past year immense numbers of through Texas cattle, numbering up into the hundreds of thousands, have been headed on the trail for the Territories of Wyoming and Montana and States of Colorado and Nebraska. Vast numbers of them have reached their destination, but during the recent hub-bub about Texas fever, the two first named declared a quarantine against through cattle from the south.

The principal reason, no doubt, why Wyoming and Montana were so prompt in shutting their gates to the young cattle that were traveling north to grow into larger beeves than they could make in their native clime, was because those Territories have been laboring under the notion that sooner or later they would be able to have their cattle passed free by the Canadian and English authorities and taken directly into the centre of Great Britain to be used for store stock or to be slaughtered at interior towns and cities, as the circumstances might seem to warrant. It is true that Wyoming has taken the lead in framing laws for the sanitary protection of her stock, and the stock growers of that Territory have urged upon the other States and Territories, and upon the United States, the importance of framing laws for the ample regulation of disorders of all kinds that might arise among stock. It is a favorite notion of many of the people of those northwest territories that they could furnish Great Britain with good store cattle that would make both buyer and seller plenty of money, and since it seems impossible yet to raise the British embargo against American cattle as a whole, they have a fond hope that by very rigid inspection they may be able to be specially favored, and gain admission into England through Canada.

The matter has been very thoroughly canvassed, and some influential Englishmen who have large ranche interests in Wyoming have caused the matter to have a very respectful hearing in the mother country, but it does not seem at all probable that this consummation, so devoutly to be wished by men who have cattle upon a thousand hills in the northern Territories, will be attained. It would be a very special favor indeed if Great Britain should continue to ignore the entreaties of the cattle men of the whole country, and single out one or two sections for exceptions to the general schedule. Favoritism to the sections that have such good inspection laws, however, would be an effective way of having necessary laws speedily passed and put into practice in the other sections. Is England doing that kind of missionary work? If so, she has a large field in which she might work on this continent.

A few days ago, when \$7.00 per hundred was about the top price for the best heavy export cattle, Col. J. D. Gillette, the celebrated feeder of Logan County, Illinois, had on the market two car-loads of 1586-lb. cattle, which sold at \$7.35 as soon as shown. In age they were twenty four and thirty months old, and that was the remarkable feature of the lot. They were never fed anything but plenty of good corn or maize, and all of the finest blue grass they could eat. Of course this is a great plenty, but in Canada I understand most of the best

beeves are fattened on more of a variety, such as roots, oil-cake, etc. As yet the farmers and feeders of the Western States have not paid any attention whatever to the value of the last named kinds of fattening material.

There seems to be much complaint among sheep raisers about the lack of profit in their business this year, but the complaint is largely confined to men who have too many low grade sheep to give them all the proper care, or men who never give anything the care it ought to have. It is true that wool has been of discouragingly slow sale, but the lot of the painstaking, industrious sheep farmer is not worse now than is the lot of men in many other kinds of business. Much time is being wasted by sheep men in trying to restore the protective tariff of '67. If the Republicans are successful this year, the protectionists may realize a part of their hopes, but it does not seem possible that the wool men can consistently get any relief without giving it to a dozen or more of the other industries, and it certainly is not likely that there will be any restoration of the general war-tariffs.

There is more money now in raising good mutton sheep than in many other kinds of industry. It may not be generally known, but of the various kinds of meat commonly in use, mutton has decidedly the highest per cent. of nutriment in it. This is a fact which farmers should bear in mind. It is easy to kill a mutton occasionally, and the choicest of fresh meat can thereby be provided for the farmer's table without danger of having a large amount spoil. Fresh mutton is often a very agreeable and profitable change in the summer time from salt pork and dried beef. The phrase is somewhat hackneyed already, but it will do no harm to repeat that every farmer should keep at least a few choice sheep.

Feeding for Records.

Next to our fat stock show and pedigree humbugs is the prevailing practice of stuffing cows for the purpose of producing records. Honest records are just the thing we want; but when a man or two has to be employed to be on the constant watch day and night lest the poor cow should exhibit the faintest symptoms of hunger, and to keep a bin of nostrums and condiments in the adjoining stall, supervised by a veterinary, for the purpose of coaxing the appetite and converting every possible secretion and excretion of the body into milk, when the service of science is invoked to figure out if there is any conceivable flaw in the albuminoid ratio of the ration, then it is time for the deluded public to begin to think of making inquiries into the cost of production, as well as the question of the ruination of the cow and her offspring, if she should chance to have any. The plant is nature's chemical laboratory; but there is no reason why the animal should be converted into one; at any rate our record crank should first tell us whether he wishes to compete with the laboratory of nature or that of the professor of chemistry.

A farmer in New York State has a fat ox weighing 3,870 pounds. The owner traced his pedigree back to a billiard table,

The Farm.

Fall Plowing.

Of all tillage operations fall plowing is the most important. Amongst practical farmers there are advocates both of deep and of shallow plowing. A great deal of fruitless discussion might be avoided by taking the different circumstances of cases into consideration. These may not only be applied to different sections of the country, but also to adjacent farmers, and even to different fields belonging to the same farmer. Perhaps the tiller's main object is to destroy weeds; it may be that he wants to increase fertility by tillage; possibly he has sufficient manure to supply the wants of the coming crop, and wishes to reserve a fund of the natural fertility for posterity. The character of the soil and subsoil is also an important factor in the consideration of the question.

If weed seeds are numerous their destruction is always desirable, and a knowledge of their vitality is indispensable to success. If the weeds have shed their seeds before the crop is removed, the best remedy is to encourage germination, and this end will be defeated by early and deep plowing; and if they have great vital strength, they will remain intact until they are plowed to the surface again. Even seeding down to grass for a number of years will frequently not destroy their vitality; but if they are kept on the surface, or if the soil is but superficially stirred, where they can get air, moisture and a suitable temperature, they are then in the best condition for germination, after which deep plowing will be death to them. On the other hand, if the weeds do not seed before the harvest is removed, the seeds are pretty sure to find their way back. If left in the straw, and the straw used as litter, our farmers do not pay sufficient attention to the fermentation of the manure heap for their destruction. If the seeds are fed with grain to the stock, the same difficulty arises, and even when they are winnowed out of the grain, they are likely to get back to the fields in some way. If the weeds are propagated by their roots, then there arises another subject for debate, frequent tillage, deep and shallow, with little or no manure, being the surest remedy.

But the farmer who keeps clean fields, not being pestered with crop robbers, should join a different debating club. He needs no vigilance committee; his work, whether in debate or in the field, is progressive. If his subsoil is rich his best plan is to manipulate with as little manuring as possible, applying the manure to the poorer fields. His aim should be to bring up subsoil to the surface by degrees, either by deep plowing or by subsoiling. Early fall plowing under such circumstances has a double advantage; it leaves a longer period for the weather to exercise its disintegrating effects on the rocky fragments of soil, and the vegetable matter being more completely decomposed, the process of nitrification, or conversion of the vegetable matter into plant food, takes earlier effect in the spring. From these circumstances it will be seen that it is desirable to obtain the greatest possible area of exposed surface; also to cover the vegetable matter as completely as practicable. If the subsoil is sandy, or otherwise poor, the soil cannot be im-

proved by deep plowing unless great quantities of manure are applied, or the green manuring system resorted to for the purpose of increasing the amount of vegetable matter, and in such cases claying and liming would be a profitable undertaking in districts where land is valuable, the aim under all circumstances being the production of a loam. Another beneficial effect of efficient cultivation is the thorough mixing of the soil and manure, and this is most effectually accomplished by tilling in as many directions as possible; but in debating the question, the aspect of the field and the drainage play an important part. Care should also be taken that as much wet land as possible be plowed in the fall.

Condimental Foods.

The considerate feeder of animals will study their tastes, their likes and dislikes, and try to render the food agreeable. He well knows that the pleasure of eating adds to the thrift or production of the animal. It does not depend wholly upon the nutritive qualities of the food, but also upon its agreeable flavor. Mere flavoring materials often greatly improve a food. It is not difficult to so combine foods as to render the compound very appetizing. Those condimental foods which are so lauded, and for which such remarkable claims as to nutritive quality are made, are generally compounded mostly of cheap materials, and then flavored to suit the appetite. They are then advertised as having a wonderful nutritive power, and as curing all the ills that animal "flesh is heir to." They are made up of materials that every feeder has within easy reach, and are usually sold at six times their real value. They are each and all such manifest humbugs, when they contain so little, and so much is claimed for them, that we have uniformly refused to advertise them, and thus assist in deluding farmers into purchasing them, at their extravagant prices. Dr. Lawes, of Rothamstead, fully exposed the pretensions of Thorley, of England, who had been deluding English feeders for years. He showed that the real value of his compound as a food was only about the same as corn meal, although it sold for \$8 per 100 lbs. And this seems to be the standard price for all the mixtures in this country. Eight cents per pound seems to be just the figure that satisfies these vendors of condimental foods. And when we consider the probable cost of 1 1/2 cents per pound, an addition of over five hundred per cent. would seem to be a liberal profit.

All animals are fond of sweet foods, and most of these condimental compounds in England are rendered sweet by using the locust bean, which contains a large amount of sugar; and our compounders may import them for this purpose, or they may use a cheap molasses or glucose sugar. We have no doubt, from our experiments, that cheap molasses may be used at a profit in feeding to render the food more palatable. In fattening cattle, one quart of molasses, dissolved in two gallons of water, is used to moisten the short-cut hay for four steers, and then the meal given is mixed with this. The sweet water flavors the mass, so that they eat it with great avidity. It must be admitted that the highest skill in feeding consists in knowing just the right adaptation of food to the animal, and this requires a care-

ful study of the quality of all the different foods used for, or that may be used for animals. And this requires also a practical knowledge of flavors. But besides this the feeder should know the effect of different foods upon the animal stomach, whether laxative or constipating, sedative or stimulating, etc. In other words, every feeder should know how to compound a condimental food for his own stock, and not subject himself to paying four prices for the want of this knowledge. The principal advantage derived from the use of these compounds comes from the palatableness and laxative elements. Animals generally suffer more from constipation than any other one source; and it is by reason of this that we have so often advised feeders to use a little oil meal, or, better still, 5 or 6 per cent. of flaxseed, ground with oats and corn as a food for horses especially, and also for other stock. This small amount of flaxseed—1-16th to 1-20th—also improves the flavor of the food.

We give a formula for a condimental food equal to any of the high-priced articles in the market:—

Table with 2 columns: Articles, lbs. and Articles, lbs. containing items like Linseed-oil cake, Finished Middlings, Molasses, Cornmeal, Ground tumeric, Anise-seed, Ginger, Caraway seed, Gentian, Cream of tartar, Sulphur, Common salt.

Total 100

There may be a great variety of formulas, but this is a good one, and will give satisfaction. If we were to try to improve it, we would make the oil cake 20 lbs., and add 5 lbs. of flaxseed. And perhaps the cheapest glucose sugar might be substituted for the molasses, and then all the articles could be ground together in the dry state.

This would facilitate its manufacture for commercial purposes. This compound could be added to the daily food for animals in small quantities. The most beneficial ingredients in this combination are the oil meal, flaxseed, and sugar or molasses. As we have often said, the feeder cannot err in feeding too great a variety of food, and the more palatable he makes it the greater will be the gain and profit of the animal.—[Nat. Live-Stock Journal.

The National Live Stock Journal says: "We wish to call the Western farmers' attention to the fact that Western horses are found less able to stand work on pavements than Canadian horses of the same weight, and that in the Eastern markets this is attributed to the general use in the West of corn as food for the young horses, while oats and peas are fed mostly in Canada as grain food."

During the last ten years there have been but three crops of corn in the U. S. that have exceeded this year's yield, and the yield of spring wheat is higher than in any year since 1877. The average for oats is a trifle lower than in 1883. The potato yield is 10 per cent. lower than last year.

The wages of farm laborers in Manitoba average \$23.50 per month, and female servants \$11.00. Both are in active demand.

The Editor at Home.

Having been frequently asked for my photograph, I now make an attempt to satisfy the applicants by furnishing them with the accompanying sketch.

On my right may be seen one of my principal contributors, Prof. L. B. Arnold, whose researches and writings on the dairy have done so much good to that lucrative industry. His name must be enrolled as one of the highest authorities in the world at the present day. His knowledge is from practice with the application of science. Every really good dairyman must be aware to some extent of his merits.

in my journal without my seeing them. Twenty years of editorial work, after twenty years of hard farm work in Canada, have, I trust, been of some service to you, and I hope the usefulness of the *ADVOCATE* may long continue.

W. WELD.

On the Wing.

(Continued from page 261.)

On Dominion Day we took a trip into the county of Lambton. There is a lot of good land in this county, considerable that is of a light quality, lying on a quicksand bottom, and some that is a plastic heavy clay and lies low and wet; but in time this land will be drained

trees. There appears to be a belt of country extending from Arkona to Lake Huron that is better adapted to fruit growing than any section we have visited fifty miles west, thirty miles south, thousands of miles north-west and hundreds of miles east.

Here is situated Mr. B. Gott's nursery. His ground appeared to us almost too densely covered with trees, and shrubs and fruits of all kinds. He has his ground in excellent order, as far as keeping free from weeds is concerned. It is rolling ground, and in appearance really looks charming when compared with nearly all the nursery grounds we have visited. But, this being the strawberry



The Editor's Residential Library and View from the Window.

No doubt you have been benefited by his labors, and will be pleased to see his portrait.

On the left is seated Minnie May, who conducts the household department. Many of our lady readers and the young folks will be pleased to see her.

The view is taken from the library window, at my residence, from where I see the beautiful view before me, which is considered the finest in this city. In this room most of my writing is done, but as work yearly increases I require more assistants, my health requiring more rest; therefore some things may and do appear

and made very productive. The part we now call your attention to is in the vicinity of Arkona. Here the soil is loam—some of it is inclined to sandy loam, other pieces to clay loam; it is porous, and in some parts stone is found below the surface. In this locality the land and climate appear to be much better adapted to fruit growing than most of the land of Western Ontario. Here we find large cherry trees of the best variety, such as do not thrive in many localities. The peach, grape, and all small fruits appear to thrive here, and the apple orchards are quite a feature. Some of the land is rolling, and on some of the side hills the houses can scarcely be seen through the fruit

season, we anchor ourselves for the time being on Mr. Hilborn's farm, one mile from the village. The farm consists of about 150 acres. Mr. and Mrs. Hilborn settled here many years ago, and a very industrious, honorable and intelligent elderly couple they now are. We know but little about their doctrines, but from the Quakers we have come in contact with, we hold no sect in higher esteem for truth and honor from transactions we have had with them. The introduction of the Democrat wheat was from the reliable information we received from a Quaker. But it is strawberries we intend to speak about.

One of Mr. Hilborn's sons devotes his principal

attention to the farm, while another, Mr. W. W. Hilborn, devotes his attention to fruit. Growing the strawberry is his especial care. He has about sixteen acres in strawberries, having about sixty different varieties growing. He procures all the kinds he can hear of, and gives them a fair trial on different soils, and gives them different treatment. He is careful and observant, and we consider him the highest authority on the strawberry we have in Canada—at least, we have never yet met with anyone who has given us half as much information about them, nor have we seen such extensive plantations in our journeys in Canada. He informed us that he has made more money out of the Crescent Seedling than any other berry. In reply to our queries, he said he did not consider it a hardier and better berry than the Wilson, but he said it ripened earlier, and one quart of early berries brings more

During the season the pleasures of the family are greatly increased, and the use of animal food is so much reduced that it is found to pay to raise strawberries for food. Another more important feature is that by a constant supply of good ripe fruit the health of the family is increased and the doctor's bills reduced, and the undertaker is kept from the house for many years. Plant more fruit, use more fruit, and cultivate more strawberries, raspberries, etc.

The accompanying illustration is compiled from two views, as his strawberries were on three parts of the farm. The picking season is quite a lively time there. The ground was in excellent order, but what appeared to us so different to the old mode was the great width he plants his strawberries apart, as you see quite a space between each row when picking. This he considers is much better than covering the whole ground, as many do. The cultiva-

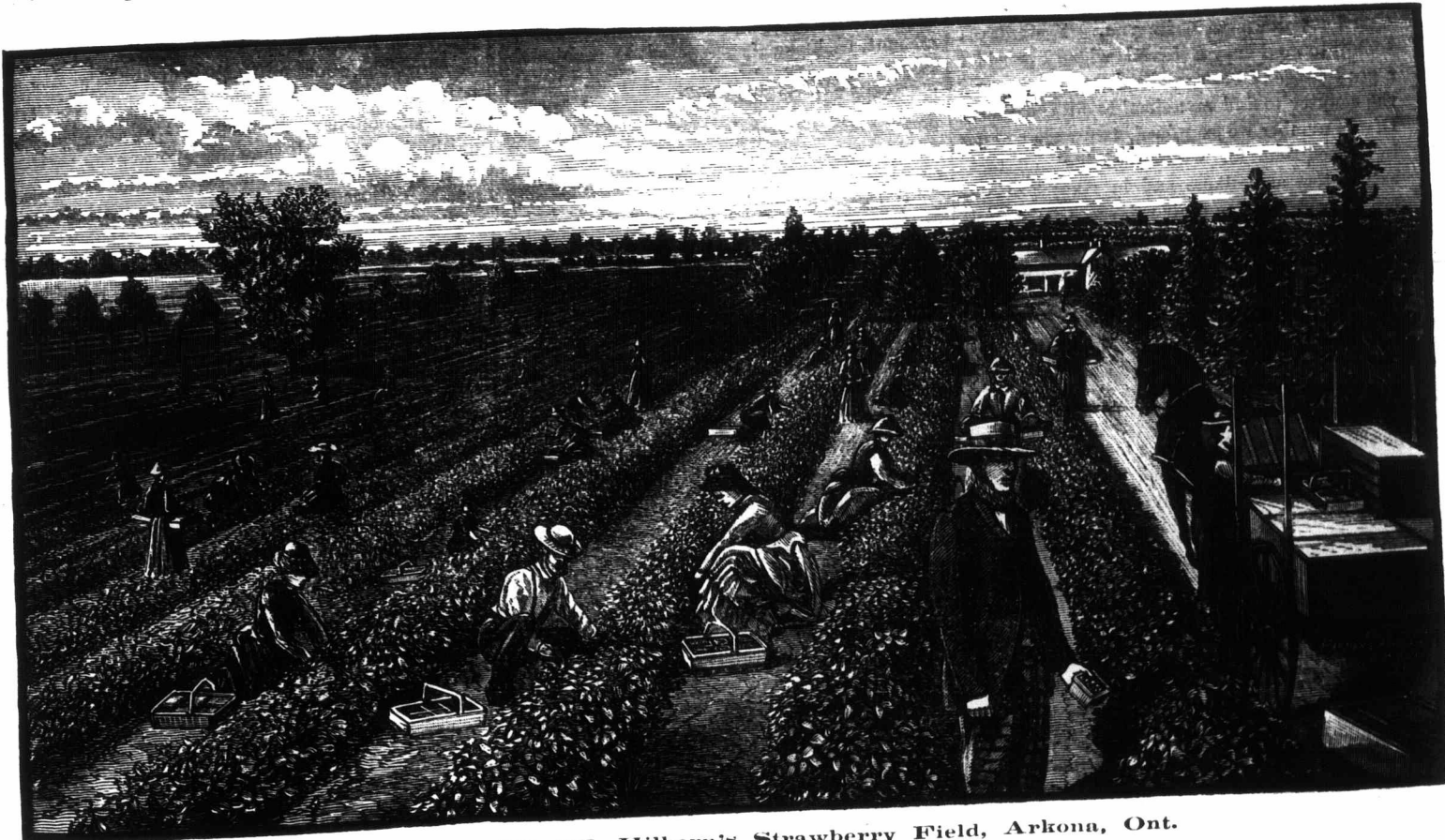
The Dairy.

Beef and Butter in One Cow.

BY PROF. ARNOLD.

The following remarks and question are an extract from a private letter, but they seem so worthy of consideration by other dairymen as well as the author of the letter, and likely to interest the general dairy reader, that I feel justified in placing them, with my answer, at your discretion, omitting the writer's name and location further than to say that he is a personal acquaintance who keeps a small butter dairy and makes a livelihood by supplying special customers, in a near-by city, with fine butter the year round:—

"By following the advice you gave me last spring, to pasture less and soil more, the result is turning out greatly to my benefit. I broke



View of Mr. W. W. Hilborn's Strawberry Field, Arkona, Ont.

money than two or three in the middle of the season. Mr. Hilborn wishes to procure the earliest and latest varieties. His main cropper for the season is the Daniel Boone; it is of finer quality than the Wilson—at least it suited our palate better. But for flavor the Prince of Berries appears to have two or three times the real essence of the strawberry flavor in a small berry than can be had in a large one of any other sort. We give you Mr. Hilborn's statement in regard to the different varieties, but for full particulars and mode of culture send to him for his catalogue; he will send it on application, as he sells plants as well as berries.

The advantages of raising strawberries are not as yet sufficiently appreciated by farmers. We know that many have not time to devote to gardening, but with straight cultivation, where the horse can be used, and by making the rows four feet apart, the labor is greatly reduced,

and the picking is done without damaging the plants or berries.

Don't cultivate more land than you can till and manure well, and keep thoroughly clean.

Of the different kinds of roots, potatoes are most liable to injury by freezing; beets next and carrots still less, partly because carrots usually grow most of their root beneath the surface. Parsnips can be left in the ground all winter, and are rather better for some freezing.

Sir J. B. Lawes says that of dry food eaten by sheep it has been found that these animals stored up in increased weight 12 per cent., while cattle only laid up in increased weight 8 per cent.; or, in other words, 8½ lbs. of dry foods increased the live weight of sheep as much as did 12½ pounds the live weight of cattle.

up fully one-quarter of my pasture and put some well-rotted manure I had on to the part that I could work the earliest, and sowed it with barley and oats for early feed. Another part was put into peas and oats and the rest to fodder corn. The liberal supply of feed this has given me has prevented the customary shrinkage of milk in the heat of summer, and which during the late dry weather has told heavily in the dairies all around me. In fact, there has been no falling off in my milk except the natural decrease on account of distance from the time of calving. The better supply of feed, and the greater comfort from being more of the time in the stable in hot weather—in the shade and away from the annoyance of flies as well as hot sun—has so increased my butter yield that I now consider it certain I shall this year make not less than 25 pounds of butter per cow more than I have been getting from the same cows

before. This from my 17 cows gives me an extra 425 pounds, which at 35 cts. a pound—the price I am now getting for all I can make—is \$148.75, or, say an even \$150, which is not a bad addition to a small farmer's income. This has been done without hiring any extra help and with a very small increase of labor, and that small increase, I think, has been fully balanced by the greater quantity of skim-milk for feed and the better condition of my cows for wintering, making the increase in butter a clear gain. Another item of some importance to me is the fact that my butter has given better satisfaction to my customers, thereby strengthening the good reputation by which I get an extra ten cents a pound.

"The larger amount of fodder produced by cultivation over what could be got by grazing the same land, is giving me more than my stock can consume, and warrants me in adding another cow to my herd to give milk in the coming winter. It is in respect to this addition that I sat down to write you. Yesterday I took into my buggy a friend whom I consider a good judge of cows, and we "sailed" round the country to find an animal to fill the place. Of the number we examined, two were coming in in good time for winter milking and were satisfactory as milkers and in respect to age, etc. In estimating their value as milkers, my friend and myself were well agreed, but we differed so widely in regard to the beef-making value of one of the animals, that after an animated, and I may say a *tenacious* discussion over that item, we finally agreed to submit the point at issue, with a statement of facts, to yourself, as an ultimatum in dairy matters, for an opinion as to which of the two cows would be the more profitable for me to purchase. The facts as we agreed are these: The two cows in question are both grades, one a Shorthorn, the other a Jersey, both born in 1880, the Shorthorn in the spring and the Jersey in the following October. The former is a large and beautiful animal, weighing, as we agreed, when in ordinary condition, 1,300 lbs. The Jersey has nothing handsome about her but her head, and, we judge, is 500 lbs. the lighter. Both are in about the same condition. The larger cow gives the greater mess, but the other gives richer milk. Judging from appearances and the best information we could get, the two cows would produce equal yields of butter, and that two years hence, under my feeding and treatment, either one would make 300 lbs. of butter a year—a satisfactory yield as I consider. The price of the larger heifer is \$60, and of the other \$55. Assuming that it is to be kept in my dairy not less than six years, which one had I better take? Your opinion, with reasons, would greatly oblige. Yours, etc.,

"J. C. K."

ANSWER.—In replying to this question, I have no hesitation in saying I would prefer the Jersey grade to the Shorthorn at the same price. They have each special merits which are to be taken into consideration. The large cow upon leaving the dairy when ten years old, will be worth more than the small one, because there is more of her, her beef will be of better quality and in better form, but she will be much inferior to a younger animal of the same sort. As a basis for making beef she may be counted worth three cents a pound, making her value

when she goes out of the dairy, \$39. A little ten-year-old Jersey cow, or any other little old cow, for that matter, after being worn out in the dairy, I consider nearly worthless as a basis for beef. A cent and a half a pound in this case would cover the actual value of the smaller cow, making her worth \$12 when she leaves the dairy. Difference, \$39 — \$12 = \$27.

