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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

PUBLISHED AT LONDON, ONTARIO. APRIL 21, 1904. WINNIPEG, MANITOBA. No. 604

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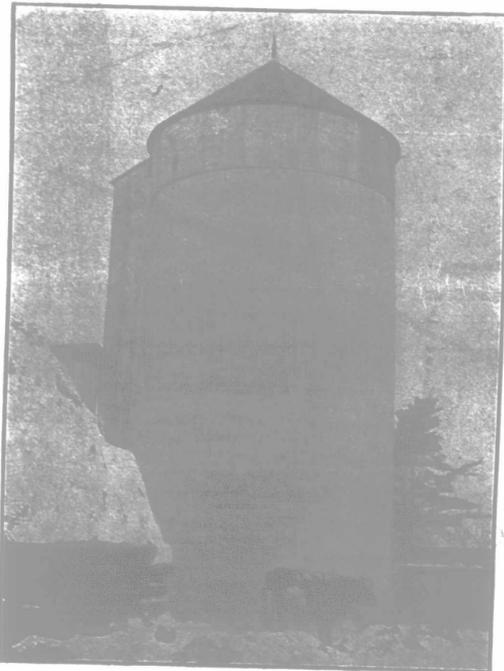
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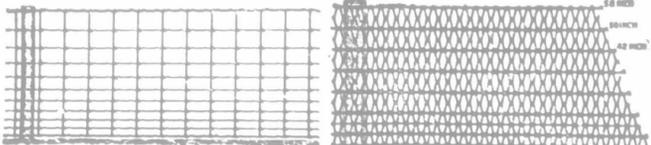
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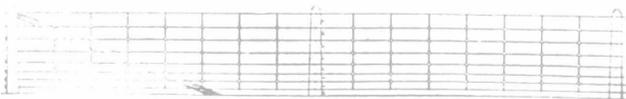
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VOL. XXXIX.

LONDON, ONT., AND WINNIPEG, MAN., APRIL 21, 1904.

No. 604

EDITORIAL.

For Good Roads.

The present seems a reasonable time for a sermon on the subject of road improvement. If ever farmers are to be effectually interested in this question, one would suppose it is while they are plunging through mud and mire in the attempt to get to town or to do any necessary teaming. It is inconceivable that there should be so much apparent apathy and indifference in regard to this much needed reform on the part of that overwhelmingly numerous section of the people, the farming community. We grant that thorough and permanent road building is a large subject, one that means much expenditure of money, and it is doubtless the vision of taxation more than any other cause that makes men fight shy of the proposition. No one questions the desirability of solid, smooth roads, comfortably passable at all seasons, but the years and decades roll past, leaving the people in many districts still dragging their weary way through mud or bumping over frozen lumps of clay, with practically no improvement on the roads of fifty years ago.

When we think of the complacency with which farmers who pay probably nine-tenths of the taxes collected in this country view the voting by our legislators of hundreds of millions to railway corporations to build roads for their own aggrandizement, and the hundreds of thousands of public money appropriated for the improvement of canals and harbors, the erection of extravagant post office buildings for the convenience of city and town people and the delivery of their mail at their doors, it need hardly be considered strange that farmers should be regarded as a meek and lowly people, willing and content to be hewers of wood and drawers of water for the most favored classes. Why should not the farmers who have made the country what it is, and who represent its most important industry, demand a fair share of their own, and insist upon at least their leading roads being made permanently passable by the aid of public money. Road reform, in its best sense, may well be regarded as too large an undertaking for a township or a county, but why should not the Province and the Dominion contribute towards what may properly be claimed as a public benefit? And why should the present generation be called upon to bear all the expense of building permanent roads for the use of future generations? Why not bond the township, the county, the Province if need be, and petition the National Government for a liberal contribution as well? Let the undertaking be financed in a businesslike way, the Dominion, the Province, and the municipality cooperating for the public good, and let us have some roads worthy of the name.

The share of public money appropriated by the Government to agriculture and the interests of the farmers, is infinitesimal when compared with the magnitude of the industry and its value to the country, and in many cases where aid has been proffered it has been so cumbered by conditions as to render it practically unavailable. Until farmers more generally shake off the shackles of political partyism, and vote and act in their own interest and the best interests of the country, little headway may be expected to be registered in the matter of national road-making, but the signs, though yet feeble, are pointing towards an awakening, and we would urge upon farmers, individually and collectively, to impress upon their representatives in Parliament their deter-

mination to demand and insist upon their rights being respected in this regard.

In the meantime much may be done by a judicious use of statute labor, or of the funds raised by commuting statute labor under existing road laws, and by reasonable money grants from township and county funds to improve the roads we have, by the purchase and use of improved road-making machinery, by grading and solidifying the road-bed, and by surface drainage, to quickly remove surplus water and facilitate rapid drying in spring and after rains at all seasons. The institution by the Ontario Government of a good-roads department and an instructor in the art, should have the effect throughout the Province, as we are glad to know it has had in some sections, of stimulating the ambition of the farmers to improve their means of transportation on the common roads. There is economy of time in having good roads; there is added ability to take larger loads to market, and added comfort going to town or driving for any purpose.

Canadian and British Publications Handicapped.

Every thinking Canadian must of late years have been struck with the quantities of United States literature which, each week, comes rolling across the border to inundate our magazine stands and the tables of our homes; and possibly not a few may have asked the questions why it is that this is so; why it is that we do not build up a national literature of our own to supplant this plethora of foreign matter, and why it is that so few of the many great periodicals of the British Isles ever find their way here among the million exponents of Yankeeedom. Mr. J. A. Cooper, in a recent letter to the Toronto News, discusses the question most thoroughly, and in doing so presents a few facts which cannot fail to be as surprising as regrettable to those who have hitherto had no opportunity of understanding the disabilities which underlie the production of our home magazines. Mr. Cooper's article is most timely, and appearing as it does now when the agitation for a stronger Imperial Unity is a matter of such widespread interest, we trust that it will do something toward removing the incubi which for so many years have tied the hands of our British and Canadian publishers, and so made such an "American" invasion possible.

It is not that much of this U. S. literature is not good enough in its way. Attractive in form and illustration, often containing matter of high literary merit, and issued enterprisingly at popular prices, these magazines will be purchased, notwithstanding the fact that U. S. interests are given a proportion in them undesirable to the British reader, just as long as present conditions obtain. On the other hand, as Mr. Cooper has well observed, much of the "literature" that comes to us from over the border is of a much lower quality. Ministering neither to the aesthetic, intellectual nor spiritual faculties of the reader, bombastic to an extreme, posing the United States of America as the Almighty Ego, and representing the British Empire as an effete monarchy already tottering to its fall to make way for the lusty young giant of the Occident, the very presence of these periodicals on Canadian soil would surely seem to be a huge joke. Some magazines British in name circulate in our Dominion, but they are U. S. editions (or imitations), re-

plete with U. S. articles, and filled with U. S. advertisements. Those of us who have reached maturer years may, it is true, afford to look upon them with quiet amusement; but there is another side to the question. We have to look to the youth of our land, whose ideas are in process of formation, and whose judgment is not yet strong enough to discriminate between the true and the false. As the bards of the olden time helped to mould the destinies of nations, so the literature of to-day must help to perform a like office. Hence, it is high time that we should awake from sleep and see to it that no longer is the literature of a British land dominated almost wholly by the output of a foreign press. Apologists for the existing state of affairs may say our national spirit and loyalty are too well grounded to be disturbed by U. S. literature. It would be worse than folly to heed such a flimsy excuse. History condemns it.

As to the remedy: In the first place, as Mr. Cooper has observed, it will be necessary, if British publications are to enter Canada freely, for the British Government to reduce the postage on periodicals bound from the British Isles to Canada. This at present amounts to eight cents per pound, while those from the U. S. come at one cent per pound. British publishers, unable to stand against such a competition, have simply stopped sending their publications to this country, and although the matter has several times been brought before the authorities in England, the Postmasters-General have not yet seen fit to take any step in the matter. As regards the handicap to Canadian periodicals, the first step, as Mr. Cooper remarks, will be to cancel the Postal Convention arrangement of 1875. It was then arranged that mail matter should be exchanged between Canada and the U. S. at the domestic rates, a plan which was satisfactory in those days when we had no C.P.R., and were obliged to send mail for Manitoba and B. C. through the U. S. In '78, under the regulations of the Universal Postal Union, which we then joined, the rates should have been five cents per half-ounce letter, and eight cents a pound for newspapers and books. These provisions, however, have been a dead letter, and, as a consequence, since the C.P.R. was completed, "the arrangement has cost Canada millions of dollars, and has given to the U. S. publishers of monthly publications almost a monopoly of this market."

The second handicap which Canadian publishers have to meet is the duty of 25 to 35 per cent. on magazine paper, very little of which is made in this country, because there is little demand for it. To quote again from Mr. Cooper: "Suppose a man desired to publish a 10-cent magazine in Canada, the minimum edition would be 600,000 per annum, and its value \$30,000. On this the duty would be \$7,500. With a handicap of \$7,500 no publisher will undertake to issue a 10-cent magazine to rank with some U. S. publications."

By all means let the agitation for more favorable conditions for Canadian and British publishers continue, until the last handicap has been removed on the threefold ground: first, of trade with Britain; second, national sentiment; and third, the encouragement of home industry and literature. Let the postal authorities see to it that every facility for home literary production is encouraged, so will Canada gain not only in post-office profit and home manufacture, but in the building up of a stronger national spirit, and a national literature, such as is, after all, the best monument of any age or nation.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
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JOHN WELD, MANAGER.

1. THE FARMER'S ADVOCATE is published every Thursday (52 issues per year). It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical, reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
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Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

Growing Sugar Beets.

The successful growing of sugar beets in any locality is an object lesson in good farming. One great difficulty the factories have had to contend with is to get enough beets grown. Special interest and value, therefore, attaches to the contributions elsewhere in this issue from Dr. A. E. Shuttleworth, Superintendent Agricultural Department Ontario Sugar Company, and several successful growers in various counties, giving a resume of their experience on just such points as beginners desire to know. From his experience and observation in this country, and also in Germany, where beet-growing is carried on to perfection, and beet-sugar production an industry of national magnitude, Dr. Shuttleworth is in a position to speak with authority. The actual experience and results described by other writers is most encouraging and helpful. Speaking of crops to precede beets, has any reader tried the summer-fallow? Would not the freedom from weeds, and the extra good crops possible, more than make up for the season's crop missed?

"Immeasurable Stores."

"It is in every way gratifying to find that our Canadian periodicals are making such a show of merit nowadays. One of the most carefully edited of our publications—a thing to be glad of, considering its large circulation and the class it reaches—is the 'Farmer's Advocate and Home Magazine.' Patriotism; literature; love of nature; good common-sense business methods in relation to farm management; together with an immeasurable store of valuable information, judiciously tempered by a spice of humor here and there in its pages, make of the 'Farmer's Advocate' a publication that should be reckoned upon as a factor for the good of the Canadian farmer, and for the good of Canada also. It would be an excellent thing if such a high-class paper could be taken in every Canadian home. This paper, which has heretofore appeared monthly, is now issued weekly."—[Prince Edward Island Magazine and Educational Outlook,

HORSES.

Starting Colts to Work.

On account of the lateness of the spring, farm work will not be commenced until about the time at which spring seeding is nearly finished some years, hence, when the ground is in condition to work, it will be the object of every farmer to rush it along, and get as much as possible done in a short time, in order to not be too late with seeding. On this account all available help will be forced into service, and it is probable many colts or young horses that have had little or no preparation will be put to work, and the anxiety to get forward with the work will have a tendency to make men, who are naturally careful and intelligent in such matters, forget the requirements of their teams in their anxiety to get the work done. Here exists the danger. If colts or unprepared horses are required to do a fair day's work at first, it is probable their shoulders will become sore or bruised, or their muscles become so tired that they will not be able to continue, while, on the other hand, even though practically unfitted for work, if intelligently used for the first few days, they will, in all probability, be able to perform, without serious injury, at least a moderate amount of work. We take it for granted that the colts have had sufficient education to enable them to be hitched and driven without trouble. Where practicable, it is wise to hitch a colt with an old horse, but where there are two colts that have to be put to work, the splitting of the teams in order to place each one with an old mate would prohibit the performance of a full day's work with either team, unless the old horse were given the short end of the doubletree, which in many cases is not satisfactory, and in such cases it might be wise to work the young ones together. The colt, or colt team, should be carefully harnessed; it should be seen that the harness, especially the collar, fits properly and is kept clean. Where the team is worked to a plow, if possible have an old horse in the furrow; if the colt be in on the off-side, it will be noticed that he will not walk the furrow properly, but will plant the near foot many times upon the land while the off foot keeps the furrow. This walking on uneven ground has a great tendency to cause sweeney or shoulder slip, which will disable him for a long time. Whether working to plow, or other implement or machine, the colts should not be expected to do full work the first few days. After a few rounds have been gone a rest of a few minutes should be given, and the collars should be lifted forward on their necks, in order to allow the air to circulate and the shoulders to cool. It is also good practice to rub the shoulders well with the hand or a cloth. When the collars are replaced, before starting again, care should be taken to part the mane carefully and see that none of it exists between the collar and the shoulder. Repeated short rests the first day, fewer the second, fewer still the third, etc., will gradually accustom the colts to their work, and after a few days they will be able to work steadily, unless the labor be hard and the weather quite warm. When brought to the stables for meals, the harness and collars should be taken off and the collars dried. The shoulders should be well rubbed, and if perspiration has been free it is good practice to wash them well with cold water, to which a little salt has been added. The collars should be thoroughly cleaned before being put on again. If after a few days the muscles of the shoulders have shrunk, and, as a consequence, the collars are too wide, as is usually the case, pads, usually called "sweat pads," should be worn, as it is practically impossible to work any horse, much less a colt, with an ill-fitting collar, without producing sore shoulders, and all teamsters know that it is a hard matter to get such sores to heal without rest, and it is cruel to work the animal while the soreness or rawness exists. When the collars fit properly, and reasonable care is taken, there will seldom be trouble, but with ill-fitting collars or careless attention even old horses must suffer. When there is excessive sweating there is a great tendency to tenderness of the shoulders from what is practically a scalding. This can be avoided to a great extent by bathing frequently with cold water, and if it occur the symptoms and soreness can be checked by, in addition to the bathing, the application of a lotion, made of an ounce each of sulphate of zinc and acetate of lead to a quart of soft water; even when there are raw surfaces there can be no better application than this lotion. When abscesses, either serous (containing a thin fluid), which appear suddenly and are not very sore to the touch, or purulent (containing pus), and which appear more slowly and are quite sore to pressure, appear, there is nothing to be done but lance, allow escape of the contents, give rest and flush out the cavities twice daily, either with the above lotion or a five per cent. solution of carbolic or other good antiseptic.

"WHIP."

A General-purpose Horse.

I noticed an article in the "Farmer's Advocate" of April 7th, entitled, "What Constitutes a General-purpose Horse?" in which the question is asked: is the horse of 1,350 lbs. a proper general-purpose horse? I consider that a horse that is built right and weighs from 1,250 to 1,350 pounds is heavy enough. When I say built right I want to be understood to mean he must not stand less than 15½ hands high; if 16hands, so much the better; should have a nice round barrel, well ribbed up; should be well up in the neck, and the neck of good length; should have good flat bone, and his legs covered with fine hair, and not a great amount of it. We have on our farm a five-year-old horse as near a good general-purpose horse as I ever saw—he weighs 1,250 lbs. in moderate flesh. Our farm is a clay loam, and he will do any work on the farm with ease, and if I want to go to town I can drive him from eight to ten miles an hour without hurting him a bit. Your correspondent says he has seen good, sound teams weighing 1,410 to 1,430 lbs. sent to the stable because they were too heavy. I think the judges did right. In several agricultural societies in Lambton County a new class has been added to the larger horses. They are now classed General-purpose, agricultural and heavy draft. The general-purpose horse weight from 1,250 to 1,350 lbs., the agricultural from 1,350 to 1,500 lbs., and the heavy draft as heavy as you can get them with good quality. Walter Harland Smith is admitted to be an expert horse judge and handles a great many horses every year. In your issue of April 7th, he quoted general-purpose and express horses from 1,200 to 1,350 lbs.

LOVER OF A GOOD HORSE.

Lambton Co., Ont.

Stallion Inspection.

To the Editor "Farmer's Advocate":

Sir,—I would like to express my ideas concerning the weight of the three classes of heavy horses. The weight of the general-purpose horse should be from 1,200 to 1,350 pounds; weight of the agricultural horse from 1,350 to 1,500 pounds; weight of the draft horse from 1,500 pounds to as much more as quality will allow. Quality is essential in each class, and the only way we can get quality is to have all stallions inspected by a veterinary, and an act of Parliament to prohibit the unsound ones from public service. In regard to showing those classes, the exhibitor usually tries to get his horse or team in a class lighter than he belongs. To overcome that, the judge should commence with the general-purpose class first, take the agricultural second, and the draft third. When he finds a good horse or team too heavy, or not the right style, instead of sending him back to the stable, tell him to come on in another class.

WM. GALLOWAY.
Lambton Co., Ont.

Quarantine Rules.

The following official statement of the new quarantine regulations adopted by the Dominion Department of Agriculture, bearing date March 30th, 1904, has been issued: Persons contemplating the importation of animals from countries other than the United States must obtain a permit from the Minister of Agriculture at Ottawa. Animals arriving by sea must enter through certain quarantine stations. The quarantine periods are as follows: For cattle from Great Britain, Ireland or the Channel Islands, sixty days; from all other countries, except the United States and Mexico, ninety days. For sheep, goats and swine, fifteen days. Cattle must submit to the tuberculin test before being released from quarantine. Cattle reacting to the tuberculin test shall be permanently marked in the right ear with the letter "T" by the officer making the test. Horses are subject to inspection only.

With respect to animals from the United States, western horses, including range horses, cattle and sheep are subject to inspection. Swine, except for immediate slaughter, are subject to fifteen days' quarantine. Cattle for breeding or milk production must be accompanied by tuberculin test charts or be tested. All suspected animals may be detained, those found diseased to be dealt with as the exigencies of the case require, and as ordered by the Minister.

Animals may be permitted to pass through Canada in bond from one port in the United States to another, and from a port in the United States for export from a Canadian sea port, subject to inspection at the latter.

Animals exported from Canadian sea ports must be inspected, and Canadian animals exported via ports in the United States must be inspected before leaving Canada.

Infected vessels, yards, stables, sheds and other premises used for animals, are to be thoroughly disinfected.

The railway and stock-yards must be kept clean and comfortable. The cars used in live-stock traffic are to be cleansed and disinfected after each load. Wide powers are given to inspectors to see that the regulations are observed, and heavy penalties are imposed for infraction of the regulations.

STOCK.

Our Scottish Letter.

At present, considerable interest is being taken here in educational matters. We have not got the length of Professor Robertson's idea of training head, hand and heart, but in purpose we are getting on. Two years ago, Parliament passed an Educational Bill for England, and has got the Government into a bit of a mess by so doing. But there is a good deal of the bulldog in the present Government, and it holds on to office with commendable tenacity. A bill has now been introduced to increase and extend education in Scotland, and so far its leading provisions have been received with remarkable unanimity. Somehow Scotsmen understand education, and there is a traditional ambition in the Scots race to be educated. This, doubtless, renders the task of statesmen easier than it is in England. Agricultural education chiefly concerns us here. For many years it was hard to get anyone to listen seriously when you discoursed on the outstanding merits of technical education in agriculture. Now times have changed. Everybody is a zealot in the cause. Glasgow Agricultural College was first got under way, the Edinburgh and East of Scotland followed, and at present the authorities in the north are busy organizing the Northern College. This will not be quite a simple task. The geographical difficulties are considerable, and it is possible that some novel steps will require to be taken in order to make the work of the college in the far northern counties all that it ought to be. The cheering fact is that such colleges will soon be in full working order all over Scotland. One difficulty which most of the colleges have to contend with is the absence of sufficient experimental ground. This is a difficulty which does not trouble you. With the illimitable prairie to draw upon, you can never be in want of land. Here it is dear, because scarce. You can't get outside the four seas, and that fact explains much in the economical situation in Great Britain.

The fiscal racket is meanwhile stilled. Whatever be the ultimate issue, there can be little doubt that the proposals of Mr. Chamberlain are, meanwhile, rather bold, and if adopted would lead to the disintegration of some trades. Farmers are becoming rather jealous of the results, and more of them are beginning to question whether Mr. Chamberlain's policy would do much for them. All the same, Mr. Chamberlain has appointed a commission to enquire into the whole question, and that commission is now hard at work. There is an agricultural sub-commission, on which two notable Scotsmen have been asked to act, viz.: Mr. J. M. Fraser, of Invermay, the well-known head of the great firm of Macdonald, Fraser & Co., Ltd., and Mr. James Biggar, the noted breeder and judge of Galloway cattle. What this commission is to do we cannot tell, but it will require to take very active steps if it means to carry the country. I believe the question should first have been approached by way of enquiry and not in the bold, uncompromising fashion identified with Mr. Chamberlain's scheme. On the other hand, it is urged, and there is a deal of truth in the point, that the question would never have made any impression if Mr. Chamberlain had not fairly carried the country by storm. The general feeling now is that the great industrial centers are not at all so enamored of the idea as they were at first. I expect it will be a long time before Mr. Chamberlain's proposals become law.

Ayrshires are in favor in Canada, and well they may be. They pay more rent in Scotland than any other breed. They have suffered a good deal in the hands of fancy stockmen, but they are now more universally in favor than they have been for very many years. Mr. Alexander Y. Allan, Croftjane, Thornhill, is not unknown to many Canadians as a successful breeder of Ayrshires. He has relinquished the holding of Croftjane, and recently his herd of Ayrshires was dispersed. He sold sixty-two head by public auction at an average price of £12 11s. 11d. each. The cows in this lot numbered 21, and these made an average of £15 6s. each. These figures indicate good enough business. Mr. Allan's herd was strong in commercial qualities. Its butter-fat standard was high, and at all times it could be depended on to produce either calves or milk to please the most fastidious. Another herd of much the same character is also in the market, and will soon be dispersed. It is that of Mr. John Steel, High Newton, Darvel, who, like so many other Ayrshire farmers, is seeking a home in Essex.

Most of the Scots farmers who went south have done uncommonly well. They have their own difficulties to contend with, but I question if even the least fortunate amongst them would come back to Scotland. Between scarcity of land, high rents, and an uncertain climate, agriculture is not an attractive pursuit in this country, hence the large number of young, able-bodied men who are leaving for the West. Canada is getting a large share of these emigrants, and I expect the C. P. R. will be taxed to the utmost in taking them to their destination.

An agitation has been commenced against the partiality displayed by the Irish Department of Agriculture in its selection of cattle breeds. It is alleged that only Shorthorns are really accepted con amore by the officials of the Board, and that other breeds, but in particular Aberdeen-Angus and Galloways, are systematically boycotted or ignored. That the majority of the average Irish farmers will prefer a Short-

horn bull can hardly be denied, but it is one thing for breeders themselves to put in a claim for a bull of a particular breed, and an altogether different thing for a public department to put its imprimatur on one breed and ignore the rest. The sensible arrangement is for the Department to give the Irish farmer the best kind of bull wanted by him, no matter what be the breed to which it belongs. Undoubtedly, black polled calves in all markets sell better as "stockers" than any other sort. This is quite explicable, and even to the end of the chapter the black polled crosses, in most cases, feed best. The point is that no salaried official of the Government should have the power to boycott any recognized known breed. The choice of breed should in every case be left to the breeders in a given locality. They know what they want, and no board administering public money has the right to say to which breed the bull wanted is to belong.

"SCOTLAND YET."

Inbreeding—Line Breeding.

A reader has asked us to explain the difference between inbreeding and line breeding, and the significance of each system.

Inbreeding, as the word implies, is the blending of consanguineous lines in the practice of breeding as opposed to the practice of mating unrelated animals. When inbreeding is persistently followed, it is commonly called in-and-inbreeding. The object of the practice is to secure and retain a fixity of type by eliminating from the parents all possible differences of character, color, etc., to insure by concentration of blood a greater degree of prepotency in the offspring, and to develop to a greater extent any peculiarity of form, function, or other characteristic. The value of inbreeding in the improvement of stock is easily realized by all, but many avoid it through fear of its results, for it is just as potent in fixing undesirable char-



Bliss M. Fawcett, Upper Sackville, N. B.
President N. B. Farmers' and Dairymen's Association.

acteristics as in fixing the valuable ones. Some breeders also believe that degeneration naturally follows or is the result of inbreeding. Tests have demonstrated that continued close in-and-inbreeding first shows its injurious effects in impaired reproductive functions, and next in a decrease of mental power, so we may conclude that as long as these are not affected there is no injury from the practice, provided there has been exercised proper care in selection. But these remarks apply to in-and-inbreeding rather than to inbreeding, the first step in the more intensive practice, and which of itself when practiced but once cannot be said to initiate injurious consequences in the lower animals.