Jersey butter is as much better than Shorthorn butter as Shorthorn beef is better than Jersey beef. There is a difference between them of three to five cents a pound, and often ten cents. Since both cows are supposed to make the same quantity of butter (300 lbs. a year for six years = 1,800 lbs.), it would only require that the butter from the Jersey grade should be 1½c. per pound better than the other to make it balance the difference in the beef values of the two. I should expect a wider difference in the quality of butter, assuming that the two animals are fair specimens of their kind. The butter of each being equal in amount, each cow is supposed to require the same weight of food for its production—but the large cow will require the most food for supporting herself, but large cows do not eat as much in proportion to live weight as smaller ones. Just how much less in proportion they require than smaller ones I do not know, but it is not much less. We will suppose, in this case, that the larger cow will require two pounds of hay a day to sustain 100 lbs. of live weight, and that the smaller one will require 2½ lbs. of hay for sustaining 100 lbs. 24 hours. The actual difference, it is very certain, is less than this, but we will be sure to allow enough. At this rate the large cow will require 26 lbs. of hay a day, or an equivalent in other food, to support her, and the small cow 20 lbs. a day. Difference in cost of keeping per day, 6 lbs. of hay, or its equivalent. For one year it would be 365 x 6 = 2,190, and for six years it would be 2,190 lbs. x 6 = 13,140 lbs., equal to 6.57 tons. Whatever this amount of hay is worth per year to convert into butter, may be considered the difference in the cost of keeping, or, in other words, it is what it would cost you to sustain the extra 500 lbs. of live weight in the larger cow for six years, to be used at the end of that time, not as good beef, but only as a basis to derive beef from, and worth 3 cts. a pound, or \$15. The value of the extra keeping at \$5 per ton for the hay, or its equivalent in other food, would be 6.57 x 5 = \$32.85. Adding the \$5 difference in the price of cows and compound interest for six years, we have \$32.85 + \$7.18 = \$40.03 as the extra cost for the larger cow at the end of the six years you propose to keep her. It is more likely that the value of extra keeping would be worth double what I have estimated, as it would be converted into butter without extra cost. This would make the beef cost \$65.70 + \$7.18 = \$72.88, a pretty steep price to pay for 500 lbs. of *old cow*. When cows give milk, or produce butter or cheese, in proportion to live weight, the larger the cows the more profitable they would be, because they cost proportionally less to keep than smaller ones, but when weight is not accompanied with a corresponding milk product, it becomes a *dead* weight in a short time.

Modern Dairying—Making the live cow compete with the dead hog.

Care of Stock in Winter.

The National Tribune says:—Although the wisdom of housing and properly feeding stock during cold weather is somewhat of a hackneyed subject, it is one of such vital importance to the interest of farmers that no apology need be made in referring to it again and urging upon our agricultural readers the necessity of preparing, even at this early period, for the forthcoming winter. The farmer should, in handling stock of all kinds, continually bear in mind that what tends to the comfort and welfare of the animals under his care, adds directly to his bank account in various ways. In the first place, he should bear in mind that while an animal is not growing and laying on flesh, he is actually losing on him—every moment that animal remains in a state of *statu quo*, his owner's money is not only idle, but is diminishing. The only way to profitably handle cattle is to keep them growing from the start until they are finally disposed of. The idea which seems to have taken possession of many farmers, that all that is requisite is attained if they manage to keep their stock *alive* through the winter, should be banished at once, for it fills our fields with lean and stunted animals that require an amount of food and care during the following year which reaches far above the cost of a few suitable buildings and sheds for their shelter in the winter. And, then, what more wasteful system of feeding can be imagined than hauling a load of fodder into an open field and leaving it there for the half-starved creatures to fight over, trample under foot and foul with their excrements? By this manner of feeding just about one-half of the forage consumed, the other part being left on the ground to rot, or blow away, as the case may be; whereas, if the proper shelter and racks were provided, every mouthful would be available. Another point, too, which must not be lost sight of, is the amount of manure that can be saved by stabling and the consequent increase of crops the following year.

Every farmer knows, or ought to know, that the manure dropped by stock on the open ground and left to the action of the frost and rain, is of little value compared to that which is hauled out and spread upon the ground at the proper season. In regard to milch cows, does any reasonable man suppose they are paying while standing around in the mud and snow, picking up miserable sustenance from the straw stack, with an occasional armful of fodder or a few ears of corn thrown to them? At the very time when butter is commanding a high price he has none to sell, and if he manages to scrape a few pounds together, the insipid white stuff can hardly find a market. Now, were these cows snugly housed and reasonably fed, their product would add no inconsiderable amount to the farmer's income.

A word, too, in regard to colts. It is an almost invariable custom to let them pick a living through the winter at the straw stack, and the consequence is that when spring comes, instead of being in prime condition to be turned into pasture, they are a disgrace to their owners, with their watery eyes, weak knees and shaggy coats.

Garden and Orchard.

The Garden.

During this season the garden is usually neglected. Weeds are permitted to grow and run to seed, which will give endless trouble in the future. All weeds and other refuse should be raked together and put on the compost heap, which, if properly fermented, will make excellent manure in the spring, and weed seeds will be destroyed. Ashes or lime may be applied to the heap with profit for the purpose of aiding the decomposition of the vegetable matter, and increasing fertilizing value of the manure. If there are many weeds and should they be cut before the seed matures, they may be left so long as the weather remains warm for the purpose of protecting the soil from the rays of sun; otherwise the ground may be mulched, or something sown for a green crop. The most profitable plan, however, is to raise as many fall sown vegetables as possible, as detailed in our last issue.

New Gooseberry.

The accompanying is a cut of the "Industry" gooseberry, which has recently been brought before the public, and which is well adapted to our climate. Size, large; color, dark red; hairy, with a pleasant rich flavor. A gooseberry possessing the desirable qualities for table and market has long been a desideratum. The best American varieties have failed to satisfy the requirements, being too small and not good enough. The foreign varieties, wherever tried, have either mildewed more or less, or they have made a poor or unsatisfactory growth. Hence a large, handsome sort of some quality has been much sought after. There is a prevailing impression that our climate is not adapted to gooseberry culture, but this is a misapprehension. Wherever failures have resulted, the cause was due to a lack of the necessary knowledge required for their cultivation. Although the planting of the cuttings may be deferred till spring, they are more certain if planted in the fall after the leaves have fallen, or when the young wood is fully mature. The cuttings may be buried in the open ground or in the cellar, and should be kept damp—not too dry nor too wet. Growing from the seed is only to be recommended for large gardeners, who make a specialty of raising new varieties. Farmers who are accustomed to the currant bush may use the same directions in the

cultivation of the gooseberry. The gooseberry flourishes best in a rich, deep soil, moist but not wet. An open airy situation is best, with an exposure that will protect the plants as much as possible from the scorching heat of summer. Cow manure, well rotted, is best, especially on light, warm soils. The gooseberry is a plant that requires liberal mulching.

Gather the Nuts.

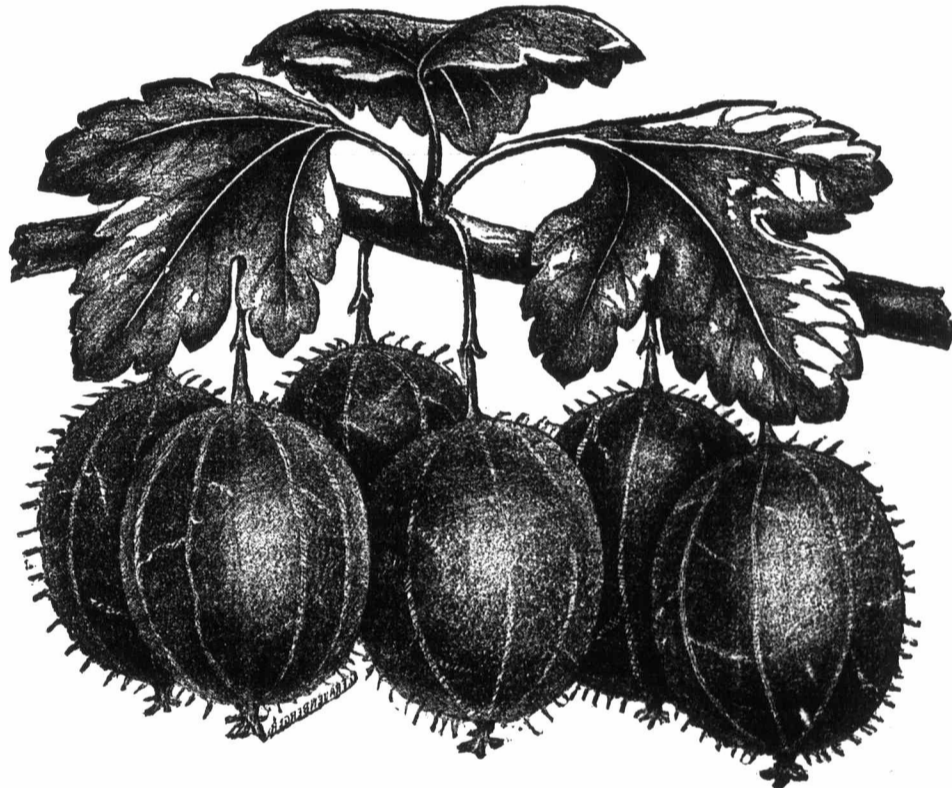
Farmers who approve of profiting by our instructions in forestry, should not be idle this fall. If they now follow nature's lessons they can make no mistake. Nature plants the seeds when they fall, and she never transplants. There is more certainty in planting the seeds of nut-bearing trees than in purchasing the young trees from a nurseryman, and it is also cheaper. Get the nuts fresh from the trees, and if we have no time to plant them now, they may be kept moist for a few weeks

them to do so, but now is the time to tell your sons' boys. Imagine how the boys would enjoy cracking nuts from the trees which they planted with their own hands, or raising pocket money by sale of their saplings! Why, every crop in the fields might have bid defiance to the storm by this time, and these attractions would be a powerful incentive to keep the boys at home. Don't wait till the government official comes along and offers the boys a penny for gathering the nuts.

Pear Blight.

The rapid increase of disease amongst our fruit trees has given rise to specialists in the science of investigation as to the causes. The ascertaining of the cause is not always followed by the remedy; but experience proves that the cure is either not far behind, or that no cure is possible, thus doing away with a great deal of unnecessary speculation and experimenting.

The New York Experiment Station, which is in advance of the times in matters pertaining to the interests of the farmer, has just completed a series of experiments relating to the cause of pear blight, conducted under the supervision of Prof. Arthur, Station Botanist. A diseased pear orchard was visited, and amongst the branches, viscid, yellowish drops were found exuding from the stem. This fluid was conveyed to the branches of a healthy pear tree, being inserted in a needle puncture about an inch from the extremity. In six to eight days every branch so inoculated showed



INDUSTRY GOOSEBERRY.

in sand or sawdust until they are planted. Every farmer could make the foundation of a nice little nursery in a day, which in not many years hence might bring more profit than all the rest of his farm. They may be planted either in the spot in which they are intended to grow into large trees, or in a garden or nursery, and the saplings afterwards transplanted, care being taken to keep the land clean while they are young. Two years after planting is the best time for transplanting, or the young trees may be left in the ground the third winter and transplanted in the spring. Just fancy what a fine and profitable little fruit-bearing forest you would have now if the boys, eight or ten years ago, had gathered their pockets full of nuts, when they were hunting the crows or chasing the chipmunks, and strewn them over a portion of the field! The boys will some day regret that you didn't tell

unmistakable signs of blight, the bark having turned brown and then blackish around the puncture, the color extending more rapidly upwards than downwards or around the branch. On the ninth day a similar fluid exuded from the wounds, and on the thirteenth day the affected parts were removed to prevent the destruction of the tree. Some leaves were also similarly treated with the fluid, and they, as well as the affected branches, were found thoroughly dead, the disease having, however, been confined almost entirely to the young and tender leaves. The virus was then applied to two young apple branches, and both became diseased in eight days. A portion of the diseased pear stem was then sliced up in watch glass half full of water; the water soon became somewhat milky, and was tested as before described on the branches of several kinds of fruit. This experiment is not yet completed, but there is

enough evidence to prove that the virus may also be communicated in this way.

It has thus been proved that the blight is infectious and may be transmitted by inoculation, it also attacking other pomaceous fruits, as the apple, quince, English hawthorn, and June berry. The diseased tissue was also examined under the microscope, when it was found to be swarming with bacteria. This experiment furnishes another striking proof that the diseases of plants, like those of animals, have their origin in living germs which rapidly multiply. These blight experiments are being continued for the purpose of ascertaining the natural mode of propagating the disease.

Varieties of Strawberries.

BY W. W. HILBORN.

MRS. GARFIELD.—A seedling of the Crescent, originated by M. Crawford, Ohio. Plant is healthy, hardy and productive on good strong clay loam, but does poorly on sand or light soil. Season medium, fruit large, roundish, slightly conical, never misshapen. While its largest berries do not much exceed the Wilson, its average size is much greater; flesh firm and of very superior flavor; color bright glossy red.

CRESCENT SEEDLING.—This was first to ripen, and is no doubt the most productive of any strawberry grown. It is medium to large, brilliant scarlet in color. The fruit colors on all sides at once, so that all red berries can be picked; is quite firm and most profitable as a market berry of any variety yet fully tested; does well on all soils; blossoms pistillate.

MANCHESTER.—This berry is gaining friends wherever it is known. It is a very rank, strong grower, blossoms pistillate, of good quality, large size, regular form, bright red color, ripens late; very productive on all soils; very valuable for home use or market.

JAMES VICK.—After fruiting this variety this very unfavorable season (it has been very dry all the time from early spring until after the fruit was gathered) we have been favorably disappointed as to its size. It has averaged fully as large as Wilson, and produced more fruit. By keeping it in narrow rows and giving good cultivation it will produce a wonderful crop of fruit, of fine, regular form, and ripens so much at once that they can be picked very fast. The plant is a model of perfection in growth and hardiness. It is doubtful if it has an equal in this respect; ripens quite late; a good market sort, but if left to grow in very wide rows it does not bring its crop to perfection, as it sets more fruit than any other sort we have grown.

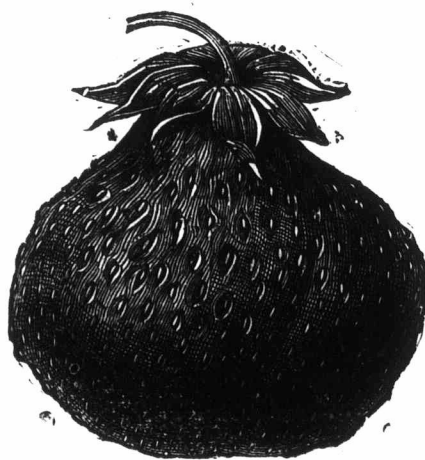
CAPT. JACK.—Grown on good strong soil, is one of the best late market varieties; blossoms staminate, a good sort to fertilize Manchester and Daniel Boone; it is very productive, good size and form; does not do well on sandy soil.

MT. VERNON.—This is a strong grower, very prolific; does best on clay loam; fruit large, very regular and uniform in shape; light scarlet color; good flavor; blossoms staminate; fruit ripens very late, which makes it very valuable as late fruits bring the largest returns.

EARLY CANADA.—Is very promising as an early market berry; its greatest defect is that it blooms so early in the spring that it is apt to be killed by late frosts; when it does escape the frost it will ripen before the Crescent; par-

ties that had it this season in favored localities realized 25c. per quart for their first pickings; but when the frost does catch the first blossoms it will not be as early as Crescent; fruit will not come to perfection in quite so short a time; it is medium in size; dark red in color; very productive; plants very healthy; blossoms staminate.

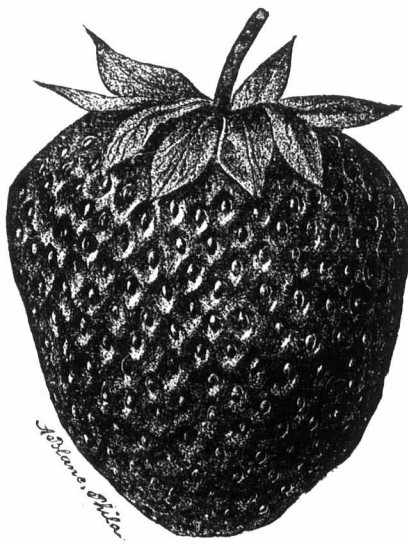
PRINCE OF BERRIES.—Is a new variety originated by E. W. Durand. It is a very rank, strong grower on both sand and clay loam; foliage does not sun-scald, blossoms perfect.



The accompanying cut gives a true representation of the form of the fruit. Superior to any berry known in flavor or quality. I have never tasted a wild berry equal to it in flavor. It is very late, and not apt to be killed by late spring frosts. Should it prove as productive as spring-set plants would indicate, it will be very valuable.

WILSON'S ALBANY.—Is still a very profitable market berry, but requires better cultivation than many of the above to make it pay well.

DANIEL BOONE.—This is a new berry that gives promise of being one of the most profitable for market or home use of any of the many new varieties lately sent out for its season, which is medium; fruit of large size and produced in abundance; form elongated, conical; it is large to the end of the season; color clear red, and not apt to fade; flesh firm and of good



quality; better in this respect than most of the prolific market berries; blossoms pistillate. We have this season gathered fruit from matted rows, taking all berries ripe, that would average larger than any other sort we have ever grown picked in the same way; plant a strong, healthy grower on either sand or clay loam, and should

be tested by every one who grows strawberries either for home use or market. The accompanying cut represents this berry.

The above ten varieties are the best and most profitable for market of some sixty varieties we have tested; there are many that have some good qualities but do not combine so many points of merit.

GOL. DEFIANCE.—For home use this is very fine; it is a very pretty berry; large even size; bright red fruit with golden seeds; they have just enough acid in them to make them taste just right with sugar and cream; do not take any person's word for it, just try them.

ARNOLD'S PRIDE.—This is the largest of any if well grown; bright red; good flavor; quite promising; quite late; requires rich soil.

KENTUCKY.—Requires light soil to make it produce well; one of the best late sorts on sandy loam; stands shipping splendidly.

SHARPLESS.—Very large; good flavor; does not ripen well at the tip; not productive unless grown in hills, with all runners kept off and given good cultivation on rich soil; it is not profitable as a market berry.

COL. CHENEY.—A few years ago this was very largely planted for market, but has been superseded by better varieties; too soft; not reliable.

NEW DOMINION.—In some localities does well; it is large; perfect in form; light clear red; not adapted to this locality.

WARREN.—Strong growing plant; fruit of best quality; fine form; dark red fruit; unproductive.

LONGFELLOW.—With good cultivation, gives some berries of the largest size; good flavor; very late; will please the amateur.

We have discarded the following sorts as of no value: Downer's Prolific, Nicanor, Green Prolific, Metcalfe, Charles Downing, Brilliant, Miner's Prolific, Big Bob, Gypsy, Triple Crown, and many others.

We grow by the matted row system; all sorts that will not prove profitable grown in that way we do not want. We plant in early spring in rows four feet apart, and from one to two feet apart in the row; thoroughly work up the soil as early in spring as possible; mark off in rows with corn marker; plant every plant firm enough so that by taking a quick jerk on a leaf it will break off without moving the plant; keep the plants from drying out with the wind while out of the ground, and there will be scarcely a failure; keep the soil cultivated clean; cut off all blossoms and first runners that put out; let the rows get about one and a-half feet in width during the season; mulch with straw soon as ground freezes, so that you can drive on to the plantation without hurting the plants; cover very light; put most of the straw between the rows; early in the following spring go over the plantation and part the straw over the row, so that the plants can get up without difficulty. We plant every spring, and take off but one crop, as it takes less work and we get better fruit.

Nebraska has nearly 250,000 acres of planted forest in a thriving condition.

Lawns should not be shaven too closely from now until winter. Twice or more the usual length should remain on the ground during winter.

Wind Breaks.

Dr. Eby, of Sebringville, Ont., read an exhaustive paper on the above subject before a meeting of the Fruit Growers' Association, recently held in Berlin. He has made a deep and systematic study of the subject in all its phases, especially its relation to our climate, and his views should receive the careful attention of our farmers. It will be observed that the following, which we extract from his paper, is the perfection of his scheme, which may be simplified or modified to suit individual circumstances. He proposes that a belt of young trees, two rods wide, be planted on the north and west sides of every ten-acre field, constituting wind breaks, and affording shade and shelter for stock, as well as producing valuable timber in the future. This would, however, be a too gigantic undertaking for our farmers at present, and the question for them to discuss now is the planting of say a single row on the north side of the fields, leaving further developments of the plan for consideration in future years. The space occupied by such a belt would, he says, only occupy ten per cent. of the land, or excluding the space usually occupied by fences, seven and a half per cent. Having detailed the opinions of several eminent authorities on the subject, he then proceeds as follows:—

The middle row should if possible be evergreens. For this purpose our native white pine (*Pinus strobus*) may be selected. The Norway spruce (*Abies excelsa*) may be used, and it could be more easily obtained, or if for other reasons it may be preferred. Any other evergreen will do, but the above are to be preferred as the most rapid growers and the most valuable when grown. The trees should be planted four feet apart in rows four feet from each other. The second rows, those on each side of the middle row, should be planted with some quick growing, soft wood. For that purpose soft maple or poplar may be selected, but elm or white ash would be more profitable. The European larch (*Larix Europa*) is very often used as a nurse for other more slowly growing trees. In case the ash is selected, the trees should be planted two feet apart in the rows. When the trees will have grown large enough when split through to make barrel hoops, every second tree should be removed so as to leave the remaining trees four feet apart. In doing this, the trees standing opposite those of the middle row should be cut away, while those standing between should be left so as to preserve the diagonal plan.

The third rows on each side should be planted with some valuable wood, as maple, oak, ash, walnut, butternut, &c. These rows properly thinned out, can be left standing until the trees have reached maturity. The fourth rows on each side should be planted with some quick growing trees. The larch or our native tamarac would do very well for this purpose. Any of the trees mentioned for the second rows will also do for the fourth rows. The object will be to get some tree or trees that will grow up to be valuable before they materially crowd on the neighboring rows. The last row on each side should be planted with trees that naturally have a tendency to grow upwards. The larch or elm will answer this purpose very well and should be selected for the southern and east-

ern sides, while some of the hardier evergreens should be selected for the windward sides. The Scotch pine (*Pinus sylvestris*) is especially well adapted for that purpose, being very hardy and fond of the light and air.

Other woods than those I have indicated above may be planted should they for any reason be preferred. The chestnut would be a valuable addition to the list for those districts in which it will grow. The catalpa and the mulberry should not be overlooked. Both are most valuable trees, but their success in our climate is a question that only future experience can answer. A few cherries and birch should be found in every grove. For wet grounds select elm, black-ash, arbor vitae (common cedar), asp, willow, &c. The white pine and the tamarac will also flourish on wet grounds, but care must be taken not to plant larch on grounds on which water is stagnant.

After the trees have grown to such a size and height that they begin to crowd each other, every second tree in the second and fourth rows, on each side, should be removed, and when they again begin to crowd each other, every second tree in the remaining rows should be cut out. This will reduce the number of trees to one half and will leave the trees eight feet apart in the rows. When the trees grow still larger so as again to become crowded, then the second and fourth rows on each side of the middle row must be entirely removed. This will leave the trees eight feet apart each way, and will give them ample space to grow to a fair size, but if it is desired to have very large trees, they must be given still more room. Care should always be taken to preserve the original diagonal plan, as that will offer the most effectual check to the winds.

By stretching wires along one of the rows of trees after they have grown so large that cattle can no longer injure them, a good fence will be obtained, while the cattle find ample shelter on either side.

The object in planting so closely, as I have advised, is to get the trees to grow upwards and not waste their strength in throwing out side branches. By planting them closely they will all grow upwards so as to keep in the light. Some writers advise planting even more closely than I have directed. Some direct planting a tree every two or three feet. This, I think, except in special cases, as the ash, elm, hickory, &c., which can be used while still small, would not be found advisable. The thinnings will hardly pay for the extra labor and expense.

One of the most unsightly things on some farms is the growth of bushes in fence corners and other places. Such rubbish is not-beds for the production of vermin. The best time to cut shrubbery is when the season's sap is exhausted in the production of growth, so that the sap is not sufficient in circulation for the support of new shoots. When the brush is dry it is a good plan to burn it on the spot where it grew, together with all the other rubbish which can be procured. This will check fresh growths, and put the ground in a good state for the growth of any crop that can be sown.

Feed fallen fruit to the hogs.
Don't allow fallen fruit to lie under the trees: it breeds destructive insects.

Stock.**Points of a Good Horse.**

MUZZLE.—Nostrils should be large and wide, indicating great breathing power, and hence ability to stand much exercise. This indicates good breeding and is also a point of beauty.

JAWS.—The space between the branches should be wide, so as to allow play for larynx and trachea; otherwise breathing will be interfered with.

FOREHEAD.—Should be wide, indicating a large brain, which gives courage, tractability and a good temper.