Line breeding, to put it simply, is just a modified form of in-and-inbreeding, or breeding within a few closely-related stock or families. It is followed for the same reason as inbreeding, but those who practice it try to avoid the physical decay supposed to be attendant upon more incestuous mating. An illustration of the practice would be to select a pair of animals and then to intermate their progeny, which after the third generation, if it were sufficiently numerous, could be bred without incestuous mating, but when bred would constitute line breeding. Some breeders have taken their own herds as a starting point, and considered all the offspring of any herd line-bred stock. Others would broaden the practice to include all stock that traced to a certain parentage, no matter how distant.

Improved Molasses Cattle Food.

By Frank T. Shutt, M. A., Chemist, Dominion Experimental Farms.

This newly introduced feeding stuff is made by the Dresden Sugar Company, Limited, Dresden, Ontario, and constitutes what may be termed a by-product in the manufacture of sugar from the sugar beet. It is prepared from two residues in the process—the exhausted beet pulp and the waste molasses. These, by the aid of heat and suitable machinery, are dried and mixed so that a dry, palatable fodder results.

As placed upon the market, it has the appearance of dry pulp chips or flakes, quite loose and without any of that stickiness generally noticeable in feeding stuffs containing molasses. We have analyzed in all during the past two months, five samples of this feed, and find that in certain particulars, e. g., sugar content, it is not characterized by uniformity of composition. This we believe to be due largely to the difficulty in keeping the proportion of molasses to the pulp constant during the drying and mixing, and it is quite possible that improvement in the process of manufacture may in the future overcome this drawback. The data of a sample taken after thoroughly mixing twenty bags (2,000 lbs.), and which we may consider, therefore, as fairly representative of the food, are as follows:

ANALYSIS.	
Moisture	4.36
Crude protein	8.28
Fat (ether extract)74
Carbohydrates	64.61
Fibre	16.36
Ash	5.65
100.00	
Aqueous extract dried at 212°F.	22.17
Ash in aqueous extract	1.31
Cane sugar	13.51
Glucose (reducing sugar)	2.05
Non-albuminoid nitrogenous substance.....	.84
Albuminoids	7.44

The element of chief value is undoubtedly the sugar, which in the animal economy acts as a source of energy and heat, and also contributes largely towards the formation of fat. Its ready solubility and the ease and rapidity with which it is digested and assimilated, place sugar before all other carbohydrates—starch, gum, etc.—for these purposes. Apart from their direct food value, the use of these molasses feeds appears to act beneficially in increasing the appetite, stimulating the digestion and keeping the animal in a thrifty condition.

As regards the flesh-forming constituents (protein), this feed is not sufficiently rich to supply all the animal's needs in milk or flesh production. It can, therefore, only be employed economically as a part of the ration and when used in conjunction with such foods as possess a comparatively high protein content. The exact position of such sugar foods in the classification of feeding stuffs cannot as yet be given. It will probably be found that these foods constitute a class by themselves, and are not strictly comparable either, on the one hand, with coarse fodders (roughage)—chiefly by reason of their high sugar content—or, on the other hand, with the concentrated milling products, principally by reason of their low protein content. Their comparative feeding value will undoubtedly depend largely on the foods associated with them in the ration and the proportions in which they are employed. This we know, however, that such foods as the one under discussion must be largely digestible; that though dry in the form as sold, they readily become succulent, and hence are of particular value when roots and ensilage are scarce; that they are palatable and wholesome, and that their sugar constitutes an element possessing very important functions in the maintenance and the fattening of the animals.

All Modern Conveniences.

We are well pleased with the weekly editions of the "Advocate." It certainly is an ideal farmer's paper. We are much interested in your articles on free rural mail delivery and farmers' telephone.

A daily stage passes our gate. We have a box at the road, and pay the mailman to carry our mail and groceries. We find a daily mail a great benefit. For instance, the newspaper comes in on the 11 a. m. train, and is dropped in our box by 1 p. m. The paper gives us the quotations for hogs, and how the market price will stand the following week. Wednesday is delivery day with us, and if market price is likely to drop we can take ours out that same afternoon. We now take daily papers, and find we use the mail oftener when it is so convenient.

We are also connected with a farmers' telephone line, which extends over twenty miles of country. We can connect with the Bell Co., order supplies sent up, or have a chat with our friends. G. A. HOGG. Oxford Co., Ont.

FARM.

Sugar-beet Culture.

Dr. A. E. Shuttleworth Epitomizes Up-to-date Experience for "Farmer's Advocate" Readers.

Q. 1.—In your judgment, what classes of soils are most suitable for growing sugar beets?

Ans.—A clay loam with a clay subsoil is probably* preferable, including both yield and percentage results. Almost any soil, however, if properly manured and cultivated, appears to be fairly well adapted to the growing of sugar beets, except it be a deep muck or a very new soil, both of which should be avoided. A cold subsoil and a quicksand bottom are very bad.

2.—After what other crops do you find that sugar beets grow to best advantage?

Sugar beets grow to good advantage after fall wheat; after clover which was plowed down sufficiently early in the previous autumn to decompose the sod; after corn, and even following potatoes and turnips, we have in many cases good results.

3.—What class of manure do you advise, also when applied and how worked into the soil?

Farmyard manure applied in the fall sufficiently early to be worked into the soil for the purpose of rotting and for the germination of seeds, gives good results. We have not, as yet, used artificial fertilizers. Nevertheless, wood ashes, potash and phosphate fertilizers give good results. But at present, the use of farmyard manure and the cultivation of the beet in a proper rotation will give very satisfactory results to growers. It is always preferable to have early autumn cultivation and manuring of the soil intended for beets, followed by a deep fall plowing late in autumn.

4.—Outline the plan of spring cultivation you advise, and the implements best suited.

A spring cultivation, supposing it to be on fall-plowed land, should be to loosen and pulverize the soil to a depth of three or four inches, and this may be done as early in the spring as the land will permit. The fine seed-bed is best prepared by the alternate use of the roller, along with the cultivator and the harrow, and after thoroughly pulverizing the soil, it is then advisable to roll it firm. Experienced beet-growers naturally prefer sowing on the flat with the regular sugar-beet drill, which sows four rows at a time, placing the seed to a depth of about three-quarters of an inch; but for beginners there is no objection to moderately raised drills, not wider apart than 22 inches, on which the seed can be sown with an ordinary mangold drill, and the holes of the tin bands of which should be filed out with a rat-tail file, and so adjusted that about ten seeds to the foot will drop. After sowing, the drills should be rolled lengthwise with a heavy land roller, preferably twice, which packs the soil closely around the seed, causing it to moisten and germinate early. If thinning is done in time, the work can be accomplished with very little more trouble than that of thinning mangolds.

5.—How is the sowing done; how far apart in the rows; at about what time, and what quantity of seed is used per acre?

Sowing, as stated under 4, may be done on the flat or on ridges. The rows, or ridges, may vary in distance from 18 to 22 inches apart, to suit the grower, the soil, and the implements with which he has to work. Early sowing gives the best results, both in yield and quality of beet. I would sow the latter part of April, if the land were sufficiently dry and warm to warrant it. But it is always advisable to sow plenty of seed; otherwise, since many seeds do not germinate, the rows will be blanky, a condition that results always in a lower tonnage and a poorer test. From 15 to 20 pounds of seed is about what is required. We have growers in our county (County of Waterloo) having three years experience, who would now sow less than 20 pounds. We have others who do not appreciate the value of plenty of seed, but, generally speaking, our growers sow from 15 to 18 pounds of seed. Thick seeding not only warrants a full stand of plants, but it hastens the early growth of the young plants, which has two advantages at least: First, in the gain of time to the plant, which is a value both in yield and in quality of beet; and, second, in advancing the growth ahead of weeds, when thinning can be done with considerable less time and expense.

6.—At what stage of growth should the thinning be done; how and with what implements or tools? How far apart should the plants be left?

Thinning should be done when the plant is in what is known generally as its fourth leaf. The distance that the plants are left in the row should be, for the best practical results and economy in handling, about ten inches; and in this country, where labor is scarce, and if thinning is done in time, most of the hoeing may be done with the ordinary turnip hoe, made sharp and pointed at the corners. Some of our farmers get satisfactory results by first blocking with what is known as the "blocking machine," a new implement that will block as many as ten acres per day, and is drawn crosswise of the rows by one horse. It mulches the ground beautifully.

7.—How frequently is it necessary to cultivate, and with hoe or horse cultivator? What implement have you found best for the purpose?

I wish it could be impressed upon farmers that too much time should not be given to cultivation with the hoe. Hasten through the thinning with the hoe as

rapidly as possible. The main and the bulk of the cultivation should be done with the horse cultivator. The number of times to cultivate is a matter resting largely with the farmer himself. Growers very readily learn that every day the cultivator is kept in the beet field the grower earns not less than \$5.00, so valuable is the stirring of the soil in the promotion of growth in the beet. In a word, as a guide to the number of times necessary to cultivate, it may be said: Keep the ground clean, and never let a crust form. We cultivate at least once, and sometimes twice, before thinning, and usually three times after. Each time after thinning should run deeper, for the thorough stirring of the soil between the rows tends to produce a long, well-formed beet. We find it an advantage to deepen the cultivation each time after thinning, until the ground is stirred from four to six inches in depth. For the purpose of horse cultivating, we find that the regular beet cultivator known as the "Deere & Mansur" is very satisfactory, cutting the ground to a depth of about one inch close to the beets, without allowing any earth to be thrown on them. But any horse cultivator that will thoroughly loosen up the ground, leaving the surface level, will give satisfactory results. It is not advisable to either work the ground away from nor to the plants. The idea that sugar beets have to be "hilled" up is quite absurd. They will look after themselves if the grower will only keep the ground between the rows deeply and thoroughly stirred.

8.—About what acreage on an average 100-acre farm should be devoted to sugar beets the first and subsequent seasons?

We recommend that acreage which the farmer with his own available help can handle to best advantage, which usually varies from three to five acres per 100 acres of land. It is far better for a beginner to be satisfied with say one and a half to two acres, than to attempt more. The object of the grower should be not to add sugar beets as an additional root crop, but to introduce beet growing in a rotation in place of turnips. This applies particularly to beet-growers within reasonable distances of the sugar factory, or near stations to which the beet pulp can be shipped. Our beet-growers about Berlin teamed away not less than 3,800 loads in less than three months, and many carloads were shipped to outside growers. A farmer who has once experienced the feeding value of beet pulp, and who has once observed the cleaning and improving effect on the soil occasioned by the cultivation of sugar beets, will very readily introduce the beet crop in his rotation in place of turnips. A. E. S.

Profitable Sugar-beet Growing.

I take pleasure in giving you my experience with sugar beets, which I regard as the most profitable farm industry we have. My beets, unloaded in flat cars at our station, or, rather, freight and seed taken out, left me \$69.73 per acre. For beet-growing I like a heavy loam, but they will do well on rich, sandy loam. I used barnyard manure, plowed in deep. I plow and disk in the spring, the same as for potatoes, and roll solid. I sowed the seed about May 15th, just before corn-planting, with grain-drill set, as for peas, eighteen inches apart, on potato and corn-stubble land. I cultivate as soon as up, then "block" with hoe, six-inch cut, and have boys and women follow to weed and thin while from one to three inches high. I gave them three subsequent cultivations with harrow-tooth cultivator. A horse will go through an eighteen-inch space as well as four feet. By sowing at the season stated, the crop is completely under way by June 20th. My beets tested sixteen per cent. sugar.

Norfolk Co., Ont.

W. H. WATTS.

Grew Beets Testing over 17 per cent. Sugar.

Any soil suitable for fall wheat, corn or clover will produce a good beet crop. Mild clay and rich, sandy loams are the most desirable ones.

Sugar beets grow to best advantage after clover plowed down in the fall.

I prefer cow manure, cattle being bedded with cut straw, drawn from the stables in early winter and spread over the land at the rate of about ten tons to the acre, cultivated into the soil with a spring-tooth cultivator or disk as soon in the spring as the land is tillable.

After the land has been plowed in the fall, manured in early winter, cultivated or disked in early spring, harrow and roll until you get a fine, solid seed-bed, suitable for fall wheat.

I sowed the seed with a common twelve-hoed seed-drill, every third tooth sowing. This leaves the rows about twenty inches apart; and sow the seed not deeper than half an inch. I sow about the latter half of April or the first half of May—the earlier the better, if the soil is warm and dry enough. About fifteen pounds to the acre is the quantity which I sow, and find it satisfactory.

Thin as soon as possible after the beets get their second leaves. A common turnip hoe, about seven inches wide, is best for blocking. This leaves the beets about nine inches apart when thinned.

As soon as the beets appear in rows I go through them with a hand wheel-hoe, afterwards cultivating them three or four times with a one-horse cultivator, going through them once with a hand-hoe after thinning.

From an acre and a half to not more than five acres

on a 100-acre farm is enough to grow. Not less than an acre and a half should be grown, as this quantity assures a good carload.

These answers are according to my experience, and I have grown beets testing 17.1 per cent. Middlesex Co., Ont. JOHN CARSON.

Cultivate Beets Every Week.

Good clay loam, not too heavy, is preferable.

Clover sod, plowed in the fall and well manured, is the crop I find beets to do best after.

I advise barnyard manure, properly taken care of and fairly well rotted, put on in the fall before plowing.

I use the disk harrows as soon as the ground is fit to go on in the spring, then use drags every week until the weather is warm enough to put the seed in. If the weather turns wet, and weeds, such as thistles, get the start of the above plan, use the gang plow, then drag well, roll and drill.

I use a regular beet drill for planting, and have tried them 27, 21 and 18 inches apart in the row, but prefer 18 inches, and from 8 to 10 inches apart in the rows. Have put them in with seed-drill by fixing a heavy shoe on bottom of the teeth, so they won't go in too deep—from one-half to one inch is deep enough to put seed in ground. I use fifteen pounds of seed per acre, and find that plenty. The best time to plant is from first to twenty-fourth of May, if weather permits.

I cultivate just as soon as the beets are nicely up, then block them out with a six-inch hoe. Follow by hand-thinning. If the blocking is well done it makes the hand-work a lot easier. Don't leave them closer than from eight to ten inches in the row.

I cultivate once a week with horse cultivator. We have a regular beet cultivator. We give them a thorough good hoeing (by hand) about the middle of August.

If in a corn section, five acres is enough to grow on a 100-acre farm, but eight or ten can be handled where there is no other fall crop to take care of. A few well taken care of is better than a lot just partially handled. I began with four acres, then ten, then four, and have followed beets with a barley crop, put in by disking the ground in the spring, and have raised the best barley I have ever grown. H. J. FRENCH. Kent Co., Ont.

Experimental Union Experiments.

To the Editor "Farmer's Advocate":

Sir,—Farmers' Institute speakers claim that the experiments carried on by the Experimental Union, an association of former students of the Agricultural College at Guelph, show that the use of fertilizers does not pay. This seems to us a misleading conclusion not justified by the results as obtained.

The report shows that complete fertilizers gave the greatest yield, while the next best yield was obtained by the use of nitrate of soda. If this means anything, it shows that the yield can be increased by using fertilizers, and that the average soil is especially lacking in nitrogen, but that the supply of this element in the form of nitrate of soda on oats does not pay under ordinary conditions.

No account has been taken of the fact that it is not necessary to buy the expensive nitrogen fertilizer, but that the nitrogen needed can be had free—absolutely free, as every up-to-date farmer knows—simply by raising leguminous crops, such as clover and peas, in rotation. These crops have the property of absorbing nitrogen from the air, which they store in their leaves and roots, and if these legumes be fertilized with potash and phosphoric acid (both of which are cheap), they will produce heavy yields, and leave much valuable nitrogen in the soil for the grain crop to follow. Thus by the simple use of mineral fertilizers we will increase our clover or pea crop, we will obtain more than enough nitrogen from the air for nothing to pay for the potash, and still have the potash in the roots of clover to benefit the next crop, which is as near solving the little boy's problem of how to eat his cake and still have it of anything I have yet heard.

The most economical way of using fertilizers in Canada is to utilize our steamed tankage, of which we now ship immense quantities to the United States, and supplement it by potash salts or wood ashes. These materials will provide the potash and phosphoric acid, in addition to some nitrogen, for a grain crop, and also leave a sufficient amount of mineral fertilizer in the soil to push on the clover crop. Thus the grain crop will be increased, a good crop of clover is insured, which in turn will add to the soil a store of the most expensive fertilizer—nitrogen—which has been abstracted from the air through the action of bacteria in the roots of the clover plant, which they are unable to do unless there is plenty of potash in the soil.

Surely this method of fertilizing pays. At least, we have seen hundreds of just such practical experiments carried on during the past couple of years in the United States by farmers, many of whom bought Canada packing-house tankage, supplementing it with potash, paid freight and profit to two or three middlemen, and made money in the end.

Now, if it will pay the United States farmers to buy our fertilizers and pay charges, it will certainly pay us to use them at home.

It is a short-sighted policy for an institute speaker to tell our farmers that we have not reached the time when it will pay to use fertilizers, encouraging us to

ship our fertilizers across the line, and, in reality, cutting our own throats by helping others to undersell us in our foreign markets. It is time for the Canadian people to wake up and stop such suicidal policy.

Grey Co., Ont.

G. F. MARSH.

Alfalfa in Ontario.

Alfalfa culture, though comparatively common in some localities, is yet only in its infancy in Ontario, and is surely bound to advance with leaps and bounds during the next decade. Although my experience with it has been limited, it may be of interest to some of your readers, and I give it for what it is worth.

The seed-bed is of the utmost importance. The ground should be clean and free from weeds, well fertilized and well underdrained, unless the drainage is naturally good. The character of the soil, whether it be clay or bottom land, matters little if these requisites be observed. If possible the ground should be fall plowed, and the spring cultivation must be most thorough; the finer the seed-bed the better.

Sow in May, when danger of frost is over, using twenty pounds of first-class seed per acre. As the seed usually costs about nine dollars a bushel, this means a considerable outlay, but thin seeding invariably causes disappointment. If one can afford the loss of one year's crop the seed may be sown broadcast, and lightly covered with a brush harrow, no nurse crop being sown. When the clover reaches the height of seven or eight inches, the mower should be run over it, the finger-bar set well up from the ground, and the clippings left to act as a mulch for the growing plants. This method is considered to be the best.

If one does not care to lose a year's crop, oats may be sown at the rate of three pecks to the acre, using an ordinary seed-drill with a clover-seeder attached, turning the spouts from the seeder in front of the drill hoes, which should be set just deep enough to cover the oats. This will cover the clover seed nicely, and if the land is rolled after the drilling is completed, an ideal seed-bed will be obtained.

The oats should be cut for hay when they are nicely in bloom. Most people cannot withstand the temptation to let them ripen, with the result that the tender young clover plants are often smothered by the vigorous oats, or if they survive they will be weak and spindling.

If one must have the nurse crop ripen, barley is, I think, more satisfactory, as it can be cut earlier, which gives the clover a better chance. It should be sown thinner than is usually done.

Do not pasture the alfalfa the first year, and never allow it to be pastured close. The crown sets well above the ground, and close pasturing will surely injure if not kill it.

After the alfalfa is well established it should yield at least three cuttings a year. It should be cut when it is about one-eighth in bloom; delay in cutting means woody stems and inferior hay. In good haying weather I would cut in the forenoon, and start the tedder immediately after dinner, then rake and cock, leaving the hay two or three days in cock to cure. This saves most of the leaves, which contain a large percentage of nitrogen. The hay is ready to draw when a wisp can be wrung with no appearance of water oozing out.

A field of seven acres, three years seeded, yielded me five and one-half tons to the acre the past summer, and I am looking for a still better return this season.

I believe it holds first place as a roughage feed for dairy cows; in fact, so rich is it in nitrogen that three tons of alfalfa hay are considered to be equal to two tons of wheat bran, which almost entitles it to a place in the list of "concentrates."

The second and third crops are the most satisfactory for sheep feed, as they are less apt to be woody in the stems. Experiments prove it to be ahead of red clover as a sheep feed, and this has been my experience.

As a pasture for hogs, alfalfa is unexcelled, and I have fed it to horses very successfully, especially when they were doing light work or running idle.

As inquiries are sometimes made about growing alfalfa seed, I may say that Joseph E. Wing, probably the best authority on alfalfa in America, states that the seed cannot be successfully grown, even as far north as Ohio, so there is little hope of a successful crop in Ontario.

Brant Co., Ont.

G. W. CLEMONS.

Frostproof Pipes.

To the Editor "Farmer's Advocate":

In your March 3rd number, H. M. asks for information re making the outlet or intake pipes frostproof. Having had some experience in that line, I give it to whom it may concern. Go down into the earth about 4 ft. 6 ins. or 5 ft., and mason up to the top of the earth with brick or stone about four feet square, and the warmth of the earth will keep the frost out of the pipes; the pipes being boxed above ground as stated. The check-valve is dangerous, as it is difficult to have it properly adjusted at all times.

Norfolk Co., Ont.

J. H. W.

Sow Thistle.

A reader says: "I would like you to publish an article on how to kill sow thistle, or as some call it, 'hawk weed.' I have seen at different times in your paper how to smother it with manure when it is in small patches, but when it is distributed all over a field it is impossible to cover it with manure. This is one of the worst weeds that grows, and if something cannot be done to get rid of it it will ruin the country, as nothing will grow where it is established. I would like to know if any of your subscribers have found any way to kill this weed when it is all over the fields? If you can publish an article on this it will do me and the rest of the farmers in this part a great favor. I have seen it grow after having the same field in hoe crop for two years in succession and the more the field is cultivated the more it spreads, as the cultivator drags the roots from one part of the field to the other."

Any one at all acquainted with perennial sow thistle will acquiesce in what our correspondent says. It is a weed that flourishes in loose alluvial soils. On stiff loams, heavy clays, and even on sands it does not prosper as luxuriantly. Its chief means of propagation is by rootstalks, like bindweed, Canada thistle, etc. When once established it soon occupies every available inch of room, and when cultivated the roots are spread to different parts of the field to further propagate. When this weed exists in small patches, it should either be dug out to the tiniest rootlet, or smothered out with a pile of straw or manure. In large areas an effort must be made to prevent the growth of leaves and secure the decay of the roots. To this end we would take extreme measures. Summer-fallowing for a season would check it a little, but would also make an excellent seed-bed for the root nodules. This would have to be endured for a time. After the summer-fallow we would grow a crop of corn, and follow that with roots or more corn. Having summer-fallowed one season and grown two root crops, we would consider it safe to grow a grain crop, but would seed it thickly with red clover, and leave it in sod for two years, then break up and plant to corn again. Such cropping would insure the least possible amount of green leaf being produced, and should hasten the decay of the roots. Throughout all the cultivation the roots that cling to harrows or cultivators should be destroyed. We once saw a field infested with this weed left in sod for eleven years, but on being broken up the thistles again appeared. With sod there is not the same amount of decay of vegetable matter in the soil as in the case when the ground is kept open and stirred, hence the roots were preserved during those years. Doubtless if the field had remained in sod fifteen years the roots would have been decayed.

Training a Hedge.

To the Editor "Farmer's Advocate":

In your January 14th number, W. N. N., Grey Co., asks what to do with his honey-locust hedge. February 25th number, W. N., Bruce Co., replies, to cut it close to the ground, which is all right, if not too large. As one of the oldest growers of honey-locust hedge in Ontario, I wish to make a few statements. The honey-locust plant is one of the best plants for hedges in Canada, for the reason it is a native plant, very hardy, grows on most any soil, and is a taproot plant, consequently will stand drouth. The plashing is a fake; I would not have it done gratis. The sprouts rob the main stock of sap, after which they decay and die, and in a few years you have a perpendicular hedge, with a lot of dead wood, making an open hedge. But to grow the honey-locust plant and trim as W. N., Bruce Co., advises, is a success, and makes a fine hedge.

Norfolk Co., Ont.

J. H. W.

Lifting Posts.