HEAD.—Should not be set on straight, but the animal must be able to draw it in well towards the breast. Straight heads indicate a dull temperament, and not being able to yield to the bit, the horse becomes hard mouthed. Size of head should be small or medium.

EYES.—Large, bright, full and mild, indicating freedom from disease and a good temperament.

EARS.—Medium sized, not locked; but this is characteristic of some thoroughbreds. Must be able to prick ears well forward.

NECK.—Full, muscular and rather short. If long, the leverage strain on the muscles is too great. Should be gracefully arched, gradually tapering towards the head, and wide at base; but it should not be too narrow towards the head, as this is a fruitful cause of "roaring."

SHOULDER.—Oblique for fast horses, giving large base for attachment and play of muscles; upright for heavy horses, giving more leverage and an equal pressure on all parts of the collar, being nearly at right angles to the line of draught.

HUMERUS.—Long and well placed under body.

ELBOW JOINT.—Should not be turned in, but have plenty room between joint and body. If turned in, it will cause turning out of toe; hence liability to speedy cut and interfering. The opposite condition (pigeon-toed) is not so objectionable.

FORE ARM.—Must have length and well clad with muscles, especially in front, indicating muscular development of the whole body.

KNEE.—Large, broad in front and projecting on sides, so as to be able to bear much concussion; well marked ridge behind knee. Should not be calf-kneed; but this is not so objectionable in heavy horses. Opposite conformation is faulty in heavy horses, but not so much in light horses.

METACARPAL (Cannon Bone).—Should be flat, indicating strength of bone, and tendons and ligaments should be well developed and marked.

FETLOCK.—Good size, square and clean.
PASTERNS.—Oblique (45° to 60°), and medium length. If too long and oblique is subject to strains. If too upright there is liability to navicular disease.

HOOF.—Tough, oily, bright, and fine texture. If dry look out for cracks. Quarters should not be low, indicating thin sole and disposition to bruises. Frog full, and elastic and large; cleft well developed.

CHEST.—Volume indicates capacity for lungs and large organs of digestion. The more room the more endurance and stamina. Fast horses

should have deep and narrow chests, wide ones being fatal to speed.

WITHERS.—Medium prominence for elegance, and for saddle should extend well back.

BARREL.—Ribs well sprung, and posterior ones long, giving room to digestive organs, and producing stamina, constitution, and good feeding properties.

BACK.—Should be short on top and bottom line long, giving more space for travelling. Animal should be well ribbed home. Top line of back should be slightly depressed behind withers, but rising towards loin, and well clad with muscle. Hog-back disfavours elasticity.

LOIN.—Cannot be too broad or muscular on any animal. Loin sometimes appears broad on account of narrowness of croop and hind quarters.

CROOP.—Variable in the different breeds. Goose rump objectionable in fast horses, but not considered so in Clydesdales.

QUARTERS.—Fleshy, wide and muscular, without deep hollow between, and not sunken at anus. View always from behind. Muscles on lower extremity of tibia (gaskin) should be well developed. For speed great length of femur and tibia is required, but for heavy horses the tibia may be shorter, although the femur may be the same length.

HOCK.—Flat and clean. Point of hock should stand well out, and low, making cannon bone short, which gives it strength.

The Beef-Milk Cow.

F. D. Curtis, in the *New York Tribune*, says: "The attempt to combine in one cow the qualities which will fit her for a cow and a beef animal at the same time, has proved futile. I never could see any sense in supporting a big carcass for twelve or fifteen years, because it might bring, at the end of that time, when put in condition, twelve or fifteen dollars more than another body, which was calculated to produce just as much milk without the extra cost of supporting all this time useless flesh and bone. If cows were to be slaughtered the same year in which they were born, this talk about extra weight might have some philosophy in it. The principle is wrong. Butter is not fat, neither is fat butter, although a great many people are trying to make out that it is. My ideal of a cow is not a small oleomargarine factory, but an animal endowed with the apparatus for making milk and real butter, and no useless muscle, tissue, or other physical organs for making fat or beef. Ordinarily cows do not get food enough to keep up this double action, and when organs are not well supplied with nutriment, there is always a lack of vital force. A beefy cow is always a poor cow, and a good cow is never beefy. Finely-spun theories may be written against my propositions, but they will never be woven into practical success. A cart-horse cannot be a runner, and one fleet of foot is not made for draught."

A brilliant record of bovine maternity, says the Orange Co. Farmer, is reported from Marlborough, N. J., where a half-breed Durham cow, just five years old, has given birth to eleven calves. At the first birth, before she was two years old, she had three calves, at the second, three, and at the fourth, two. All but one were born alive. This leads the record.

Veterinary.

Veterinary Notes for Farmers.

BY E. W. H., MONTREAL.

COLIC.

Perhaps one of the commonest diseases affecting working horses at this season is colic, also known as the gripes, the fret. It is easily recognized, and if taken in time is very amenable to treatment. There are two kinds of colic, but sometimes both are seen in the same case. In what is known as spasmodic colic the abdomen is not unnaturally swollen, but the pain is very acute and comes on at intervals. The seat of the pain is in the intestines, being either in the small or the large. The affection consists in a spasmodic contraction of the muscular coats of the intestines. The form known as flatulent colic is recognised by the distension of the abdomen; the pain is not so acute as in the spasmodic form, but more constant. The distension is caused by the presence of large quantities of gas in the intestines.

The symptoms of spasmodic colic are first uneasiness of the patient—sudden pain, stamping of his feet, looking at his sides; then he rolls on his back, gets up and lies down again. In flatulent colic the abdomen is much distended and the pain more constant; the animal rolls and lies down with more care than in the spasmodic form.

The causes of spasmodic colic are various. Drinking large quantities of cold water when in a heated or exhausted condition is a frequent cause; sudden changes of diet, as being brought into a stable off pasture and kept on dry food; also giving large quantities of water immediately after feeding on oats. The causes of flatulent colic are generally found to be due to food which undergoes fermentation, whereby a large amount of gas is generated; boiled food and succulent clover, etc., when the animal has bad digestion, are very common causes.

TREATMENT OF SPASMODIC COLIC.

In this affection, as in all others, prevention is much better than cure, and a proper attention to feeding and watering will do much to prevent it. With regard to medicinal remedies, the great point is to administer an agent which will relieve the pain and relax the spasm; also a stimulant to cause healthy muscular action of the intestines. For these purposes tincture of opium (commonly known as laudanum), combined with sweet spirits of nitre, has proved to be the best in use, and it is good to keep a supply on hand in case of necessity. On the first symptoms showing themselves the following drench is to be administered: Take laudanum, 2 ozs.; sweet spirits of nitre, 1 oz.; tincture of ginger, 1 oz.; water, 1 pint. This is for one dose. Also give an injection of warm water, about three-fourths of a pailful with a little soap dissolved in it. If in an hour's time there is no improvement, give the following drench: Take laudanum, 1 oz.; spirits of turpentine, 1 oz.; raw linseed oil, 1 pint. Apply cloths soaked in hot water to the belly, and kept constantly hot by renewing; or hot poultices may be applied in the same way. Ordinary cases generally yield to this treatment; the great danger to be apprehended is that it may run on to inflammation of the bowels, which in

the majority of cases proves fatal and requires different treatment.

The treatment of flatulent colic must be directed to dispel the gas in the intestines. For this purpose spirits of turpentine administered in linseed oil is the best remedy. Give the following drench: Take spirits of turpentine, 2 ozs.; raw linseed oil, 1½ pints. Care must be taken to shake these well together, as the turpentine by itself would injure the animal's mouth. This drench is to be repeated in an hour's time, and if there is much pain, an ounce of laudanum may be administered in addition to the above. The danger to be apprehended in flatulent colic is either suffocation or rupture of the intestine. The after treatment of all cases of colic consists in attention being paid to the food, which should be of a very digestible nature; no hay nor oats should be given that day. Tonics to improve the digestion should also be given, such as a teaspoonful of sulphate of iron powdered, and two teaspoonfuls of powdered gentian, given in the food morning and evening.

New oats are not good feed for horses. They relax the bowels, and often if the change from old to new is sudden, the value of the oat ration is almost entirely lost. As they shrink a good deal in drying, the old oats, though nominally dearer, are usually cheaper, as well as better feed, than the new crop.

The Texas *Wool Grower* says sheep are not the only class of stock that has gone down in value. The same is the case with cattle and horses, which have recently depreciated 25 per cent. Stock cattle, as they run, which were worth from \$18 to \$20 last April, or at least were held up to those figures, are now being offered at \$14 to \$14.50. The consequence is great complaint among those who hold this class of stock.

The Geary Bros., of Bli Bro Farm, London, Canada, recently sold to E. S. Butler, of Ridgeway, Ohio, their celebrated Shropshire ram Acme, imported by them in 1883, from the flock of Mr. Edward Instone, Shropshire, Eng. Acme is a celebrated prize winner, weighs 370 lbs., and was sold for the handsome sum of \$450. This, we believe, is the highest price ever paid for a Shropshire ram in America.

The American Cultivator says:—There is a growing disposition among fruit growers to believe that if pine trees are mixed through an orchard it will have a beneficial influence in driving away the moth of many of the destructive insects which prey upon apples and apple trees. It is supposed to be the strong effluvia issuing from the turpentine of the pine. Others contend that the pine, in all its varieties, throws off in the grove constantly in cold weather a large amount of warmth or caloric, which has a favorable influence on surrounding trees during our long and severe winters. In fact it is contended by some scientific authorities that all live trees have this influence, besides the protection which they impart as wind-breaks. It is claimed by medical writers that the influence of the turpentine in pine groves is highly beneficial to the health of the human race, as well as to animals which dwell in well-ventilated pine groves.

Editor's Diary.

A German farmer in Michigan tested one of the highly boasted threshers of that State by putting the chaff through a fan-mill, and obtained twenty-five per cent. of the crop threshed. The "more manure" cry should now be accepted with greater suspicion than ever.

Many farmers are perfectly satisfied with the results of summer fallowing as an agent for the destruction of weeds. Weeds require the same nourishment as other crops, and if the soil is light and the season wet, the true secret of extermination of these merciless crop-robbers, is that the soil has been deprived of the fertility which is required to make them flourish, and consequently the weaker shoots must succumb to the gripes of hunger.

At Cornell University there is a herd of grade Holsteins, half to three-quarter bred, amongst which there is one thoroughbred. A party of experts who visited the herd could not pick it out from the rest of the herd. This speaks well for the impressive power of this noble breed. Prof. Roberts, who is both a scientific and practical farmer, conducts the farm on the principle of farming scientifically for profit, the result being that the profits of 125 acres over all expenses amount to \$2,000 a year. It is interesting to know that the professor, in producing milk for sale, has selected the Holsteins to grade up his herd. There is something in book-farming after all.

The German Millers' Association offered a prize for the best essay on "How to determine the admixture of organic or inorganic substances in rye and wheat flour." The prize was won by Dr. Wittmack, professor of the Agricultural College at Berlin. This is possibly one of the most important prizes ever offered, as it has been the means of bringing conspicuously before the public the different modes of adulterating wheat flour, and has offered a series of practical tests by which the adulterations may be detected. The mixing of cheap with costly flours has become a most sinful evil, and it is hoped that the various tests brought out in the essay will be the means of driving defrauders into more legitimate pursuits.

Beware of gamblers and swindlers at the jumbo exhibitions. This growing disgrace is one of the chief features of the American shows, and it is thought we will be left behind the age unless we also patronize all sorts of humbug monstrosities. The show is getting to be a fine nest for sharpers, quacks and buffoons, who compete with each other in diverting the attention of those who go to learn something fresh about their business. If the growing evil is finally to overcome the waning good, the sooner the farmers begin to discuss the establishment of purely agricultural exhibitions, the better for themselves and for posterity. The farmer who on leaving the exhibit grounds does not feel that he has been benefited both morally and intellectually, should stay at home in the future, and certainly his wife and family would be better amused and instructed by going elsewhere.

It is not expected that any more falling will take place in live stock, as it now stands on four legs, viz., butter, cheese, beef and oleo-margarine.

The cruel practice of dishorning cattle still continues in Ireland, it being estimated that 80,000 head are dishorned annually. In a late suit instituted by the Society for the Prevention of Cruelty to Animals against a dishorner, judgment was rendered against defendant.

Less than three per cent. of the dairy productions of the United States consist of butter made in factories; only twenty per cent. of the total cheese manufactured is the factory-made article. This is after twenty years of co-operative dairying, and yet attempts are being made to convince the farmers that private dairying must go.

Now is the best time to take the question relating to the destruction of weeds into consideration. The botany of every weed should be studied, and the duration of its season of growth. A distinction should be drawn between those weeds which ripen their seeds before the removal of the crop, and those which ripen afterwards. The gang-plow and the cultivator, as agents for their destruction, are often better than the plow.

The farmer's boy is often led into mischief for want of something to occupy his mind, either from inward depravity or from association with neighbors' boys of still more evil propensities. Even during his school days he has always some vacant moments, mornings and evenings; or rather he should not spend all his out-of-school hours either in idleness or in farm drudgery. The best way to awaken his latent ambition is to put the outline of some experimental work into his hands. Give him a plot in the garden, a cow or a pig with which to carry on experimental feeding, or even an insect or a plant with which he may practice entomology or botany. Watch the bent of his mind, and you will be sure to find evidence of greatness somewhere.

The Wyoming delegation appointed for the purpose of obtaining a hearing before the Privy Council in relation to the shipment of cattle through Canada into the interior of England, have submitted their case. It will be remembered that there is a restriction in England compelling American cattle to be slaughtered on landing, so that if the case be favorably heard the Privy Council will be discriminating in favor of Wyoming cattle. The Council wisely decided that the Dominion Government would first have to be consulted with regard to permitting the cattle to pass through Canadian territory. Although the Canadian route is much shorter and cheaper than that via Chicago to the Atlantic ports, and the English could procure healthier meat through the former route, yet it is not likely that the Privy Council will be desirous of changing the general policy with regard to restrictions on American cattle, whether or not the object is to afford a certain amount of protection to British stockmen. Should the Wyomingites still entertain hopes of success, they may expect to have the policy of delay to contend with. Apart from these considerations, it is not to be expected that western cattle are to be considered sufficiently free from disease to warrant the acceptance of the proposed scheme.

Correspondence.

NOTICE TO CORRESPONDENTS.—1. Please write on one side of the paper only. 2. Give full name, Post-Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. If an answer is specially requested by mail, a stamp must be enclosed. Unless of general interest, no questions will be answered through the *Advocate*, as our space is very limited. 3. Do not expect anonymous communications to be noticed. 4. Matter for publication should be marked "Printers' MS." on the cover, the ends being open, in which case the postage will only be 1c. per 4 ounces. Non-subscribers should not expect their communications to be noticed.

Voluntary correspondence containing useful and seasonable information solicited, and if need, will be liberally paid for. No notice taken of anonymous correspondence. We do not return rejected communications.

We do not hold ourselves responsible for the views of correspondents.

SIR,—I have a pear tree, and the pears fall off before they come to any size. Can you give me any information as to the cause?
G. C.

NORTH MILTON, P. E. I.

[This dropping of the pears may arise from their being infested with the codling moth, which attacks the pear as readily as the apple. Pears also sometimes drop from protracted drought and sometimes from over-bearing.]

SIR,—I read in your paper the article on safe introduction of queens. I know that letting a queen out, as recommended in July number, she would be sure to be killed if they were not all young bees. Now I have a method that is sure success every time you may put a queen in any colony. After first removing the old queen, take two frames of brood bees, and all from some strong colony, or from the colony into which you wish to put your queen, and set them into an empty hive at the side of the one into which you wish to put her; let it stand a few hours, and let your queen out upon these two frames. As soon as she begins to lay freely, remove the old queen that you wish to supersede and unite these two frames of brood bees and queen with the one from which the queen has been removed, after having thoroughly smoked both parts until gorged with honey. Now you can introduce her any way, by putting in these two frames or simply shaking bees and queen at the entrance, and let her run in. I have introduced two hybrids in this way when every other way was a failure. Bee-keepers should give it a trial.
D. W. M.

TINTERN, ONT.

SIR,—Will you be kind enough to describe a good land leveller? I have a very good field, but very uneven on the surface, and have tried the common road scraper, but it is not satisfactory.
W. A. W.

LANSDOWNE.

[Take three or four heavy planks about 12 feet long, place them side by side, and fasten them together by three heavy cross pieces, one at each end and one in the centre; iron bolts or wooden pins through the planks, and cross-pieces, will make the structure secure. Hitch a team of horses to one end and drag it along the ground, side with cross-pieces up. This is the best arrangement we have seen for levelling small hills on plowed land, but will not work where the earth is to be carried any distance.]

SIR,—Will you be so kind as to answer me the following questions: 1. What kind of ground is the most suitable for the raising of red and black raspberries? 2. What would be the respective cost of setting out an acre? 3. Could root crops be raised between rows the first year? 4. What is the best time to set them out? 5. What is about the average yield of an acre of each when well attended, and the price on Toronto market per quart of different varieties? 6. What are the best kinds of artificial manure to use on them? 7. About how many plants would it take to an acre?
J. T. B.

UNBRIDGE, ONT.

[1. For red raspberries, sand loam; for black raspberries and blackberries, good rich clay loam, well under-drained. 2. The cost of plants would be about \$30 or \$35 per acre for either raspberries or blackberries. One man could plant an acre in two days after ground is ready. 3. Root crops can be raised between rows first year, but it does not pay to do so, as the plants will not do near so well. 4. There is no better time to plant than fall, as soon as frost kills the leaves on the plants. 5. Black raspberries will yield from 100 to 150 bushels to the acre, if well attended to; red about 75 to 100 per acre; blackberries from 100 to 200 bushels. Price changes so often on the market; it would run from 8c. to 20c. per qt. 6. Hard wood ashes. 7. It will take of raspberries planted in rows six feet apart, and three and one half feet apart in the row, 2,100; and of blackberries, rows 8 ft. apart and 3 ft. in the row, 1,800.]

SIR.—I plant trees along the road. When large enough I put wire on them, and put a strip of inch wide band iron on the top. Can I be compelled to put a scantling along the top? 2. I draw my manure out in the winter, and let it heat in a pile in the field. Do I lose any of the strength of it in doing so?
J. W.
CORWAIN, Ont.

[1. There is no statutory law to compel you to do so, and it is not likely that your Council would pass a by-law to that effect. 2. All depends upon the temperature of fermentation, and whether the heap is exposed to the rain or not. This is a vast subject, and we are now treating thereon in a series of editorial articles, in which you will get all the information you want.]

SIR.—1. The price of American cattle is two cents a pound higher in Albany, N. Y., than in Montreal, and yet the Americans claim that they lose 1½ cents by being compelled to slaughter on landing. Last year I sold my cattle for \$90 a head, and this year I sold as good and even better cattle for \$75. I believe this is caused by a combination formed for the purpose of keeping down prices. Is this not so? 2. Which is the best kind of black raspberry, also yellow?
T. B. S.
VANNECK, Ont.

[1. There has been a glut of stock in the English market owing partly to the simultaneous arrivals of large cargoes of cattle from Canada and the United States. This depression is fully equal to the figures in your case. We are not aware of any combination, and if there is any the depressed prices cannot be traced to it. 2. Mammoth Cluster or Greg is the best black, and the best hardy yellow is the Caroline—in this vicinity.]

SIR.—I intend feeding oil cake the coming winter, but am not sufficiently acquainted with the proper quantities to feed to different kinds of stock to commence without some one's opinion and advice. Will you in your next issue give me quantities to feed to young calves, yearlings, and fat cattle and sheep. Yours,
A. SUBSCRIBER.

[There is no fixed rule as to quantity. Oil cake being a laxative, you should watch the state of the bowels of animals that eat it, and the relative quantity as compared with other food should be changed occasionally. Everything depends upon the kind of other food given. A little experience will guide you. As a rule, however, you may take the following ration as a basis for moderately fed cattle or sheep; One part hay (timothy and clover mixed), 4 parts roots, 1 part meal (barley or oats, mixed or separate), and one-fourth part oil cake. In changing this ration, bran may be substituted, in whole or in part, for oil cake, and if peas are substituted for oats or barley, a less quantity must be given. If no grain is used more oil cake may be given, especially if the hay is of poor quality. Stock will do very well on good straw and oil cake, that is, a too poor and a too rich food mixed will often do as well as a mixture of several moderately rich foods. If you bear in mind that clover, bran, peas and oil cake are the rich foods; oats, barley, timothy and roots the medium, and corn and straw the poor foods, common sense will teach you how to mix them. For fattening cattle more rich foods should be added to the standard ration. In rations weight is always understood, not measure.]

SIR.—1. What is the cause of the feathers coming off my hens' necks from the head to down near the breast, and is there any cure? They appear to be in good health, and are laying well; they are inclosed, but get out every evening, and are fed on grain of different sorts, and some soft feed. Some of them have not stopped laying since February; but they are a fright to look at. 2. How much unleached ashes is required to be put on an acre of muck land to give a good crop? The land is well drained. 3. Would it be injurious to a garden to water it out of the well without warming the water in the sun?
PALMERSTON, Ont. SUBSCRIBER.

[1. Your hens pick each other for want of animal food. We know of no other cause that has ever produced such symptoms. When they once get into the habit they very often continue the practice after the animal food is given, so that the only sure remedy is to keep them separate. Some poultrymen destroy such hens when they are not very valuable. 2. It depends upon how deep you plow. You needn't be afraid of putting on too much, if you plow deep and mix the ashes thoroughly with the soil. Apply 60 to 120 bushels per acre, according to the depth you plow; but a less quantity applied as a top dressing or merely harrowed in would produce a good effect on some crops. 3. No.]

SIR.—Is there a reliable company that insures horses? I want to buy a good stallion, but am opposed to run any risk.
M. M.
SOUTH CAYUGA.

[The insurance companies will insure stock against fire in connection with the stables they occupy; but other wise you can't get a policy on an animal's life.]

SIR.—Would it do to sow buckwheat amongst strawberries to act as a mulch?
T. H.
PETROLIA.

[A green crop may be sown between the rows, but buckwheat wilts to almost nothing soon after the frost makes its appearance. Oats would be the best green crop for the purpose, but there is nothing better than clean wheat straw. The green crop should be sown early in the fall.]

SIR.—What is the name of the weed I send herewith, and how is it destroyed?
OLD SUBSCRIBER.
INGERSOLL, Ont.

[The common name of the weed is sow thistle, the botanical name being *Sonchus asper*. Read our article on "Fall Plowing" in this issue, and you will get the information you want.]

SIR.—What is the remedy for the onion worm?
WATFORD, Ont. E. B. H.

[You will find a cut of the onion fly, with description and remedy, in our issue of last May.]

SIR.—I have a sucking mare colt (valuable stock) with what appears a rupture around navel. Please inform me what to do with it. Some say it will get well of itself.
SACKVILLE. T. C. C.

[Don't treat the colt till it is a year old; in nine cases out of ten they get better at this age without treatment. If the rupture does not pass away when the patient is a year old, you will have to get the clamps put on, which must be done by a skillful veterinary.]

SIR.—What is the best plan to exterminate wild oats?
OMENER. W. G.

[Wild oats, and all other seeds that ripen before harvest, are best destroyed by cultivating or lightly gangplowing the land as soon as the crop is removed. This will give the seeds a better chance to germinate, and may be plowed under late in the fall. If the season is favorable for a vigorous growth, you will then have a crop of green manuring, which will make the oats pay for the trouble they have given you. For further details read our article on "Fall Plowing," in this issue.]

SIR.—Can you please inform me through the columns of your valuable paper of any reliable books on small fruit growing and on flower and vegetable gardening?
WINDSOR, N. S. B. A.

[Refer to our book list in advertising columns of back numbers of the ADVOCATE.]

SIR.—We have a bull calf about seven weeks old which appears to be affected with stiffness in its hind quarters near the back bone. Its legs also appear to be stiff, it being scarcely able to stand on first getting up. There appears to be no swelling or inflammation, or, on the limbs being rubbed, any perceptible pain, only stiffness near the hips, and lack of control over its limbs. Until recently it has been out on grass with other calves, when we brought it in-doors, thinking that the exposure was injurious. It has been affected for a month or more. Appetite good and bowels regular. Have been bathing the affected parts with high wines lately, but with no apparent benefit yet. What course of treatment would you recommend? An early reply by mail will greatly oblige.
M. C.
AULTSVILLE, Ont.

[Your calf is troubled with rheumatism, which frequently affects high-bred and highly fed young stock, especially when they are subject to exposure. Give about three fourths of a pint of raw linseed oil twice a week as a drench. Give also some diuretic medicine, say saltpetre, two or three times a week in dram doses. Rub a sharp liniment on the hips and back. Continue this treatment until you find manifest symptoms of improvement.]

We are continually receiving letters asking for information which has appeared over and over again in the ADVOCATE, and these are the letters which we omit when our space is too limited to answer all our correspondents. We endeavor to give information as much in season as possible, and letters coming to us out of season, or do not demand immediate attention, are left over when we are crowded for space. Other letters remain unanswered because the information is found in other columns. Our readers should glance through the ADVOCATE if they do not find the answers to their questions in the correspondence columns. We are always ready to furnish reliable information to our correspondents, if the questions asked are sensible and of general interest.