I was much interested in Mr. Deo's article in the "Advocate" of the 31st March, about lifting posts. Although I never used the plan he mentions, I think there is too much manual labor about it.

My method is this: Take a plank about a foot wide and five feet long; if the ground is soft at the time, spike or bolt a two-by-four inch piece two feet long across one end; set this end on the ground, about two and a half feet from the post, let the other end rest against the post; then take a logging chain, and hitch one end around the post at the ground—run it over the top of the plank, to the whiffletrees—hitch the team and go ahead. The plank will cause the draft to come straight up on the post till it is nearly out. Another way is to take the reach and hind wheels of a wagon, back it up to the post, turn the reach straight up, then take a chain and hitch it around the post, bring it over the top of the bolster and fasten; take a hold of the reach and pull it down; this gives you a powerful windlass. The first way is the better, as horse-power is ahead of elbow grease.

Oxford Co., Ont.

J. C.

Problems of the Soil—IV.: Drainage.

In the previous articles we have shown the way in which water is held by the soil, the form in which plants require water, and how soil-moisture may be controlled by the operations of tillage. We have now to discuss another very important means of controlling soil-moisture—drainage.

While drainage is necessary in all soils, if the best results are to be obtained, many soils do not require artificial drainage, being already naturally drained. Where soils are open and mellow, with an open subsoil, and the permanent level of soil-water a good distance below the surface, no artificial drainage is required, the best conditions already existing. Artificial drainage is needed in three cases: (1) Where the level of the soil-water is too close to the surface to give plants a chance for good root development, as is the case in many swamps. (2) Where the land is springy and cold, as we find is the case on many hillsides, and on flat lands at the foot of hills. (3) Where the texture of the land is too close to allow the free escape of surface-water, even though the subsoil may be dry and good, as we find is the case on many good clay lands.

There is no need at the present time of discussing the various methods of draining. Experience has plainly shown that underdraining is the best method of draining, and tile make the best of all underdrains. It is sometimes necessary to use an open ditch to carry off the large volume of water coming from a system of underdrains, but in all other cases it is best to use the underdrains. The number of these drains and the manner of laying them depends on the condition of the land to be drained.

In the case of land having the level of the soil-water too close to the surface, our object is to lower the level of the water to such a depth that it will not interfere with the proper growth of our plants. Hence, our drains must be made of a good depth—three feet at least, while four feet, or even more, is better still. The land here is only of use to plants to the depth of the drains, since below this it is filled with poisonous, stagnant water, and the deeper we can put our drains the better for our plants, particularly for such plants as the red clover, which requires a good depth of soil to succeed. Besides, the distance from which drains will "draw" is proportionate to the depth of the drains, and the deeper the drains are, the fewer of them will be required. The number of drains will also be governed by the texture of the soil, open soil requiring a less number than fine, close soils. In draining these soils, it is a good plan to run a main drain through the land, following, as far as possible, the natural watercourse, and from this, on each side, to run parallel lateral drains, the distance apart of these being governed by the nature of the soil, and the depth of the drains. Four rods is generally a great enough distance in even open soils of this nature, while, if the land is close and heavy, a less distance should be used.

Where land on the slope of a hill, or at the bottom, is "springy" and cold, as the result of the slow seepage of water out of the side of the hill, the object of draining should be to cut off the flow of this water, and instead of allowing it to come to the surface, to the detriment of the soil, to carry it harmlessly off in the drain. We should aim, then, to cut off the flow of this water. To this end, "cut-off" drains should be run diagonally up the side of the hill. In the case of a small hillside, one such drain put in the right place, not running straight up the hill, but angling across it, will often do the work. In case of a larger hillside, a system of such drains, connecting with a main at the bottom, will be necessary.

In the case of clay land, where the subsoil is dry, but where the close texture of the soil prevents the free escape of water, a system of drains laid along the natural watercourses of the land will be all that is necessary. Here it is a question of aiding the escape of surface water, and the drains are intended to take the place of the slower and less satisfactory surface drainage. In such soils, it is a good plan to run the drains wherever water lies after a heavy rain.

In the space at our disposal, it is impossible to fully discuss the broad subject of drainage. We have pointed out the different conditions of the soil requiring artificial drainage, with the needs in each case. We will not attempt to discuss the methods of digging and laying drains, except to say that care should be taken in all cases to have the bed of the drain of uniform fall, and free from sharp dips in which sediment can collect, and that the laterals should join the main drains at a gradual angle, so that the current of the lateral shall not check the flow of the main. Where the land requires it, there is no improvement that gives better returns on investment than underdraining, but we should understand the needs of our land in this regard, and suit our system of drainage to these needs, if the best results are to be had. D.

Wholesale Farmer.

David Rankin, of Tarkio, Mo., owns 22,000 acres of land, and leases more. In his busy season he employs 220 men and 1,000 teams. In 1902 he sold 7,539 head of cattle for \$172,520, and 8,249 hogs for \$111,846.14. Each of his fourteen ranches is in charge of a foreman, who makes a detailed report to Mr. Rankin every month. Mr. Rankin made \$100,000 in 1902.

GARDEN AND ORCHARD.

A Useless Method.

In a recent issue we replied to an enquiry from a subscriber regarding a reported process of injecting substances in the trunks of trees, with the idea of destroying insect pests and fungous diseases. We notice by the report of the Western New York Horticultural Society just issued, that its standing committee on botany and plant diseases have reported upon the subject. This committee consists of Prof. F. C. Stewart, botanist of the New York Experiment Station, chairman; Dr. L. H. Bailey, the eminent authority on horticulture, director and dean of faculty, College of Agriculture, Cornell University; Albert Perkins, Rochester; C. H. Stewart, Newark; and Willis T. Mann, Barker.

In conclusion, this committee finds as follows: "It makes no difference what the substance is, for IT IS NOT POSSIBLE TO PREVENT THE RAVAGES OF INSECTS AND FUNGOUS DISEASES BY INSERTING ANY CHEMICAL IN HOLES BORED IN THE TRUNKS OF TREES. Although it is possible to get soluble salts into the circulation of the tree in this way, enough poison to affect insects and fungi could not be gotten into the leaves without killing the tree." Fruit-growers would do well to heed the foregoing, and govern themselves accordingly.

Frozen Fruit Trees.

On behalf of the U. S. Department of Agriculture, Mr. M. B. Waite visited several orchards in the Eastern States to ascertain the extent of the damage done to fruit trees and to make some recommendations regarding the treatment of the same. In his report, he says:

"In the bearing peach orchards the trees most injured by freezing show the bark entirely blackened and dead, more or less separated from the trunk, and the wood turned a very dark brown color. Such trees are dead beyond all question, and should be treated accordingly. With many peach trees, however, the bark is slightly separated from the wood, which is of a dark walnut color next the cambium and brown throughout. Though still alive, the bark is somewhat browned and discolored, the youngest or outer layer of wood has been frozen until it is now of a dark walnut color, and the wood of the trunk is blackened throughout. Where the bark is adhering or only partially separated from the trunk the chances for recovery are good. The tops of such trees are usually found in fair condition, the wood brownish, but the white cambium layer uninjured, though lying immediately in contact with the brown, dead wood. In severe cases the leaf buds are killed, but as a rule they are still alive. Of course, on all such trees the fruit buds are killed. The most injured part is the trunk just above the snow line. About one-half of the orchards examined were in this condition. A third class, which may be described as the moderately-frozen trees, in which the wood above the snow-line is blackened, but the bark not separated from the wood, and with the cambium still apparently alive, although water-soaked and injured, frequently has minute brown streaks in the bark immediately in contact with the cambium. Such trees will almost invariably recover. Moderate pruning back, say from one-third to not over one-half the tops, gives the best results on trees of this character.

HOW TO TREAT THE PEACH TREES.

One should be cautious about pulling out damaged trees. Almost all the trees in which the bark is stuck tight at the critical point—about two feet from the ground—may be expected to pull through, and many which have the bark partially loosened may recover. Moderate pruning back, followed by good cultivation, and, unless the land is in very good condition, with a moderate amount of fertilizing, will be the best course to pursue. If the buds can push out in the tops, growth will extend downward, resulting in many cases in a complete covering of new, sound, white wood, even over the most injured part on the trunk. The frozen dead wood can conduct the crude sap as long as it remains moist. If the bark remains alive it will carry the elaborated sap downward from the leaves. This shell of new wood will be sufficient to maintain the tree in profitable bearing and will, of course, be added to annually. The aim should be, with good cultivation and fertilization, to grow the tree out of the injury. Stable manure will probably answer the requirement in some cases. Nitrate of soda at the rate of two hundred pounds per acre may be preferable in other cases.

Interests Fruit-growers.

We have received a copy of the proceedings of the forty-ninth annual convention of the Western New York Horticultural Society. This society has issued good reports in the past, but we doubt if they ever sent out one as "live" or practical as this. Its one hundred and seventy-two pages are packed with valuable information on nearly every branch of the subject of interest to fruit-growers in these climes. The volume is printed in fine taste, and has a frontispiece with portraits of Dr. Jordan, of the Geneva Experiment Station, and Doctors Roberts and Bailey, of Cornell University. The secretary is Mr. John Hall, Rochester, N. Y., by whom the report is edited. It goes to members of the society.

Hardy Shrubs for a Cold Climate.

By Anna L. Jack.

There is nothing in the permanent ornamentation of a garden that can take the place of shrubs, for they adorn the dooryard and borders, growing stronger year by year, are easily managed when once started, and permanently beautiful. Many of the hardy kinds root easily if put in the ground during the growing season, and may be propagated by root division. Before the last streak of snow has melted from the garden, the *Daphne Cneorum* shows its umbels of deliciously fragrant pink flowers. It does best in a peat soil, and requires



Hydrangea paniculata.

to be protected a little by taller shrubs near by. Before it fades we have *Spiraea Thunbergia*, with its pale-green feathery foliage and starry blossoms. Then comes the gem of the garden, the *Magnolia Stellata*, rightly named "a star." It is quite hardy when once acclimatized, and blooms before the leaves are seen, first opening a pale pink sheath that becomes white as the flower expands. On the little shrub shown in the illustration, from 80 to 100 flowers have been counted some seasons, but this winter has been so unusually severe that the plant suffered above the snow line, although never injured before during the last ten years of its growth. The flowers are fragrant, the petals spread star-like, but afterwards become reflexed. It is a marvel of beauty, standing like a ghost on the lawn while the rest of the shrubs are only brown stems. Then come the jaunty yellow bells of the *Forsythia*, gleaming in the spring sunlight with a golden shower of bloom. These shrubs were brought from China to England in the eighteenth century, and planted in Kensington Gardens, being named after William Forsyth, who was then director. In unfavorable weather the flowerbuds on the top of the plant fail to open in this climate, but at the same time lower branches will be full of bloom.



Magnolia stellata.

The word "hardy" is the talisman in selecting shrubby plants for the north, and we cannot ignore the lilac, with its many shades from white to red, with all intervening tints. But the old-fashioned lilac that has the familiar fragrance dear to childish hearts is an old-time delight for most of us. Nowadays there are the great white lilacs that seem so stately and pure, heavy with perfume, and marvellous in size of truss. These shrubs are apt to grow stronger than other varieties, and should be planted where they will have room to develop. Young bushes can be pruned into any shape, and the tendency to sucker can be kept in check.

The flowering almond comes about this time,

with its miniature roses; it is slender-branched and graceful. Then comes the Missouri currant, considered by some people unworthy of their garden, but which has, nevertheless, a bewildering spicy perfume, unlike any other, which is very attractive to the bees. Little wonder that the busy little insects swarm around its yellow blossoms, which are richer in honey than any other flower of that season!

Before the *Syringas*, there are the late lilacs, the *Japan* and the *Villosa*, and then the *Shad-bush*, that flowers in late May, its fruit ripening early enough to have given to it the name of *Juneberry*. Long before this, the hardiest shrub of all will have blossomed and faded. It is the *Siberian pea*, with its pale green leaves and bright clusters of yellow flowers, that slightly resembles the *Laburnum*. This plant has proved a boon to the Northwest; it is early and sure, never having been injured by severe frost. The *Spiræas* troop in succession through June and July; their name is legion, but perhaps the best is the well-known *Van Houttii*, that is sometimes called *bridal wreath*, and is graceful and effective. All these *Spiræas* do not expend their beauty with the blooming, for in autumn they are a bewildering maze of leaves, rich claret, deep red, with purple tones, orange and scarlet, and the gatherer of autumn leaves finds the richest colored trophies among the *Spiræas*. In midsummer there are a number of low-growing *Spiræas*, the best being "Anthony Waterer." It is rose colored, and continues to bloom through the autumn.

The *Japan quince*, with its brilliant orange-scarlet flowers, must not be forgotten. In gardens a little farther south it is used as a hedge, but the habit of winter-killing on the top renders it uncertain; yet an old bush of twenty years' standing here, perfects a few quinces every autumn near the ground.

For hardiness, the *Tartarian honeysuckle* excels, and will spread almost to wildness, while on the other hand the *Deutzia* is often killed down to the snow line.

As the season advances shrubs become scarcer, and one of interest is the *Euonymus atropurpureus*, called often "Burning Bush." It does not grow beyond shrub size, but is well worthy of attention. The flowers are small and inconspicuous, but the fruit is four-lobed and smooth. When ripe the scarlet capsule opens to discharge the crimson-covered seeds, and gleaming among the dark-green leaves, these glowing seed cases give the name to the shrub, the capsules clinging to the branches after the leaves fall. Even the old snowball has been improved in Japan, and the newer sort is more compact and of finer flower and foliage. After *Syringas* fade (and they are a hardy acquisition for a northern climate), there is a lull in the shrub blossoming. The *Hibiscus* does not grow strong enough to show its beauty of flower, and the *barberry* is just turning into its autumn beauty of fruit and foliage. Then another Japanese importation becomes the favorite, as *Hydrangea paniculata* sends out its spikes of bloom. It is a shrub that wins admiration, its flowers having four distinct seasons of color—first pale green, then a clear cream white, turning to pink, and afterwards to brownish red. So its panicles delight us from August till October, and we think what a magnificent sight it must be in Southern Japan, where it becomes a tree thirty feet high, with drooping branches. If large trusses of bloom are wanted, it is best to prune, but if quantity is desired, the natural growth can be left, only straggling branches being removed.

So many shrubs have white flowers that the pendulous magenta blossoms of the *Desmodium* give a variety late in the season. The Japanese single rose (*Rugosa*), too, with its leathery, glossy leaves, always free from insects, shows its large and fragrant blossoms of red from June until frost, and is one of the hardiest of our shrubs.

With a choice of so many varieties that form a procession of flowers all through the season, there is every inducement for planting in the north, where, with a winter protection of leaves or litter around the roots, and the usual blanket of snow, we shall be able to make even the wilderness blossom.

Plant Introduction.

The United States Department of Agriculture has decided to establish a Plant Introduction Garden and Experiment Station at Chico, California. A beginning will be made with ninety acres, but it is the intention of the Department to extend the area as the needs of the institution require. The garden will be devoted to experimental culture of the plants introduced from various parts of the world, and to a careful study of plant life. Chico is situated near the eastern border of the great Sacramento Valley, seventy-five miles north of Sacramento, the State capital.

The order-in-council of January 15th, 1903, by which nursery stock was permitted to enter Vancouver, B. C., during the winter months only from October 15th to April 15th, has been amended by extending the time to May 1st.

Parsnips.

In selecting ground for parsnips, choose that which last year was very highly manured and thoroughly and deeply worked. This vegetable delights in a deep, rich, well-pulverized soil, of a sandy or light loamy texture, and forms smooth and better roots when the enriching has been done the previous year, and the manure thoroughly incorporated with the soil. If manure be given the same season, it should be most thoroughly decomposed, or, what would be perhaps better, a light application of commercial fertilizer. Coarse manure causes the roots to branch a fork, and become uneven and rough. This is a favorite vegetable with nearly all people, boiled and served with butter. There is only one variety worth mentioning, and that is the Hollow Crown, which grows more smooth and regular, and is of a finer and sweeter flavor than any other variety, at least that is the experience in this part of the country.

As frosts do not injure the parsnips, the roots can be left in the ground all winter, and taken up when wanted in the spring, by spreading a few branches of fir or spruce, or straw, over a part of the bed to prevent the freezing and thawing in the spring, to cause the tops to rot. Where they are left in over winter, care should be taken to see that they are left in a piece of ground that is naturally dry, or they are apt to rot down three or four inches during the latter part of March and the first of April. In some instances, it is desirable to store a quantity in the cellar for winter and spring use. My experience has been that this is the better way to secure the whole crop, as, taking it on an average, they will keep better in the cellar than in the ground.

My way of getting them out of the ground and storing is this: I take a pair of horses and plow, with a man to drive, and run a deep furrow three or four inches away from the parsnips, then plow the next furrow just deep enough so that the tails of parsnips stick up about three inches; then go along and pull the parsnip out and snip the top off with the fingers, which leaves the tops under the ground, where they should be, to rot. If it is naturally dry ground, and does not need rigging up for the successive crops, the ground is plowed ready for spring seeding. Three men and a pair of horses will take out and store in the cellar thirty or forty barrels a day in this way, and is a decided advantage to trying to dig them out with a fork. You will destroy more in one day with forks than you would in a week with a plow. After they have dried completely, put them in the cellar, and cover with bags or sacks and about six or eight inches of coarse hay. I find they keep better this way than when packed in earth. Stored in this manner in a dry, cool basement, they will come out in the spring just as fresh and sweet as when stored. The seed may be sown as early as the soil can be worked, as they come on very slow the first month, in drills fifteen inches apart. They should be thinned out to three or four inches apart in the row, and the ground well and thoroughly cultivated as long as the cultivator can be properly run between the rows.

Col. Co., N. S.

Improving the Old Orchard.

There are many old orchards in the country that, through neglect, have become unprofitable, and it is a question with many whether it is worth while to try to revive and improve them. If they are of the right varieties many of them can be made to pay well for the labor required to put them in good shape. This has been well proved in many cases where orchards have changed hands, and under good treatment, in the way of cultivating, pruning and spraying and a liberal application of fertilizers, have given excellent returns, where they were formerly barren or only producing meager crops of stunted, useless stuff. Many of them are starved. They are left standing in sod, after the fertility has been taken out of the soil by other crops, for many people continue to crop the land just the same as if no trees were growing there, and it is safe to say that the prevailing cause of unproductive orchards is lack of fertility. The signs are plainly evident—a weak, puny growth, pale foliage, and a scraggy, unthrifty appearance.

If the orchard has been standing for some years in sod, one of the first things to do is to break it up and bring it into a good state of cultivation. This will involve the breaking of a number of small roots that have come up near the surface in search of food, but the damage will be more than offset by the good effect the cultivation will have on the trees. Then apply a liberal dressing of manure if it is available, just such a dressing as would be used in the preparation for roots or corn, and disk it in. If manure is not available, sow red clover after the ground is in a good state of tilth. Sow the clover alone, and plenty of it, to ensure a good catch. Plow it in the next year when it is about half in blossom, and apply hardwood ashes (unleached) at the rate of forty or fifty bushels to the acre. If ashes cannot be got, sow around each tree about five pounds muriate of potash and ten pounds finely-ground bone meal. Surface-work the land immediately after plowing in the clover, and sow with rape. In the fall, when the rape is pretty well grown, turn in a flock of sheep or lambs. It would pay to buy some lambs for that purpose, and they will pay well for fattening. There should be ten lambs to the acre, and feed a little ground oats and bran, or a little oil cake, along with the rape. They will feed on the rape until near Christmas, if given a place where they

can shelter at nights and on stormy days. In the spring, plow and cultivate until June, and then sow again to clover as before, which will serve as a cover crop in winter, and to be plowed under the following year when in half bloom. This course of treatment will add two much-needed elements to the soil—humus and fertility.

In pruning an old, neglected orchard, cut no large limbs. The chances are that they have been badly butchered at some time. Thin out the fine brush, using a step ladder and working round the outside of the tree. If it has had at some time the heroic treatment we so often see, and has grown a lot of suckers, good judgment will be required by the pruner to use some of those to restore it to proper shape. Then the rough bark should be scraped off, and the whole surface washed or scrubbed with some alkali wash, such as Gillet's lye, one can to five gallons of water, or lye made from hardwood ashes. There is nothing better, used not quite as strong as is used in soapmaking. If it will float a potato, dilute with water until the potato sinks; then it will do very well for old and large trees. This process is well worth the trouble. It removes bark lice and other insects, and has a tonic effect on the tree that improves its health and vigor wonderfully, and the best time to do this is about the first week of June. Then, it should have at least three sprayings—one of three pounds of bluestone to forty gallons of water, just as the buds begin to swell; another with the full Bordeaux mixture, just before the blossoms open. If bud moth or leaf-eating insects are present, Paris green should be used with the mixture, six to eight ounces to forty gallons of water. Then repeat with the same formula as soon as the blossoms have fallen. The necessity for further spraying will depend largely upon the weather. This course of treatment would bring many old, neglected orchards into a healthy, productive condition, and, where not too far gone, from old age and neglect, the labor and expense of reviving them will be well repaid.

Strawberry Culture.

Strawberries may be grown on any soil which will produce profitable crops of corn, potatoes or roots, but the ideal home of this queen of fruits is a deep, rich, sandy loam, with a clay or gravelly subsoil. On such soil, under the methods of culture I am about to describe, with the aid of favorable weather conditions, we have harvested from ten to fifteen thousand quarts of high-class berries per acre.

We prefer to plant strawberries on a plot on which we had the previous year grown potatoes or roots. We apply, during the winter if possible, twenty to thirty tons of stable manure per acre. When the land is dry enough to carry the horses, we harrow it, driving them at a trot, in order to more thoroughly spread the manure. We then plow it, and disk or spring-

plant only those plants having nice, clean, fresh hearts and roots, and throw away the weak ones. We mark our rows three and one-half feet apart, and plant twenty to thirty inches apart in row, being guided in this by the propagating tendency of the variety.

We have obtained the best crops of the best berries from a narrow matted row, not wider than eighteen inches, with the plants four to eight inches apart in the row. In planting, we make the holes with a spade, taking care to get the roots well spread, but all pointing downwards, and press the soil firmly to them. Just as soon as we get our patch planted we cultivate and hoe it, and repeat such act every week or ten days, and every time it rains, not so much to kill weeds as to assist nature, by letting in the air, which conserves and makes available to the plant the moisture, and, through it, the plant-foods in the soil. We know that there is always moisture under a board or a stone, likewise under two or three inches of dry earth, no matter how dry, if it be kept loose and fine by cultivation; because any body or substance which is interposed between the hot air and the moist soil will prevent the undue evaporation of the moisture.

A rotation of crops that we have followed with success is: Strawberries, plow the patch under after harvested with a skimmer on plow, and roll and harrow; sow with turnips, broadcast, or rye; plow under the following spring, and plant corn or roots; next year, barley, and seed with clover; plow that under the following spring, and plant potatoes; and then you will be ready for strawberries again.

I might say that if you have not plants of your own to select from, it will pay you to get them from a reliable grower, and don't object to paying a fair price for them. Good plants, dug from the row, and mulched with horse manure to protect them during the winter and stimulate them in the spring, are better value for your money at four dollars per thousand than poor ones are as a gift. F. R. BRECKON.

Halton Co., Ont.

DAIRY.

As a Farmer's Cow.

By Geo. Rice, Norfolk Co., Ont.

No breed of cattle has had more to contend with from opposition of rival breeds than Holsteins. Prejudices die hard, but Holsteins have shown, wherever given a fair chance, such intrinsic value as dairy cattle that they have won their way to first place in the estimation of very many practical dairymen, until now no breed is more popular. This has been brought about by the unbroken series of victories in public test, and by the great showing made by this breed in official tests. There are more and larger records to the credit of Holsteins than can be shown by any of the other breeds. It is not alone as pure-breds that Holsteins have demonstrated their worth, but many dairymen have, by the use of good Holstein bulls on grade cows, made great improvement in the milking qualities of their herds. The great records made by grade Holsteins in the herd of that zealous dairyman, the late Mr. E. D. Tillson, are known very widely. But many others working in the same line have had, on a smaller scale, equally good results, until now a black-and-white cow will sell for more money at public sales than any other. It was only a short time ago that a number of grade Holsteins sold at the large price of \$78.00 per cow. Why? Because they had shown such good records in actually supplying milk to the cheese factory. Dairy-

men consider a cow worth as much as she will make in one year, and there are a great number of grade Holsteins that make from \$50.00 to \$75.00 per year, and many do better. A grade Holstein at the last Winter Dairy Show made the good showing of 127 pounds of milk, testing 3.95 per cent. of butter-fat in forty-eight hours. Holstein breeders have, as a rule, steered clear of fads and fancies that have worked injury to other breeds, and have banked upon performance. Advanced registry, wherein actual performance is the crucial test, is the standard that Holstein breeders set most value upon. They believe that a cow must possess capacity for milk if she is to transmit the milk habit to her descendants. A cow may possess what is generally called "great dairy form," and yet be an indifferent performer. How can a cow transmit what she does not possess? On the other hand, a cow that is a great performer may lack some of the points that we in ignorance call



Lady Nancy—6245—

First-prize Ayrshire cow over three years, Central Canada Dairy Show, 1904. Property of J. G. Clark, Ottawa, Ont.

tooth it both ways, harrow, and repeat this method of cultivation until the manure is thoroughly mixed in with the soil, and that reduced to the finest particles possible. We now leave it to the care of nature, until we are ready to plant, unless it rains heavily, and then cultivate it over again, and don't begrudge the time, because when we set the plants we want the soil to be ready to feed them.

The varieties we grow are the Clyde, Williams, Glen Mary, Bubach, Bederwood and Brandywine. Before digging any plants, we give the plot a stroke with the harrows, both ways, and roll it. In digging, we use a five or six pronged dung fork, and dig a portion of the whole row, shake the plants out, and instantly place them in a basket or a damp bag, carry them to some place protected from the sun and wind, and clean them by removing the old runners and leaves, and trimming off those roots longer than four inches. We

"dairy form." What are fancy points worth? A good performer must possess the essential points—good constitution, vigor and capacity to assimilate and digest food, with the temperament to turn it into milk. Such a cow is the Holstein. For this very purpose she has been bred for years, and the result is that she "gets there" to the satisfaction of dairymen who value a cow for what she does.

In pure-bred Holsteins it is quite common for two-year-old heifers to give forty to fifty pounds of milk daily, and make ten to fifteen pounds of butter per week, with larger records for other ages, and many cows have made in official tests from twenty to twenty-four pounds of butter per week, and several have made from twenty-four to twenty-nine pounds. This is the kind of work that commends itself to dairymen. "Performance," not form, type, or such misleading and indefinite things, but actual performance, is the word which Holstein breeders swear by, and that is what breeders are working for. This is the secret of the marvellous growth in popularity of the Holstein breed, whether as pure-breds or grades. If a dairyman uses a good Holstein bull from performing ancestors, and raises the heifer calves intelligently, success is assured.

The Milking Machine.

A writer in the *Farmer and Stock-breeder*, of London, England, gives a glowing description of a dairy farm near Paris, France, and of the successful working there by electrical power of the well-known Scotch Laurence-Kennedy cow milker, which has been used in England with more or less success. "Milking cows mechanically," says the writer, "is by no means a new method, the question of substituting a mere machine for the rosy-cheeked dairymaid having for years occupied the minds of inventors. The introduction of electric power which makes it possible to milk as many as fifty cows with the assistance of only two human beings, one to fix the apparatus and one to remove the milk pails, is certainly a novelty." It is maintained by the manager of the farm in question that the yield is greater than from cows milked in the ordinary way, and that the milk will keep longer, owing to being drawn into airtight covered pails. To the question will it pay, the answer given is: "The machinery is very costly, but that in this case the result has justified the expenditure, and that there can be little doubt in regard to the question of economy."

POULTRY.

Hatching Chickens.

To manage a number of sitting hens is likely to be a great deal of trouble. Not all hens, even of the breeds supposed to sit, are sure sitters. The hen should be of a quiet disposition, in fair condition. The body should feel hot underneath, and no hen should be taken that does not allow herself to be handled freely, at least after dark. Sitting hens should be provided with a room by themselves, away from laying stock. The nests should be of good size, and only just high enough in front to retain the nesting material. Care should be taken that the nests are sufficiently large, and, in the rooms where the hens are sitting, suitable provision should be made for a dust bath. If sitting in a room with a board floor, use nests with bottoms; on an earthen floor, bottomless nests are better. If a nest with bottom is used it is desirable to place some earth in the bottom, and on top of that a little fine straw or hay. It will be found most convenient to set a number of hens at one time, and the eggs should be tested after about five days, and if many are found infertile some of the hens may be reset on fresh eggs. In setting hens, it is best to move them from their accustomed nest to a new one at night, and no lantern should be used. The hen should be kept fastened in the nest for a day or two at least, and if many sitters are kept in the same room it will be safest to keep the nests closed all the time, removing the hens from the nests daily for the necessary length of time. Sitting hens should be fed on whole corn and allowed plenty of grit and fresh water. When taken from the nest they should not be allowed to remain off more than about twenty minutes, unless the weather is very warm. Chilling the eggs is less injurious during the second week of hatching than at any other period. When the chicks begin to hatch, the hens should be watched to see that they are doing well, and if a hen is inclined to kill chickens or is restless it will be necessary to remove her and give her eggs to another. If it is seen that some of the chickens are making no progress in getting out and that the membrane is becoming dry, it should be moistened with warm water, especially if it inclines to adhere to the body of the chick. It is almost always possible to place chicks hatched under hens in charge of a smaller number than are required to hatch them. The number must be varied according to the weather. Twelve is a suitable number for winter, but in summer one hen can care for about eighteen or twenty chickens after they are a day old. Those hens that make the best hatches should be given charge of the chickens. Never allow a sick hen or one with scaly legs to care for chickens. All deformed chickens, and those that are weak, had better be killed at once. Chickens with hens should be kept inside for a few days. Then, unless the weather is especially cold or stormy, they may be placed in a coop out of doors.

H. E. HANLY.

Turkey Raising.

A correspondent and constant reader has asked us to publish something on turkey-raising. The following is from an essay by a successful poultry-woman, and was published in a book called "Turkeys, and how to grow them," by Herbert Myrick:

The first requisite to successful turkey-growing is carefully selected stock for parent birds. Selections of the best for years have produced the most improved and profitable breeds of stock. After complying with the first condition, and having secured large, strong parent turkeys at least one year old, see that they are in the right condition for breeding. Breeding fowls should not be overfat, as the offspring of such fowls are less vigorous. If the hens are young (late hatched) they require more food at breeding time, as they are still growing and immature. If hens are old they should have millet and clover, where it can be grown, and less carbonaceous food in the latter part of the season. Too much corn will produce overfat turkeys, unless they have abundant exercise in insect hunting and plenty of green food. When the laying season begins, usually in April or May, a watchful lookout must be kept for the eggs. It is natural for all turkeys to hide the nest, but petting will do much toward keeping them near the house. Each egg should be gathered as soon as laid, and placed, small end down, on cotton or some soft material, and kept in a dry, cool, dark place. If not used at once, they should be turned occasionally, to prevent settling or adhering to the shell. As the eggs are removed daily from the nest, it is better to return a hen's egg, until there are five or six in the nest, as a turkey is suspicious and easily discomfited. My turkeys lay entirely in the grove near the house, and arrange their nests with skill themselves, my only task being to protect them from natural wild enemies. The nest should always be dry and large, and on the ground if possible. Fifteen eggs are sufficient for a large hen, and if small thirteen will give better results. Four weeks, and often thirty days, are required to hatch the eggs. This makes a long period of rest for active Mrs. Turkey, yet she must be compelled to do her work faithfully, consequently should have easy access to an abundance of food and pure water, that she may not be forced to remain too long a time off the nest to procure food, thus allowing the eggs to chill.

CARE OF THE YOUNG.—About the twenty-seventh day I throw a hard-boiled egg, mashed very fine, close to the nest, not into it, lest it adhere to an egg, rendering the egg air-tight exactly over the beak of the young turkey, which would prevent his escape from the shell. The mother may eat this egg, and the one given the following day or two, if it is not needed for her young, but in case she is hatching, she will use it for the little ones, and this food will often save the first-hatched birds. I have had the mother turkey refuse to leave the nest for three days after the first eggs hatched. If she leaves too soon the remaining eggs may be placed under hens, or hatched by wrapping in wool and keeping warm near the fire. Should an egg become broken in the nest, the soiled eggs should be carefully washed immediately in warm but not hot water, and dried and returned at once to the nest. The trying time in the life of turkeys is the first week, when they require constant watching, then great care until they are eight weeks old, or until the quill-feathers are well started. The producing of these feathers seems to weaken the fowl, and exhausts the system, and therefore they need especial treatment to counteract this difficulty.

For the first week, the mother and young must have a warm place, free from drafts of air, free from dampness, and where they will be undisturbed by other fowls.

The first three weeks the food should consist of sweet milk (fresh from the cow is best), very hard-boiled eggs, and fine wheat; bread crumbs for the little ones, wheat, corn and fresh water for the mother. Feed the mother first, and she will not take much of the egg and bread, which is more expensive. During this time, if the weather be warm and sunny, let the mother out during the middle of the day, keeping her near the coop, taking care to shut her in before sunset, as the dew is harmful to the young turks. During the first week the little ones are apt to get onto their backs, from which position they cannot rise, and will die if allowed to thus lie for any length of time. Care must be taken not to place the pens near the hills of small red or black ants, as these are enemies to young turkeys. They not only attack the head and kill the turkey, but if eaten, will almost instantly choke them to death.

The fourth week the food may consist of oatmeal, sour milk curd in small quantities, cracked wheat and scraps from the table, taking care that the scraps contain no salt. Salt, salt meat, brine or salt fish will kill them. After the eighth week, give mother and brood their freedom. Feed only in the morning, and this is not needful if they have access to grain fields.

If a turkey becomes sick, it should be isolated

at once from the others, to prevent the spread of the disease. Land over which diseased fowls wander will be contaminated and infect other flocks. Turkeys require plenty of pure water, and must not be allowed to drink from stagnant pools, as this may produce bowel troubles. It is useless to doctor a very sick turkey—better to kill and bury deep at once. Prevention is better than cure, and if the following dose is given fortnightly, or even monthly, throughout the year, to either turkeys or chickens, there will be little necessity for cholera cure: Two ounces of Cayenne pepper, two ounces sulphur, two ounces alum, and two ounces copperas. Mix all together, and add two tablespoonfuls to eight quarts of corn meal, and wet the mixture with sweet milk or warm water. This will feed forty fowls.

One may profitably practice giving two broods of young turkeys to one mother when hatched at the same time, as one turkey can hover from twenty-five to thirty little ones during the critical period in their lives, after which they do not need much hovering. The other mother, after being closely confined out of sight and hearing of the little ones for one week, will quickly mate and lay again. This is very practicable and desirable when the first broods are hatched in May, or earlier, as the second hatchings are often the best, only a little later ready for market.

To Prevent Hens Eating Eggs.

I have tried several ways, and find this a success: Make a box twenty-six inches long, fourteen inches high, and fourteen inches wide. Put a second bottom in the whole length of the box, raising where the hen enters four inches. Line the bottom with carpet; put a board across the center high enough from the bottom to let the eggs roll down under it to the lowest end of the box. Make a little door in that end to take the eggs out. Take a white door-knob with a screw in; screw it in the center where the hens goes in to lay. This represents an egg.

Brighton, Ont.

FRANCIS C. SAGER.

APIARY.

Recent Winter's Losses.

That winter losses will be abnormally heavy throughout Ontario is a fact that by this time will be admitted by the most sanguine of beekeepers. While the outlook with many is no doubt very discouraging, yet there is always a silver lining to the darkest cloud, if we only look in the right direction. Losses in bees are much easier recuperated than with almost any other kind of stock. Hives and combs do not die, and if the season is fair, by autumn the majority of apiaries can be restored to former condition and numbers. Again, this disastrous winter may be a blessing in disguise, by awakening beekeepers to the fact that they should always prepare for a severe winter. Editor Hutchinson, of the *Beekeepers' Review*, says that our recent open winters, with consequent fair wintering without special protection, has made many beekeepers careless. To my mind, after making all due allowance for exceptionally severe weather, this condition of things is responsible for a large percentage of losses this year.

CARE OF COMBS BEES HAVE DIED ON.

As soon as colonies are known to be dead, the combs should be taken out and all dead bees shaken off them. Any bees on bottom of the hive should also be taken out; if left they soon create a nasty stench. Don't try to pick dead bees out of the cells; it is a slow job, and if left in they do no harm to the combs. These combs can be used to hive swarms on, and when so used the bees will remove their dead comrades from the cells in a more expeditious manner than we possibly can. They can also be used for surplus combs if desired, but before so using they should be sprayed full of water and then be turned in the extractor previous to allowing the bees to store honey in them. If this is not done, combs that have had brood reared in them will color the first extracting of honey. It is quite a job to preserve these combs from the ravages of the bee moth. One of the best plans I know of is to suspend the combs in a light room, keeping them quite a distance apart. When in this position one can tell at a glance if anything is amiss. If left in the hives it is well-nigh impossible to keep the moths out, and in an incredibly short time the hive will be a squirming, wriggling mass of webs, grubs and filth. If chances are not good for using the combs, by all means melt them up and put through a wax press. Half a loaf is better than none.

J. L. B.

Elgin County Beekeepers' Association.

A meeting in the interests of beekeepers will be held in the Y. M. C. A. building, St. Thomas, on Saturday, April 30th; sessions commencing 10 a. m. and 1.30 p. m. A good programme is being arranged. Special attention will be given to questions from beginners, also to the subject of marketing honey. All who are interested in bees and honey are cordially invited to be present.

EVENTS OF THE WORLD.

Ex-Queen Isabella of Spain, grandmother of King Alfonso, is dead.

Ninety-five Japanese prisoners have been sent to Tomsk, Western Siberia, for imprisonment.

The Anglo-French Treaty is looked upon with much suspicion by the Russians, who see in it only a plan to alienate France from Russia.

Correspondents of Paris papers now in Russia state that a large number of armored automobiles have been despatched to the Far East.

The British force which went to suppress the rising of the natives in Nigeria who were stirred into rebellion by the outbreak of the Hereros against German rule, lost four men killed and forty-eight wounded in the first encounter. The Okpotos, the tribe which is most violently disaffected, continues to resist the advance of the expedition.

Japan has ordered two new battleships from English firms. The vessels will be exceedingly powerful, their length exceeding that of the largest British battleships by twenty feet. The armored belt at the water line will be nine inches thick, with six-inch armor extending to the level of the deck. The main batteries will be arranged so as to discharge eleven tons of projectiles per minute.

In their struggle against the Hereros, the Germans have again lost heavily. While a column under command of Major Von Glazenapp was marching along thicket-lined roads in the direction of Oniatu, it was suddenly attacked by natives concealed among the thickets. After a long fight, the Hereros were repulsed, but not until the Germans had lost thirty-three killed and fifteen wounded. The Hereros left ninety-two dead on the field.

It is hoped that the Turko-Bulgarian Convention signed at Constantinople on April 8th will be effectual in bringing about peace in the Balkans. It provides for amnesty to all Bulgarians compromised in the Macedonian rising of 1903, excepting persons guilty of using dynamite, the repatriation of refugees, the removal of frontier restriction of Bulgarian trade and travel, and the application of the Austro-Hungarian reform scheme to Macedonia. Bulgaria undertakes to suppress revolutionary movements in her territory, and to prevent the smuggling of arms and explosives across the frontier.

By the Anglo-French Treaty, signed at the Foreign Office in London on the 8th of April, the long-disputed Newfoundland French-shore Question has been finally disposed of. The terms of the treaty, so far as Newfoundland is concerned, are as follows: (1) France renounces her rights to the French shore, with the exception of the right of cleaning and drying fish on the shore. (2) France retains the right of fishing in the territorial waters of the French shore. (3) France secures, on the other hand, the right of French fishermen to obtain supplies of bait on that coast, and the right to fish in those waters, not only for cod, but also for lobsters. Shipowners and sailors whose interests are impaired by the new state of things will receive an indemnity, the amount of which will be determined by a commission of French and British naval officers, with the option of an appeal to an arbitrator to be designated by the Hague Tribunal. Other provisions of the treaty are: The right of France to guard the tranquility of Morocco is recognized. France, on the other hand, will not impede the action of Great Britain in Egypt, and must erect no fortification on the Moroccan coast along the Straits of Gibraltar; Great Britain adheres to the Convention of 1889 for the neutrality of the Suez Canal, and the freedom of trade in Egypt and Morocco is guaranteed for thirty years. In more southern Africa, France obtains important concessions which will give her access to that portion of the Zambezi River which is navigable to ocean-going ships; also, a better route through the fertile country leading to Lake Tchad. The announcement of the terms of the treaty has been met with much enthusiasm in England, where the King is being much lauded as a successful diplomatist in the interests of peace.

Admiral Togo is continuing his attacks upon Port Arthur. On April 15th, he advanced with fourteen battleships into position before the town, and for three hours bombarded it, the forts and the remnant of the Russian fleet replying to the attack. A few Chinese were killed during the bombardment. Particulars as to the sinking of the Petropavlovsk, which have been received from both Russian and Japanese sources, differ somewhat as to the cause, but little as to the result of the great blow which has fallen upon Russia. The Russians assert that the catastrophe was purely accidental, and that no naval conflict took place, except that which concerned the sinking of the torpedo-boat destroyer, Bestrashni, which, becoming separated from the Russian fleet was discovered by the Japanese as she tried, under cover of a

fog, to return to the squadron, and was thereupon surrounded and sunk, only five of the fifty men on board being saved. The Japanese Admiral, Uriu, on the contrary, asserts that the Petropavlovsk struck a mine laid at the entrance of the port by a fleet of Japanese torpedo boats, which, after making a demonstration and accomplishing their real purpose, retired to the main squadron, there awaiting the terrible disaster which met the Petropavlovsk. Survivors of the ill-fated vessel state that the reason why the loss of life was so great was that officers and crew were admidships at breakfast when the explosion occurred. First a terrible roar from the boilers was heard, followed immediately by a deafening detonation from the magazines. Those on deck were hurled into the water, where they swam and clung to wreckage thrown up from the vortex into which the vessel had disappeared. Not a man who was admidships escaped. The famous Russian battle-scene painter, Verestchagin, who was Vice-Admiral Makaroff's guest, was lost, along with Makaroff's complete staff of twenty-eight officers. Only 52 were saved out of a total number of 650 who were on board, Grand Duke Cyril, heir, after Grand Duke Michael, to the throne of Russia, being one of those picked up by the torpedo boats which immediately pushed out to the rescue. Russia, where Admiral Makaroff's widow was the first to hear of his death, is prostrate with grief, but is still confident as to ultimate victory. "There are more Makaroffs in Russia," the people say. But the whole hope is now centered upon the army on land, where the Russians feel they have the advantage. Port Arthur, however, is said to be completely demoralized. The confidence of its defenders is shaken, and the deepest gloom prevails. The Japanese are unanimous in their praise of Admiral Makaroff, whose ability and courage were much admired by them. Vice-Admiral Alexieff has been ordered to take control of the Port Arthur fleet until a successor is appointed to Makaroff, but there are, at present, only two uninjured vessels in the harbor of Port Arthur.

NOTES AND NEWS.

"He that can work is born king of something."—Carlyle.

"Worth begets in base minds, envy; in great souls, emulation."—Fielding.

The Duke of Sutherland is making a tour of Canada, and professes to be much pleased with it.

"Nobleness of character is nothing else but steady love of good and steady scorn of evil."—Epictetus.

Peterboro ratepayers will vote on the by-law to guarantee \$100,000 bonds of the sugar company on May 5th.

A large deposit of coal, covering an area of eighty-five square miles, has been discovered near Controller Bay, Alaska.

Viceroy Alexieff has prohibited, under pain of severe punishment, the sale of spirits to soldiers operating in his viceroyalty.

The Right Hon. Joseph Chamberlain (on his way back through Italy, addressing Vesuvius)—Call yourself a volcano? You wait till I get home.—Punch.

Mr. W. T. Macoun, horticulturist at the Experimental Farm, Ottawa, states that the severity of the past winter has affected fruit trees from points in Quebec to Leamington, in Western Ontario.

The Minister of the Interior has promised a grant of \$5,000 a year for two years to the Canada Immigration Society, which is engaged in bringing settlers from the Western States into Canada.

On April 12th, the Allan Liner, Pretorian, with 450 immigrants, arrived at Halifax. The immigrants are nearly all English and Scotch farmers in good circumstances. They left almost immediately for Winnipeg.

The Educational Association of Ontario has recommended that the study of Latin shall be made compulsory in the High Schools of the Province. Chancellor Burwash has been made president of the Association.

A new process of meat preservation which it is claimed will revolutionize the packing industry and go far toward solving the problem of supply for armies in the field has been discovered in Germany by Prof. Emmerich.

The Ontario Fisheries Department has granted permits to several companies to clean out the German carp from Lakes Erie and Ontario. These fish have become a nuisance, and are driving black bass and other game fish from the waters, hence the action of the Department.

Mr. Thoe De Schryver, of Auckland, N. Z., representative of the Canadian Manufacturers' Association in New Zealand, stated in Toronto lately that the colony at the antipodes is enjoying a great wave of prosperity, and that its trade with Canada has been greatly extended as a result of the preferential tariff.

The Canada Woollen Mills Co., which has mills at Carleton Place, Hespeler and other points in Ontario, has decided to sell out because of lack of orders. For three years the company has been carrying on business at a loss in the hope that the tariff on British woollens might be raised. Unless a buyer is found, 700 men will be out of work.

On April 11th, for the first time since his coronation, the Pope went to St. Peter's to say mass, the ceremony being in celebration of the thirteenth

centennial of St. Gregory the Great, who died 604 A. D. More than 70,000 persons were present in the Basilica, but the entrance of the Pope, by his request, was greeted with no acclamation such as was permitted in the days of Pope Leo.

On April 10th, a sudden jam of ice on the St. Lawrence River above Victoria Bridge caused the inundation of several towns near Montreal, and destroyed a mile of the G. T. R. On the same day, the dam three miles above Smith's Falls, Ont., which holds back the waters of Rideau Lake, gave way, and, as a consequence, a portion of the town was flooded and much damage done. Floods in the vicinity of Belleville and at Tweed, Ont., have also wrought havoc in carrying away bridges and destroying property.

Mr. J. W. Tyrell, the explorer, writing to the Toronto Globe, re the Hudson's Bay territory, recommends it as a land of great resources, especially in minerals and fur-bearing animals, and, along the coast regions, in fish of all kinds. There are in the vast territory, he says, a million and a half square miles of land, capable of sustaining an immense population. In conclusion, he gives this opinion: "I am convinced that the sooner we provide ourselves with some adequate means of access to this great realm of isolation, the better it will be for the trade and commerce of our country, and for the thousands of those who may go up and possess themselves of our 'Great Northern Heritage.'"

Seedsmen and the Seed Bill.

On Tuesday, the 12th inst., a deputation of the leading Canadian seedsmen waited upon Hon. Mr. Fisher to present their views on the seed question and to protest against the passage of the bill which the Minister of Agriculture introduced into Parliament last session. Hon. Mr. Fitzpatrick and Sir Wm. Mulock, as members of the Government, were also present. All the phases of the question were freely discussed, and the conclusion was reached that all were aiming at the one object—the improvement of the quality of the seed sold to Canadian farmers, and that there was a possibility of methods being adopted that would be satisfactory and advantageous to all concerned.

As the bill was introduced a year ago, the seedsmen consider it an insurmountable hardship, and that they would be so required to revolutionize their business that they could not carry it on, and that as a result the agriculture of the country would be greatly injured instead of benefited. The large wholesale houses could not hold their entire supply of seed on hand sufficiently long to test its purity and vitality, and they would be compelled to incur heavy penalties for what it was beyond their power to prevent. Objection was also raised to farmers being practically exempt from the provisions of the Act when they carried on a business for which seedsmen were liable to incur penalties. More particularly was this considered unjust because it is a fact that a great deal of the poorest, uncleaned seeds thus become distributed and with them many noxious weeds. This sort of trade would be encouraged by the passage of the act, as seedsmen would have to be more careful regarding the seeds they purchased, and much of the lower-grade seed would be left in the hands of the producer to be traded around among his neighbors without having been re-cleaned, and at a price with which the firms selling only the higher-grade seeds could not compete.

Attention was also very properly drawn to the lack of care exercised by very many growers of seed and to the opening there was for educational work in improving the conditions under which much of our seed is at present grown. The seedsmen were unanimous in recommending that a minimum standard be set to which all seed offered for sale should conform, and this standard be set by a committee of seedsmen, farmers and officials of the Department of Agriculture. They also suggested that the customs duty be made specific, instead of ad valorem, as it is at present, which would discourage the importation of lower-grade seed.