The Apiary.

Increasing Colonies by Division.

J. M. Hicks, in the American Bee Journal, says: "It has been many years since I first practised increasing my colonies of bees by the above method of swarming, and thus saved a great deal of trouble as well as time in waiting for them to swarm at will; which I think is money to the bee-keeper who desires to prosper in the business of keeping bees for profit.

I am well aware that many object to the management of bees on any other than the old style, and say, "let the bees swarm naturally if you would succeed, as did our fathers;" but I desire different success from that of 50 years ago, when we so well recollect how father, mother, and sometimes grandpa as well as grandma frequently came over to show how to hive bees when they should swarm; and of all the whang-to-bang-bangs and jingling of cow-bells, played so as to get the bees to settle, frequently resulting in a total failure. Often the bees would return to the hive from which they came out, and sometimes going off to the woods, for there was plenty of woods here in the Hoosier State about that time, and were thus lost or failed to cast a swarm at all.

It is a well-known fact, too well established to be misunderstood by any one except an old-time bee-keeper, that two-fifths of the colonies which are allowed to swarm in the old way, are lost by going to the woods. While it is a well established fact to the more modern and scientific bee-keeper that a swarm produced by dividing a colony, at the right time, there will be no trouble about losing a swarm, or having them come out and leave the hive.

I think that it is much easier to swing the brood frames out and select such of the brood as is fit for putting into a new hive of the same shape and size (which they should all be); thus making up your new colonies in five to ten minutes. This should be so managed as to come as near to the time when the oldest of the brood would have swarmed had they been left to luck and chance.

But says one old fogey, "How are you going to do all this and not let the bees swarm in the old way?" Truly, this old question is a poser to us; but we must make ready one of our improved hives, just the same as all the bees are in, and we set it by the side of the hive of bees that we think is ready for dividing. We now swing the doors open and take out a frame from the middle of the new hive, then open the strong colony of bees, and swing the brood frames apart carefully, and we find the frames on which the queen is situated. Perhaps she is laying eggs at the rate of a hundred per hour; but we now lift the frame of brood, queen, and adhering bees on the same, and hang it in the new hive in place of the frame just taken out, and then hang the new frame in the old hive, and close up both hives carefully.

Put the new hive with the frame of brood, bees and queen, in the same place where the old hive stood, and move the old hive some distance off to a new location. Now the work is done, the old colony which would have swarmed, returned to the new hive at the old location, thus strengthening them, and goes to work with a will, already having one sheet of brood, eggs, and the mother-queen; a start in house-keeping.

The Household.

Taking Medicines.

Mischief is often done by the indiscriminate use of medicines. The idea is well expressed by the inscription on an old tomb-stone:

"I was well; I wished to be better; I took physic, and here I am!"

The intelligent physician does not profess to cure disease through the direct agency of the remedies he prescribes; these are given to remove obstructions that interfere with the recuperative efforts of nature. If there are no obstructions to remove, the effect of drugs is to interfere with the natural and healthful movements of the machinery of life. Health is maintained by "good living,"—a term that comprehends a great deal. I consist in having good food, properly cooked, at every meal; clothing appropriate to the changing seasons; and moderation in all things. Such a person might require no medicine during a long life.

I must admit, however, that such an instance would be exceptional, even to one making the effort to live in that way. We can not always procure well-cooked foods, nor can we always predict sudden changes of the weather in time to protect ourselves against them. But we can aid nature in throwing off disease, by abstinence and such other prudential means as would occur to any thoughtful person, instead of eating heartily and trusting in drugs to overcome our ailments.

Who ever saw an habitual medicine-taker who enjoyed reasonably good health? All medicines debilitate, and that drawback must be duly considered before taking them. Think of the quantities of pills that are used. Most of these are taken to relieve constipation. Unfortunately, the relief is only temporary, and the doses must be repeated often, thus weakening the stomach and incapacitating it for its natural work. If medicine is used for the relief of constipation it is better to employ it in suppositories, but a better plan than either is to cure the trouble by means of a proper diet and regular and active exercise or work in the open air. Thousands of drunkards, with their legacies of sorrow and crime and broken hearts, are made through dram drinking, commenced at first for the relief of dyspepsia or colic, and continued through excuses and subterfuges that a depraved appetite strives to make plausible.

The little household remedies have their uses and they have also their abuses. There are occasions when such remedies as camphor, brandy, paregoric, laudanum, ginger, and pills and powders, may be of great service. The important point is to know when to use them; that would be perhaps once where they are ordinarily employed ten times. The best of all remedies—and every person should have a little constantly on hand—is common sense. If one experiences inconvenience in eating, nature will bring relief sooner and more effectually if left to herself, than by efforts to aid her with liquors and tinctures that benumb the stomach and retard healthy action. Rest, warmth and abstinence are the proper remedies for all ordinary ailments. Wholesome and nutritious food, the comforts of a good home, vigorous and regular exercise, seasonable clothing, fresh air constantly, and eight hours of sound sleep out of every twenty-four, and you may "throw physic to the dogs."

Family Circle.

Ludwig's Jealousy.

In one of the many crowded streets of a town not far from Bonn, at the time when that fine old city was the capital of an electorate, and justly renowned for its artistic supremacy, there lived an old musical instrument mender.

His shop—if the dingy little room with its one dim window, and low entrance, stocked with a motley collection of old instruments in various stages of decrepitude, be worthy such a designation—lay almost under the shadow of the great church; and when in the evening sun lit up the grand old pile, a faint reflection of glory found its way through the narrow doorway of the instrument mender's abode, and threw a dim halo, like the light of departed days, round his odd stock.

There was something strangely pathetic in the sight of these voiceless melodists hanging neglected from the dingy walls, with loose strings straggling, like the spare grey locks of old age, round their shattered frames; and art which—so whispered hope—was to set them up anew, and restore them again to the world for another period of triumph. Poor broken-winded "cellos" and thin-voiced violins! strange types of worn-out humanity, waiting, like human patients, with trembling frames and lengthened features, and wrinkles intensified by anxiety, for the word of condemnation or encouragement from the physician's lips, that shall mark the verdict of life or death to each of them.

The musical instrument mender had two sons: one, Ludwig, the elder, a sharp intelligent lad, full of fire and ambition; the other, Felix, a shy dreamy boy, with strangely lustrous full dark eyes, seldom speaking, and never joining in the sports and games proper to childhood.

Both helped the father in his work; for the old man was a sort of celebrity in his way, famed for his dexterity in mending a broken bridge, or repairing the ravages of time by a new coat of varnish, and it was his intention to bring both boys up in the same trade. But while Ludwig, with his long slender fingers, firm and quick in their movements, soon learnt to work as neatly as his father, little Felix proved himself awkward and incapable. Yet, while Ludwig sauntered away, carelessly indifferent to the success of a piece of work which had not depended on him in any way, Felix would remain by his father's side, watching in breathless anxiety the adjustment of a screw or the gluing of a back.

Many a hopeless incurable condemned to the fire was saved by him, and secretly stored away in a closet under the roof, and here, safe from the scrutiny of other eyes, he amused himself for hours drawing a feeble sound or two from wheezy lungs that refused to respond to any touch less tender than his.

His great delight, however, was to steal into the church during the hours for service. Here he spent long hours listening to the choir practising, and drinking in with never-wearying delight the deep sounds from the organ. The boy had a sweet voice that might have gained him a place in the choir had any one discovered the fact; but only the old violins under the roof knew that Felix could sing, and they were not likely, in the nature of things, to divulge the secret.

One day, a very important personage came into the shop: no less than one Johann Breun, Capell-meister to the late Elector, and of great repute both as a singer and as a violinist.

He had brought his famous violin with him, in order to have some slight matter attended to. Ludwig in his father's absence took the task in hand, and acquitted himself to the old master's entire satisfaction.

As he handed the instrument back to its owner with a respectful bow, the musician's eyes fell on his long delicately-shaped hand.

"Why, boy," he cried, "thou hast the very fingers for this instrument thyself I wouldst like to learn!"

The boy coloured; a flash of delight and expectation passed across his face. Musical emoluments in those days were the reverse of extravagant; yet the old master's assured position, his comfortable income, his prosperous condition, the solid respectability of his abode, were in themselves a sufficient guarantee of what might be done in the profession, under the kindly wing of protection.

"Ay, master," he replied, "that would I, if I could hope to do as much by my violin as you have done."

The musician took this as a compliment to his mastery over the instrument; it did not occur to him that it might be merely a tribute to his easy condition.

He seized the boy's hand, and felt the flexible joints.

"Why, my boy," he cried excitedly, "if thou hast but the soul of music within thee, thou mayst do more. Come, I will teach thee; and perhaps, who knows! thou mayst one day find thyself Capell-meister in thy turn."

Ludwig gasped for breath. Capell-meister; the protege of an Elector; pensioner of a prince; the frequenter of Courts; the friend of high-born dames! All this instead of one mean shop, and the poor share of a paltry trade!

"Canst work?" inquired the master.

There was no need for reply. No labor is too great for genius or ambition. Ludwig possessed the very soul of ambition. The master saw its gleam in his eye—but he took it for the light of genius.

"Come to me to-morrow," said he in parting; "I will teach thee."

O happy Ludwig! And Felix, standing unnoticed by, felt a great hot tear roll heavily down his cheek.

And so Ludwig set himself deliberately to become a musician. The task was a harder one than he had imagined, and it needed all the allurements of future triumph to keep him at it. All day long he toiled, up and down, up and down the weary strings, hating the work but loving the end in view. Sometimes he grew disgusted. Often, after a stormy lesson, in which the fiery old musician, angrily contemptuous at the boy's failure to understand his exercise in counter-point, or perhaps dimly conscious of his pupil's lack of soul, would in his

passion almost resort to blows, Ludwig would come home, throw down his instrument, tear his hair, vowing that never again would he take a lesson. But these fits were short: on good days—days when the maestro was satisfied with his pupil—Ludwig would get him to talk about his old Court days; the receptions he attended, the great people who flattered him, and paid him deference (for the musician had his touch of vanity like the rest of the world), and the reminiscences fired Ludwig's heart anew. Courage and industry, and all these things would be his too! When at night he lay down to sleep, he saw himself, in his dreams, the centre of a grand assembly. Fair maidens and high-born dames smiled graciously on him, Ludwig, the son of the instrument mender, Ludwig, the great musician; they bent their heads in rapt attention, while through the air floated the magic sounds of music made by his hand.

One night the dream was so vivid, the sounds so distinct that they roused him from his slumber, and he awoke cold and trembling. Surely he was dreaming yet; for the tender strains still lingered on the night air, and touched with a distant trembling vibration his listening ear. He started up, and peered through the darkness of the room almost fancying that in a moment more the often-pictured scene of the Electoral Court would open before his eyes. Nothing to be seen; yet still in the distance, amid the darkness, those faint vibrations float mysteriously through the room.

A thrill, almost of fear, passed through the listener's heart. Hastily he rose, and made his way to the door. The strains grew louder; they seem to proceed from the little cupboard in the roof where reposed the worn-out treasures of the tender-hearted Felix.

Ludwig half-murmured a prayer. Was it the music of the spheres he heard at that solemn hour of the night? Instinctively he held his breath and listened. The instrument—it was a violin, there was no mistaking it—seemed to his excited mind, to wail and moan as though some spirit-hand, troubled and restless, strayed over the strings. Ludwig listened half-fascinated for a time; then he crept back to his chamber, and groped his way to his brother's bed-side; for the two boys shared the same room.

"Felix," he whispered.

The child did not answer.

"Felix," he repeated, "wake up; I want you to listen to the music." He knew that this, if anything, would rouse the boy.

Yet still no answer.

He stretched out his hand in the darkness. There was no one there; the bed was deserted!

The whole truth came upon him with a flash. It was Felix—Felix who was playing up there in the darkness—Felix who was meanly stealing his art from him. He threw himself on the bed and wrathed in agony of spirit. The bitterest, cruellest jealousy took possession of his heart. To share his glory with Felix was to forfeit it altogether.

Just as the first cock-crow announced the birth of another morn, the child crept cautiously back to his bed, never doubting that Ludwig still slumbered.

Night after night the same thing occurred. Ludwig grew almost to hate the dreamy child who seemed to be stepping between him and his ambition. He dreaded lest the maestro should discover his brother's superior talent; and never lost an opportunity of railing at the boy, sneering at his incapacity, scoffing at his stupidity.

The father saw that all was not well between the two boys. He grew anxious about the younger lad. He remembered that death must call one day, and that he must obey. He trembled for the little Felix left at the mercy of the clever elder boy.

He pondered over the matter for some time in silence; then he spoke.

"Felix, wouldst like to go and visit thy aunt in Dresden?"

The boy looked up radiant. What possibilities did such a journey not suggest?

One morning they packed the bag that contained all his worldly possessions, and tucking his one treasure, an old violin under his arm, the boy bade farewell to his old home, and started off on his journey into the great world beyond.

Years went by; Felix was still away. Occasionally a letter, written in a bright hopeful spirit and full of undefined expectation came to the old home. Occasionally, too, there came letters from the good aunt with whom Felix lived; but she was cleverer with her needle than with her pen, and it was difficult sometimes to make out her strange flourishes. That she loved the boy was clear, for her letters were one long song of praise in his honor. She hinted at mysterious patrons who had befriended the boy, and took a strange interest in his welfare. Then, by-and-by, there came whispers of a fair young fraulein with golden hair and eyes of heavenliest blue, far above Felix in social position, said the good aunt, but, with all her virtues, only his equal in all that was great and noble in human nature. She was the daughter of his patron, himself an ancient burgomeister, and was to be the crowning prize of the young man's efforts; if, and only if, said the father, he should prove successful in the career he had mapped out for himself.

To all this Ludwig listened with complete indifference; he was so hard at work now perfecting his musical studies, that Felix, out of sight and out of hearing, no longer troubled his jealous soul.

His skill as a violinist was very great. In the mechanical part of his art it was simply marvellous; and although the old Capell-meister had long discovered that his pupil was soulless, so far as music was concerned, still he was proud of him and hoped great things for him. The Elector had announced his intention of holding a series of chamber concerts, to consist of string music exclusively, and it was an open secret that at the close of the performance the most successful violinists would be offered an important post in the Court orchestra. Ludwig had received through his old friend the Capell-meister

an invitation to attend, and already he felt that the moment so longed and sought for had arrived. He felt confident of success—this is easy to understand, for diffidence belongs to genius—and he smilingly pictured to himself his triumph.

Yet it was with some excitement of feeling, and some small trepidation at heart, that he finally set out for Bonn, whither the Capell-meister had preceded him, in order that none should say his pupil had made his *debut* under the open protection of a friend.

It was night when Ludwig reached his destination; and he made his way straight to the lodging that had been set aside for him during his stay in the capital.

On the morrow—soon after noon—he was sitting idly in his chamber, when a strange thing befell him. He fell into a light doze, and somehow in his slumber he seemed to be borne back, on the wings of time, to the days of his childhood. He and Felix were boys again. They both stood in the midst of an assembly of courtly personages, each had a violin in his hand, and both were playing. How fast Felix played! They were racing, he trying to outstrip his brother in the race. The ladies looked on, but their encouraging glances were all bent on the younger brother; they had all of them golden hair and blue eyes. How reproachfully the eyes seemed to look on him! He struggled in his sleep to escape them, and awoke—awoke as he had done long ago, to find the vision a creation of his imagination, but the sound that

had formed part of his dream a reality. He opened the door of his bedroom, just as he had done on that former occasion, and listened. The music grew louder; again the strains reached him from above. First a long steady note, like a sigh indefinitely prolonged—he had learnt the same trick himself with infinite difficulty—and then a burst of sweetness, of pathos, and of passion, the like of which had never come from his hand.

For the first time in his life he became conscious of his own deficiencies. Marvelling at the superior power of the invisible performer, he stumbled to the door, and made his way to the open air, to escape if possible the sounds themselves and the gloomy forebodings they awakened within him.

When he returned the house was silent. Some irresistible power seized him, and he stole up the stairs and towards the room from whence the music had come. The door was open and the room vacated, but he could discern, in the dim light of the winter afternoon, an open case on the table, and a violin within. Like a thief he drew near, and looked at it; he bent down: the label, "Stradivarius," was a sufficient guarantee of the quality of the instrument, even had he not heard it. There was another inscription besides. He raised the violin in his hand to look at it nearer: it was his brother's name, Felix. The ungoverned passion of a whole life-time seemed to be let loose in his soul. He took the violin, and with his trembling hands tore out the strings, and flinging the instrument from him on the floor, he crunched it, like a toy, beneath his heel. There he left it, and in a few moments more was in his own room again. He dressed, he scarcely knew how, in the Court garments that had been so carefully prepared for the occasion—the embroidered waistcoat, the silken hose, the buckled shoes that he was donning for the first time in his life—and, like a man in a hideous nightmare, he made his way to the carriage that was waiting to convey him to the Palace. In a few moments more he found himself standing—still as in a dream—upon the smooth parquet of the concert-room. The lights dazzled him by their brilliancy. The splendid toilettes, rustling fans, the murmur of voices, the glancing of bright eyes, the perfume that filled the air bewildered him.

The performance began. He played as he had never played before. Never was execution so brilliant—so faultless. Some unseen power seemed to drive his bow. The effect was startling. He might have been the ancient mariner telling his gruesome tale, and his audience the wedding-guests "who could not choose but ear."

The keener critics, accustomed to form a calm judgment in the midst of startling effects, professed to detect a flaw in the pitch, as though the musician's ear were not as sensitive as it might be, and a certain harshness of tone, that seemed to rob the instrument of the human tone in its voice; but the whole performance was so rapid, so gorgeous, that the general audience could only sit still and listen as in a fevered trance.

A brilliant passage brought the piece to an abrupt conclusion—almost with a crash as though some creature's heart-strings had been torn asunder. The triumph was immediate and complete. A burst of tremendous applause greeted the young musician. The moment ambition had crept was come at last. He bowed repeatedly, and then turned away. He felt the maestro's hand on his arm, and heard his proud voice in his ear—"My son, you have succeeded."

Ludwig tottered to a pillar, and stood there for a moment speechless. "You are ill, my pupil," said the old Capell-meister in evident consternation. "Come we will go. To-morrow you will see the Elector."

They made their way together through the deserted streets.

"To-morrow," said the old Capell-meister brightly. "To-morrow brings the introduction to the Elector."

Ludwig entered his room. On the table lay a note bearing his name, and in his brother's writing—

"Brother, I write this at the moment of my departure from this town, which only a few hours I entered with quite a different purpose in view. By accident I have just learnt of your arrival, and have heard of the errand which has brought you hither. Will it surprise you to learn that the same hope that guided your footsteps has also been my loadstone? Will it surprise you to learn that I also am a musician struggling for fame?"

"You yourself, brother were my earliest master. From you did I first discover my passion for music. We can never, then, be rivals; besides the sacred bonds of blood and affection preclude such a possibility. My success to-night was to have brought me a wife, but it would have lost me a brother.—Thine, "Felix."

Then, added hastily in a postscript, as though his generous heart had reproached him, in the face of his own bitter disappointment, with giving a scant and grudging measure of affection, were these words:—

"During your absence from the house to-day, I ventured to steal into your room to try your violin. It is good, but not, I think, equal to mine, which is the gift of a generous patron. I leave it behind in the hope that

Bouquet of Wheat Ears.

The accompanying illustration gives a very pretty way of making a bouquet for the winter, and if as artistically arranged, looks very pretty for some nook or corner of your room. It is something you might all have, but because so easy to procure, perhaps despised. All such decorations tend to make home more cheerful, and natural flowers will soon be gone.

Posies for Wedding Rings.

The old English custom of having engraved upon the wedding ring a sweet sentiment has yet many followers, hence we give below a number of trite expressions, most of which were written and used during the time of Cromwell:

Death never parts Such loving hearts,	Joy day and night Be our delight.
Love and respect I do expect.	Divinely knit by (Grace are we; Late two; now one the pledge here see.
No gift can show The love I owe.	Endless my love As this shall prove.
Let him never take a wife That will not love her as his life.	Avoid all strife "Twixt man and wife
In loving thee I love myself.	Joyful love This ring doth prove.
A heart content Can ne'er repent.	In thee, dear wife, I find new life.
In God and thee Shall my joy be.	Of rapturous joy I am the toy.
Love thy chaste wife Beyond thy life.	In thee I prove The joy of love.
Love and pray Night and day.	In loving wife Spend all thy life.
Great joy in thee Continually.	In love abide Till death divide.
My fond delight By day and night.	In unity Let's live and die.
Pray to love; Love to pray.	Happy in thee Hath God made me.
In thee, my choice, I do rejoice.	Silence ends strife With man and wife
Body and mind In thee I find.	None can prevent The Lord's intent.
Dear wife, thy rod Doth lead to God.	God did decree Our unity.
God alone Made us two one.	I kiss the rod From thee and God.
Eternally My love shall be.	In love and joy Be our employ.
All I refuse, And thee I choos.	Live and love; Love and live.
Worship is due To God and you.	God above Continue our love.
I wish to thee All joy may be.	True love will ne'er forget.
In thee my love All joy I prove.	This ring doth bind Body and mind.
Beyond this life Love me, dear wife.	Endless as this Shall be our bliss.



BOUQUET OF HEADS.

you will make use of it on this occasion. God be with thee, and every success crown thy efforts."

When the old Capell-meister called for his protegee the next morning, in order to bring about the coveted introduction to the Elector, Ludwig had left the town, leaving no message behind him.

H. H. R.

An effective and easily made decoration to break a space upon a barren wall, is an eighteen inch square board, quite thin and covered smoothly with plush. Hang it diamond-wise by means of eyes screwed to the back; nail in the centre of this a carved or gilded bracket, large enough to hold a vase or figure, or else hang a pretty porcelain or some old fashioned plaque in the centre.

Love and joy Can never cloy.	I do rejoice In thee my choice.
The pledge I prove Of mutual love.	All I refuse But thee I choos.
I love the rod And thee and God.	I change the life Of maid to wife.
I love myself in loving thee.	Endless my love For thee shall prove.

Jemima Rann—"Good bye, 'Arry! Yer mustn't come no nearer the 'ouse, case missus sh'd see yer." 'Arry—"I see, my darlin'! You're afeared o' the green-eyed mornster jelloosy."—[Fun.

Ears.

... gives a very for the winter, d, looks very of your room. ve, but because ised. All such more cheerful, gone.

Rings.

...iving engraved sentiment has give below a most of which g the time of

... Joy day and night Be our delight.

... Divinely knit by Grace are we; Late two; now one pledge here see.

... Endless my love As this shall prove.

... Avoid all strife Next man and wife

... Joyful love ring doth prove.

... In thee, dear wife, find new life.

... Of rapturous joy am the toy.

... In thee I prove The joy of love.

... In loving wife spend all thy life.

... In love abide till death divide.

... In unity Let's live and die.

... Happy in thee Ath God made me.

... Silence ends strife With man and wife

... None can prevent The Lord's intent.

... God did decree our unity.

... Kiss the rod om thee and God.

... In love and joy our employ.

... Live and love; love and live.

... God above continue our love.

... True love will ne'er forget.

... This ring doth bind body and mind.

... Endless as this shall be our bliss.

... I choose.

... I choose.

... the life to wife.

... my love shall prove.

... 'Arry! Yer

... e, case missus

... my darlin'!

... and mornster

Minnie May's Department.

MY DEAR NIECES.—As many of you are anxious to know how my vacation was spent, I will endeavour to give you a brief sketch of a trip I took in company with some friends, to the grand old city of Boston, the Capital of the State of Massachusetts, or the "Hub of the Universe," as it has been called. Being desirous also of visiting friends in Toronto and near Montreal, we took the longest route, going by rail to Toronto, which is probably so well known, at least by hearsay, to most of my readers, that I need not encroach upon our valuable space by giving any description. Suffice it to say that after spending a few delightful days there, we continued our journey by rail as far as Kingston, where we took the steamer for a run down the St. Lawrence River to Montreal, wending our way through the mazes of the Thousand Islands, which are situated at the head of the St. Lawrence and extending a distance of thirty miles down the river. Nowhere does nature present such alluring charms as in this region; there are hundreds of places, rugged and solitary, where a boat can glide, while its occupant lies peacefully indolent, reveling in the solitude. These St. Lawrence Islands number about two thousand, usually varying in size from a few square yards of surface to several acres. Wolf Island, about fifteen miles in length, is the largest, while some seem mere dots rising out of the water; their appearance is most picturesque, the rocky foundations being studded with trees of rich foliage, generally of moderate or stunted growth. Many of the islands, both large and small, are rendered more attractive by the pretty cottages and imposing villas. Beyond the islands the river rolls steadily on until it reaches the rapids, seven in number, the principal of which are the Long Sault, nine miles in length; then the Cedar, and although the shortest, yet far the most dangerous, are the Lachine Rapids. The current rushes impetuously over and between the rocks which jut from its bottom, while the pilot, generally an Indian, with skill guides the boat safely through the treacherous channel. The passage causes a peculiar sensation to the tourist, the water, lashed into a white foam, presenting a grand appearance. At one point in the Lachine it is particularly exciting, one almost fancying that the boat must strike an immense rock which usually stands about three or four feet above the water, but gradually we found ourselves swerving around it as easily and gracefully as possible. Steamers have run these rapids since 1840, and never yet has there been a fatal accident. After passing the rapids we drew near to the famous Victoria Bridge, which spans the St. Lawrence, a distance of nearly two miles. It is the longest bridge in the world; the railway track runs through an iron tube twenty-two feet high and sixteen feet wide. Passing under this bridge we approached the City of Montreal, which is beautifully situated on an island thirty-two miles long and ten miles at its widest point. On one side of the city is Mount Royal, or Mount Real, seven hundred and fifty feet in height, from which the city takes its name. Having only a short time to remain, we visited a few points of interest, among which was the Cathedral of Notre Dame,

one of the largest churches on the continent. It is a massive structure built of stone, capable of seating over ten thousand persons; in one of the towers is a fine chime of bells, the largest of which weighs twenty-nine thousand four hundred pounds.