In replying to the delegation, Mr. Fisher stated that he had had a great many representations made him by farmers' associations and individual farmers in all parts of the country asking that the bill be made law as speedily as possible, and there seemed to be a general sentiment in favor of some such measure. What was wanted, however, was a workable act, else its usefulness would be lost, so that if any suggested amendments could be incorporated into the measure he would be only too glad to accept them, as he strongly objected to coercive measures, and did not want in any way to hamper legitimate trade. The suggestion to fix a minimum standard was, he believed, a good one, but was not complete, as there was too many grades of seeds undefined, all seed that was sold going as one grade as far as Government standard was concerned. The trade in seeds had improved wonderfully in the last few years, and if the objects sought in the bill could be attained without legislative measures he would be very glad. At present, however, a person getting a poor grade of seed by mistake had no recourse, but must simply accept his misfortune; he believed, therefore, that some measure was necessary.

As the seedsmen represented were entirely in favor of the principle of the bill, they accepted the invitation of the Minister to discuss in detail its clauses with some of the officers of the Department. It is expected that the bill as it will be amended will embrace some of the suggestions of the seedsmen to enable them to carry on and improve their trade under its provisions.

Death of Mr. B. H. Bull.

The death on April 10th, in his 59th year, at his home, "Hawthorne Lodge," Brampton, Ont., of Bartholomew Hill Bull, senior member of the firm of B. H. Bull & Son, widely known breeders of Jersey cattle, has removed from the ranks of Canadian stockmen a prominent figure. Born in York County, Ontario, the eldest son of J. P. Bull, J. P., and educated at Weston Grammar School and Victoria College, he married, in 1867, Sarah Duncan, daughter of William Duncan, J.P., one of York's pioneer settlers. Mrs. Bull and a family of ten, five sons and five daughters, survive him. About 1875 Mr. Bull took over the Hawthorne Lodge farm, near Brampton, in Peel County, and about twenty years ago he established in a small way, but on a sound foundation, the nucleus of the Brampton herd of Jerseys, which by judicious breeding and management, and in late years the importation from the home of the breed, of animals of the best modern type, has grown into the largest herd of Jerseys in Canada, with a prizewinning record unequalled in its class in the Dominion in the last decade.

The history of Hawthorne Lodge is a splendid tribute to the efficacy of the formula of clover, cattle and cream in the restoration of a run-down farm to fertility, and the ability of its owner to add to its acreage, having in that time doubled its area, equipped it with up-to-date buildings, provided the means for a liberal education to a large family, and made a comparative wilderness to blossom as the rose. And Mr. Bull's time and thought was by no means given up entirely to business, for he was an active and energetic worker in the cause of temperance and in the Methodist church, of which he was an official member and an acceptable local preacher. Given to hospitality and charity, his upright christian character shone out through all his life, and those who knew him best valued most highly his friendship and sympathy. He will be greatly missed in his neighborhood, but most in the home where he was an indulgent and kind-hearted husband and father, watching with pride the education and advancement of his family.

Appreciation of his character and usefulness was manifested, among other ways, by the floral tributes at his funeral, which, in addition to those from friends and relatives, included a broken column, with the inscription, "Our ex-President," from the Canadian Jersey Cattle Club, and a handsome wreath from the faculty and students of the Ontario Agricultural College. We are glad to know that the Brampton Jersey herd will be kept intact, and the business continued by the family, under the name of B. H. Bull & Son, and under the management of Mr. D. O. Bull.

M. Thompson's Shorthorn Sale.

At the auction sale on March 3rd of the herd of Shorthorns belonging to Mr. M. Thompson, Walkerton, Ont., fairly good prices were realized in spite of almost impassable roads, more than one-half the animals selling for an average of \$110 each, and the whole number sold averaging \$95. Following is the list:

Maude 6th; Chas. Dickinson, Walkerton	143
Maude 12th; Wm. Johnston, Walkerton	130
Maude 9th; Chas. Baehler, Kinloss	110
Maude 5th; Chas. Baehler	109
Maude 8th; Abe Stringer, Kingarth	109
Duchess 7th; Geo. Riley, Walkerton	108
Myrtle 8th; Jos. Hopperth, Carlsruhe	105
Bracelet 8th; A. C. Tennison, Drayton	103
Myrtle 9th; Jos. Hopperth	104
Cornet (bull); W. F. Lamont, Malcolm	75
Maude 3rd; Wm. Rowand, Walkerton	72
Duchess 10th; Benj. Warchter, Formosa	71
Maude 11th; Wm. Rowand	67
Merry Maid 3rd; Robt. Parker, Cargill	71
Maude 13th; James Farr, Maple Hill	65
Bracelet 14th; Thos. Coates, Walkerton	58

Geo. Isaac's Sale of Clydes.

The auction sale, on April 13th, of imported Clydesdale fillies at Markham, Ont., property of Mr. Geo. Isaac, Cobourg, was well attended and quite successful, the highest price being \$510, and the average for all sold, \$358. Following is the list:

Gipsy Maid; G. A. Brodie, Bethesda	\$510
Jessie Birnie; W. J. Shean, Owen Sound	460
Lady Grice; Thos. Mercer, Markdale	410
Miss Dorothy; James Baptie, Springville	455
Bell of Wardes; Geo. Jackson, Downsview	395
Gipsy Queen; H. C. Garbutt, Lakefield	355
Dally; J. W. Innes, Woodstock	335
Jean Macgregor; M. Freeman, Gananoque	300
Rosy Turner; Robt. Grandy, Springville	255
Lady Luck; J. W. Innes	255
Heather Erskine; G. Brownsburger, Markham	210

Winter Wheat Outlook.

Judging by fields seen by members of our staff, and by reports from several districts, the Ontario winter wheat outlook is anything but encouraging. The winter coating of ice in many cases, and recent frosts after thaws in others, have left fields that looked well in the fall now almost completely bare and brown.

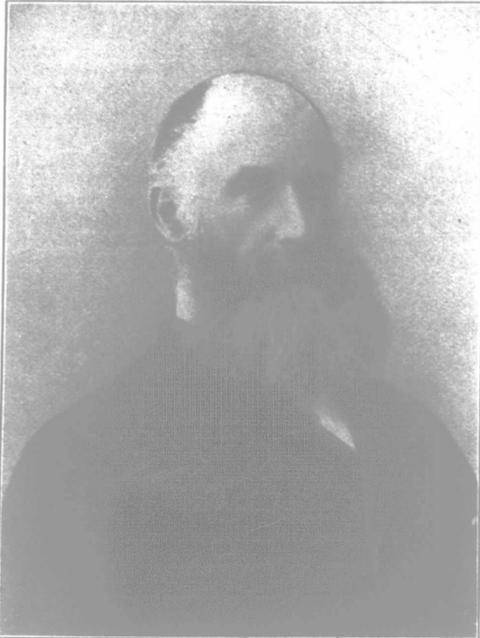
English Wheat Prospects Poor.

A week of fine springlike weather has enabled farmers at length to make some progress with spring field work. Some reports from the country state that the seed-bed is not suitable for either spring wheat or barley this season, and that oats, therefore, may be sown to a larger extent than usual. The autumn-sown wheat is described in many districts as poor and patchy in appearance, and probably the present outlook in regard to the English wheat crop is the worst for many years past. The country wheat markets have been generally poorly supplied, and from some districts the condition is described as execrable.

In Mark Lane prices have been difficult to maintain, and are indeed quoted 6c. to 12c. lower on the week. The arrivals are on a liberal scale, and are considerably in advance of the totals at this period last year. The weekly average imports this year are, so far, 67,000 quarters, and the distribution is very little, if any, short of this. The reports from yesterday's markets are:

The Baltic.—There was a steadier tone with rather more enquiry for white descriptions, but the market otherwise shows no change. No. 1 Northern Manitoba afloat sold at \$8.10; No. 3 at \$7.83.

There has just come into my hands a booklet containing many cleverly drawn and brightly colored cartoons issued by the Commissioner of Emigration for the Canadian Government. The object in view is that of impressing the many advantages of Canada on the popular mind, and I think the booklet is quite the most effective thing in that line I have seen. According to reports cabled from Montreal, it appears that "the tide of emigration is now pouring through there on its way to the Canadian Northwest," and it is



The Late Mr. B. H. Bull, of Brampton, Ont.

satisfactory to note that the great majority are provided with some capital, which indicates that they are of a higher social grade than usual.

In his article in the Journal of the Royal Agricultural Society on "The Food Production of British Farms," Mr. R. H. Rew estimates the annual production of meat in the United Kingdom at 25,000,000 cwts., while that of milk he puts at 58,000,000 cwts.; that of butter and cheese at 4,000,000 cwts., and of poultry and eggs at 3,500,000 cwts.

To-day the workers give vent to their feelings, at a great demonstration against the importation of Chinese labor into South Africa. There can be no question that the heart of the country is against this innovation, and to-day's display ought to bring home to H. M. Government this fact, if they have not already had ample evidence.

In spite of the signs of improvement shown in the bacon market at the close of last week, trade has been of a slow, dragging nature this week, and Canadian brands have shared in the prevailing depression, and prices have been officially lowered half a cent. There is no life in any branch of the provision market just now, and in view of the near approach of Easter this is surprising. Buyers cannot be tempted to go beyond their usual weekly requirements. Leanest selections (40 to 56 pounds) are now quoted 9½c., with an exceptional 10c. now and again.

In the cheese market, as was anticipated, there has been another advance of 24c. per cwt., for both Canadian and New Zealand cheese.

"Choicest" brands are now selling at 10½c. to 11½c., with an exceptional 11½c. for Canadian, and 10½c. to 10¾c. for New Zealand. This advance is due to the diminution of stocks, which are undoubtedly lighter this March than in the average of seasons. Shippers from Canada at present in this country allege that the shortage is much greater than retailers and distributors here are willing to acknowledge.

The depression in the butter trade has brought about further reductions this week, and although a few packages of Canadian butter have appeared on the market, it has not been in sufficient quantity to justify a special quotation.

London, Eng., March 26th, 1904.

P. E. Island Pork Trade.

One of the largest meetings of farmers ever held here was convened in Charlottetown on March 30th. It was made up of representatives of our thirty Farmers' Institutes and other prominent farmers. The object of the meeting was first to come to a better understanding with the Dominion Packing Co. with respect to the sale, shipment, grading and weighing of hogs. The relations between this company and the farmers have in the past been anything but pleasant. A mutual distrust has always existed, which has been against the best interests of both, and has also made our bacon trade very unsatisfactory. This company deals directly with the farmers, as we have no such things as drovers here, and one complaint was that when the Company advertised for hogs they did not give notice of what price they were paying, consequently when farmers shipped their hogs they did not know what price to expect. Another complaint of farmers was the company changed their scale of weights very frequently without notice, and still another that they docked the farmers excessively in weight. The Packing Company, on their part, claimed that the farmers did not fast their hogs a sufficient time previous to weighing. That very many hogs were shipped to them that were in too thin condition, and also that they received hogs that had been fed on fish refuse, and sustained great loss thereby. The remedy proposed was to pay an inspector and weigher appointed that would possess the confidence of both farmers and packers. Such inspector to remain at the packing-house and class and weigh all hogs received. The foregoing matters were thoroughly discussed at the meeting, and though a definite agreement was not arrived at, a much better feeling prevailed, and a committee was appointed to draft an agreement to submit to the Farmers' Institutes for their sanction. This committee have reported recommending that all hogs be weighed and classed at the factory after being dressed, and that an independent inspector and weigher be appointed, and that all hogs shipped to the Company be marked and numbered with metal ear-tags to show who the owner is. If this plan is adopted it will place our bacon industry on a much better footing, and, besides being satisfactory to both parties, will result in a great increase in the production of bacon hogs, and also raise the quality of the product.

Another business of this meeting was the organization of a Central Convention of Farmers' Institutes. This was accomplished as far as it could be, pending an amendment to our Institute Law, which will be made during the present session of our Legislature. This Central Convention will be a kind of advisory board to the local societies, and will be made up of delegates from each of them.

A strong resolution was passed at this meeting, requesting our Government to make an agreement with our Exhibition Association for at least five years, guaranteeing a grant of \$4,000.00 per year for a Maritime Exhibition. If this request is acceded to it will place our exhibition on a much more satisfactory basis, as it will give both the management and exhibitors time to prepare for it and make the holding of it a certainty for at least five years. A grant will be given for it this year, but at present dates have not been fixed. The Exhibition Association, yielding to a strong pressure from the better element of our people, have about decided to exclude all gambling and fake shows from future exhibitions here.

Not much signs of spring yet. Bays and rivers frozen solid, and immense quantities of snow on the roads, but fields are getting somewhat bare.

Prices.—Oats, 34c. per bushel; potatoes, 40c. per bushel; beef, dressed, 7c.; live cattle, 4½c.; hogs, bacon, 5c.; heavy and light, 4½c., live weight; milch cows, \$25 to \$35; horses, in good demand, from \$80 to \$150. Navigation is about being opened to Charlottetown by the winter ice-breaking steamer. W. S.

Ontario Sugar Company.

The annual report presented at the recent meeting of the Berlin factory shareholders showed a small profit on the year's operations. The quality of the beets delivered at the factory last year averaged fifteen per cent. of sugar, and the farmers received an average of \$5 per ton on the whole output. The extraction of pure granulated sugar was 246.6 pounds to the ton, said to be larger than has ever been obtained by any factory in the U. S., outside of California. The total production of sugar was 7,000,000 pounds of a first-class quality. Last year, 28,000 tons of beets were delivered at the factory. President Hugh Blain says the successful production of beet sugar in Canada of the highest grade is now demonstrated, soil and climate being peculiarly favorable.

Westminster Fat-stock and Stallion Show.

From the unanimous expression of those who visited Queen's Park, New Westminster, during the week ending March 18th, the first Spring Stallion and Fat-stock Show held in the Pacific Province was a great success. This being the initial step in an exhibition of the kind, few farmers had a clear idea of what was required to meet the judge's ideal in the various classes, and as the time since the announcement of the show was comparatively short, large entries in all sections could not be expected. Any lack in this respect, however, was more than made up by the interest taken by all who attended in the exhibits and in the lectures on live stock delivered by W. J. Black, "Farmer's Advocate," Winnipeg, who was present by request to judge and lecture on live stock.

The exhibition was formally opened at two o'clock on the afternoon of the 8th, by Capt. Tatlow, Provincial Minister of Agriculture, and immediately afterwards a representative specimen of a dairy cow was brought into the ring, score cards for dairy cattle were passed, and, after an introductory address by the judge, a practical demonstration in judging dairy cattle was given, a large number of those present entering the ring and marking a score-card according to their judgment. Later, the animal was closely criticised and the score-card marked by the judge. The following morning, the cattle entries were judged, and in the afternoon the sheep and swine. The two latter classes were the subjects of score-card criticism and judging, which lasted for nearly three hours.

The evening session was devoted to instruction in judging beef cattle, except that, by special request, a short period was devoted to the dairy cow. At this meeting the crowd was large and the interest intense.

On Thursday, attention was directed entirely to horses. During the afternoon the judging took place, and a large number were in attendance. In the Thoroughbred class, Dalra, a splendid specimen of the breed, was shown by E. H. Rainey, Vancouver. Standard-breds were represented by Colloquy, a big, strong animal shown by J. H. Wilkinson, Chilliwack, and by Palestine, a promising two-year-old owned by E. H. Lennie, New Westminster. Three Clydesdales were shown, G. B. Embree, Delta, being placed first, with Golden Prince, a horse of splendid scale and substance. Shannon Bros., Cloverdale, came in for second with Royal McGregor, an animal of fine quality and action, Royal Jubilee, owned by W. & R. Thompson, Hoggan, standing third. In Suffolks, Jos. Steves, of Steveston, had two entries, and in Shires, Wm. Campbell, Cloverdale, had the only representative.

At the evening meeting, the horses were all brought into the ring, and the judge, in a few words, gave his reasons for placing each animal. This was followed by a lecture and score-card work on heavy horses, and a lecture on light horses. There was a splendid crowd in attendance, and everyone was interested in the proceedings, until eleven o'clock, when adjournment took place.

Friday's programme consisted of a consideration of the dressed carcasses. A cow and steer shown on foot in the ring by Thos. A. Sharp, Experimental Farm, Agassiz, were slaughtered, and, with the assistance of the butchers, Messrs. Woodron, Vancouver, and Reichenbach, New Westminster, some very practical and valuable conclusions were drawn. The same work was carried on with sheep and swine, and the requirements of the market were demonstrated in the presence of the producers of live stock, as it could be done in no other way. The market for live stock in British Columbia at the present time is entirely local, and, owing to the large lumbering and mining industries of the Province, it is likely to remain so. It has, hence, conditions peculiar to itself, and there is no better means whereby the producer may ascertain facts concerning the needs of the consumer than the Fat-stock Show. In the demonstration of mutton carcasses, it was shown that the demand throughout the Province is for a carcass evenly fleshed, but not fat, weighing from fifty to sixty pounds, dressed. In fact, one sheep that while alive was regarded as rather lean, was found to be too fat when dressed. J. H. Wilkinson had the only entries in sheep, but these included a shearing Southdown ewe of almost perfect conformation.

The lessons obtained from the dressed beef carcasses were no less interesting than those of sheep and hogs. The market at present demands a carcass weighing about seven hundred, not particularly fat, but evenly fleshed, with juicy meat. Steers that have been well fed from birth will be ready to meet this demand at two years old.

An effort is being made to secure patronage for a Dominion Exhibition in this city in 1905, and it is to be hoped that the proposition may be favorably considered by the Ottawa authorities. For some time, financial assistance from Canada's capital has not been forthcoming to the live-stock associations, and, in consideration of the urgent need for educational work being carried on west of the Rockies, and the readiness with which it would be appreciated, it is difficult to understand why it should be longer withheld.

The Westminster Fat-stock and Stallion Show is now well established, and next year's show may be well looked forward to by all farmers and stockmen in British Columbia.

Quebec maple sugar and syrup makers, as well as those in Ontario, report a very poor season.

Veterinary Graduates.

The closing exercises of the Ontario Veterinary College for the year 1903-4, were held in Toronto, on Thursday, March 31st, Dr. Andrew Smith, the Principal, presiding. Among others present were: Lieut.-Governor Mortimer Clark, Prof. Baker (Toronto University), Col. Lloyd, D. W. Alexander, Commander Lloyd, and Mr. Lawson, President of the Ontario Veterinary Association. Mr. A. R. Coleman, of Jarvis, Ont., triple winner of first prizes, presented the President with a class group. The medal of the Ontario Veterinary Association was won by Theodore A. Girling, of Wawanesa, Man., for the best general examination.

Following is the list of graduates: Irving S. Alfrod, Sibley, Ill.; Jed. Badgley, Tampico, Ill.; Trueman Bailey, Rosemont, Ont.; Ernest A. Beavers, Perrysville, Ohio; Lester D. Bettinger, Chittenango, N.Y.; James A. Black, Chesley; Charles L. Boissiere, Port of Spain, Trinidad; George R. Brewster, Sunderland; Linus W. Burr, Cameron, Mo.; Duncan C. Bell, Portage la Prairie; Absalom B. Campbell, Fergus; Fred T. Cheney, Lindsay, N.B.; Fred F. Gonsaul, Buffalo, N.Y.; Wm. A. Coyner, Staunton, Va.; Leroy L. Cress, Clinton, Mo.; George A. Cunningham, Brussels; Alexander Currie, Elmvale; A. R. Colman, Jr., Jarvis; J. P. Chisholm, Lisbon, N. Dak.; Charles C. Dauber, Attica, N.Y.; Richard W. Deats, Bardstow, Ky.; John A. Dilley, Aledo, Ill.; Robert R. Donaldson, Argyle, Minn.; Wilbert S. Eddy, Dubuque, Iowa; George D. Fisher, Grandin, N. Dak.; J. Williamson Frank, Victoria, B.C.; Theodore A. Girling, Wawanesa; Charles W. Grantham, Ladoga, Ind.; Ralph C. Harris, Jackson, Mich.; Archibald Howden, Lewiston Junction, Maine; George A. Johnston, Lexington, Neb.; Herbert R. Jones, Newburg, N.Y.; Chas. J. Korinck, Cottage Grove, Oregon; Theodore F. Krey, Brooklyn, N.Y.; E. G. Lathrop, Weston, Ohio; Andrew A. Lockhart, Rapid City, Man.; Ira B. Ludington, Holley, N.Y.; Daniel A. McArthur, Lauder, Man.; Clarence L. McConkey, Tedrow, Ohio; Clarence McDowell, Watertown, S. Dak.; Robert McKenzie, Jarvis; Henry E. Maguire, Waterloo, P.Q.; Alex. M. Mair, Seagrave; Harvey G. Malloy, Benmiller; Walter Martin, Pocahontas, Mo.; Chas. C. Mix, New Berlin, N.Y.; Albert A. Munn, Cambridge, Neb.; Samuel Murray, Dauphin; Samuel T. P. Nichol, Virden; Fred D. Orr, Caro, Mich.; Edwin J. Peck, Buffalo, N.Y.; Clark A. Philips, Wallaceburg; Olaf J. Reed, Lion's Head; Samuel Robinson, Brandon; Thomas Scrivener, Edgeley; A. B. Sexsmith, Sidney, N.Y.; Ashley C. Spencer, Fowler, Mich.; Curtis J. Spring, Millersburg, Ohio; William P. Stuart, Rapid City; William Symes, Hutchinson, Kansas; Raymond Tiedt, Argyle, Minn.; Andrew M. Van Cleaf, Bloomfield; William W. Warnock, Aledo, Ill.; Clinton B. Weagly, Cave-town, Maryland; Oral W. Winters, Arthur, Ill.; T. Z. Woods, Winnipeg; Albert L. Wright, Columbus, Wis.; W. Wade Zirkle, Forestville, Va.

Ottawa Notes.

The Central Canada Exhibition Association has abolished the rule excluding animals from competition for prizes unless the exhibitor had owned them for at least ten days. The revision of the prize-list for the 1904 fair is almost completed. A class has been provided for Guernsey cattle. No more prizes will be offered for Merino sheep, but a new class will be added to this department for local fat sheep. In the swine department, Duroc-Jerseys and Poland-Chinas have been expunged from the list. A special class for bacon hogs has been added. The Cheviot sheep class, which was tried for the first time last year, was only a moderate success, but it will be given another trial. At the request of a large number of breeders, the horse department has been enlarged by the addition of a new class for Shire horses. In future no extra charges will be made for foals entered with dams.

The refusal of the Canada Atlantic Railway Company to project a siding into the grounds has perplexed the fair directors. Exhibitors have repeatedly asked for this accommodation, and last year the C. C. E. A. assured them they would get their request before another year. The Canada Atlantic main line is only three-quarters of a mile from the grounds, but the company, nevertheless, refused to make the venture. The exhibition men offered to pay interest on the investment, but this did not avail. A connection with the C. P. R. would be much more expensive; it is scarcely probable that company will be approached.

Dr. Charles Saunders, Experimentalist in the Grain Department at the Experimental Farm, is establishing a new kind of museum at the Farm, which will display interesting samples of seed grain. He has had an opportunity to handle only one crop so far, grown on the Central Experimental Farm. He tested two new English varieties of oats—Excelsior (black) and Storm King (white), and reports them unsatisfactory. The Banner is much finer and more delicate, but yields heavier. The new kinds are attractive in appearance, on account of their vigorous growth, but millers reject them for coarseness.

Mr. J. A. Ruddick, Chief of the Dairy Division of the Dominion Department of Agriculture,

is writing a report of his recent trip to the Bermudas and Jamaica. He spent seven weeks investigating the market conditions in these islands, and will be able to tell Canada butter and cheese makers how best to cater to this trade. He found a strong Imperial sentiment, which means for Canadian goods a preference. Much dairy produce, hay and oats, and from Nova Scotia, sheep, are already sold in the Bermudas and Jamaica by Canadian exporters, says Mr. Ruddick. Professor J. W. Robertson accompanied Mr. Ruddick in unofficial capacity. He was travelling for his health, and is now thoroughly recuperated.

Farmers in the Ottawa Valley are three weeks later than last year in beginning their spring cultivation.

Peel Co., Ont.

At this date, April 1st, the ground is pretty well covered with snow, and, from all appearances, seeding will be backward. Those who don't grind their grain at the barn are taking advantage of the sleighing by running a few loads of chop to the mill, so they will not have to drop off work during seeding time to provide for the wants of the stock. We notice where gravel has been applied the road is hard and dry. This seems to be a costly method of road improvement, but it is the only means of procuring good roads. It was feared during the winter that ice had done considerable damage to wheat, but later reports are that it is quite green and in a healthy condition. Clover also managed to pull through the winter all right so far.

There has been considerable changing of property this spring, and auction sales are very numerous. Stock, on the whole, have been bringing very fair prices. Farm horses are scarce, and are fetching from \$150 to \$180. Milch cows sell at \$40 to \$50, and poultry is also in active demand. There seems to be the same difficulty this season as last in securing farm laborers. It will be more than ever necessary for employer and employee to maintain a mutual consideration for each other. Good men are getting from \$18 to \$25, according to the number of months engaged, and the experience and capability of the man.

In this district, pruning is generally practiced in the spring, when the fruit-raiser is not pressed by work, and by doing it at this season better results have been obtained. The instructions in pruning given in the "Advocate" for March 24th, by W. T. Macoun, Experimental Farm, Ottawa, are sound and correct.

Most farmers in this district practice hauling out their manure in the winter, which subject has recently been well discussed in these columns. It not only reduces labor in the summer, but better results are derived by following this method. It is expected that numerous basement barns will be constructed this summer, judging from the amount of material drawn by farmers during the winter.

Immense floods of water and huge blockades of ice have occurred in the rivers, but no serious damage has been done or is anticipated.

It is stated by reliable bee-raisers that there will be a scarcity of honey this season, as there will be a shortage of honeybees, the bees having been badly injured by the severe winter, except those kept in cellars, which appear to be mostly living. As this is a great beekeeping district, it will be a severe blow to the owners, as it is estimated that fifty per cent. of the bees have perished. M. J. SANFORD.

Successful Co-operation.

The Board of Directors of the Farmers' Co-operative Shipping Association, representing nearly 4,000 farmers of Missouri, Kansas, Nebraska, and Oklahoma, met at Kansas City last week, and declared a dividend of 8 per cent. The association has a capital of \$200,000, buys, sells and handles grain and other farm products on consignment for stockholders only. It owns 19 elevators, and buys grain directly from farmers at 47 stations in the four States. It handled up to March 5th over 2,000 cars of grain. Of its 4,000 members, over 3,900 are farmers, with paid-up stock of \$85,000. The net earnings of the company are about 80 per cent. on capital, but all over 8 per cent. goes back to the stockholders. At first the Board of Trade bitterly opposed the new enterprise, and refused membership to its managers, but all that is now changed and the best of feeling prevails.

Spraying Demonstrations.

Mr. W. A. MacKinnon, Chief of the Fruit Division of the Dominion Department of Agriculture, has been making arrangements to conduct spraying demonstrations again this year. One outfit will operate in Ontario about Ingersoll, and another in Nova Scotia. As a result of the demonstration last year in the Ingersoll district, the fruit-growers are very enthusiastic in their approval of the practice of spraying, as carried out by the Department. Orchardists in many districts would now like to see someone undertake spraying operations for the season, similar to the way in which threshing is now done.

Peterboro Sugar Company.

Mr. D. A. Gordon, manager of the Wallaceburg Sugar Co., has offered to invest \$100,000 in stock in the proposed Peterboro sugar factory on condition that the town guarantee bonds to an equal amount and fix the assessment for ten years at \$10,000. The town council has agreed, and the ratepayers will vote on the proposition on May 5th. The machinery for the factory is coming from Holland.

MARKETS.

There is nothing unusual to report from the traders this week. Live-stock supplies continue to meet the demand. Hogs are still quoted \$4.75 at Toronto, although competing companies at other points pay as much direct from wagons. Montreal hog prices receded considerably, but still remain well above Toronto's. Horses are very active. Grain prices are inclined to be firmer, though there is little doing. Dealers in dairy produce are bearing the market for cheese, claiming there are greater supplies of old in the country than can be cleared out before the new makes come in. Potatoes are wanted badly.

Toronto quotations are:

LIVE STOCK.

Cattle.—Exporters—Best loads, \$4.70 to \$5.00; good, \$4.50 to \$4.70.
Export Bulls.—Choice quality, \$3.50 to \$3.75.
Export cows, \$3.50 to \$3.75.
Butchers' Cattle.—Choice picked lots of butchers', 1,000 to 1,500 lbs. each, equal in quality to best exporters, \$4.35 to \$4.50, good, \$4 to \$4.25; fair to good, \$3.60 to \$3.85; common, \$3.25 to \$3.50; rough to inferior, \$3; canners, \$2.50 to \$2.75.
Feeders.—Steers of good quality, 1,050 to 1,150 lbs. each, \$4 to \$4.25 per cwt.
Stockers.—One-year to two-year old steers, 400 to 700 lbs. each, \$3 to \$3.25.
Cows.—Milch cows and springers, \$30 to \$55.
Calves.—\$2 to \$10 each, or from \$3 to \$5.25 per cwt.
Sheep.—\$4 to \$4.25 per cwt. for ewes, bucks \$3 to \$3.50.
Yearling Lambs.—Grain-fed, choice ewes and wethers for export, \$5.60 to \$6.10; barnyard lambs, \$4.50 to \$5.50.
Spring Lambs.—Good spring lambs are worth \$3 to \$5 each.
Hogs.—Straight loads of hogs, 150 to 200 lbs. in weight, \$4.75 per cwt., fed and watered.

GRAIN AND PRODUCE.

Toronto Wholesale Prices.

Wheat.—Is steady at 92c. to 93c. for No. 2 red and white, middle freights or east; goose, 83c. for No. 2, east; spring, 88c. for No. 3, east. Manitoba—No. 1 hard, \$1; No. 1 northern, 99c.; No. 2 northern, 95c., at Georgian Bay ports, and six cents more for grinding in transit.
Barley.—43c. for No. 2, 41c. for No. 3 extra, and 39c. for No. 3, west or east.
Buckwheat.—Is quiet at 51c. for No. 2, middle freights, and 50c. high freights, west.
Rye.—59c. for No. 3, west or east.
Corn.—Canada mixed is quoted at 39c., and yellow at 40c., f. o. b. cars, west. American No. 2 yellow, 56c.; No. 3 yellow, 55c., and No. 3 mixed, 54c., in car lots on the track, Toronto.
Oats.—Steady, at 32c. for No. 1 white, and 31c. for No. 2 white, east. No. 3 white are quoted at 31c., middle freights.
Peas.—65c. to 66c. for No. 2, west or east.
Mill Feed.—\$17 for cars of shorts; bran, \$16, in bulk, middle freights, east or west. Manitoba Mill Feed—\$21 for cars of shorts, and \$20 for bran, sacks included, Toronto freights.
Beans are quoted, \$1.65 to \$1.75 for hand-picked, \$1.50 to \$1.60 for prime, and \$1 for under grades.
Seeds.—Jobbers report the demand as fair. Quota-

tions are: alsike, \$4.25 to \$7.80; red clover, \$5.40 to \$5.75; and timothy, \$1.50 to \$2.75, the latter for flail-thrashed, all per bushel.

Potatoes.—85c. to 90c. per bag.

Baled Hay.—The supply continues fairly equal to the demand, and the market is quoted at \$9.50 per ton for car lots, on track here.

Baled Straw.—\$5.50 per ton for cars lots, on track here.

Butter—

Creamery 20c. to 22c.
 Creamery, solids 19c. to 20c.
 Dairy, pound rolls, choice 14c. to 16c.

Cheese.—Prices for old are quoted lower, at 10c. to 10½c. per lb. for large, and 10c. to 10½c. for twins.

Eggs.—Quotations are about steady at 14c. to 14½c. per dozen.

Dressed Hogs.—Rail lots, \$6 per cwt. for light-weights, and \$5.75 for heavies.

Montreal Wholesale Prices.

Owing to the fact that England is flooded with Russian oats at much lower prices than Canadians can be offered, the market here is very depressed. There is always some demand for local consumption at current prices. Sellers are offering at 37½c., car lots in store, for No. 2; 36½c. for No. 3, Montreal inspection, and 35½c. for Peterboro No. 3.

Flour.—Millers report a firm market, the demand being active. Manitoba patents, \$5.40; strong bakers', \$5.10; winter wheat patents, \$5 to \$5.25; straight rollers, \$4.75 to \$5; straight rollers, in bags, \$2.25 to \$2.35.

Feed.—Bran and shorts are firm and demand good. Manitoba bran, in bags, \$19 to \$20; shorts, \$21 per ton; Ontario bran, in bulk, \$19 to \$20; shorts, \$20.50 to \$21.50; moultrie, \$26 to \$28 per ton, as to quality.

Hay.—The market is steady; No. 1, \$10 to \$11; No. 2, \$8.50 to \$9.50; clover, mixed, \$7.50 to \$8.

Beans.—Choice primes, \$1.45 per bushel; \$1.40 in car lots.

Provisions.—Fresh-killed abattoir hogs, \$7 to \$7.25; country-dressed hogs, \$7; live hogs, \$5 to \$5.12.

Eggs.—New-laid, 15c. to 15½c.

Butter.—Winter creamery, 19c. to 19½c.; new-made, 19½c. to 20c.; full-grass, fall makes, 18½c. to 21½c., according to quality; western dairy, 15c. to 15½c.

Cheese.—Ontario, 9c. to 10c.; townships, 9½c. to 10c.

Retail prices, Toronto street market:

Wheat, white \$0.98
 Wheat, red 97
 Wheat, goose 83 to 84
 Wheat, spring 93
 Oats 36½ to 37
 Barley 48 to 48½
 Rye 62
 Buckwheat 46
 Peas 65
 Hay, No. 1 timothy 10.00 to 12.00
 Hay, mixed or clover 7.00 to 9.00
 Dressed hogs, light, cwt. 6.25 to 6.75
 Dressed hogs, heavy 6.00
 Butter 20 to 22
 Eggs, new-laid 16 to 19
 Fowls, per lb. 6 to 8
 Spring chickens, per pair 75 to 1.50
 Spring chickens, per pound 13 to 16
 Geese, per pound 10 to 14
 Turkeys, per pound 15 to 18
 Apples, per barrel 1.50 to 2.50
 Potatoes, per bag 1.10 to 1.15

Horse Market.

Two hundred and forty horses were sold at The Repository, Toronto, during the last week. They consisted mostly of general-purpose and draft mares and geldings, and were a good average class, many of them being exceptionally fine animals. The purchasers were from different parts of the Province, and a few from the Northwest.

The lumber horses sold on Friday belonging to Mr. Cashin were a very good lot, and sold from \$55.00, for a useful black mare, up to \$380.00, for a five and six year old pair of geldings weighing about 3,000 pounds.

The following is Walter Harland Smith's weekly report of prevailing prices:

Single roadsters, 15 to 16 hands \$130 to \$200
 Single cobs and carriage horses, 15 to 16.1 hands 150 to 275
 Matched pairs carriage horses, 15 to 16.1 hands 325 to 450
 Delivery horses, 1,100 to 1,200 lbs. 145 to 175
 General-purpose and express horses, 1,200 to 1,350 lbs. 140 to 185
 Draft horses, 1,350 to 1,750 lbs. 150 to 235
 Serviceable second-hand workers 50 to 120
 Serviceable second-hand drivers 75 to 125
 Business was good.

Montreal Markets.

Montreal—Choice beefs, \$4.75 per cwt.; mediums, \$4 to \$4.25; common stock, \$2.50 to \$3.50. Good milch cows, as high as \$70. Calves, \$1.50 to \$2.50 each; good veals, \$5 to \$10 each. Yearling sheep, shorn, 4c. to 4½c. per lb.; spring lambs, \$3 to \$4.50 each. Hogs, \$5.

Buffalo Markets.

East Buffalo.—Cattle—Prime steers, \$5 to \$5.35; shipping, \$4.40 to \$4.85; butchers', \$4 to \$4.75. Veals, \$4.50 to \$6.50. Hogs—Heavy, \$5.70 to \$5.75; mixed, \$5.65 to \$5.70; Yorkers, \$5.50 to \$5.65. Sheep and Lambs—Lambs, \$5 to \$7; yearlings, \$6 to \$6.25; wethers, \$5.50 to \$5.80; ewes, \$4.75 to \$5.25.

British Markets.

London.—Live cattle firmer at 10½c. to 12c. per lb. for steers, dressed weight; refrigerator beef steady at 8½c. to 8¾c. Sheep slow, 12½c. to 13½c. per lb.

Chicago Markets.

Chicago.—Cattle—Good to prime steers, \$5.10 to \$5.65; poor to medium, \$3.75 to \$5; stockers and feeders, \$2.75 to \$4.25. Hogs—Mixed and butchers', \$5.10 to \$5.35; good to choice, heavy, \$5.25 to \$5.35. Sheep—Good to choice wethers, \$4.75 to \$5.65; fair to choice mixed, \$3.50 to \$4.60; Western sheep, \$4.40 to \$5.30; native lambs, \$4 to \$5.75.

Live-stock Shipments.

Statement of live stock shipped from the ports of St. John and Halifax, for week ending April 11th, 1904, as compiled by Robert Bickerdike & Co., Ltd., Dominion Live-stock Exchange, Montreal: Cattle, 1,955; sheep, 449.

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HOME MAGAZINE

"The current of life runs every way,
To the bosom of God's great ocean;
Don't set your force 'gainst the river's
course,
And think to alter its motion;
Don't waste a curse on the universe;
Remember it lived before you;
Don't butt at the storm with your puny
form.
But bend, and let it fly o'er you."

A FAIR BARBARIAN.

BY FRANCES HODGSON BURNETT.

CHAPTER XXII.—Continued.

And if this had been the case in those early days, imagine what she felt now, when—ah, well!—when her friendship had had time and opportunity to become a much deeper sentiment. Must it be confessed that she had seen Mr. Burmiston even oftener than Octavia and Miss Belinda knew of? Of course it had all been quite accidental; but it had happened that now and then, when she had been taking a quiet walk in the lanes about Oldclough, she had encountered a gentleman, who had dismounted, and led his horse by the bridle, as he sauntered by her side. She had always been very timid at such times, and had felt rather like a criminal; but Mr. Burmiston had not been timid at all, and would, indeed, as soon have met Lady Theobald as not, for which courage his companion admired him more than ever. It was not very long before to be with this hero reassured her, and made her feel stronger and more self-reliant. She was never afraid to open her soft little heart to him, and show him innocently all its goodness, and ignorance of worldliness. She warmed and brightened under his kindly influence, and was often surprised in secret at her own simple readiness of wit and speech.

"It is odd that I am such a different girl when—I am with you," she said to him one day. "I even make little jokes. I never should think of making even the tiniest joke before grandma. Somehow, she never seems quite to understand jokes. She never laughs at them. You always laugh, and I am sure it is very kind of you to encourage me so; but you must not encourage me too much, or I might forget, and make a little joke at dinner, and I think, if I did, she would choke over her soup."

Perhaps, when she dressed her hair, and adorned herself with pale pink bows and like appurtenances, this artful young person had privately in mind other beholders than Mrs. Burnham, and other commendation than that to be bestowed by that most excellent matron.

"Do you mind my telling you that you have put on an enchanted garment?" said Mr. Burmiston, the first time they met when she wore one of the old-new gowns. "I thought I knew before how!"

"I don't mind it at all," said Lucia, blushing brilliantly. "I rather like it. It rewards me for my industry. My hair is dressed in a new way. I hope you like that too. Grandma does not."

It had been Lady Theobald's habit to treat Lucia severely from a sense of duty. Her manner toward her had always rather the tone of implying that she was naturally at fault, and yet her ladyship could not have told wherein she wished the girl changed. In the good old school in which my lady had been trained, it was customary to regard young people as weak, foolish, and, if left to their own desires, frequently sin-

ful. Lucia had not been left to her own desires. She had been taught to view herself as rather a bad case, and to feel that she was far from being what her relatives had a right to expect. To be thrown with a person who did not find her silly or dull or commonplace, was a new experience.

"If I had been clever," Lucia said once to Mr. Burmiston,—"if I had been clever, perhaps grandma would have been more satisfied with me. I have often wished I had been clever."

"If you had been a boy," replied Mr. Burmiston? rather grimly, "and had squandered her money, and run into debt, and lullied her, you would have been her idol, and she would have pinched and starved herself to supply your highness's extravagance."

When the garden-party rumor began to take definite form, and there was no doubt as to Mr. Burmiston's intentions, a discussion arose at once, and went on in every genteel parlor. Would Lady Theobald allow Lucia to go? and, if she did allow her, would not such a course appear very pointed indeed? It was universally decided that it would appear pointed, but that Lady Theobald would not mind that in the least, and perhaps would rather enjoy it than otherwise; and it was thought Lucia would not go. And it is very likely that Lucia would have remained at home, if it had not been for the influence of Mr. Francis Barold.

Making a call at Oldclough, he found his august relative in a very majestic mood, and she applied to him again for information.

"Perhaps," she said, "you may be able to tell me whether it is true that Belinda Bassett—Belinda Bassett," with emphasis, "has been invited by Mr. Burmiston to assist him to receive his guests."

"Yes, it is true," was the reply. "I think I advised it myself. Burmiston is fond of her. They are great friends. Man needs a woman at such times."

"And he chose Belinda Bassett?"

"In the first place, he is on friendly terms with her, as I said before," replied Barold; "in the second, she's just what he wants—well-bred, kind-hearted, not likely to make rows, et cetera." There was a slight pause before he finished, adding quietly, "He's not the man to submit to being refused—Burmiston."

Lady Theobald did not reply, or raise her eyes from her work; she knew he was looking at her with calm fixedness, through the glass he held in his place so cleverly; and she detested this more than anything else, perhaps because she was invariably quelled by it, and found she had nothing to say.

He did not address her again immediately, but turned to Lucia, dropping the eyeglass, and resuming his normal condition.

"You will go, of course?" he said.

Lucia glanced across at my lady.

"I—do not know. Grandma—"

"Oh!" interposed Barold, "you must go. There is no reason for your refusing the invitation, unless you wish to imply something unpleasant—which is, of course, out of the question."

"But there may be reasons"—began her ladyship.

"Burmiston is my friend," put in Barold, in his coolest tone; "and I am your relative, which would make my position in his house a delicate one, if he has offended you."

When Lucia saw Octavia again, she was able to tell her that they had received invitations to the fete, and that Lady Theobald accepted them.

"She has not spoken a word to me

about it, but she has accepted them," said Lucia. "I don't quite understand her lately, Octavia. She must be very fond of Francis Barold. He never gives way to her in the least, and she always seems to submit to him. I know she would not let me go, if he had not insisted on it, in that taking-it-for-granted way of his."

Naturally Mr. Burmiston's fete caused great excitement. Miss Chickie was never so busy in her life, and there were rumors that her feelings had been outraged by the discovery that Mrs. Burnham had sent to Harriford for costumes for her daughters.

"Slowbridge is changing, mem," said Miss Chickie, with brilliant sarcasm. "Our ladies is led in their fashions by a Nevada young person. We're improving most rapid—more rapid than I'd ever dared to hope. Do you prefer a frill, or a flounce, mem?"

Octavia was in great good spirits at the prospect of the gayeties in question. She had been in remarkably good spirits for some weeks. She had received letters from Nevada, containing good news she said. Shares had gone up again; and her father had almost settled his affairs, and it would not be long before he would come to England. She looked so exhilarated over the matter, that Lucia felt a little aggrieved.

"Will you be so glad to leave us, Octavia?" she asked. "We shall not be so glad to let you go. We have grown very fond of you."

"I shall be sorry to leave you, and aunt Belinda is going with us. You don't expect me to be very fond of Slowbridge, do you, and to be sorry I can't take Mrs. Burnham—and the rest?"

Barold was present when she made this speech, and it rather rankled.

"Am I one of 'the rest'?" he inquired, the first time he found himself alone with her. He was sufficiently piqued to forget his usual hauteur and discretion.

"Would you like to be?" she said.

"Oh! Very much—very much—naturally," he replied severely.

They were standing near a rose-bush in the garden; and she plucked a rose, and regarded it with deep interest.

"Well," she said, next, "I must say I think I shouldn't have had such a good time if you hadn't been here. You have made it livelier."

"Tha-anks," he remarked. "You are most kind."

"Oh!" she answered, "it's true. If it wasn't, I shouldn't say it. You and Mr. Burmiston and Mr. Poppleton have certainly made it livelier."

He went home in such a bad humor that his host, who was rather happier than usual, commented upon his grave aspect at dinner.

"You look as if you had heard ill news, old fellow," he said. "What's up?"

"Oh, nothing!" he was answered sardonically; "nothing whatever—unless that I have been rather snubbed by a young lady from Nevada."

"Ah!" with great seriousness: that's rather cool, isn't it?"

"It's her little way," said Barold. "It seems to be one of the customs of Nevada."

(To be continued.)

"Did the minister say anything comforting?" asked the neighbor of the widow recently bereaved. "Indeed, he didn't," was the quick reply. "He said my husband was better off."

Travelling Notes.

(Continued.)

Florence.—One cannot but be struck with the spirit of a great deal of the ancient painting exhibited here, yet at the same time there is often shown a great lack of knowledge of anatomy, and this especially as regards hands and feet—and infants. We have seen some of the most woodenly unnatural-looking babies. The Accademia della Belle Arti has a collection of works by Tuscan artists, both ancient and modern. Here in one room are a great many by Fra Angelico. As an angel depicter he was wonderfully clever—beautiful faces, graceful postures and delicate drapery all combined to make him excel in this respect. It is said that he used always to pray before he began to paint, that the Holy Spirit would guide him, so he never altered anything that he had done, as he considered it was the best of which he was capable. His "Last Judgment" was particularly interesting, as showing his opinions of heaven and hell. Alone in the heavens, Christ was represented in Glory, surrounded by a wreath of the usual lovely angel faces. Below in front were the open tombs, with the dead arising; on the right were the blessed, being led away to glorious abodes; while on the left were the wicked, being seized by awful black demons of curious shapes, some of these carrying them in their mouths, both hands, and even ears, while other evildoers were dumped into curious flat looking tubs, probably meant for caldrons. All the churches are wonderfully rich in paintings or frescoes, often both, by the best artists. Quite close to us is the Westminster Abbey of Florence. It is a most imposing building inside, with its beautiful columns and lovely stained windows and sculptures. Here Michael Angelo is buried, and a fine monument is erected over his remains. Here also are monuments to Dante, Alfieri and Galileo. At the Santa Maria Novella there are some wonderful cloisters containing very faded frescoes done by the school of Giotto; two in a fair state of preservation are said to have been done by Giotto himself, and one, representing the meeting of Anna and Joachim at the Beautiful Gate, are worthy of such a master. The beautiful dignity of the two figures, their lovely faces and fine draperies, recalled one again and again. Here in these cloisters is a famous chapel, called the Spanish Chapel, as it was used for the Spanish attendants of Eleanor of Toledo, wife of Cosimo I. The walls are covered with frescoes, illustrating scenes from the lives of many of the Dominicans, and showing their influence on public life in Florence. One scene was especially curious. It was "The Church Militant." Above was Heaven, with Christ in Glory, and Peter at the gate with the keys admitting the good. Lower down the Dominican monks were depicted showing the right way to live, and adjuring their followers to flee from the pomps and vanities of the wicked world, which, curiously enough, were represented by a woman nursing a monkey, a man playing a harp, others plucking fruit and dancing, while still lower more Dominicans were painted as black

and white dogs hunting wolves, the heretics.

Talking of frescoes, though, the most wonderful that I have seen so far is Perugino's "Crucifixion." It is painted on the wall of the chapter house belonging to an ancient convent, and is in three parts. The central part contains the crucifixion, with Mary Magdalene kneeling at the foot of the cross. That to the right depicts St. Thomas and St. Benedict; on the left the Virgin and St. Bernard. All have a background of green hills, while the central one also shows a beautiful winding river running through a quiet meadow, and on its banks a little country village. The figure of Christ is not so wonderful, though the droop of the head is very good, but it is the emotions depicted on the faces of the watchers that are so stirring. Magdalene's eyes are filled

with tears, and her face is full of penitence. St. Bernard and St. John, the one on his knees, the other standing, are looking upward, with faces full of sorrow, sense of loss, and admiration. The Virgin is as if benumbed with grief. St. Bernard was much less interesting, so I gave most of my attention to the other figures. The quiet surroundings of the convent added to the solemnity of the scene, and a young American girl who was with me remarked, that if she were a Roman Catholic she would rather come to worship here than before many of the altars in the churches. Now you will all have heard enough of Florence, so I must stop, though one might go on for hours, writing of the interesting scenes that surround us.