Montreal has been styled the "City of Churches," and the number of nunneries, hospitals, scientific institutions, libraries, schools and universities is remarkable. The public buildings are constructed of solid stone, and all are edifices of which to be proud. We must not dwell longer here, but move on to our next stopping place, which was near Sherbrooke, about a hundred and thirty miles from Montreal. There we thoroughly enjoyed the pure country air among the hills for a few days, rambling into the woods and fields, sometimes riding home from the latter on a load of hay or stopping by the wayside to gather berries for our evening repast. All this drew to a close only too soon, and we were compelled to continue our journey southward. The scenery through Vermont and New Hampshire was charming; in the latter State we had a glimpse of the White Mountains in the distance. After a ride of about seven hours we reached Portland, the eastern terminus of the Grand Trunk Railway. Here we left the cars and continued our journey by steamer to Boston, a distance of one hundred miles; the change was exceedingly agreeable, but the trip being made at night there was nothing to be seen; however we were amply repaid, for upon rising the next morning we witnessed the approach to the city. The soft gray mist of early morn was just giving way to the warm, red light of the rising sun, which was reflected on the water, rendering the scene indescribably beautiful.

"Boston sits like a queen at the head of her harbor on the Massachusetts coast, and wears her crown of past and present glory with an easy and self-satisfied grace." The city is built upon a peninsular about four miles in circumference; it was first called Shawmutt, the Indian word, signifying "peninsular;" then Tremont, which took its rise from the three peaks of Beacon Hill, but in 1630 the name was again changed to that of Boston, because many of the colonists were from old Boston, in Lincolnshire, England. The face of the country has been entirely changed and many of the old landmarks are now obliterated. "The three peaks of Beacon Hill which once lifted themselves to the height of a hundred and thirty feet above the sea, are now cut down to insignificant knolls." At the present time thousands of acres of made land, which once formed the bed of the harbor, are densely populated. The Common, which is the pride of Bostonians, and very justly so, was originally a fifty acre lot intended for a cow pasture and training ground, for which it was sold to the people of Boston in 1634 for the sum of thirty pounds. In 1830 the city authorities forbade the use of the common for that purpose and had it inclosed by a two rail fence, which has long since given way to a handsome iron one. For many years the principal object of interest upon the common was the Great Tree, or Old Elm, which was probably over one hundred years old in 1722, being full-grown at that time; in 1844 its height was said to be seventy-two and a half feet, and the circumference, a foot above the ground, twenty-

two and a half feet. The storms of many years marred its beauty, but tender nursing assisted greatly in its preservation.

During the Revolution the British Army were encamped around this grand old tree. "In 1812 the patriot army occupied the same place in protecting the town against the invasion of a foreign foe," and here in 1740, Rev. Geo. Whitfield preached his farewell sermon to an audience of thirty thousand people. On the highest point of the common stands the soldiers' monument, the extreme height of which is ninety feet. At each corner is a statue representing Peace, History, the Army, and the Navy. Surmounting the shaft is a colossal statue of "America" resting on a hemisphere, guarded by four figures of the American eagle, with out-spread wings. America holds in her left hand the national standard, and in her right she supports a sheathed sword and wreaths for the victors.

Among the places of interest in Boston is the old State House, built in 1748, King's Chapel, completed in 1754, its churchyard being Boston's first burial ground; some of the tombstones date back as far as 1658. The new State House whose "gilded dome is a conspicuous object far and near, and glitters in the sunlight like veritable gold."

The new post office, which is considered one of the finest public buildings in New England, occupies an entire square. Groups of statuary ornament the central projections of the building; the interior arrangement cannot be surpassed for beauty or convenience. The process of building occupied many years, and cost something like three millions of dollars. At the time of the great fire of 1872, the massive granite walls were cracked and split, but they effectually stopped the work of the fire fiend. The old South Church which stands in the heart of the city, is one of the most famous buildings in Boston; during the Revolution it was frequently used for public meeting, and here the celebrated "Tea Party" held their meetings and discussed the measures which resulted in consigning the British tea, together with the hated tax, to the bottom of Boston Harbor. In 1775 it was used by the British as a place of cavalry drill, and a grog shop was established in one of its galleries. It is now only used for business purposes.

It is impossible to properly describe Boston within so short a chapter, therefore hundreds of interesting places in this singular and crooked city must be left unnoticed. The suburbs also are very beautiful; one can drive through a number of towns without realizing that they were not all one, so evenly are they settled and beautifully kept. We visited Cambridge and Harvard University; the residence of the late poet, Longfellow; Mount Auburn Cemetery, the most picturesque I have ever seen; thence to Belmont to see the gardens, green houses and Deer Park, belonging to a private gentleman, who very generously opens his grounds to visitors during the week. I can only say it was the most beautiful sight of the kind I have ever beheld. It is impossible for me to close without giving you a peep at another of my pleasures, namely, my trip to the beach, where so many Bostonians have built summer cottages, which remind one more of pretty little bird cages than anything else; they are of the

Queen Anne style and painted gaily, yet tastefully, in olives, gold, browns, terracotta, and bright red. A drive past them, along the water's edge, while drinking in the fresh sea air, was most enjoyable.

We were very loath to leave this enchanting city and its surroundings, but at the end of a few short weeks we had started upon our return trip, feeling that what we had seen was almost like a dream.

Now, my dear girls, I will give the result of the competition for the essay on Friendship; prize of a *silver butter cooler* has been awarded to Miss Maggie Naismith, of Holstein, Ont. We now offer a prize of a handsome *silver napkin ring* with the winner's initials engraved, for the best essay on "True Politeness." We were particularly pleased at the quantity and quality of essays sent in this month, and trust they will be equally good for the coming competition. All communications must be in by the 25th.

MINNIE MAY.

PRIZE ESSAY.

Friendship.

BY MISS MAGGIE NAISMITH, HOLSTEIN, ONT.

What is this friendship of which bards have sung and poets raved almost from "time immemorial?" Is it—

"But a name, a charm that lulls to sleep,
A shade that follows wealth and fame,
And leaves the wretch to weep?"

Far be the thought! Friendship, tried and steadfast, may be rare, it is true, yet even in this world of empty form and base deception, we may find that which merits the title, Friendship—sweet word and sweeter bond. From earliest infancy each has had a bosom friend; one near and dear, to whom has been confided every joy—every hope. While as time rolls on and with the changing years change early ties, still there will be one who, nearer than all others, may claim that chosen place.

Are we wrong? Are there those who tread "life's thorny way" friendless and alone? "None to love, none to caress." None to care whether fortune smiles on them and life seems as a glad song of summer; or whether their's are frowns, not smiles, and "the burden laid upon them seems greater than they can bear."

Cheerless thought! Could joy unshared be joy? Could there be sorrow and none to sympathize? None to speak a kindly word or lend a pitying glance? Oh! depth of earthly woe!

Bowed thus in sorrow, do they not know that there is one ever ready to help? One "Friend that sticketh closer than a brother." No grief is too small for His notice—no care too trifling. Precious "refuge in time of trouble!" Why will not all seek comfort there?

But even humanly speaking, are there not sweet ties of friendship, and what constitutes a true friend? Is there one who bravely, yet gently, tells us our faults; who tenderly disentangles our feet from the meshes of evil and points us to the straight and narrow way; who chides without harshness; who loves with out servility? Then such would we gladly call our friend. Only one who is faithful and true could venture to administer a reproof, knowing that it would inflict pain, for whose inward

spirit would not feel chafed to see their faults exposed to the glare of even friendly criticism? Yet we are told in *the Book* of all books that "the wounds of a friend are better than the kisses of an enemy."

"True bliss, if man may reach it, is composed of hearts in union mutually disclosed." What care is there which fellow-feeling will not lighten? How often, when downcast and sorrowful, have we felt the soothing influence of friendly sympathy? Think of our sad experience had there been none to confide in. Would we not be still morosely brooding over our ills, magnified tenfold by nursing them, whereas we can now see the silver lining peeping through the clouds, and life once more seems bright and beautiful? One friendly word worked this metamorphosis and enabled us to see all in a new light. Who can estimate the value of a true friend? Little do we realize how much our companions make or mar our lives. Many a bright boy leaves the peaceful home of his childhood—his father's restraining influence and his mother's tender care—goes to fight life's battles, totally ignorant of the snares and pitfalls which await him. "Distance lends enchantment," the world seems full of beauty and sunshine; he does not dream of danger, when, perchance, the serpent lurking in his path will steal upon him unawares. He does not recognise a foe, who, skilled in deceit, comes in the guise of a friend, and ensnares the unsuspecting youth. All are not endowed with the same will power. Some have a yielding and pliable nature and may be readily influenced for good or evil. How many, looking back when years have fled, may trace their present condition to the timely influence of a friend?

Parents should study the disposition of each child, and as far as possible keep them from being contaminated by evil companions. Beware lest the tempter come in the disguise of friendship and steal from your garland its sweetest blossoms.

Ah! could you but have foreseen the dire consequences—your boy filling the drunkard's grave, or chained with the convict's fetter, would that subtle deceiver have found a place at you fireside? No! And now when goaded by misery you spurn him from you, it is too late. He only mocks at your sorrow—he, who ruined your darling while claiming to be his friend, yes—friend—as Brutus was to Caesar—as Delilah was to Samson.

Can friendship exist between two of different tastes and habits; must there not be thoughts and feelings in common—only sufficient diversity of disposition to avoid monotony, yet such agreement that their lives will blend harmoniously together? "Two souls with but a single thought—two hearts that beat as one."

How true it is that "a whisperer separateth chief friends?" Are instances of it not of every day occurrence? Strange it is that we value our friends so lightly, that we would allow a mere scandal-monger to come between us and them. It is only when they are gone—parted by a proud, unforgiving spirit—that we feel our loss. Mayhap, we do not realize it till they are gone from us to another world. Then, in vain would we recall each hasty action, in vain wish for a reconciliation when too late.

We did not appreciate their true value when here, and now 'tis vain to sigh for

A friend "whose every breath
May blend and mingle with our own,
Whose heart with ours in joy may beat
Whose eye with ours in pain may meet;
For dear to us are those who wait
Around our couch with kindred pain;
The long familiar friend or mate,
Whose softness woos us to complain,
Whose tear meets every tear that flows,
Whose sympathy relieves our woes."

Answers to Inquirers.

KATIE.—A very pretty way to use your numerous Christmas cards would be to cover the top of a table as follows: Begin by cutting off all the margins of the cards, then arrange them, lapping over each other, starting from the centre, and taking care that all the light and dark ones are not together, but counter-balance each other; stick them on with paste sold in bottles. Size, and then varnish. Finish with a gold rim or tack a gimp around the edge with fancy nails; the effect is very pleasing.

PERPLEXED.—Please tell me how to make white and spotted castile soap? ANS.—Take 6 lbs. of sal soda and 3 lbs. of quicklime, and dissolve in 4 gallons of water; strain clear and add 6 lbs. of olive oil, stir thoroughly and boil, then set to cool in a square flat vessel and cut into bars while soft. To color the soap, take a small quantity of finely powdered coppers and stir it in the hot soap sufficient to partly mix or marble it, and then set it to cool; after a time the iron changes to oxide and makes the red streaks and spots.

T. H. L.—1. Pronounce "patent" as "pay-tent," not as "pattent." 2. By no means take any notice of the man who presumes to stare so rudely at you in church, but keep your eyes away and devote your thoughts to your religious duties.

MAISIE.—1. George Eliot is the *nom de plume* of Marianne Evans, born in England 1820, died 1880. She was the daughter of a clergyman; her principal publications are "Scenes of Clerical Life," "Adam Bede," "The Mill on the Floss," "Silas Marner," "Romola," "Felix Holt," "Middlemarch," "Daniel Deronda," etc. 2. The lines—

"To know, to esteem, to love and then to part,
Makes up life's tale to many a feeling heart,"
are by Coleridge.

SWEET SIXTEEN.—1. To paint the fan, it will be necessary to stretch it on a board and fasten it down with tacks. Otherwise, the material will draw. 2. It is not necessary that a bridesmaid's dress should be like that worn by the bride—indeed, just now, it is preferred that they should differ. The gloves should match the costume. Hats are considered in better taste than flower-dressing for the hair. 3. The tulle veil is simply finished with a hem about an inch and a half wide, and is drawn together at the top in soft plaits that are carefully pinned before the veil is fastened to the hair. Tiny silver pins are pretty for fastening the veil.

BELLA B.—1. You are not too old to learn singing at nineteen years of age. The voice remains beautiful for many years. Be careful not to exercise the voice too long at a time; practice the scales and exercises mainly, and do not waste time over poor songs.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES, — Below you will find the letter which gained the prize, your cousin, Harry Woodworth, being the lucky boy; and I think you will agree with me in thinking him a lucky boy in another sense, for few of my children have had such a nice trip to write upon. I was very much pleased with all your letters, and wished I could give a dozen prizes. Poor Maggie Elliott has had coals of fire heaped on her head, by nearly every cousin, for sending that dreadful drop letter puzzle. No one answered it; and best of all, boys and girls, she couldn't answer it herself, for I had mislaid the answer, so looked to her letter for it, and behold! she omitted it too. So in this, one is not ahead or behind another. I am requested from headquarters to be brief this time, for they want an early issue, so I am very punctual and have only the letters up to the 25th, and many of them had no names. I never heard of such stupidity.

Sackville, N. B., Aug. 20th, 1884.

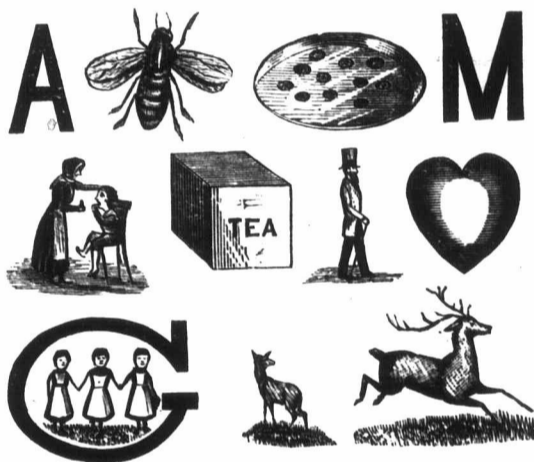
DEAR UNCLE TOM, — I read with great pleasure your interesting account of how you spent your vacation, and only wish your description had been longer. I did not enjoy my midsummer holidays this year as much as I did last, when I spent a month and a lot of money on a visit to the capital of Nova Scotia, where I have a great many cousins, who took me sailing, boating, swimming, fishing and canoeing, and sight-seeing generally. One of my cousins and another man beat twenty-two canoes (two men in each), and won the Mayor's prize and a couple of silver medals. The day I arrived in Halifax I went to a picnic on the Dartmouth Lakes, and there met a lady who asked me if I was the Harry Woodworth who sent puzzles to the FARMER'S ADVOCATE. So you see my fame had preceded me, or the fame of the ADVOCATE, I'm not sure which. One night I went out with a boating party on the harbor. We went over and stayed a while about H. M. S. Northampton, then went over by the side of H. M. S. Dido, where the sailors were having a concert, which sounded splendidly on the water. When it was over, a chap came to the side and said "Good Night!" Then we rowed for home. We attended the annual Studley Quoit Club match, and proud enough were we boys when our cousin, John E. Albro, carried off the second prize; and you can fancy how surprised I was on asking "Who is that guy in white pants?" to be told it was no other than H. R. H. Prince George of Wales. We like Sackville very well. It is a large and pretty village on the Tantramar River, and has, besides a lot of other public buildings, several churches, two foundries, one boot and shoe factory, one tannery, three public schools, four halls, one exhibition building, &c., and is the seat of Mount Allison Wesleyan College and Academies. The new Memorial College, erected in memory of William Black, the founder of Methodism in the Maritime Provinces, was opened this summer. One of the rooms in the College is called Memorial

Hall, and has two very handsome stained glass windows, in memory of Charles F. Allison and William Black, presented by Mrs. C. F. Allison and Martin Black. There is a great deal more I should like to write about, but I am afraid you will think my letter too long, so will say good bye, hoping if you ever come to Sackville you may come and see

Your affectionate nephew,
HARRY ALBRO' WOODWORTH.

Puzzles.

- 1—TWO HIDDEN PROVERBS. (One word of each in each line.) (a) Ada, Flewellyn is here. (b) How I scream and roll. Ingersoll is in Oxford. (c) We have no time. Is tone one of the elements of music? (d) When gathering old relics we stopped at Gath. Ers is a bitter herb. (e) Do not spoil that hat. (f) That stone is partly moss, that glitters so. CHRISTINA HADCOCK. 2—DIAMOND. 1. A consonant. 2. A dish. 3. An author. 4. A unit. 5. A consonant. The centrals will give the names of two authors. MINNIE E. WELDON.



3—ILLUSTRATED REBUS. ADA HAGAR.

4—ANAGRAM. Three si ni yvee namhu thare Eosm tno lmeocptely brenra rapt, Ewehr deses fo vole dan rthut mgthi rogw, Dna lfrowse fo soeenurg tivren lowf. ADA ARMAND.

5—HIDDEN FISH. Which piece of calico do you like best? To make lots of cash, Arkansas is not so good as Ontario. Mary lost her pet lamb as she was coming home. After supper Charles and Mary played chess. WM. S. HOWELL.

6—CHARADE. I am composed of three syllables. My first is an adjective. My second is a liquor. My third is a residence of a prince. My whole is a noted place in geography. SARAH M. BRETT.

7—BEHEADINGS. 1. When whole I mean to wander. Behead and you will see That any dining-room waiter Can't well do without me. Behead again and see you may What the sun sends out at bright noonday. 2. When whole I mean worth. Behead and you will see A grain that does not grow here, Yet is used extensively. Behead again and now you will find Something that's useful in hot summer time. A. J. TAYLOR.

8—DECAPITATION.

Whole, I am an archbishop; behead, and I mean to tell; behead again, and I mean flushed with success; behead again, and I mean tardy; behead again, and I am a verb; transpose, and I am a beverage; transpose again, and I am a verb; behead, and I am a preposition; curtail, and I am an article.

HARRY A. WOODWORTH.

9—SPANISH PROVERB.

L-ive w-th wo--s an-y-u w--l--r-t-h--. No letter is used the second time except initial letters. ADA HAGAR.

10—NUMERICAL PUZZLE.

I am composed of nine letters. 1 My 8, 3 is an article. My 6, 7, 8, 3, 4 means to stop. My 7, 1, 8, 3 means noting comparison. My 6, 5, 7 is a drunkard. My 6, 5, 4 is a piece of turf. My 2, 9 means within. My 6, 2, 7 means to rest. My whole is a country in Asia. MAGGIE F. ELLIOTT. 2 My first is part of verb "to sit." My second is part of verb "to be." My third is a place where articles are manufactured. My whole is how we like to see things done. J. W. FORBES.

Answers to August Puzzles.

- 1. J P O T B O U N D J O U R N A L S U N N Y R A T L 2. A man of words and not of deeds, Is like a garden full of weeds. 3. Minnie May. 4. Ballantyne, DeQuincey, Dickens, Goldsmith, Longfellow, Ryerson. 5. R O P E L E A P O P A L E A S E P A L L A S I A E L L A P E A L 6. Sing-a-pore. 7. Out of shadow springs the sunshine, Out of dusk the daylight grows; April flowers are no less lovely, For their birth beneath the snows. 8. I A T E S P A I N A L E Y 9. Tennyson. 10. Regard the world with cautious eye, Nor raise your expectations high, So that the balanced scales be such You neither fear nor hope too much. 11. No answer. 12. Scream, cream, ream, ear, a.

Names of Those who Have Sent Correct Answers to August Puzzles.

Eva Henderson, Fred D. Boss, Adelaide Manning, Mary McArthur, Minnie E. Weldon, A. J. Taylor, Addie E. Davidson, J. W. Forbes, Peter Lamb, Sarah M. Brett, Aggie Willson, Eunice E. Ward, Lottie A. Sewell, Ellen D. Tupper, Will Thirlwall, Robt. J. Risk, Lottie A. Boss, Jas. Paterson, Mary Marshall, Elmon Moyer, J. G. Sutherland, Katie Miller, Harry A. Woodworth, Ada Hagar, Edmund Stockton, Geo. B. Van Blaricorn, Neil McEwen, Willie B. Bell, Sarah E. Miller, W. S. Howell, Ina Semple, James Watson, Ada Armand, Becca Lowry, Carrie Chrisher, Stephen J. Smith, Henry Reeve, Robert Willson, Maggie F. Elliott, Sarah Wessel, Amelia L. Sumner, W. L. Sisson, Byron G. Bowerman, Agnes M. Frood, Mabel Robson, W. M. Head, Georgina Smith, Phillip Boulton, Robert Kerr, Bella Richardson, Esther Douisa Ryan, Eva C. Kelly, Jessie M. Fox, Charles H. Foster, Christena Hadcock, Thos. Armstrong, Amelia E. Walker.

Bows and Arrows.**HOW TO MAKE AND USE THEM.**

At the present time girls and boys alike are interested in archery, and commendably so, for the exercise is a healthy one, strengthening the muscles of chest and arms, and at the same time giving out-door exercise for the gentler sex. Not one boy in a hundred can make a good bow and arrow; not because there is a lack of mechanical genius, but because the way to do it is not understood.

The first requisite is suitable wood. White hickory, or rather hickory that is white, is preferable; but oak, ash, and indeed any kind of wood that is tough and elastic, will make a good bow. The sticks to make both bows and arrows from should be straight grained and split out. Let the sticks season before working, as they are liable to warp. The bow stick should be from three to five feet in length, according to the height and strength of the party to use them. Split the bow stick an inch square or thereabouts; place it in a position where it will not have a chance to warp much. It is best seasoned in the shade where the air circulates freely.

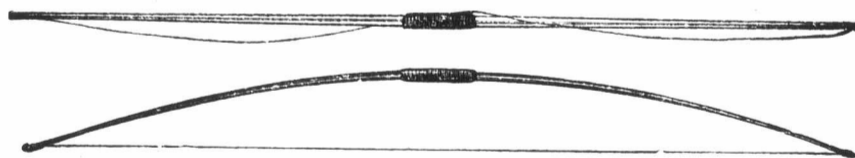
Make one side straight, or as nearly so as you possibly can. This is for the outside of the bow, or the side that will be from you when using the weapon. Next work off the two edges until the stick is three-quarters of an inch in the centre and three-eighths at the ends. By use of a straightedge you can get the tapers very true. As an aid to this line from end to end through the centre of the dressed side, and this line will be the guide in making the tapers. Now for the inside. Make the thickness three-quarters of an inch in the centre. The stick at this point will be just three-quarters of an inch square. Now do all of the tapering from one side—that is, leave the outside straight. Taper inside from near centre to ends so that the extreme ends are square—three-eighths each way. In this shape you have the bow "squared up." All of the rounding should be done upon the inside, and that only sufficient to get a good, true oval, the outside being left flat. Sandpaper until it is smooth, then cut string notches three-fourths of an inch from the end, slanting toward the center, and only deep enough to hold the string. Cut these string notches only on the outside, so that on the inside the string can have free action. The bow-string should be fastened at one end of the bow, and the other formed into a loop so that it can be slipped over the end and into the notch by bending the stick. When not in use, always leave the bow unstrung. The illustration will

give a good idea as to the finish of the weapon, and as to the tightness of the string when in rig for shooting.

To make the arrows, dress out seasoned sticks on two opposite sides until straight and three-eighths of an inch thick, then straighten one of the edges, and mark in three-eighths of an inch from that and work to the line. Now you have a rod three-eighths of an inch square. Round up by taking off the corners with a plane or knife, then scrape with a piece of glass until round; finish up with sandpaper and a rag moistened in linseed oil. It is useless to whittle out an arrow and get it perfectly true and straight, and unless an arrow is straight accurate shooting cannot be done. Feather



ARCHERY IN THE COUNTRY.



BOWS FOR BOYS AND GIRLS.

the arrow on two or three sides, the latter being preferable. Strip a hen or goose quill and fasten to the shaft by means of glue. Do not

allow the feathers to extend to the end, but they may reach five or six inches up the shaft. The illustration gives both styles so clearly that further explanation is not necessary. The feathered end of the arrow should have a string notch.