ELEANOR.

HEALTH IN THE HOME.

By a Trained Nurse

The Care of the Baby.

In dressing the baby do not put on the little flannel band so tight that the child cannot expand a little after feeding; it causes pain. A baby waking from sleep should be taken up as soon as he cries—it is his only means of calling attention to himself, his wants and troubles. If he is immediately put to rights very likely he will be quiet and contented again, but to wait each time until he is fairly screaming is to eventually have a cross baby. Hard crying for a long time may cause internal injury. Sharp screams, accompanied by drawing up the legs, mean pain in the bowels, caused by gas, and may be relieved by hot flannels or a little peppermint water (if possible prepared by the druggist in the right strength). Sometimes a change of position, such as laying the child on its stomach over your shoulder, helps to expel the gas. When other things have failed, half a teaspoon of castor oil may be given, and it will go down more easily if the spoon is dipped in hot water before using, care being taken not to use it too hot. It prevents the oil from clinging to the spoon. Of course there is a limit to the use of castor oil. The way to avoid the trouble is to be extremely regular and clean about the feeding of the child, and if it does not thrive on the food it has, consult the doctor.

It should be made a matter of special care to see that

THE BABY BREATHES COMFORTABLY THROUGH ITS NOSE.

A slight difficulty resulting from cold in the head may be relieved by putting vaseline or tallow on the nose, especially over the bridge, and greasing the nostrils a little also on the inside. A persistent difficulty calls for the doctor's care, and should be reported to him at once. Shoes, especially leather ones, should be taken off, and all bands around the body loosened when a child lies down to sleep in the daytime. The feet are made to perspire by the shoes, and the bands interfere with the proper relaxation of the muscles, so that he wakes restless and cross, instead of refreshed.

IT IS NO LESS THAN WICKED to threaten a child with the "Bogy" or "Black man," or anything else of the kind to induce obedience, or to "box his ears." His head should be most carefully guarded from blows. He should not be slapped upon his back, particularly between the shoulder blades. Physical pun-

ishment is to be deprecated anyway, especially as the child very often is whipped for some bad habit that his parents have allowed him to fall into by not taking proper care from the beginning. It is the child's right to be protected so far as possible from acquiring bad habits. The fear of the rod makes children liars, and the indignity involved in its use lessens that respect for themselves, and, consequently, for others, which is one of the great safeguards of their future, and should be assiduously cultivated. I have seen persons tease a child for the amusement of seeing him fight back, and when he became quite unmanageable under this treatment, whip him to restore his good temper. Such persons merit contempt, but are usually well satisfied with themselves. They stop the crying with a handful of candy, and call it square. I do not say that a child should never be whipped, but the question should not be decided in a moment of irritation, and the person who administers the punishment ought to realize that a responsibility is incurred in so doing. I do not believe it is necessary with many children, and should be the last resort.

Children should have

WHOLESOME AND REGULAR MEALS.

Milk, eggs, well-cooked cereals and potatoes, and other vegetables according to the age of the child; meat not more than once a day, and that at the noon meal. Beef, lamb and chicken are good; milk and suet puddings, whole wheat bread and rye bread 24 hours old, soups, cocoa, cornstarches, fruit, homemade preserves, cake, etc. No tea, coffee or beer; no whiskey or stimulants, except by order of the physician; no pepper, mustard, pickles, or other condiments. No meat of any kind should be given until the child is over two years old, and then only a very little, or better, none until he is five or six. It is better to give the meat gravy from the dish, not made gravy. This really contains the most nourishing part of the meat, and is readily digested. It is better not to serve milk on their fruit, and not much sugar. The last meal at night should be light in character, and the child should go to bed early. Babies should be put to bed at six o'clock, and all children not later than half-past seven, under ordinary conditions. In some places, where the summer heat is intense, it is better to allow them to stay up a little later at night, and see that they sleep in the afternoon, but ordinarily children ought, like young animals, to go to bed with the sun, and in warm weather live as much as possible in the fresh air.

ALICE G. OWEN.



On the Casquets.

(By Jim's Wife.)

It was Holy Week, I remember—
The week before Easter Day—
They were ringing the bells for service
In the churches round our way,
So peaceful-like and quiet,
When Jim brought home to me
The news of an awful shipwreck
Out in the channel sea.
The wreck of the Steamer Stella—
Maybe you remember it plain,
But the tale can't be told too often
And so I tell it again.
And may it be told by our children,
When we are under the sod,
In the memory of a woman,
And to the glory of God!

The Stella left Southampton
One shiny April day,
Bound for the Channel Islands,
For Jersey—where they say
There are months of golden summer
And apples and plums in piles,
And hedges of roses and fuchsias
A-blooming for miles and miles!
I've never been to Jersey,
And I never shall go there;
For I've never been on a steamer,
And if you paid my fare,
And gave me something over,
I shouldn't want to go!
Many's the time Jim has asked me,
And I've always answered, "No."
While I can have an outing
On a bit of solid land
I won't be rolled topsy-turvy!
And I never can understand
How other folks enjoy it!

Yet there on the ship that day
Men, women and little children
Were merry at heart and gay,
All of them looking forward
To holiday and rest.
The Stella was strong and steady,
Her crew were of the best,
And no one thought of danger,
Till swiftly over the sea
Like a cloud of smoke a-rolling
The fog came suddenly.
Fogs are bad enough in London,
They're the terror of the wave.
I've heard that sailors hate them
And fear them like the grave.
They steal across the ocean
Faster than rain-scuds run,
And muffle the wind into silence
And blot out the light of the sun.
Like the mouth of some grim sea-
monster

Rising with teeth a-drip,
The jaws of the sea-fog opened
And swallowed up the ship!
Into the deadly vapor,
That hides the reefs and shoals,
The Stella passed with her cargo
Of nigh two hundred souls!
Did she stop or slow her engines?
Did she creep along the sea
Like a snail? Like a lame duck pad-
dling?—
For that's how it ought to be
When fog is on the water.
No; 'tis a moral crime
For ships in these days of hurry
To fail to keep their time.
The captain didn't slacken,
He steamed full speed ahead—
Peace to his soul! he is sleeping
Till the sea gives up its dead.
But woe to the great, rich companies
For whom such things are done.
As I say to Jim, I'd try them
For manslaughter, every one.
On rushed the Stella, blindfold,
Laden with human life,
Father and mother and brother,
Sister and husband and wife.
Helpless, poor souls, as dummies
Shut in a wooden box,
Till the keel of the flying vessel
Crashed on the "Casquet Rocks."
Oh, Lord! Those sharp rock hatchets!
They hewed her and hacked her in two,
Ripping up her strong steel plating
As I'd cut butter through,
Rent her and wrenched her asunder
And tore away plank from plank:
In six, mad, awful minutes
The trim screw steamer sank.
Sank! Can you think of those minutes?
And yet there were deeds done then
That will shine to the endless honor

Of Christian women and men,
Deeds done, and last words spoken—
Glorious! Wonderful! True!
Though it's only of just one woman
That I want to speak to you.
The Stewardess—Mrs. Rogers—
She served for years at sea
And she wanted to retire,
And had said that this would be
Her last run with the Stella,
For she meant to settle down
With her children at Southampton—
She'd a little home in the town.
I know no more about her,
Except that I've been told
That she was nice to look at
And wasn't very old,
And went about her duties
In a pleasant sort of way,
Like scores of quiet women
Who pass us any day.
When the vessel struck she was helping
The sick folk down below.
They clung to her, poor creatures,
As I should have done, I know.
And she spoke to them brave and steady,
And through the shock of the wreck,
She held them back from panic,
And brought them out on deck,
And bound the life-belts round them.
One lady stood alone,
Without a belt; the Stewardess
Unstrapped her own! Her own!
And forced it on the stranger.
"Quick, madam! You can't choose!
You're in my charge!" she says.
"You must have it, there isn't a
second to lose."

Then she took the lady and pushed her
Into the crowded boat.
"Get in yourself!" roared the sailors,
Though they scarce could keep afloat;
"Jump in for your life, Mrs. Rogers!"
One thought of the English shore,
Of the children who were waiting
For her step at the cottage door,
One look at that choking boat-load,
"No!" came the answer, high,
"You are full enough! I should sink
you,
Good-bye to all—good-bye!"
Then she turned towards death, as fear-
less
As I'd walk down the street.
"Lord take me," they heard her say-
ing.
And the ship sunk under her feet.

The body of Mary Rogers
Went down to its deep sea-grave,
But if ever a crown was waiting
For the faithful and the brave,
If the angels were ever ready
To carry a soul away,
They carried the soul of that woman
To Paradise that day.
"Lord take me!" those words will
haunt me
Till the day I come to die,
Not, "Save me, Lord!" or "Help
me!"
As some of us might cry
From the deck of a foundering vessel,
But "take me!" Oh, great and blest,
And strong as the wing of an angel,
Was the faith in this woman's breast.
—From Sunday Strand.

A New Leaf.

He came to my desk with a quivering
lip—
The lesson was done:
"Dear teacher, I want a new leaf," he
said;
"I have spoiled this one."
In place of the leaf so stained and
blotted,
I gave him a new one, all unspotted,
And into his sad eyes smiled—
"Do better, now, my child."
I went to the throne with a quivering
soul—
The old year was done:
"Dear Father, hast thou a new leaf for
me?
I have spoiled this one."
He took the old leaf, stained and
blotted,
And gave me a new one, all unspot-
ted,
And into my sad heart smiled—
"Do better, now, my child."
—Selected.

With the Flower's

Mrs. S. J. Smith writes: "I have two Chinese Sacred Lilies which have just stopped flowering. What treatment should their bulbs receive now, so that they shall flower again next year? Also, how should I now treat the bulbs of hyacinths to have them flower again next winter?"
Ans.—Being somewhat in doubt as to your lilies, I visited a "John Chinaman" last night, to ask him about them. You should have seen his face brighten when I mentioned the lilies. "Oh," he said, "Him no good! Him no make flower a ny more! Must get new one from China." This was definite enough; still, not wholly sure, I afterwards visited one of the most enthusiastic botanists and plant lovers in the city. He bade me tell you that you can do nothing with the bulbs to make them flower again, so you may just throw them away. Disappointing, isn't it? But the fact is that new bulbs even cannot be developed in this country, owing, I suppose, to climatic conditions. So that John Chinaman was right after all, and there is simply nothing left for one but to get "new one from China."
 Your hyacinths cannot be forced again for bloom in the house, but if you let them ripen off, then plant them out in the ground in the fall, and cover them over with a light litter of leaves or straw, they will probably bloom for you in the garden the next spring.

FLORA FERNLEAF.

"Farmer's Advocate" office, London, Ont.

TUBEROUS-ROOTED BEGONIA.

I would like to tell you of my success with raising tuberous begonias from seed. I prepared the soil by sifting one part sand and two of good garden soil; slightly damping and placing it in the oven till it was hot enough to kill all insects. By damping the soil it will not be injured, as it will be if made too hot when dry, and less heat will destroy all insects when there is steam. I sowed the seed April 20th in a shallow tin basin with holes in the bottom, sifted a little soil from a pepper box over, pressed the top with a spoon, and covered it with a folded paper, which I removed during part of each day to prevent mould on top. In a few days the plants were up thickly. When an inch high I picked them out into other tin basins, prepared the same way, using a large pen with point broken off, and placing the plants an inch apart. When large enough, I placed them into separate pots (let me whisper low, most of the "pots" were salmon and tomato cans, papered with a reddish-brown paper), where they remained till the next spring. I had fifty-six plants from one packet of mixed seed. Forty-one were different from all others, either in color of bloom, or color of markings, or form of leaf; some of them rivaling many foliage plants. Most of them bloomed the first season. When the leaves dropped in the fall, after drying out, I wrapped each pot in paper, and put them in a frost-proof cupboard in the kitchen, where they remained till the next March, when I watered and set them in the light. When nicely started, I transplanted them into fresh soil and new pots. Forty-eight of them grew and bloomed the second season. They were most magnificent. I had only the kitchen windows of a farmhouse, one east and one north, both very large, and a wood fire, with a south veranda, when warm enough. With the same general treatment, I have had good success with Chinese primrose and gloxinia. The Chinese primrose bloomed from Christmas to May the first winter. I kept the gloxinias growing the first winter. The bulbs were so small I was afraid to dry them for fear they would not grow in the spring. They bloomed all the second summer. Many failures came from sowing the seed of such flowers too early, as the young plants will "damp off," if too wet or too cold. Try at least one packet of above-named flowers. Even five plants will amply repay you for all your care and trouble.

MARY JOHN.



THE CHILDREN'S CORNER

The Sun's Cup.

By Priscilla H. Drone.

Snug in her bed little Daffodil lay,
 Dreaming; she thought she heard some-
 body say:
 "Daffodil, Daffodil, aren't you awake?
 Robins their nests are beginning to
 make."
 Daffy was lazy, so, yawning, she said:
 "Oh, I'm so sleepy! I must stay in
 bed."

"Daffydowndilly," the tone was severe,
 "Aren't you ashamed of yourself, lying
 here?
 Crocuses all of them up long ago,
 They do not mind going out in the
 snow.
 Beauties, hepaticas, baby windflowers,
 Every one dressed, and been playing for
 hours."

Daffy, pretending she never had heard,
 Lay very quiet and said not a word.
 What was the use of her rising at all?
 Might as well stay and be ready for
 fall.

Just at that minute she heard the first
 wren,
 There was Nurse Spring come to call her
 again.

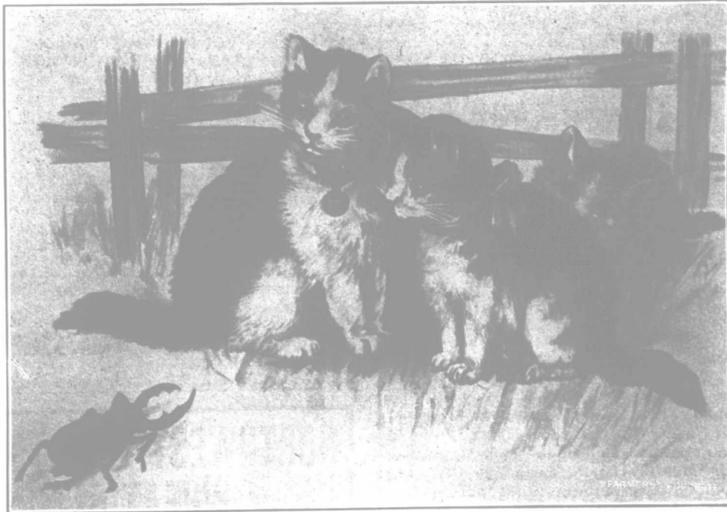
"Daffodil, Daffodil, better get up;
 Here's the sun's messenger brought you
 a cup."
 Daffy sprang up, and Nurse Spring, you
 may guess,
 Hastily helped the small sluggard to
 dress.

Robed from her head to her feet all in
 green,
 Prettier Daffodil never was seen.

"Daffydowndilly," the messenger bowed;
 Daffy stood trembling, though smiling
 and proud;
 "Lo! the sun's cup, green-enamelled
 and gold,
 Brimming with sunshine as full as
 'twill hold;
 Scatter its brightness on all who may
 pass,
 Well it besemeth so lovely a lass."

Facing Danger.

Of course there is no real danger in this case, but that queer-looking beetle looks wicked enough to frighten any kitten. I think the two in front are rather brave to face it, don't you? though they will probably run away if Mr. Beetle comes any nearer. The little coward behind does not intend to face the danger at all. Did you ever behave like that? I mean did you ever get into a scrape and leave Tom or Mary to bear all the blame? There are some boys and girls who always try to shirk their punishment. It is a good deal braver to own up and take the consequences like a man. But, perhaps, you may think that it is all very well for me to talk, but it is not so easy to face danger. No, you are right, it isn't easy. It is a great deal easier for me to preach than for you to be heroic. But plenty of boys and girls have faced danger, and perhaps you may be as brave as they when your turn comes.
 A good many years ago a young girl was carrying a baby in her arms and walking down a narrow lane which had a high wall on both sides. She had no more idea that she was going to die a noble death than you have this moment, as she walked along, singing to the baby. Suddenly a team of horses, pulling a heavy wagon, came tearing down the narrow lane. There was no room to pass, and the walls were too high to climb. The horses were running away, and there was no driver. What she thought of we do not know, but probably she flashed a prayer up to God and He helped her to do a grand thing. She did not run away—there was no time for that—but she tossed the baby over the high wall into a grassy field beyond, and the next moment she was safe with God. She was killed instantly when the horses trampled her under foot, but death must come to all of us, and no soldier on duty ever died a nobler death than she. The baby was



Facing Danger.

Daffy clasped tightly the beautiful gift,
 Gone was the messenger, shining and
 swift.
 Daffy gazed long at her wonderful cup,
 Then she said, softly: "I'm glad I got
 up.
 All the day long I will scatter its light,
 Everyone surely will smile at the sight."

Little Willie Knew Her.

Little Willie—"Who is that lady over
 there?"
 Little Bot—"Ho! That ain't ne lady,
 she's my sister!"

horse, could carry him safely, but what should he do with his little twin daughters. Their mother was dead, and they were only five years old. He could hardly take them with him, and if he did they might be killed when the Indians came. Quickly he made up his mind, snatched up two sheets and some food, took both children in his arms, and rushed into the woods. He soon turned the sheets into hammocks, and put a child in each; telling them not to cry or speak aloud, for fear the Indians might hear, and God would take care of them. They were dreadfully frightened when it got dark, and the Indians crept quietly through the forest near their hiding-place. But soon they fell asleep, and before morning their father came back to take care of his dear little girls. How eagerly he peeped into the hammocks, and can you guess how thankful he was to see the dear little faces looking so peaceful and happy in their cosy beds. He had warned the white men in the village, and when the Indians arrived they found everybody awake and armed. They were afraid to face the danger, and slunk off into the woods again.

COUSIN DOROTHY.

Humorous.

The bookkeeper of an hotel at a well-known golfing resort in Scotland is still pondering over the subtle sarcasm of an English golfer who was a week-end visitor to the golf-links. This gentleman unwisely failed to make a "contract" on arriving, with the result that he was presented with an outrageous bill on his departure. Paying it without a murmur, he asked, "Have you any penny stamps?" "Oh, yes," said the bookkeeper. "How many do you want, sir?" Very sweetly the visitor answered, "Well, how much are they each?"

At a concert held at a certain town a soldier of the Black Watch occupied a seat in front of a private of an Irish regiment and his sweetheart. The latter was very much interested in the Highlander's uniform, and scanned the regimental badge on his cap and collar particularly. This badge is the figure and cross of St. Andrew, with the motto, "Nemo me impune lacessit." (No one annoys me with impunity.)
 "Phwat does that writin' mane, Patsy?" asked the girl.
 "Phwy," replied Pat, "it's Latin, but I've forgotten the English av it. But in good ould Oirish it manes, 'Ihread on the tail av me coat if ye dare!'"

Polly found her spelling-lesson very difficult, so her governess bought a pictorial book, in which every word possible was illustrated. Then Polly got on rapidly—so rapidly that Miss Miller began to be suspicious. So she put her hand over the picture, and then asked Polly:
 "What does o-x spell?"
 "Ox," answered Polly.
 "How do you know?"
 "Saw his tail!" exclaimed Polly gleefully.

Some Other Day.

"There are wonderful things we are going to do
 Some other day;
 And harbors we hope do drift into
 Some other day.
 With folded hands, and ears that trail,
 We watch and wait for a favoring gale
 To fill the folds of an idle sail.
 Some other day.
 "We know we must toil, if ever we win,
 Some other day;
 But we say to ourselves, there's time
 to begin
 Some other day;
 And so, deferring, we loiter on,
 Until at last we find withdrawn
 The strength of the hope we lean upon,
 Some other day."

INGLE NOOK CHATS

Dear Friends,—Almost the end of April! Season of warm rains and southern breezes, of song-birds and marsh-marigolds, of shooting grasses and wild-flowers in the wood, of awakening interest to all the world, and the renewed hope that comes with seeing the earth burst forth in the glad new life which proclaims with each springtide, "God's in His Heaven, all's right with the world." Do you feel all this, Ingle Nook friend? Oh yes, you do; the story is written in your face these mild spring days. I can see you often, you know, best of all, perhaps, in the twilight, when the "work" is all done, and you have time in which to think a little, and feel how good most things are after all. . . . You are sitting in your kitchen, perhaps alone, for the "men" haven't come in yet, and the rest of the family are all "out around" somewhere. Your lamp hasn't been lighted, but there is a ruddy fire in the stove, and the light of it runs rampant over the floor which you have scrubbed so carefully, and up along the white walls where the shadows seem to run off into the corners, and dance little hobgoblin capers there. The door is open, and through the doorway you can see the gray fields, with a thin April fog hanging low over them. . . . Presently you go over and stand there, with your hand on the doorpost. You look away out and down to the marsh, over which a long red gleam shows where the sun has sunk; then on to that little clump of trees, among which the "gustful April mornings" have already begun to "puff the swaying branches into smoke." . . . How still the air is! From the marsh away off there you can hear the frogs quite plainly, but their shrill "chir-r-r" does not jar upon you; it comes to you, rather, with a sort of musical cadence, which you love to hear. Somewhere a robin is rollicking away as though it were morning; somewhere else a dog barks, and, nearer, the sound of an axe cuts the air with a measured thud, thud. . . . Common sounds these, and not much music in them? Perhaps so; yet, while listening to them, there comes a quiet smile on your face, which the grand st overtone of Bach or Beethoven, heard in the brilliantly lit music hall, amid the rustle of gowns and bewilderment of fair faces and hearts far from yours could never bring there. After all there is no perhaps about it. There is music here for you as you stand in your open door. You know it, and I know it, though there may be some who cannot understand. For these we may feel just a little bit sorry.

But now I must stop rambling on in this way. A little heap of envelopes on my desk reminds me that there are guests present, and that it will never do for the hostess to do all the talking. I am delighted to make room for these friends.

COUSIN BEE AND HER LAMPS.

Dear Dame Durden,—I am one of the many who are deeply interested in your "Ingle Nook Chats," and I would dearly like to become an occasional contributor. I likewise am one of the many farmers' wives, who cannot persuade a girl to live in the country now; although I have kept servants steadily until two or three years ago. Now, I am planning continually how to lessen the work, that I can save some time for visiting, or more congenial work, for a portion of the day. I have gained many useful hints from your columns, and, if possible, I would like to give some. I wonder if I am an exception, when I say, I used to abominate cleaning the lamps; but since it has fallen to my lot to do them regularly, I have so changed

the manner of doing them, that now it is a pleasure, instead of a burden. To begin with, I wash all the bowls thoroughly, rinse well, and dry them perfectly. The burners can be boiling, with washing soda in the water, while the lamps are being washed. One can make them look like new by rubbing and polishing well with Meyer's Putz cream. I have found nothing like it for brightening brass. I invariably wash my chimneys in the morning, and dry them with a nice glass towel. COUSIN BEE.

NOTES FROM "SEABIRD."

Dame Durden,—Here is a recipe for quick-rising bread, which I have seen for years without a failure: In the morning, stir in a bowl, one cup lukewarm water; one cup flour; one tablespoonful sugar; one tablespoonful salt, and one Royal yeast cake, which has been previously dissolved. Set in the cupboard to rise. In the evening, boil one quart potatoes in three pints of water; when nearly cool, mash the potatoes in the water in which they were boiled, stir in the bowl of rising, which you set in the morning, cover closely to keep warm. In the morning, it will be light. Then set your bread; use half this mixture for yeast; keep the other half in a cool place, where it will not freeze, for the next time you bake. Stir, let rise, knead, let rise again, knead and form into loaves in the ordinary way. This bread requires close watching, as it passes through all the stages in less than half the time of that made by the slow process. Set in the morning, and you can bake it while getting dinner. Be sure not to set at night, as it rises so fast it will be spoiled before morning. Remember, yeast in bread is plant life, and treat it accordingly. Don't freeze or scald it, but just keep it covered up warm (in winter warm the flour), and it will grow. Don't stir or knead it until it is developed, as the plants should not be broken until they are ripe. A cheese box makes an excellent bread tray.

Tenderfoot will find beef dripping a very good substitute for lard. If, when using, he melts the dripping, warms the milk or water, and in winter warms the flour, then it will not form in hard lumps of tallow.