A handsome bookcase can be made by having shelves fitted into a recess in the wall and suspending curtains made of double-faced canton, furniture satin or any heavy material; decorate with embroidery or a simple band of velvet or satin across the ends, about fourteen inches deep, contrasting in color with the curtains; finish with a fringe. Hang the curtains with a small rod and rings, so they may be easily pushed back to gain access to the books; loop away at the sides about three quarters of a yard from the floor with bands of ribbon or brass chains.

The Little Ones' Column.**Rover.**

"Now, Rover, I am very sure.
There is no reason why
You shouldn't talk as well as not
If you will only try.

"You're big enough and old enough—
Say, do you hear me, sir?—
To be an educated dog,
And not a common cur.

"Come, do not be so lazy, now;
Speak out—speak out, I say!
Just try how easy 'tis to talk;
Why—I can talk all day.

"Now, tell me, when you
scratched and scratched,
And made a dreadful
hole
Among the pansies yester-
day,
Was it a rat or mole?

"Why did you chew up
Lulu's doll?
And then my rubber
shoe,
Where did you hide it?
won't you tell?
Well, that is mean of
you!

"But say, old fellow, was it
you
That ate the candy up,
That night we set it out to
cool,
And didn't leave a sup?

"You won't? Well, I'm
ashamed of you!
Go off, and snarl and
growl,
Like any other stupid dog,
Just fit to bark and
growl."

Better Whistle than Whine.

As I was taking a walk early in September, I noticed two little boys on their way to school. The small one tumbled and fell, and though he was not much hurt, he began to whine in a babyish way—not a regular roaring boy cry, as though he were half killed, but a little cross whine.

The older boy took his hand in a kind and fatherly way, and said:

"Oh, never mind, Jimmy, don't whine; it is a great deal better to whistle."

And he began in the merriest way a cheerful whistle.

Jimmy tried to join the whistle.

"I can't whistle as nice as you, Charlie," said he, "my lips won't pucker up good."

"Oh, that is because you have not got all the whine out yet," said Charlie; "but you try a minute, and the whistle will drive the whine away."

So he did; and the last I saw or heard of the little fellow, they were whistling away as earnestly as though that was the chief end of life.

Dignity is much better than much familiarity. In the coolness which it imposes it is always like water freezing, somewhat elevated.

Commercial.

THE FARMER'S ADVOCATE OFFICE, London, Ont., Sept. 1, 1884.

Another month of glorious harvest weather has come and gone. With the exception of a few very hot days, the weather has been all that could be desired for harvest work.

WHEAT

Does not seem to have many friends. Even the speculators are somewhat afraid to touch it. Wheat is unusually low in the English markets—lower than it has been for 100 years.

The average contrasts as under with the annual averages since the year 1780:

Table with columns: Year, Price (s, d), Year, Price (s, d), Year, Price (s, d). Lists wheat prices from 1780 to 1884.

From every quarter comes reports of a good wheat harvest. What the future of the market will be is very hard to say. A great deal will depend on the way in which farmers will market their wheat.

Spring wheat is also fine all throughout Ontario, and any deficiency in the acreage of fall wheat over former years will be counterbalanced by the increase in the acreage of spring wheat with a probable average yield of 25 bushels per acre.

PEAS, BARLEY, OATS AND CORN are all very promising, and will be up to if not above the average.

WOOL

The unusual position of the wool market this season is worthy of a few remarks. This depression is not by any means local, and both free trade England and the protected United States, as well as Canada, are all pretty much effected alike.

was checked in 1879 and 1880, when the prices were from 23c. to 32c., but in 1881 the value of fine grown English wool was about 22c. ; 1883 brought still lower figures, viz., 19c., the lowest price on record since 1859.

CATTLE

The high prices paid by exporters of beef cattle the past two years seem to have cooled their zeal, and the result is that there is much more cautious buying this season.

There has been a good deal of discussion the last few weeks over the export of American cattle from Wyoming and Montana Territories through Canada to England.

The question arises, What advantage will this be to Canada, if any, and will there not be more or less danger of having the Pleuropneumonia brought into this country?

With a fair supply of sheep and a fair demand the market was steady. Best long woolled... Merinos... Inferior and rams.

fitably grown in the far west and shipped through to England, we question very much whether Canadian stock raisers cannot raise such stock equally as profitably.

APPLES

The crop of apples in this country is far in advance of that of last year. In New York State the crop is estimated at 4,000,000 bushels. Michigan will also have a full crop.

The reports from England give the following estimate of the apple crop:—

"That the apple crop of Europe, taking it as a whole, will be considerably under that of last year."

"That fall shipments of Canadian and American apples to Glasgow, London and Liverpool should meet with good demand at values ruled by supply."

CHEESE

has assumed a very quiet tone, and the excitement seems to be over for the present. What cause the buyers had for so much anxiety to get hold of July cheese at 10c to 11c. we fail to see, and we fancy in the majority of cases the cause was purely imaginary.

PRICES AT FARMERS' WAGONS, TORONTO.

Table listing prices for various agricultural products like wheat, barley, oats, peas, rye, dressed hogs, chickens, ducks, butter, cheese, eggs, potatoes, apples, onions, cabbage, turnips, carrots, beets, parsnips, radishes, hay, and straw.

BRITISH MARKETS BY WIRE.

Cattle Firmer—Sheep Steady. LIVERPOOL, Aug. 18, 1884. General supplies of cattle large. Receipts of Canadian and American only fair, however.

Table listing prices for various types of cattle: Cholce steers, Good steers, Medium steers, Inferior and bulls.

With a fair supply of sheep and a fair demand the market was steady. Best long woolled... Merinos... Inferior and rams.

CHEESE MARKETS.

London, Ont., Aug. 23, 1884. Offerings on Saturday last, 2,101 boxes, the make of seven factories for first half of August. Market dull, No sales.

Little Falls, Aug. 25.
Sales of factory cheese were 6,640 boxes at 9c. to 9½c.;
28 packages butter at 22c. to 23c.
No report.
Liverpool cable to-day, 51s.

LIVE STOCK MARKETS.

East Buffalo, N. Y., Aug. 23.
Receipts—Cattle, 1,336; hogs, 3,330; sheep, 1,400.
Shipments—Cattle, 1,547; hogs, 4,025; sheep, 3,400.
Cattle—Market closed quiet and steady for common to fair grades, and a shade firmer for good ones. About all the offerings sold. The prospects for next week look fair for anything good. Sheep and lambs—No change for the better in this branch of trade; if anything lambs and common sheep are lower. Canada lambs, \$6. Hogs—A good supply on sale; market dull and from 15c to 20c lower, while buyers held off, and little was done. A few good dairy-fed hogs brought \$6 25; few grassers, fair to good quality, sold at \$5 50 to \$5 90; good corn-fed mediums held at \$5 90 to \$6 60; no demand whatever for pigs and common grassers, and a good many were unsold.

Fall Fairs.

Great Industrial Fair, Toronto, Sept. 10-20.
Agricultural and Arts Association, Ottawa, Sept. 22-27.
Western Fair, London, Sept. 22-27.
Berlin Horticultural, Berlin, Sept. 10-11.
Midland Central, Kingston, Sept. 30, Oct. 3.
Central, Hamilton, Sept. 30, Oct. 3.
Southern Counties, St. Thomas, Sept. 30, Oct. 3.
Dominion, Montreal, Sept. 5 to 13.
Lindsay Central, Lindsay, Oct. 1-3.
Peninsular, Chatham, Oct. 7-9.
Brantford Southern, Brantford, Oct. 8-10.
North-Western, Wingham, Oct. 7-8.
West Simcoe, Barrie, Oct. 7-9.
North Grey, Owen Sound, Oct. 2-3.
North Brant, Paris, Oct. 7-8.
South Oxford Union, Ottville, Oct. 3-4.
Dereham, Tilsonburg, Sept. 29-30.

The Farmer's Advocate.

To our friends who wish for sample copies to deliver or to be sent to their friends, or to persons who they think should subscribe, if they will send us a list of names by letter or post card, sample copies will be sent next month, as we then publish our mammoth issue.

The Cockshutt Plow Co., of Brantford, Ont., have a novel wing and point attachment for their plows. They appear as if they must be a great saving to the farmer. Examine their plows at the exhibitions. They turn out really good plows, and are a reliable firm to deal with.

The Mail, Sidney, Australia, says: "We are not yet fully convinced that the American Merino is so remarkably profitable, or more profitable than the Merino of Australia. The calculations are based upon different lines. In America, the wool producer stands protected to about one-third the value of any wool which may be imported. His sheep are treated as are the stud flocks of this colony. The animals are housed and clothed, and are stall fed. An increase in both wool and carcase is the result; but in the case of the American sheep, the feeding and housing causes an abnormal production of yolk, and the percentage lost in the washpen is enormous. This wool, although so remarkably heavy in condition, finds a market at a good price, but in connection with this, the special aid afforded by the tariff should not be overlooked. If the Vermont wools, instead of being sold in America, were exported to London and placed by the side of Australian clips, the Michigan breeders would soon learn which sheep were really the more profitable." While what is said in the foregoing in reference to the care of sheep, may be true of some of the "stud flocks" in the East, it certainly is not correct in the case of the flock-masters who grow by far the larger portion of the wool produced in this country.

OUR FALL CAMPAIGN!

SELECTIONS FROM OUR PREMIUM LIST.

Grand Wheat Prizes.

For One New Subscriber:

THE CHOICE OF
One-half pound of the **Valley Wheat**, just introduced this year for the first time to you; has been tried by leading seedsmen in Canada and the U. S. A., and pronounced a most promising variety for our farmers, and deserving of a good trial; or,

One pound of the **Martin Amber**, the leading fall wheat of this country; see full accounts of it in this issue; 60 bushels to the acre from one bushel of seed; has, it is said, been grown this season; or,

One pound of the **Landreth, or Bonnell**; for description and cuts of this new, promising variety, see page 235. The originators claim for this wheat that it is less liable to rust and very prolific. Give it a good test. This variety has succeeded very well in the county of York; or,

Two pound of the **Democrat**. This favorite wheat has grown in popularity, and needs no praise after a trial. This season it has probably excelled all other varieties in withstanding the midge, and its yield has been very good; or,

The **Farmer's Advocate Test Package**, for '84, comprising samples of the following new varieties:—Martin Amber, Hybrid Mediterranean, Landreth, Lancaster Red, Tuscan Red, Valley, Oster's Amber and Red Russian.

Some other new varieties may be added or some omitted, but nine or ten varieties will be mailed as promised. Just what every farmer wants—enough to test and to govern his further sowing. We obtain every variety we deem worthy of trial.

STRAWBERRY PLANTS.

Two plants, **Prince of Berries**, said to be the latest and best of the many excellent varieties originated by Mr. Durand, of New Jersey. (See cut and description in this issue.) or,

Two plants, **Daniel Boone**. This plant has grown in favor greatly during the past season, and bids fair to be in great demand, both as to flavor, productiveness and keeping qualities.

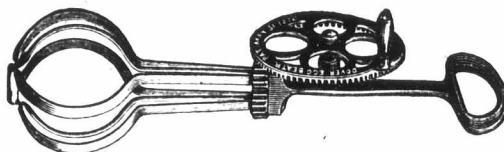
Three plants of **James Vick** Strawberry. In addition to the already favorable opinions expressed about this berry, it has this season averaged fully as large berries as the Wilson, and produced more fruit. One large grower states, that he could fill a basket sooner from the James Vick, than from any other strawberry.

FLOWER SEEDS.

New German Pansies—one packet of about 50 seeds of these lovely flowers. The plants are choice and exceedingly popular. The seeds here offered embrace eighty of the most strikingly beautiful colors, and are from the best growers in Germany. August and September are excellent months to sow for early spring flowers.

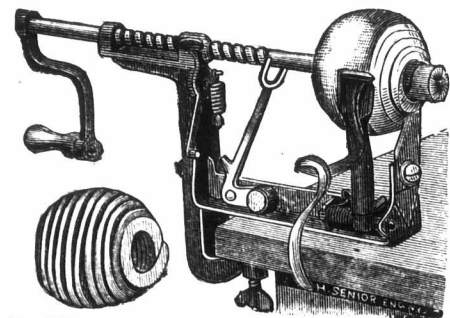
N. B.—We are not in the seed business. We procure what we give for premiums from reliable seedsmen, but cannot guarantee any variety offered as pure and true to name.

For Two New Subscribers:



Dover's Egg Beater—Beats the whites of the eggs thoroughly in 10 seconds. The beating floats revolve on two centres one inch apart, and curiously interlace each other. No joints or rivets to get loose. Cleaned instantly. A woman and her Dover Beater cannot be separated.

For Three New Subscribers:



The White Mountain Apple Parer.—This machine does its work economically and quickly, leaving the fruit ready for drying, &c. This parer is the best and most serviceable one which we know of, and can strongly recommend it to every one. Per express at receiver's charges, or

The White Mountain Potato Parer—is said to be not only the best one made, but the only one manufactured which will pare a potato better than it can be done by hand, taking off a thinner paring from every shape or kind of potato, but will go into and clean out the eyes. Per express at receiver's charges.

The above premiums, except otherwise stated, will be sent per mail at the proper season. These prizes are given to our subscribers for obtaining new ones, and are in no case given to the new subscribers.

The annual subscription (\$1.00) must always accompany the new name to win a prize.

Sample copies, subscription lists, posters, &c., mailed free on application. Address,

The FARMER'S ADVOCATE, London, Ont.

Cheese as Food.

Cheese, when properly made and thoroughly cured, so that all of its substance is available for food, has twice the value of butcher's meat for sustaining life, and is quite as easily digested, and as wholesome. But all cheese, even when well cured, is not equal to its highest possibilities. Many circumstances interfere with its perfection. In the first place, good cheese can only be made out of good milk, and this is not always at the command of the cheese maker. The milk which was good when it came from the cow may not be so when it reaches the cheese vat; it may be sour or stale, or uncleanly; and, further, milk itself is liable to wide variations in its constituents, thereby varying the quality of cheese made from it. But these are only accidental irregularities, that are not always present, and cheese made from milk which is free from them should not be condemned on their account. They are avoidable, and do not, in fact, give much ground for complaint against the use of cheese.

There are other things connected with the use of cheese equally avoidable, which give rise to well-grounded complaints, that are telling heavily against its good name and use. Bearing in mind the indigestible and consequently unwholesome, condition of newly-pressed curd, or as it is called, green cheese, and remembering that this condition only abates gradually, as the cheese advances in curing, the ill effects of putting it into consumption too soon, while it is yet in the green state, will be understood. Those who are at all familiar with the traffic in cheese know very well that much of the cheese of commerce, when it goes into consumption, is too imperfectly cured to have its food value fully available. It is so indigestible as to be unhealthful, and it is used at a loss because much of it is not digested at all. Thus the practice of thrusting green cheese upon the market gives rise to just grounds for objections to its healthfulness and value, and greatly restricts its consumption, all of which would be obviated by retaining the goods in the curing room till they are fit for use.—Prof. L. B. Arnold, in Nat. Liv. Stock Journal.

How to Drink Milk.

Milk should not be taken in copious draughts like beer or any other fluid which differs from it chemically, says the *Farmer and Dairyman*. If we consider the use of milk in infancy, the physiological ingestion, that is, of food provided for it, each small mouthful is secured by effort and slowly presented to the gastric mucous surface for the primal digestive stages. It is thus regularly and gradually reduced to curd, and the stomach is not oppressed with a lump of half coagulated milk. The same principle should be regarded in case of the adult. Milk should be taken in mouthfuls, at short intervals, and thus it is rightly dealt with by the gastric juice. If milk be taken after other food, it is almost sure to burden the stomach and cause discomfort and prolonged indigestion, and this for the obvious reason that there is not sufficient digestive agency to dispose of it, and the better the quality of the milk the more severe the discomfort will be under these conditions.

See Notices, page 282.

MESSRS. BROOKS & COMPANY,
2 Railway Approach, London Bridge,
LONDON, ENGLAND.

—WHOLESALE—
Apple Merchants and Commission Salesmen

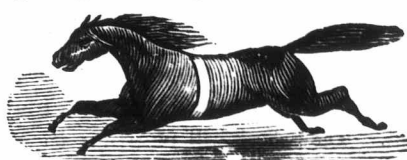
desire to correspond with a few Canadian apple growers and shippers as to the prospects of their this year's crop, when they will be pleased to forward their opinion as to the probabilities of the English demand, prices, &c., and give full information as to the European crop generally.

PUBLIC AUCTION
WITHOUT RESERVE, on
FRIDAY, OCTOBER 3rd
at 12 o'clock, at

JAMES ANDERSON'S, Springfield Farm,
(four miles from Guelph.)

H. SORBY, Gourock P. O., will sell the following valuable stock:—70 Cotswold sheep and 30 Berkshire pigs, imported or from imported stock; also 2 thoroughbred Jersey bulls. My sheep and pigs have won over 100 first prizes the last four years at the leading shows in Canada and the Western States. There will be 12 months' credit; 6 per cent. discount for cash.

Grand's Repository
47, 49 AND 51 ADELAIDE STREET,
TORONTO.



HAVING met with some flattering success at our recent sales of fancy cattle, we shall hold a **Great Combination Sale of THOROUGHBRED CATTLE** to take place at our Repository

OCTOBER 6th, 7th and 8th.

We have been in correspondence with several of our most prominent breeders, who have already made large entries of Short Horn, Durham, Devon, Ayrshire and Jersey Cattle.

We respectfully solicit correspondence from all owners and breeders having fancy stock of any kind to dispose of. The above sale will be followed **October 9th, 10th and 11th,** with a **Combination Colt Sale** of Thoroughbred and Trotting Stock and **200 WORK HORSES.**

We have already received large entries from Mr. John Carroll, St. Catharines; Mr. John White, Milton; Mr. H. Y. Attrell, Goderich; J. H. Hunt, Port Hope, and probably Mr. J. P. Wiser, Prescott, and others. Entries will close Sept. 20th, when catalogue with extended pedigrees will be published, and may be had on application.

These sales will be thoroughly advertised throughout Canada, Manitoba and the United States, and neither time, trouble nor expense will be spared to make them the largest and most successful yet held in Canada. Sale will commence each day at 10 o'clock sharp.

GRAND & WALSH,
Proprietors and Auctioneers.

225-b

"THE FAIR OF THE SEASON."

The GREAT CENTRAL FAIR
and Agricultural and Industrial Exhibition.

will be held at the **CRYSTAL PALACE GROUNDS**
in the **CITY OF HAMILTON** on

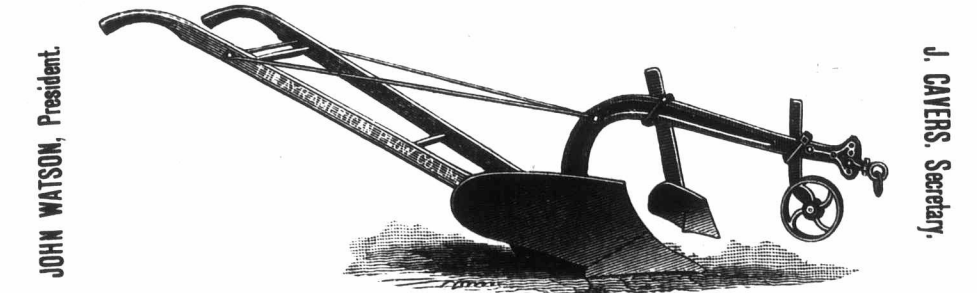
Tuesday, Wednesday, Thursday, Friday
SEPTEMBER 30, AND OCTOBER 1, 2, 3, 1884.

Larger amounts are offered in premiums than at former exhibitions for Live Stock, Poultry, Agricultural, Horticultural and Dairy Products, Implements, Manufactures, Fine Arts, Ladies' Work, etc.

Great Attractions in the Horse Ring.
The Railway Companies will carry passengers and exhibits for half fare. For Prize Lists and information regarding the Exhibition apply to

JONATHAN DAVIS, F. O. BRUOE, ROBT. EVANS
Secretary. Treasurer. President.

225-a



NO. 23 PLOW CHILLED.

THE AYR AMERICAN PLOW COMPANY (Limited)

MANUFACTURERS OF THE

CELEBRATED BUFORD SULKY PLOWS

with Steel or Chilled Iron Bottoms.

SULKY GANG PLOWS and STEEL and CHILLED PLOWS

of all the Latest Patterns.

BETTSCHEN'S CORN and ROOT CULTIVATOR and WHIPPLE'S SPRING HARROW

Our **SULKY PLOWS** are beyond question the best made in Canada, either for the Prairie or the older Provinces. Our No. 23 **CHILLED PLOW** is the neatest, strongest, and best working jointed Plow in the market.

The **BETTSCHEN CULTIVATOR** has taken First Prizes wherever shown.

We have the sole right for Canada to make the **WHIPPLE SPRING HARROW** either on wheels or on shoes.

It is the most effective cultivating implement ever introduced to the Canadian farmers. It will do more and much better work than two old fashioned field cultivators or three gang plows. It is not a spring tooth harrow, but greatly superior to any spring tooth harrow in the market.

Send for an illustrated catalogue. Address

THE AYR AMERICAN PLOW COMPANY (Limited), AYR, ONT., CANADA.

225-h

THE BAIN WAGON



IS THE FARMER'S FAVORITE.

- Because it is the lightest running wagon made.
- Because it is made in the most careful manner, from the best selected seasoned timber.
- Because no inferior iron is used, and special attention is paid in ironing it off.
- Because the wheels before the tire is put on are thoroughly saturated in boiling linseed oil, which is a sure preventive of loose tires.
- Because the patent arms made from our own patterns are superior to those made by other makers.
- Because all material used in painting it is of the finest quality, which gives it a superior finish.
- Because every wagon is inspected in all its parts by one of the members of the company before being sent out.
- Because it is just as represented every time.
- Because "the Bain Wagon" is warranted to be well made and of good material, and any breakage occurring with fair usage within one year, by reason of defective material or workmanship, will be made good by any of their agents, upon the purchaser producing the broken or defective parts as evidence.

Agents wanted for every county. Send for descriptive circular and prices to the

BAIN WAGON COMPANY, WOODSTOCK, ONT.

N. B.—We make a specialty in spring wagons. Prices given on application.

225

Western Fair
1884.
CANADA'S GREAT EXHIBITION
AND INDUSTRIAL ENTERPRISE.
LONDON, CAN.
SEPTEMBER 22, 23, 24, 25, 26

\$17,000.00 in PRIZES
\$2,000.00 in excess of 1883.
\$1,049.00 in specials by friends
of the Western Fair.

OPEN TO THE WORLD!

The Western Fair for 1884 will far surpass all its predecessors. The prizes are larger and the new features and novelties to be introduced will make it the most attractive exhibition ever held in Canada. Wait for it.
Write to the Secretary for Prize Lists, Posters, Programmes or any information required.
E. R. ROBINSON, **GEO. MCBROOM,**
224-b President. Secretary.

BRITISH AMERICAN BUSINESS COLLEGE TORONTO, CANADA

This is the Leading Commercial College in Canada. Its Location is in the Business and Educational Centre of this Province. The Course of Studies has been specially arranged to give a sound business training. Every Subject in the course is taught by men who make these subjects specialties. Arithmetic, Commercial Law, Book-keeping, Correspondence, Penmanship and Phonography are thoroughly taught. The School will re-open on Monday, September 1st. For Catalogue and other information, address THE SECRETARY, Arcade Buildings, Yonge Street.

ONTARIO LADIES' COLLEGE Whitby, Ont.

Affords an advanced collegiate course with the privilege of taking professional or University examinations; a full conservatory course in instrumental and vocal music under the direction of Mr. Edward Fisher, of Toronto; a fine arts course by two specialists from the Ontario Society of Artists; judicious training in home and social life by the lady principal, Miss Adams. Buildings and grounds unrivalled in the Dominion for elegance and completeness. Will re-open September 4.

For calendar apply to
225-d
Rev. J. J. Hare, M.A., Principal.

Ontario Business College BELLEVILLE, ONT.

Students in attendance from all parts of the continent and the West Indies. Course most thorough. Fees as low as in other first-class colleges.

Board only \$2.75 a Week.

Entrance at any time.

For circulars, &c., address

ROBINSON & JOHNSON,

225-a

Belleville, Ont.

BUSINESS EDUCATION!

HAMILTON COMMERCIAL COLLEGE.

Corner King and James Streets.
(Over Federal Bank.)

THIS INSTITUTION offers special terms and advantages to

YOUNG GENTLEMEN AND LADIES

desiring a thorough, practical Business Education. Its course of instruction embraces all the branches necessary to complete commercial training, and is second to none. Its teachers are well qualified for their work, and the number of pupils is limited to what can be properly attended to. Everything connected with the school is the newest and best. No old system has any place in its curriculum.

The location of the College is in the best spot in the city of Hamilton, overlooking the Gore Park. The rooms are large, airy and newly furnished throughout. It will pay to call before applying elsewhere.

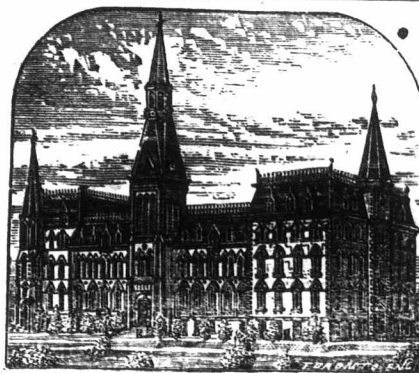
Send for circular.

M. L. RATTRAY,

223-f

PRINCIPAL.

Please Mention this Paper.



ALMA LADIES' COLLEGE St. Thomas, Ont.

BUILDINGS AND FURNISHINGS THE FINEST IN CANADA
RE-OPENS SEPTEMBER 4th, 1884.

Gives thorough instruction in Literature, Music, Fine Arts and Commercial Course.

Board, Room, Light, Laundry and Tuition cost only from \$38 to \$45 per term, according to department. The same with Music, Drawing and Perspective, only \$190 per year in advance. The college has 15 thoroughly qualified teachers, and grants certificates and diplomas to successful candidates. For Calendar, &c., address

224-b

PRINCIPAL AUSTIN, B. D.

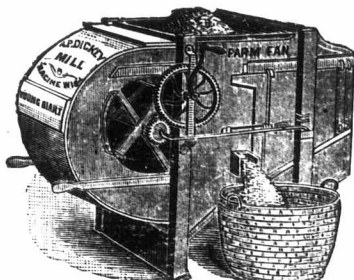
BLUEBERRY PLANTS.—The Blueberry is a very profitable fruit to grow for market. It succeeds on high as well as low ground, and is an enormous bearer; will yield 100 bushels per acre under ordinary cultivation, and bears abundantly the first season after setting out; they are perfectly hardy, never known to winter-kill in this latitude. I am very anxious to have the Blueberry introduced in all parts of the country, and will send one dozen plants by mail for 60 cents, 2 dozen \$1, 100 by express \$2 50. Address,

225-a

DELOS STAPLES, West Sebawa, Mich.

THE CELEBRATED A. P. DICKEY FANNING MILLS

THE "FIRST PRIZE" MILL



OF AMERICA

Being the best Mill made for Cleaning and GRADING all kinds of Grain and Seeds. The Farm sizes are convenient, light, STRONG AND DURABLE. For description, catalogues and prices, address

225-a

Dickey & Pease, Manufacturers,
Racine, Wisconsin, U. S. A.

DEDERICK'S HAY PRESSES.



Manufactory at 90 College Street, Montreal, P. Q.
Address for circular P. K. DEDERICK & CO., Albany, N.Y.

HAVE YOU A FRIEND WHO WANTS TO GET INTO a good paying business, or would you prefer to go in and win yourself. Agents and farmers will find this an easy way to make money. Write for particulars, enclosing 3c. stamp; don't delay. Address, JAMES LAUT, 231 Yonge Street, Toronto, Ont.

219-y

FOR FALL PLANTING.

The largest assortment in the country of the best Old and New Fruit and Ornamental Trees, Shrubs, Fences, Hedge Plants, Grape Vines, Small Fruits, etc. Abridged Catalogue mailed free.

ROSES. A Superb Collection. Carefully compiled Catalogue describing Best Old and New varieties mailed free.

BULBS. New Illustrated Catalogue, containing lists of the choicest bulbs, at lowest prices, now ready and mailed free.

NEW GOOSEBERRY. We now offer a very valuable new variety. Circular giving full description and price, together with a handsome colored plate, and New Catalogue of Small Fruits, free. Address,

ELLWANGER & BARRY,
Rochester, N. Y.

Mount Hope Nurseries. Mention this paper.

225-b

SMALL FRUITS

Cornelia, Daniel Boone, Prince of Berries, Atlantic, Connecticut Queen, James Vick and other new and old Strawberries.

Marlboro, Beebe's, Golden Prolific, Souhegan, Tyler, Hopkins, Shaffers, Hansell and other leading Raspberries.

Early Cluster Blackberry.

Fay's Prolific Currant.

Gooseberries, Grapes, and other Small Fruits.

FIRST-CLASS PLANTS. LOW PRICES

Send for fall Price List, free to all.

W. W. HILBORN & CO.,

225-ef

ARKONA, ONT., CANADA.

Notices.

Our readers will notice by referring to our advertising columns that Mr. Henry Arkell, of Arkell P. O., near Guelph, intends holding a great sale by auction, on the 10th September of pure bred and high grade Shorthorn cattle, Cotswold and Oxford Down sheep, Berkshire pigs, &c., &c. The sheep are mostly imported stock. As a prize-winner, Mr. Henry Arkell's name stands high, and is a guarantee of the excellence of the stock which will be offered for sale.

The Directors of the Blanshard Agricultural Society intend holding their annual fall show at Kirkton on October the 9th and 10th, when liberal prizes will be given.

The attention of our readers is directed to the advertisement of the Alma Ladies' College, St. Thomas, Ont. The institution is deservedly popular and those desirous of making use of its many advantages, could not do better than to apply to Principal Austin for particulars.

We have seen an analysis of the Excelsior Fertilizer made by Thos. Aspden & Son of London, Ont., which proves it to be fully worth its value to any farmer who uses it judiciously. So popular has this fertilizer become with those who have tried it, that the firm has difficulty in supplying the demand.

Good crops, steam threshing, and happy results.—Mr. Geo. White, of London, has recently started no less than five of his threshing engines within a short distance of Guelph for the following gentlemen, viz., Messrs. McPhee & Grant, Mr. John Clarke, Messrs. McLaren, Mr. John Lamb, and Mr. John Fisher. The White Engine seems to handle the various separators as though they were playthings. The turn out of grain is very satisfactory in some cases, threshing as much as three bushels per minute. These engines were sold chiefly through the reputation of one purchased from Mr. White by Messrs. Murphy and Gordon last year. Result, a lot of happy men and White taking home \$4,000 of gilt edged paper.

—Guelph Mercury.

See Stock Notes, page 284.

PLANTING.
 In the country
 Fruit and
 Shrubs, Ferns,
 etc. Abridged Cata-
 Carefully compiled
 List Old and New
 Catalogue, contain-
 ing choice bulbs, at low-
 price and mailed free.
HERRY,
 Circular giving full
 some colored plates,
 address,
HERRY & HARRY,
 Rochester, N. Y.

FRUIT

of Berries,
 Vick and other

Life, Souhegan,
 and other leading

Small Fruits.
 LOW PRICES
 & CO.,
 T., CANADA.

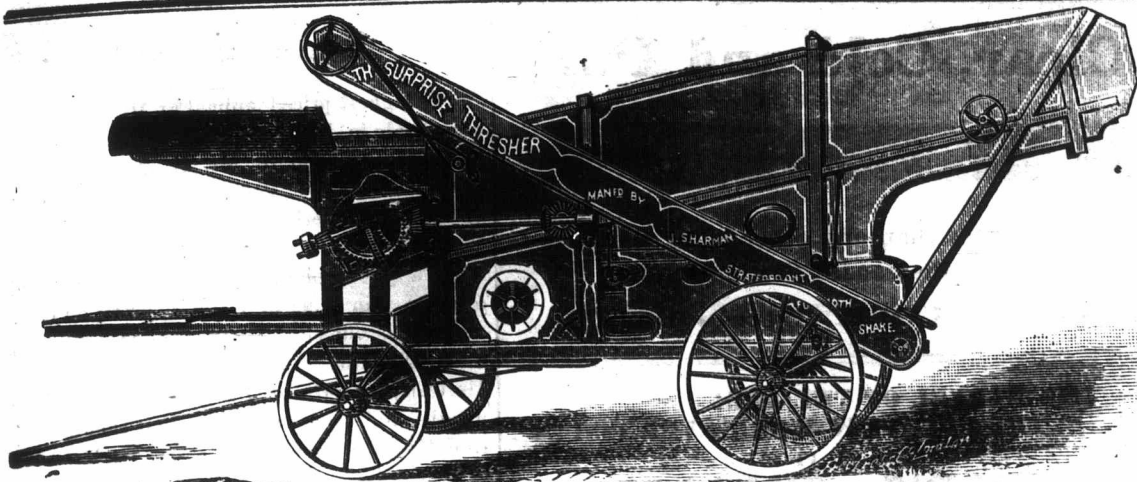
referring to our
 ry Arkell, of
 nds holding a
 h September
 rthorn cattle,
 ep, Berkshire
 stly imported
 enry Arkell's
 rantee of the
 ll be offered

Agricultural
 al fall show
 10th, when

directed to
 ies' College,
 s deservedly
 ng use of its
 er than to
 culars.

e Excelsior
 Son of Lon-
 ly worth its
 judiciously;
 e with those
 difficulty in

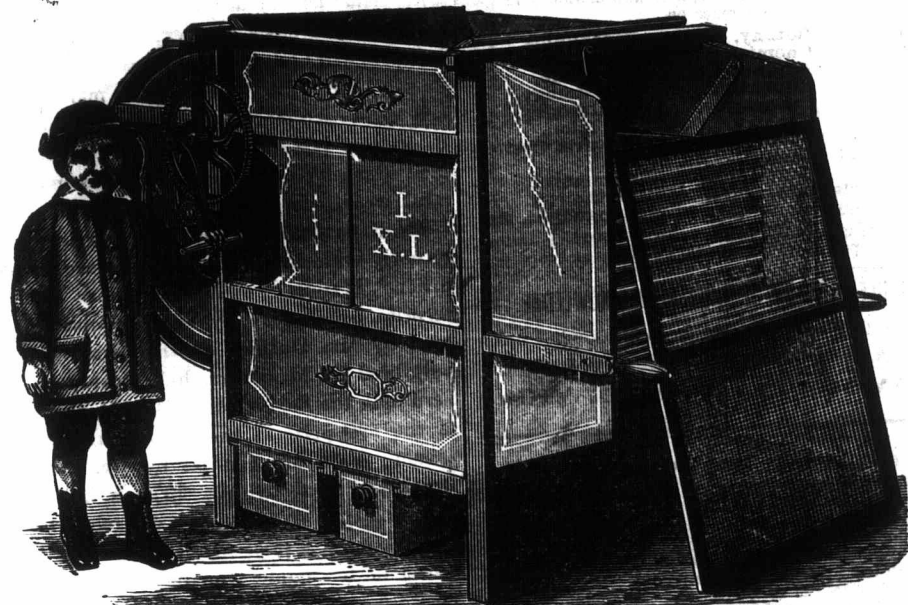
happy re-
 on, has re-
 is thrashing
 Guelph for
 Messrs. Mc-
 Messrs. Mc-
 hn Fisher.
 he various
 playthings.
 ry in some
 ushels per
 ld chiefly
 ased from
 and Gordon
 men and
 ed paper.



If you want a
THRESHER
 either for travelling
 purposes, or for
 farmers' own use, or
 a company of farm-
 ers, send post card
 asking for descrip-
 tive circular, with
 the different ma-
 chines and powers
 illustrated and price
 list. The best styles
 of Thresher in the
 world, fast and easy
 running. State for
 what purpose you
 want it!

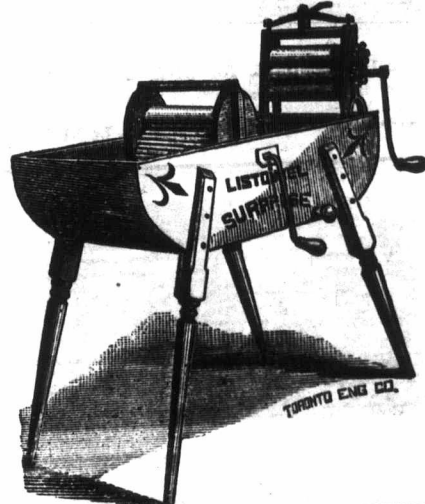
Mention FARMER'S ADVOCATE.
 221

JAMES SHARMAN, Stratford, Ont.

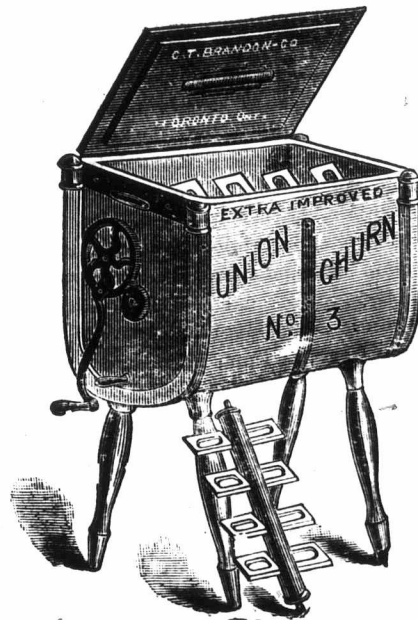


WILLIAM FORSYTH, Sole Manufacturer,
 PETERBOROUGH, ONTARIO. 225-a

The NOVELTY RUG MACHINE
 (PAT. MARCH 6th, 1882.)
 Makes Rugs, Ties, Hoods, Mit-
 tens, Door Mats, &c.,
 with ease and rapidity. Price only one
 dollar. Single machines, with full direc-
 tions, sent by mail on receipt of price.
 Agents wanted. Apply for circulars to R.
 W. Ross, P. O. Box 641, Sole Manufacturer,
 Guelph, Ont. Also dealer in Rug Patterns. 225-f



THE EXTRA IMPROVED
UNION CHURN



Admitted to be the Best Churn in
 the World!

Took the following 1st Prizes against all com-
 petitors:-
 Hamilton.....1876 and 1881
 London and Quebec.....1877
 Sydney, New South Wales.....1877
 Paris, France.....1878
 Guelph.....1883
 Toronto.....1878, 1879, 1880, 1883

Made in Four Sizes:-
 No. 1.....\$ 8 00 each
 No. 2....." 8 50 "
 No. 3....." 9 00 "
 No. 4....." 11 00 "

If no dealer in your nearest town keeps our churns in
 stock, we will forward to your nearest railway station for above
 prices. Send for circular.

MANUFACTURED ONLY BY
C. T. BRANDON & CO., Toronto.
 Manufacturers all kinds of Wooden Goods.
 225-b

The GREAT SURPRISE WASHING INSTITUTION
 will be on exhibition at all the big shows this fall. Ob-
 jections or prejudice to washing machines cannot live
 in its presence when seen at work. Watch and wait, and
 buy no other till you see it. For circulars or orders
 Address N. E. WALTON, Listowel, Ont.
 225-a
 Canvassing Agents Wanted.

Gurney & Ware's Standard Scales



Have taken first
 Prize at 22 Provin-
 cial Exhibitions;
 first Prize at Pro-
 vincial Exhibition,
 London, 1881.
 Prizes taken in
 England and Pro-
 vinces of Quebec
 and Nova Scotia.
 Hay, Cattle, Coal,
 Stock, Mill, Grain,
 Dairy, Railroad &
 Grocer Scales.
 None genuine
 without name on.
 All makes of scales
 promptly repaired.
GURNEY & WARE,
 Hamilton, Ont.

Send for catalogue to
 201-1 eom



J. N. ANDERSON, M. D.
 M. C. P. S. Ont.—Eye
 and Ear Surgeon, 24 James St.
 Hamilton, Ont. Dr. Anderson
 gives exclusive attention to
 the treatment of the various
 diseases of the EYE and EAR.
CROSS EYES STRAIGHTENED.

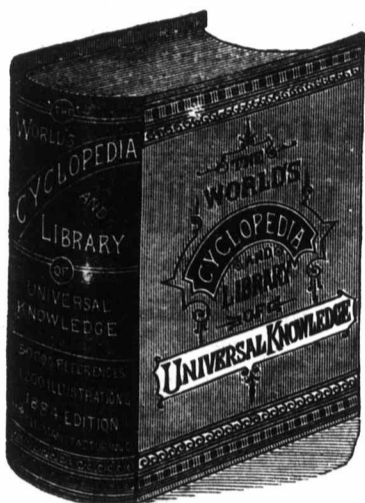
WATER---Clear, Cold and Pure.



The Radial Centre secures water better than any other point made, as it gives the whole surface under the gauze. Circulars free.

223-a

F. G. BULLOCK, Otterville, Ont.



THE MARVEL OF THE AGE! THE CHEAPEST WORK EVER ISSUED! — THE — WORLD'S CYCLOPEDIA

— AND LIBRARY OF — UNIVERSAL KNOWLEDGE.

This valuable volume gives accurate and concise information, arranged for ready reference on

Anatomy,
Architecture,
Agriculture,
Astronomy,
Arts and Sciences,
Biography,
Biblical Literature,
Cities and Towns of
the World,
Exploration & Travels
Ecclesiastical History

Botany,
Chemistry,
Engineering,
Education,
Geography,
Geology,
Governments,
History,
Horticulture,
Literature,

Mechanics,
Mineralogy,
Medicine,
Physiology,
Philosophy,
Religion,
Natural History
Law,
Commerce,
Mythology,
Languages, &c.

It contains over 800 pages, 50 000 References and 1,200 Illustrations, and is the best and most popular Cyclopaedia for all classes and conditions ever published.

AN INDISPENSABLE LIBRARY OF UNIVERSAL KNOWLEDGE.

By Mail, Post-paid, for ONE DOLLAR; or A Copy will be sent, post-paid, to anyone sending us the names of three new subscribers to "The Farmer's Advocate," with \$3, to pay one year's subscription to same.

ADDRESS,— THE FARMER'S ADVOCATE, LONDON, ONT., CANADA.



OLDS' PATENT 1, 2 AND 3 HORSE-POWERS AND SEPARATORS

The leading Threshing Machine in the Dominion. Will do almost double the work of the old style mills. Send for Pamphlet to B. W. OLDS & CO., 174 Mullins St., Point St. Charles, Montreal.
Or to LARMONTH & SONS, General Agents, 33 College St., Montreal.
Or to W. S. CASSON, General Agents for Frost & Wood, Truro, Nova Scotia.
Our Powers, formerly made at St. Albans, are used to operate the Laval Cream Separator.

A USEFUL BOOK! LADIES' MANUAL OF FANCY-WORK.

A NEW BOOK, giving plain directions for Artistic Embroidery, Lace Work, Knitting, Tatting, Crochet Work, Net Work and all kinds of fancy Needle Work. This VALUABLE BOOK is beautifully printed on fine tinted paper, has a handsome cover, and contains over

400 ILLUSTRATIONS,

Comprising designs for Monograms, Initials, Knit Edgings, Cross Stitch Patterns, Point Russe, Berlin and Shetland Wool designs, Applique designs, Kate Greenaway designs for Doyleys, etc., Handkerchief Borders, Macrame Lace work, Holbein work, Java Canvas work, Worsted Fringes, Turkish Rugs, Toilet Cushions, Footstools, Hat Racks, Pin Cushions, Ottomans, Work Baskets, Pen & Wipers, Bed-quilts, Lambrequins, Work Bags, Book Covers, Wood Boxes, Door Panels, Scrap Baskets, Sofa Coverlets, Toilet Bottle Cases, Table top Patterns, Folding Screens, Church Font Decorations, Sofa Cushions, Music Portfolios, Slipper Patterns, Persian Rugs, Wall



Pockets, Carriage Rugs, Chair back Covers, Towel Racks, Perfume Sachets, Tidy designs, Flower Pot Covers, Lamp Shades, Needle cases, Watch Cases, Fancy Work Bags, Catch-all, Match Safes, Eye Glass Pockets, Collar Boxes, Chair Bolsters, Umbrella Cases, School Bags, Patch work designs, Coin Purses, Designs for Tricot and Burlaps, Wood Baskets, Commodore, Elbs, Glove Cases, Air Castles, Gypsy Tables, Hair Receivers, Paper Weights, Table Mats, Night-dress Cases, Shoe Bags, Needle Books, Jewel Boxes, Door Mats, Knitted Jackets, Bottle Cases, Paper Racks, Pillow Shams, Hair Pin holders, Floss Winders, Mosaic Window Shades, Book Marks, and every design in fancy work a lady can desire, to the number of over 400.

Plain directions with each design.—A Reliable book for daily reference. Jenny June in her preface to this book, says: "The present volume does not pretend to furnish the theory or practice of the highest Needle work art, but it does aim to supply within its compass a greater variety of excellent designs—every one of which is useful, for dress or household decoration—than have ever before been gathered within the leaves of one manual."

Only 50 cents per mail, post-paid, or sent free to any subscriber who send in one new name, with \$1.00 for a year's subscription.

Address FARMER'S ADVOCATE, London, Ont.

Stock Notes.

The highest priced animal at Mr. Geo. Fox's recent sale in England, was Cherry Duchess of Elmhurst 3d, sold to Mr. H. Y. Attrill, of Goderich, Ont., for 210 guineas. The average on the entire offering, 39 head, was a little over £50.

By a typographical error of our printer, and overlooked in going in haste to press, an error crept into our stock notes last month. Mr. T. G. Nankin, of Shade Park Stock Farm, Merivale, is represented as having a sow "two months old" weighing 800 lbs.; it should have read "twenty months old." Our readers will, of course, have seen that there was a mistake in the figures somewhere.

Now that the season for the sale of cattle will soon be active, we hope our friends and patrons will send us an account of their sales of thoroughbred stock of every description. All breeders will find it to their own advantage to do so. As we usually commence mailing about the 1st of each month, our forms must be closed before this date, and we should therefore be glad to receive notes about stock gossip at least a full week before the end of the month.

Mr. F. Green, Innerkip, Ont., arrived home recently with his importation in excellent condition. It consists of the Short-horn bull Enterprise, a dark roan, by Ventriloquist (44180), bred by Mr. Duthie; another roan yearling bull, bred by Mr. Marr, half-brother to their herd bull, the Earl of Marr (47815), the winner of the first prize at the Provincial Show last season. Vain Maid, bred by Mr. Nares, of Bruckton, sired by Mr. Bruce's bull Edgar, dam Vanity, a cow having six direct crosses of Cruickshanks, a prize-winner at three different shows in Scotland; The Belle, red, sired by Forward (46375), dam Mina by Comet (41250); Proud Duchess, sired by Norman (45272), dam Venus 2d by British Champion (36273)—Venus 2d was sold to Mr. Hill, Minnesota, U. S., in 1883; Monogram 20th, red and little white, sired by Vienna (45731), a Cruickshank bull, dam Monogram 14th by Prince Frederick (42178). Their Hereford importation consists of a bull and five heifers, from the herds of Messrs. Hill, Felhampton Court, Griffiths, of Brierly, and Haywood, of Blakemore House, Hereford.

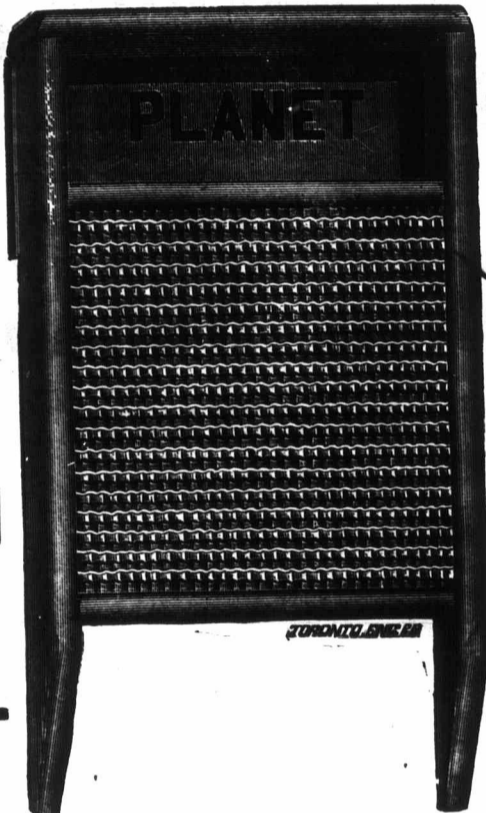
Mr. John C. Ross writes us from South Quebec, dated Aug. 19, 1884, saying: I just send you a few lines informing you of my arrival here in the Lake Winnipeg, with my stock all in good shape, considering we had rather a bad, rough, dirty passage. I have four Clydesdales three entire, one filly three Berkshire pigs, sixteen Shropshire sheep, purchased from Mr. John Evans, of Uppington, near Shrewsbury, and six from Mr. Barber, a very fine lot, and a first-prize pen of Southdowns at the Royal, Mr. J. Main came out with me and brought out one entire colt, bought off Lord Elsmire, but lost him coming out; he also brought two Suffolk pigs from the same place, and a lot of game fowls from the same place, also fifteen Berkshire pigs, prize winners at the Royal, and a fine lot of Cotswolds, prize winners at the Royal, and a collie dog. We have been here over a week and don't hear any talk of leave to go home. I think it is wrong keeping stock so long; our stock is all in fine order, and to keep them here in this place to roast to death I think is wrong.

Continued on page 286.

WASHBOARDS

THE BEST IS THE CHEAPEST.

P
L
A
N
E
T



—THE—
PLANET

IS THE BEST.

ASK FOR IT AND TAKE NO OTHER!

SATISFACTION GUARANTEED!

Saves Time, Labor and Soap.

E. B. EDDY,
HULL, P. Q.

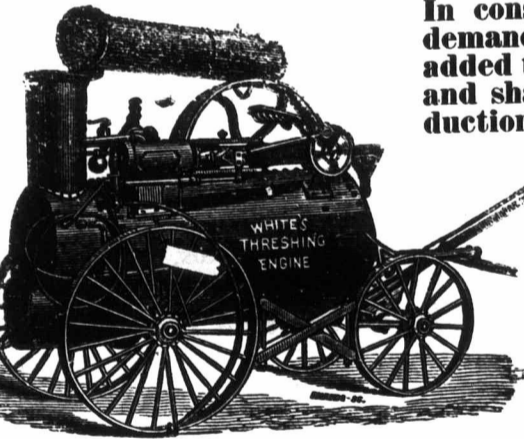
Manufacturer of

PAILS, TUBS, WASHBOARDS and MATCHES

All goods manufactured by me bear my name, and are guaranteed to be the best in the market.
E. B. EDDY.

WHOLESALE AGENTS:

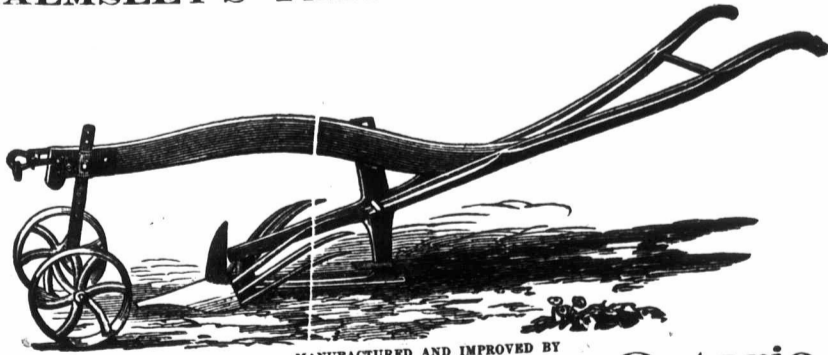
H. A. NELSON & SONS, TORONTO and MONTREAL.



In consequence of the increased demand for my ENGINES, I have added to my shops and machinery, and shall largely increase the production of engines for 1884.

It is licensed by all Insurance Co.'s and has proved itself to be the most durable.
The Engine for the Northwest is made to burn either coal, wood or straw. Farmers, procure a Genuine White Threshing Engine at the Forest City Machine Works, London, Ont., Can.
GEORGE WHITE, Proprietor and Manager
H. B. WHITE, Supt. of Machinist Dept.
A. W. WHITE, Supt. of Erecting Dept.
HUB. J. WHITE, Secretary-Treasurer.
F. J. WHITE, Assistant-Secretary.
The engines may be seen at Van Tassel's foot bridge warehouse, Belleville.

219-y
WALMSLEY'S PATENT POTATO DIGGER!



MANUFACTURED AND IMPROVED BY
R. DENNIS, London, Ontario.

This Potato Digger gives satisfaction to purchasers. For particulars address above.
Price \$16 at shop or placed on board cars at London.

223

Our FAMILY KNITTING MACHINE



Under Shirts, Drawers, Scarfs, Children's Wear, Hosiery, Caps, Gloves, Mitts, &c. All sizes can be made on Our Family Machine. Our Book of Instructions will teach you all. It is so simple six undershirts can be made in one day, giving a profit of 75 cents each. Blind girls can knit and finish one dozen pairs of socks per day, and \$2, \$3 and \$4 per day can be easily made on our "Great Family Canadian Ribbing Machine."

Send for descriptive Catalogue and Testimonials from the blind.

CREELMAN BROS.,
Georgetown, Ont.

CHEAP TELESCOPES

A portable Achromatic Telescope that will tell the time of the church clock in Toronto at three miles off, with extra astronomical eye piece and sun glass for astronomical use. It will show Jupiter's moons, spots on the sun, mountains in the moon, &c. Sent to any address on receipt of \$5.50.

CHAS. POTTER, Optician,
31 King St. East, Toronto.

ESTABLISHED 30 YEARS.

TESTIMONIALS.

A few simple Testimonials that Speak for Themselves.

Ottawa, September 3rd, 1883.
A. NORMAN, Esq.—Dear Sir,—I have experienced considerable benefit from your appliances. I feel stronger and better every day.
Yours truly, R. E. HALIBURTON.

Peterborough, October 15, 1883.
A. NORMAN, Esq.—Dear Sir,—Soon after I commenced to use your Electric Appliances, they opened my bowels, cured my cough and cold, relieved my head, and considerably relieved my catarrh in consequence. The discharges from my head and chest are now easy, and I feel altogether better. My digestion has improved, my stomach is less sour and windy, and I am less troubled with lascivious and vivid dreams. I had previously tried almost all the advertised patent medicines without deriving any good.
Yours truly, J. GREEN.

4 Queen Street East, Toronto.
A. NORMAN, Proprietor.

VIENNA BAKING POWDER

S. H. & A. S. EWING



Proprietors & Manufacturers

57 & 61 ST. JAMES ST.

MONTREAL.

C. M. Patney

For Sale by all Grocers.

NORTHERN PACIFIC R. R. LANDS

In Minnesota, North Dakota, Montana, Idaho, Washington and Oregon.
The Northern Pacific country is the newest region open for settlement, BUT THE RICHEST IN NATURAL RESOURCES. Its exceptionally fertile soil, well watered surface, fine wheat and farming lands, best of cattle grounds, large bodies of timber, rich mining districts, healthful climate, great navigable waters, and grand commercial opportunities are the chief attractions which invite a large population.
NOTE 10,818,433 acres or MORE THAN HALF of all the Public Lands disposed of in 1883 were in the Northern Pacific country. Send for maps and publications describing the railroad lands and the country. They are sent FREE.
Address CHAS. B. LAMBORN, Land Com'r, St. Paul, Minn.

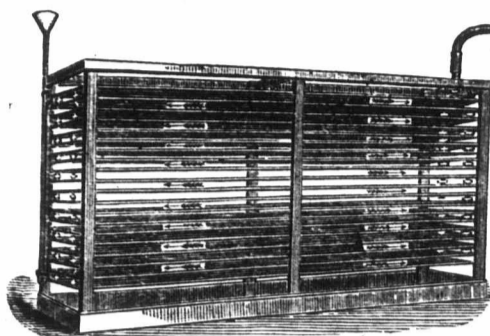
STOCK NOTES.

(Continued from page 284.)

A very important test case under the new Act relating to glanders or farcy, was recently tried in the city of London, Ont., before Justice Peeters. The circumstances were: George Davidson, of Harrietsville, had a horse which he brought upon the London market for sale, when the Chief of Police noticed that the animal was suffering from a complaint which he took to be glanders, and forthwith notified two city veterinarians of the fact. The horse was accordingly examined, the veterinarians pronounced the disease to be glanders, and meanwhile he was ordered to be kept isolated from other animals. Not satisfied with this decision, Mr. Davidson procured the opinion of two other veterinary surgeons from other parts of the county, who gave their opinion that the affection was nasal gleet. When the case was brought before the court, the Justice called Prof. Smith, of Toronto, who examined the animal, and pronounced the disease to be glanders. The Justice then ordered the horse to be shot and buried in compliance with the law. This is about as complicated a case as can easily be imagined, and may give rise to an inquiry as to the efficiency of the Act relating to the spread of contagious diseases amongst domestic animals. This case proves that an immense bill of costs may be incurred, especially under circumstances in which the Justice shows incompetency (which was fortunately not the fact in the case in question). These costs have to be borne by the municipality—except the fees of the veterinary engaged by the owner of the diseased animal. The delay incident to such a circuitous mode of procedure may also prove to be prejudicial, or at least annoying. If the Act provided for the appointment of a qualified veterinarian in each county who would have power to order the animal to be destroyed, thus peremptorily disposing of the case, great satisfaction to all parties concerned would unquestionably be the result in a great majority of cases.

A pool of all the cattlemen holding between the Cimarron and Canadian rivers, in Oklahoma, has been formed. It is composed of seven outfits, and will contain, when stocked up to the limits, 50,000 cattle under its control. A board of seven directors was elected, and on August 1st a full set of officers, consisting of president, treasurer, secretary and pool boss. The ranchmen turn all their stock into the pool in their own brands and then put the pool brand on in addition thereto. The pool pays all expenses by assessment *pro rata* with the number of cattle held by each member. To 1,000 cattle one man and eight horses are turned in. The annual pay roll and expense bill on the pool plan will be cut down over seventy-five per cent., as under the pool plan twenty-five men and 150 horses will do the work that it now takes over seventy-five men and 500 horses to accomplish. The name is to be Cimarron and Canadian Pool. As the brand has not been decided upon yet, we are unable to give it, but it is very probable that the brand of the pool will appear in these columns soon.

The *Husbandman* suggests the inquiry whether well-selected cows, not thoroughbred, do not give more profit in the dairy than others of pure breeding, "even if prices could be made the same in each class."



ACME

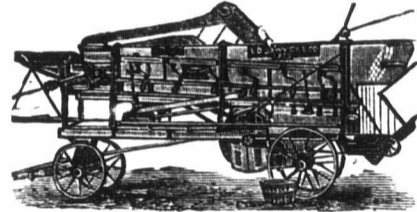
STEAM HEAT
EVAPORATOR

—FOR—
DRYING FRUITS AND VEGETABLES.
Has twice the capacity for its size of any machine in the market, and is warranted to use less than one-half the fuel used by any other drying machine. Is used for drying Straw Board, Fish, Confectioneries &c. Send for Catalogue and Price List.
J. J. BLACKMORE & CO.,
224-c ST. THOMAS, ONT

HAMILTON AGRICULTURAL WORKS

The Pioneer Threshing Machine
Works of Canada.

ESTABLISHED 1836.



Our Celebrated GRAIN SAVER is the Best and Most Perfect THRESHER and SEPARATOR made in the Dominion, being first over all others for

Durability, Workmanship, Fast & Clean Work,
Perfection of Parts, Ease of Management,
Simplicity of Construction, Light-
ness of Draft, Capacity for Work.

We have Machines working in all parts of Canada, giving the very best satisfaction, when driven by either Steam or Horse Power.

It is a General Favorite with the Farmers, who prefer it for Fast and Clean Work.

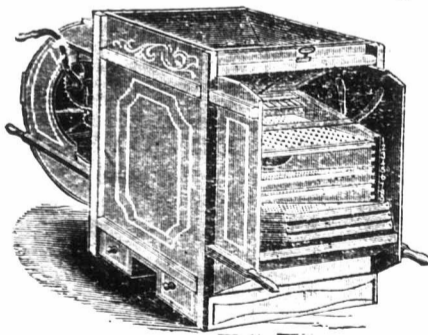
SPECIAL SIZE MADE FOR STEAM POWER.

Address us for Circular and Price List of THRESHERS, CLOVER MILLS, HORSE POWERS, REAPERS AND MOWERS. A personal inspection is solicited.

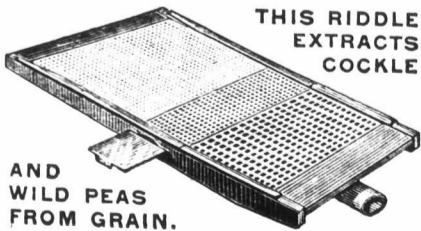
173-1eom

L. D. SAWYER & CO.,
HAMILTON, ONT., CANADA

Campbell's Riddle for Extracting Cockle and Wild Peas from Wheat.



THIS RIDDLE
EXTRACTS
COCKLE



AND
WILD PEAS
FROM GRAIN.

The accompanying cuts represent the top view of Campbell's Patented Riddle for extracting cockle and wild peas from grain.

You will notice that there are three different sizes of perforated zinc on the top over which the grain passes. The size of the holes where the grain runs over first, is $\frac{1}{2}$ of an inch, and the next size is some larger and by means of a Sheet Iron Slide, you can either close the middle holes or leave them open, according to size of cockle or wild peas you wish to take out.

The holes in the piece furthest out are $\frac{1}{4}$ of an inch, and they let the clean grain through, down on the screen, just the same as an ordinary riddle.

This Riddle works grand, and farmers who desire to have clean grain to sell and clean seed to sow, will be well satisfied with it.

It will be in all of my Mills sent out after this date. The Mill is also fitted with Screens and Riddles for cleaning every kind of grain that grows.

The Mill has proved itself to be first-class in every respect, and farmers who favor me with an order will get a Mill that will give them every satisfaction, and it is second to none in the market.

GEARING INSIDE. SCREENS and RIDDLES ADJUST-
ABLE TO ANY PITCH.

Send for circular and prices to

MANSON CAMPBELL,
Box 106, CHATHAM.

222

SWISS SOAP!

Guaranteed Best in the World!
Ask Your Grocer For It!
Manufactured only by the
HURON SOAP COMPANY, Goderich, Ont
220-y

FARM FOR SALE.

That fine farm of 200 acres, more or less, in the township of Delaware, known as Green Park, held by the undersigned in trust for the co-heirs of the late Rothwell Garnett, Esq., being lot No. 10 in the 1st concession. Enquire of **J. SHANLY, London** } Co-trustees
H. MORTIMER, Toronto }
Dated 31st March, 1884. 220-1f

INTERCOLONIAL RAILWAY

The Great Canadian Route to and from the Ocean.

For Speed, Comfort and Safety is Unsurpassed.

Pullman Palace, Day and Sleeping Cars on all through Express Trains.

Good Dining Rooms at Convenient Distances.

NO CUSTOM HOUSE EXAMINATION.

Passengers from all points in Canada and the Western States to Great Britain and the Continent should take this route, as hundreds of miles of winter navigation are thereby avoided.

IMPORTERS and EXPORTERS

will find it advantageous to use this route, as it is the quickest in point of time, and the rates are as low as by any other.

Through freight is forwarded by FAST SPECIAL TRAINS, and experience has proved the Intercolonial route to be the quickest for European freight to and from all points in Canada and the Western States.

The Pullman cars which leave Montreal on Monday, Wednesday and Friday, run through to Halifax without change, and those which leave Montreal on Tuesday, Thursday and Saturday run through to St. John, N. B., without change.

Tickets may be obtained, and also information about the route, and about freight and passenger rates from R. B. MOODIE, Western Freight and Passenger Agent, 93 Rossin House Block, York St., Toronto, and E. DE LAHOOKE, Ticket Agent, No. 3 Masonic Temple, London.

D. POTTINGER,
Chief Superintendent, Moncton, N. B.
Railway Office, Moncton, N. B., 10th December, 1883. 217-1f

Agricultural Savings & Loan Company, LONDON, ONTARIO.

President—WM. GLASS, Sheriff Co. Middlesex.
Vice-President—ADAM MURRAY, Co. Treasurer

Subscribed Capital, . . . \$600,000
Paid Up do. 575,000
Reserve Fund, 61,000
Total Assets, 1,339,000

The Company issues debentures for two or more years in sums of \$100 and upwards, bearing interest at highest current rates, payable half-yearly by coupons.

Executors and Trustees are authorized by law to invest in debentures of this Company.
For information apply to
JOHN A. ROE, Manager.
206-1f

RED RIVER VALLEY LANDS A FARM

SPECIAL OFFER
Actual Settlers
only between the 1st March and the 31st Dec., 1884.
Lands include the most productive and, considering locality, the cheapest of any unoccupied lands in the United States now open for sale. First applicants will have first chance. Home-seekers "catch on."
For Maps, Illustrated Papers and other information regarding these lands, write to
J. B. POWER,
Land and Immigration Commissioner,
St. Paul, Minneapolis & Manitoba Ry., ST. PAUL, MINN.

FOR \$3 PER ACRE
SALES WILL BE MADE IN LOTS OF NOT LESS THAN 160 ACRES NOR MORE THAN 320 ACRES. THE TERMS ARE BETTER THAN CAN BE OBTAINED FROM THE GOVERNMENT.

Write to **J. B. POWER,**
Land and Immigration Commissioner,
St. Paul, Minneapolis & Manitoba Ry., ST. PAUL, MINN.

THE LINE SELECTED BY THE U. S. GOVT TO CARRY THE FAST MAIL



GOING WEST.

ONLY LINE RUNNING TWO THROUGH TRAINS DAILY FROM CHICAGO, PEORIA & ST. LOUIS,

Through the Heart of the Continent by way of Pacific Junction or Omaha to DENVER,

or via Kansas City and Atchison to Denver, connecting in Union Depots at Kansas City, Atchison, Omaha and Denver with through trains for SAN FRANCISCO, and all points in the Far West. Shortest Line to KANSAS CITY, and all points in the South-West.

TOURISTS and HEALTH-SEEKERS should not forget the fact that Round Trip tickets at reduced rates can be purchased via this Great Through Line, to all the Health and Pleasure Resorts of the West and South-West, including the Mountains of COLORADO, the Valley of the Yosemite, the

CITY OF MEXICO, and all points in the Mexican Republic.

HOME-SEEKERS Should also remember that this line leads direct to the heart of the Government and Railroad Lands in Nebraska, Kansas, Texas, Colorado and Washington Territory.

It is known as the great THROUGH CAR LINE of America, and is universally admitted to be the **Finest Equipped Railroad in the World for all classes of Travel.**

Through Tickets via this line for sale at all Railroad Coupon Ticket Offices in the United States and Canada.

T. J. POTTER, Vice Pres. and Gen. Manager.
PERCIVAL LOWELL, Gen. Pass. Ag't Chicago.

JNO. Q. A. BEAN, Gen. Eastern Ag't, 47 Broadway, New York, and 36 Washington St., Boston.

222-y

BUY ONLY THE DOHERTY ORGAN

Opera Chairs AND Railway Settees

H. R. Ives & Co., Queen St., Montreal
Manufacturers of

Opera Chairs, Railway Settees, Farm Gates, Stable Fittings, Park Settees, Wire Window and Door Guards, Cast Iron Window and Door Guards, Wrought Iron Window and Door Guards, Cemetery Railings, Roof Crestings, Balcony Railings, Vanes for Towers, Composite Wrought Iron Railings and Gates Specialities. Light and Heavy Castings to Order.

Send for Prices.
Office of the **CANADA WIRE CO.,**
215-y H. R. IVES, President.

Ontario Veterinary College

TEMPERANCE STREET, TORONTO.

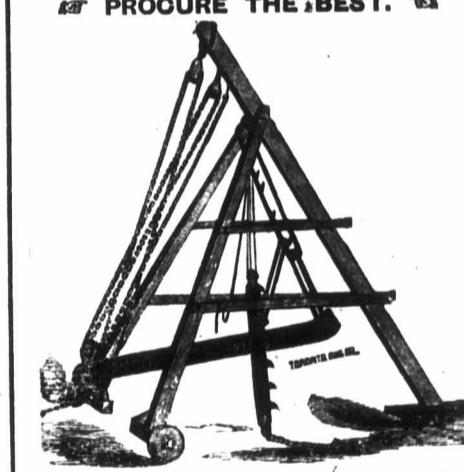
The most successful Veterinary Institution in America. All experienced Teachers. Fees, Fifty Dollars per Session. Session 1882-3 begins Oct. 25th. Apply to the Principal, PROF. SMITH, V. S., Edin., TORONTO, CANADA. 201-1

THE CHEAPEST FORCE PUMP IN THE WORLD!

Especially adapted for spraying fruit trees, watering gardens and lawns, and washing carriages. Will throw a steady stream 60 feet. Can be applied to any service that a siphon or force pump can be used for. Send for Catalogue and Price List. For sale in Canada by Waterous Engine Co., Brantford, Ont.

FIELD FORCE PUMP CO.,
Lockport, N. Y., U. S. A.
18-y

PROURE THE BEST.



The Whitfield Stump Extractor.
The superiority of this machine consists in the rapidity and ease in which it can take out the largest stumps; and the ease with which it is operated by man or beast, and the great strength and durability of this machine. It leaves no holes to fill up, nor any stumps or snags in the ground. Send for circular of testimonials and particulars about it before purchasing an inferior machine.
JOHN WHITFIELD,
202-1f Dominion Chain Works, Front Street, Toronto.

FIRST-CLASS ENGRAVING

DESIGNS SUPPLIED IN WOOD

TORONTO ENGRAVING CO.
100-1f

THE SUCCESSFUL FIRE-PROOF CHAMPION!



OVER 150 SOLD and DELIVERED THIS YEAR

We are still turning out **SIX Finished Engines** every week and cannot keep up to the demand.

7 Years Test has proved the Champion to be the best engine in every respect for farmers,

The Thresher's Favorite { Always ready. No delays.

The Farmer's Favorite { Uses little wood and water. Perfect safety from fire.

The Only Engine that has stood the test of time and still continues more popular than ever.

ENDLESS THRESHING BELTS { 5, 6 and 7 in. Gandy 100 ft. long. 6 in. 4-ply Rubber 100 ft. long.

WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

KEPT IN STOCK. 225-

ONTARIO PUMP CO., Limited, TORONTO, ONT.,

MANUFACTURERS AND DEALERS IN

Wind Mills, I. X. L. Feed Mills, Hay Carriers, Horse Hay Forks, Tanks, Double and Single Acting Pumps, Wood or Iron. Also Steam Pumps and Water Supplies, Iron Pipe and Pipe Fitting, all kinds.

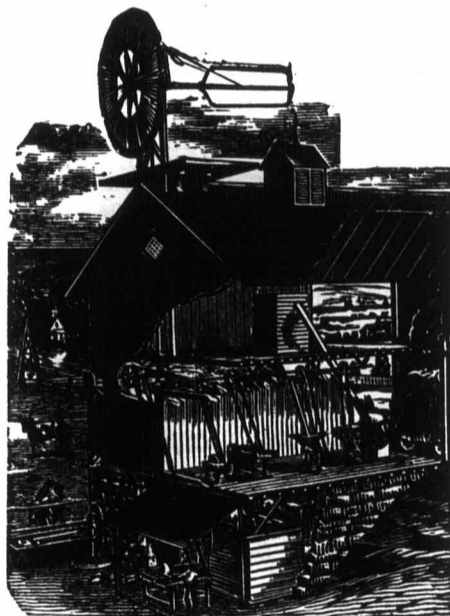
STATE WHAT YOU WANT AND SEND FOR ILLUSTRATED CATALOGUES.



Halladay's Standard Wind Mills. 17 Sizes.



Pumps—Iron & Wood. Force or lift. Deep Geared Wind Mills, for driving Machinery, Pumping Water, &c. From 1 to 40 horse power.



March 14, 1884.



I X L FEED MILLS. The cheapest, most durable and perfect iron feed mill ever invented. 220-tf

ONTARIO PUMP CO.,

Gentlemen,—In regard to the 16-foot geared Wind Mill I bought of you, I can say it more than fills my expectations in every respect. In a fair to good wind I can saw wood at the rate of four cords of hard wood per hour, cut once in two. In a stiff wind I open the fans just half way and get all the power I require. In regard to your feed mill it is just grand. I have ground peas and oats at the rate of a bushel in three and a half minutes, and ground it as fine as one would wish for. I can grind fine cornmeal, also Graham flour. Have ground, since the 15th of February, 325 bushels of grain for customers, besides doing my own work with it. One man brought a grist of screenings, such as small wheat, mustard, and pussy grass seed, thinking that I could not grind it; but I ground it to powder, looking just like ground pepper. Your 13-foot geared mill, I think, is quite large enough for any farmer to do his own work.

Yours truly, EDWIN KEELER, Maitland P. O.



TRADE MARK

BUY THE GENUINE

BELL ORGAN

made only in Guelph.

IT HAS STOOD THE TEST FOR 20 YEARS.

Send for our Catalogue.

214-y

WM. BELL & CO.

W. & F. P. CURRIE & CO.

100 Grey Nun St., Montreal,

MANUFACTURERS OF

SOFA, CHAIR AND BED SPRINGS.

A LARGE STOCK ALWAYS ON HAND

IMPORTERS OF

Drain Pipes, Vent Linings, Flue Covers, Fire Bricks, Fire Clay, Portland Cement, Roman Cement, Water Lime, Plaster of Paris, Borax, Whiting, China, Clay, etc. 210-y

For 25 Cents

The Canadian Stock-Raisers' Journal

will be sent to any address in Canada or United States from

SEPTEMBER to JANUARY, 1885.

FARMERS, try it before deciding which paper you will take next year. Address

STOCK JOURNAL Co., Hamilton, Ont.

AMBER SUGAR CANE MACHINERY.
NEW PARAGON SCHOOL DESKS.
M. BEATTY & SONS, WRELLAND, ONT.
Early Amber Cane Seed imported from the States. *Fine and reliable.* Send for catalogues and prices. 219-h

DR. W. E. WAUGH—Office, The late Dr. Anderson's, Ridout Street, LONDON ONT. 217-y

FARMS FOR SALE

In Western Ontario a number of choice Farms. Full description list sent on application. Correspondence invited, full information given, and on personal application at my office, plans of the townships shown, enabling strangers to see the position of properties and their proximity to towns, railway stations, &c. Farms with acreage to suit every one. Send to

CHARLES E. BRYDGES,
Real Estate Agent.

Land office, 98 Dundas street west, London, opposite to the City Hotel, for list of farms for sale. 176-s