When the bread is ready for the pans, take a piece, according to the size of the family, knead into it two or three tablespoonfuls of shortening, form into balls, flour the underside, dust the board with flour, and place them not too close together; let rise; drop into water almost boiling; boil for fifteen minutes. Lift the Dumplings out hurriedly, and place in a hot oven immediately; allow them to remain two minutes; then serve with sugar syrup. Hoping this may be useful, Yours sincerely, SEABIRD.

JOTTINGS FROM HELP-ON-A-BIT.

Dear Dame Durden,—Again in answer to Tenderfoot's request, I send you a few recipes for hungry, hard-working people; the dainty expensive dishes we will leave to the cookbooks: First, a good, plain cake can be made by taking four cups—by cup I mean one that will hold half a pint—of light dough; two cups of brown sugar; one of soft dripping; one of currants; one of raisins, a little mixed spice or nutmeg. Work all thoroughly together; put in a greased pan, and set to rise in a warm place for about half an hour; then bake in a moderate oven for about an hour. Second, a good cake can be made with four cups of flour, if you have sour or buttermilk; crush with a knife a teaspoonful of baking soda, and mix it dry into the flour; then add two cups brown sugar; one of soft dripping or lard. Then rub with your hands until thoroughly mixed and smooth. Then add one cup of currants; one of raisins; spice to taste, or a teaspoonful of essence of lemon or vanilla. Then take a spoon—a wooden one is best—and stir in the milk until you have a nice soft dough. Then beat it until it has a

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creamy look; the more you beat it the finer the cake will be, and it will not dry so soon as when it is coarser. Put in a greased pan, and bake at once in a moderate oven for about an hour. If you have no buttermilk or sour milk, add have sweet milk, use two teaspoonfuls of baking powder, instead of soda; or if you have no milk, you can mix with water. This cake, if not baked too hard, and kept in a covered tin or crock, will keep moist and nice for two weeks. A nice pudding that our men are fond of is made by soaking stale pieces of bread or crusts in cold water; when soaked, squeeze out. If you have nearly enough bread for the pudding, a little flour (half a cupful will be enough to add), and a cupful of suet, to two cups of bread and flour. Form it into a roll; put into the corner of the pudding-cloth, turn in the sides of the cloth, roll up, and pin in place; drop into boiling water, and boil for one or two hours according to the size of the pudding. This makes a nice, light pudding, which may be eaten with jam, syrup, or brown sugar. Quite a different pudding, almost as good as Christmas plum pudding, can be made by adding sugar, spice, currants and raisins; and making a sauce for it. There are so many inexpensive things which may be made, but it is the "know how." In my next letter, I will tell you how we manage our washing.

HELP-ON-A-BIT.

A FAVORITE POEM.

Dear Dame Durden,—We enjoy the "Advocate" so much now. There is something in it for everyone—from the youngest to the oldest. I get so many helpful ideas from the Ingle Nook. In reading it this evening I noticed the request sent by M. R. B. for the poem, "The Bairnies' Have Cuddled Doon." Now, I think I have the poem she wants, though it has a different title. I will send you a copy of it. With best wishes.

M. M. M.

THE LAST TO CUDDLE DOON.

I sit afore a half-oot fire,
An' I am a' my lane,
Nae frien' or fremit dauners in,
For a' my fouk are gane.
An' John—that was my ain gude man—
He sleeps the mools amang,
An' auld frail body like mysel'—
It's time that I should gang.

The win' moans roun' the auld houseen'
An' shakes the a'e fir tree,
An' as it souchs it waukens up
Auld things fu' dear to me.
If I could only greet, my heart
It wadna' be sae sair;
But tears are gane, an' brains are gane,
An' baith come back nae mair.

Ay, Tam, puir Tam, sae fu' o' fun,
He fan' this warld a fecht,
An' sair, sair he was hadden doon,
Wi' mony a weary wecht.
He bore it a' until the en',
But when we laid him doon,
The grey hairs there afore their time,
Were thick amang the broon.

An' Jamie wi' the curly heid,
Sae hurly, big, an' braw,
Was cut doon in the prime o' youth,
The first amang them a',
If I had tears for thae auld een,
Then cauld I greet fu' weel,
To think o' Jamie lyin' deid
Aneath the engine wheel.

Wee Rab—what can I sae o' him?
He's waur then deid to me;
Nae word frae him thae weary years
Has come across the sea.
Could I but ken that he is weel,
As here I sit this nicht,
This warld wi' aj its faucht an' care
Wad look a wee thing licht.

I sit afore a half-oot fire,
An' I am a' my lane,
Nae frien' hae I to dauner in,
For a' my fouk are gane.
I wuss that He wha rules us a'
Frae where He dwells abune,
Wad touch my auld grey heid an' say,
"It's time to cuddle doon."

The same poem has also been kindly sent by Mrs. J. B. C.

DAME DURDEN.

"Farmer's Advocate" office, London, Ont.

Domestic Economy.

To keep palms green and fresh-looking, and remove the dusty and faded appearance of the leaves, wipe each leaf separately with a cloth dipped in milk. This will at once give back their natural gloss and fresh green appearance.

Very often cakes stick to the tin, and it is difficult to get them out without breaking the cake. Wring out a cloth in cold water, and wrap it round the sides and bottom of the tin. Leave it for five minutes, then tip it up, and the cake will slip from the tin without breaking.

A woman whose sitting-room window looked out on a dreary blank wall, gave the matter a little thought, and devised an ingenious screen. She had a latticework made to fit the window inside the room, which she painted white, and then converted into a trellis for climbing ivy. The effect was charming, and the end was most successfully and artistically accomplished.

CUSTARDS.

To make custards successfully, cook the soft custards in a double boiler over hot, not boiling, water, and stir constantly. The custards to be baked should be set into a second dish half filled with warm water.

A good formula to use for custards of any sort is the following: One cup of milk, one egg, one tablespoonful of sugar, and flavoring to taste, added (in case of soft custards) after the custard is cooked, but while it is still hot.

To restore a soft custard which has separated or "curdled," set the dish in cold water, and beat with an egg beater until smooth.

For white sauces of the ordinary consistency used for cream toast, creamed vegetables, escaloped dishes and others, a very satisfactory formula is: One cup of milk, one tablespoonful each of butter and flour, and one-half teaspoonful of salt. There are several methods, equally good, for preparing the sauce, but this is the simplest in the writer's experience: Heat the milk slightly in the top of the double boiler. After rubbing together the butter and flour and salt, add a little of the heated milk and mix smoothly. Add the mixture to the rest of the milk in the boiler, and cook with the water boiling until well thickened, stirring occasionally to keep it smooth.

Book for the Kitchen.

After a perusal of Prof. H. W. Conn's new book on Bacteria, Yeasts and Molds, we have laid it down with the conviction that this is a little manual which should occupy a place beside the cook-book and medicine-chest of every kitchen. In an interesting manner, and in simple language, free from the excess of scientific terms which bars the ordinary reader from so many books of this kind, Prof. Conn has told the story of Bacteria, Yeasts and Molds, dwelling especially upon the part they play in domestic economy; describing those micro-organisms that are helpful and those that are harmful, and how the housewife may, to all practical purposes, utilize the one and eliminate the other. Bread-baking, canning, preservation of foods, prevention of disease, etc., are all dealt with in the treatise, but though ostensibly a book for the housewife, "Bacteria, Yeasts and Molds" incidentally opens up a world of scientific information so attractively told as to hold the attention of any reader interested from cover to cover. Publishers, Ginn & Co., Boston, Mass.; price, \$1. The book may be ordered through this office.

A Highland waiter once refused to serve the late Max O'Rell at table. "It's no to be expected," said he, "that a self-respecting Scotsman could serve him with ceaveelity. Did he no' say we took to the kilt because our feet were too large to get through trowse?"

SAVE
SAFELY

"Safety is the first consideration, and the matter of interest earnings is of the second or even third importance."

Depositors who make absolute safety the first consideration are attracted by the exceptional strength of the CANADA PERMANENT MORTGAGE CORPORATION, Toronto Street, Toronto. It has the third largest paid-up capital of all Canada's strong financial institutions.

Deposits may with perfect convenience be made and withdrawn by mail. Our booklet will be mailed free on receipt of your address.

Last

\$8.10
PER
ACRE.

Easy Terms.

Mountain

STRASSBURG, ASSA.,
50,000 Acres for Sale.

Valley

WM. PEARSON & CO.,
383 Main Street, Winnipeg.

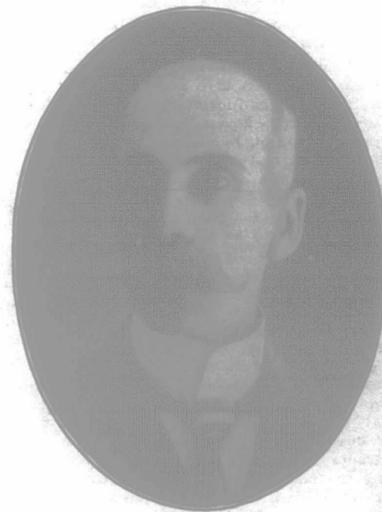
Lands.

Write for descriptive pamphlet.

One year
from now

you will regret
you did not
invest your
money in our

Wheat
Lands.



Hundreds of the shrewdest land buyers on the continent are taking advantage of the opportunities we are offering. WHY NOT YOU? Come West this spring. Stop at

REGINA.

Buy some of our land and you will not regret it. Give me the pleasure of showing you where to find THE BEST and you will have a kind word in my favor ever after.

J. M. YOUNG,

Land Owner and Financial Agent, **REGINA, NORTHWEST TERRITORIES.**

MRS. GRAHAM'S
QUICK HAIR RESTORER

is a delightfully clean preparation for restoring gray or faded hair to its original color in a few days. Clear as water, neither greasy nor sticky. It contains no harmful ingredients. Price, \$1.00, express paid.

Superfluous Hair, Moles, Warts, etc., always permanently removed by Electrolysis. Satisfaction assured. Skin and scalp diseases cured by our successful home treatment. Send 10c. for descriptive literature and sample of Cream.

Graham Dermatological Institute,
Dept. F. 502 Church Street, Toronto.
Established 1892.

\$10 to \$100
FOR A NAME.

Representatives wanted in every section. Our agents make from \$50 to \$300 per month.

MARTIN & CO.,
115 MANNING CHAMBERS, TORONTO, ONT.

The Berlin X-Ray and Electro-Therapeutic Laboratory, X-RAYS—Electricity in all its varied forms and high frequency currents used successfully in the treatment of cancer, fibroids, goitre, sciatica, asthma, chronic rheumatism, all forms of nervous ailments, sexual follicles, rupture, varicocele, tubercular glands and joints, paralysis (some forms), facial blemishes, superfluous hair, etc., catarrh of the nose and throat, and other chronic ailments. For further information address DR. J. E. HETT, BERLIN, ONT.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

"COCK O' THE NORTH" LINE.

Employ

Send for printed information regarding our manufactures.

The "Advance" Engine

and

The "Toronto Combination" Separator

with which

TO DO YOUR THRESHING.

Manufactured by the

American-Abell Engine & Thresher Company, Limited

N.-W. AGENCY:
WINNIPEG

HEAD OFFICE AND FACTORY:
TORONTO

BRANCH HOUSE:
REGINA

GOSSIP.

HODGKINSON & TISDALE'S CLYDES AND HACKNEYS.

The firm of Hodgkinson & Tisdale, Beaverton, Ont., well and favorably known importers and breeders of Clydesdale and Hackney horses, advertise in this paper some high-class stallions and mares for sale. Among the Clydesdale stallions is Lyon Macqueen [3305], a very promising bay colt rising two years, sired by Old Macqueen (imp.), the world's Fair champion, and is the picture of his sire. His dam is Royal Clara, winner of championship at Toronto in 1902, also first prize at the Pan-American. He is full of substance, well coupled-up, with a good set of limbs, and has splendid action. There are also two colts rising one year old—one the winner of first prize at Toronto last fall, showing against imported ones; the other, a July colt (Royal Honor), won second in the Canadian-bred class. These colts have the appearance of making big, good horses. Among the mares that are for sale are a well-matched pair, Daisy Macqueen and May Macqueen, with plenty of substance, and the right kind of quality, both sired by Old Macqueen. The first-mentioned mare, Daisy, won first at Toronto Exhibition, 1903, also first and reserve for championship at the Toronto Horse Show in March, 1904. May Macqueen won third at both the London and Toronto Exhibitions, 1903, and the Spring Show, March, 1904. Idonia Queen, rising five years old, is a beautiful mare that has also made a record for herself by winning first at Toronto Exhibition, the only time shown; while her colt won second in a class of eight, although it was scarcely two months old. This mare's action is seldom equalled in the draft horse class. She is also for sale, and has been bred to Foremost (imp.) [3364] (11339), and is said to be safe in foal. Foremost (imp.) is at the head of the stud, and a remarkably fine horse he is, big and weighty, with a splendid quality of bone and good feet. This horse is rising five years old, by Prince Sturdy 2881, dam Myrtle 3843, by Macgregor (1487). Moss Rose is suckling a

The Great Western Endless Apron Manure Spreader.

There are just exactly thirty-four good solid reasons why you should have one of these MANURE SPREADERS over any other made. Used by most of the Agricultural Colleges and Experiment Stations in the United States. Once sold in a locality, no other make ever enters it. A handsome catalogue and full particulars for asking from the manufacturers.

The Wilkinson Plough Company

TORONTO, CANADA. LIMITED.

STAMMERERS

THE ARNOTT INSTITUTE, BERLIN, CANADA, for the treatment of all forms of SPEECH DEFECTS. Dr. W. J. Arnot, Superintendent. We treat the cause, not simply the habit, and therefore produce natural speech. *om Write for particulars.*

SHORTHORNS and SHROPSHIRE.

Present offerings: First-class young Shorthorns, mostly heifers. For price and particulars write to GEORGE RAIKES, BARRIE, ONT.

filly about a week old, from the above-mentioned sire, that will make a good one, if we are able to judge aright. This firm has others worthy of special mention did space permit, suffice to say parties in want of one or more choice mares or young stallions will consult their own interest by paying this firm a visit. The Hackneys are pretty well sold now. Storm King, the brown colt rising three years, sire Lord Rosebery, dam Trinket, by Fireaway, and bred by Mr. Burdette Coutts, stands at the head of this department, and like the Clyde, is a very worthy specimen of the breed to which he belongs; good enough to stand at the head of any stud.

THE COLUMBIA HAY PRESS CO., Kingsville, Ont., have received the following letter commending their Columbia hay press for baling hay: "Dear Sirs.—Your hay press came duly to hand, and we got it set up, and have given it a thorough testing. We are quite satisfied that it is as good as represented, if not better. It will bale all the hay a man can get to it handily. You may make draft for amount at your convenience. Yours truly, The James Dunlop Co., Limited, per Jas. Dunlop, President."

Imported Clydes & Shires Shorthorns & Yorkshires



Five Clydesdale Stallions, one Shire Stallion, three Shorthorn Bull Calves, imp. in dam; a few imported Heifers, and imported Yorkshire Hogs. Clydes by such sires as Prince of Carruchan, Prince Stephen, Prince Thomas and Royal Champion. Write for prices, or come and see. *om*

GEO. ISAAC,
Cobourg Station, G. T. R.,
COBOURG, ONT.

HIGH-CLASS HERFORDS

We have for sale the following choice young stock, which have been bred from imported stock. Intending buyers will do well to inspect the following: 18 young bulls, 25 young heifers, and 15 cows; also Barred Plymouth Rock eggs from choice matings at \$1 per 15. Correspondence invited. *om*

A. S. HUNTER, Durham, Ont.

GINSING.

Roots—Yearling plants for this spring's planting, also a quantity of best stratified seed, may be had from ARTHUR J. MARTIN, Ginseng Cultivator, Box 58, KINMOUNT, ONT. *o*

If you want your horse shed you take him to a blacksmith shop. If you want to learn law you go to a law school. So, if you want to learn

TELEGRAPHY

you go to an exclusive Telegraph School, and the best school of the kind in Canada is the

Dominion School of Telegraphy,
King Street East, - Toronto, Ontario.
Let us send you particulars. *o*

GOSSIP.

A couple of miles from the thriving town of Barrie, Ont., is the home of Mr. Geo. Raikes, an enthusiastic breeder of high-class Shorthorn cattle and Shropshire sheep and Yorkshire hogs. The Shorthorns number 25 head, with Golden Victor, a long, deep-bodied bull, bred by Mr. John Isaac, and sired by Golden Measure, at the head. A bunch of very nice heifers were seen, sired by Royal Standard, Sir Roger and Golden Victor. Mr. Raikes will dispose of several young things now very reasonably.

See the new advertisement of A. S. Hunter, Durham, Ont., for Barred Plymouth Rock eggs for hatching.

Tobacco and Liquor Habits.

Dr. McTaggart's tobacco remedy removes all desire for the weed in a few days. A vegetable medicine, and only requires touching the tongue with it occasionally. Price \$2. Truly marvellous are the results from taking his remedy for the liquor habit. Is a safe and inexpensive home treatment; no hypodermic injections, no publicity, no loss of time from business, and a certainty of cure. Address or consult Dr. McTaggart, 75 Yonge street, Toronto.

It Speaks for Itself!

Head-rite

25c. CURES HEADACHE

Guaranteed to Cure within 30 Minutes, or money refunded
All Druggists or mailed. The Herald Remedy Co., Montreal

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Veterinary.

PÆMIA IN LAMBS.

I have two lambs with swollen heads, and there are lumps about the size of plums; some have broken. W. J. M.

Ans.—Eruptive diseases of this nature are rare in lambs. It is a species of blood poisoning, and may be contagious. Isolate the affected. As soon as pus forms, lance the abscesses, and dress with a five-per-cent. solution of carbolic acid until healed. Give each 30 grains hypsulphite of soda, dissolved in a little water, as a drench daily. V.

ERUPTIVE DISEASE IN PIGS.

Some of my pigs, two weeks old, have scales on head and front legs. Two have lumps of cheesy matter on the bone of jaw, inside lips, and two have similar lumps on their feet. Other litter are all right. P. McD.

Ans.—This is an eruptive disease that may be contagious. Isolate affected litter. Dress the skin twice weekly with Little's Sheep Dip, and give, internally, once daily, 15 drops Zenoleum diluted in 2 ozs. water. Disinfect the premises in which they are kept before introducing fresh stock. V.

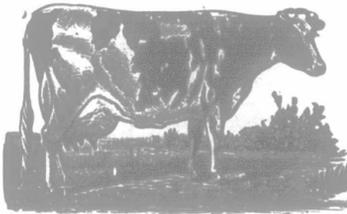
TAPEWORM.

I have lost eight yearling ewes from tapeworms, and others are showing symptoms. H. A.

Ans.—Starve them for twelve hours. Make a mixture of one part oil of turpentine and fifteen parts sweet milk. Shake until thoroughly mixed, and give each ewe about four ounces of the mixture. Give nothing to eat for five or six hours longer. Keep enclosed and gather the worms that are passed and destroy them. Repeat treatment in ten days, and, if necessary, the third or fourth time. Keep the sheep off low-

UNRESERVED AUCTION SALE

40 REGISTERED HOLSTEINS.



1 bull, 3 years old, imported from H. D. Roe, Augusta, N. J.; 2 bulls ready for service, 5 bulls from 3 to 6 months old, 7 cows milking and 16 due to freshen by May 20th, 6 heifer calves from 1 to 11 months old. Am giving up farm, and all will be sold.

Tuesday, May 3, at 1 o'clock p. m.,

on lot 22, con. 8, Townsend, 1 mile from Villa Nova, 5 miles from Waterford and 6 miles from Hagersville, G. T. R. Terms: 6 months' credit

on approved security; 5 per cent. per annum discount for cash. Catalogues mailed on application. JAS. DUNLOP, Auctioneer. D. JONES, JR., VILLA NOVA, PROPRIETOR.

DISPERSION SALE BY AUCTION

of the entire herd of

SHORTHORN CATTLE

belonging to H. S. Fallows, Evelyn, Ont., at the old farm, Lot 5, Concession 7, West Nissouri, Middlesex Co., 10 miles from London, on TUESDAY, MAY 3RD, 1904.

25 HEAD OF REGISTERED SHORTHORNS, of the thick-fleshed, early-maturing sort. Also 5 high-grade Shorthorn females.

Morning trains will be met at Thamesford, C. P. R., and Thorndale, G. T. R.

As the proprietor has moved from this farm, all will be sold without reserve.

Terms: 10 months' credit on approved joint notes; 4 per cent. off for cash.

Sale to commence at one o'clock. For catalogues and information apply to

CAPT. T. E. ROBSON, AUCTIONEER. H. S. FALLOWS, PROP., EVELYN, ONT.



Clydesdales.

We have a number of YOUNG CLYDESDALE MARES AND FILLIES for sale, and any person wanting to purchase a good young brood mare should come and see what we have before buying elsewhere.

HODGKINSON & TISDALE Beaverton, Ont.

Long-distance phone in connection with farm. 70 miles north of Toronto, on Midland Division of G. T. R.

FARMER'S ADVOCATE ADS. PAY

lying pastures during the pasturing season, as it is doubtless in such pasture they get the infection. V.

WEAK PASTERNS.

Three-year-old Clyde colt is weak in his pasterns. He occasionally stands with one or the other cocked, and is restless on them. They are short, and fairly well set. P. A. F.

Ans.—Colts that show this weakness before having done any hard work are very liable to get worse when put to work. It may be caused by too much standing in the stable, in which case treatment will be more successful. Blister all around the fetlock joint once every month with two drams each biniodide of mercury and cantharides, mixed with two ounces vaseline. Cut the hair off, rub blister well in. Tie so that he cannot bite the parts. In twenty-four hours, rub well again, and in twenty-four hours longer wash off and apply sweet oil. Let his head down now, and oil every day. Allow him a large box stall, and some exercise in a paddock, except during the time he is tied up to blister. V.

Miscellaneous.

EGG-EATING HENS.

Seymour Salls, Clarenceville, Que., says he saw an enquiry in the "Advocate" as to what would keep hens from eating their eggs: "Take some Indian meal and wet it with good strong vinegar; feed it to them two or three times, and they will quit eating their eggs."

FLAXSEED—LINSEED OIL.

Which is the best to feed horses, boiled flaxseed or raw? What is the difference between boiled flaxseed and boiled linseed oil? D. A. R. M.

Ans.—Flaxseed is a laxative and encourages the secretions of the skin. It is not more digestible boiled, but seems to exercise a more beneficial effect upon the system, and is safer. Boiled flaxseed contains protein, vegetable fiber and fat or oil. Boiled oil is almost entirely cooked fat, and is not an easily-digested food. Never give stock boiled oil, either as a food or medicine.

Massey-Harris Implements ARE STANDARDS THE WORLD OVER.

A WORLD-WIDE TRADE MEANS MUCH TO THE PRACTICAL BUYER. IT'S A GUARANTEE OF WORTH, QUALITY, MERIT. THE "MASSEY-HARRIS" TRADE-MARK ON YOUR FARM IMPLEMENTS MEANS YOU HAVE IMPLEMENTS ACKNOWLEDGED THROUGHOUT THE WORLD TO BE THE BEST.

IN THE SPRING USE "MASSEY-HARRIS"

- DISC DRILLS PLOWS AND SCUFFLERS
HOE DRILLS DISC HARROWS
SHOE DRILLS DRAG HARROWS
FERTILIZER DRILLS BAIN WAGONS

MASSEY-HARRIS CO., LIMITED, TORONTO, - - ONTARIO. AGENCIES EVERYWHERE.

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"The truth,
the whole truth
and nothing but
the truth"
in time telling means
the time as told by the
ELGIN
WATCH

Every Elgin Watch is fully guaranteed. All jewelers have Elgin Watches. "Timemakers and Timekeepers," an illustrated history of the watch, sent free upon request to ELGIN NATIONAL WATCH CO., ELGIN, ILLINOIS.

QUESTIONS AND ANSWERS. Miscellaneous.

HORSE CLASSES.

Will you please answer, through your valuable paper, the weight and height of all the classes of horses that are on the prize list for the Toronto Exhibition.

A. R. S.

Ans.—The only class in which weights are specified is the general purpose. At the Toronto Exhibition, the general purpose horse is understood to be a horse suitable for wagon, carriage, buggy, saddle or plow. The Exhibition rules say, mares or geldings, four years old and upwards, shall not exceed 1,350 lbs.; three years old, 1,200 lbs., and two years old, 1,000 lbs. The fancy harness horses have sections provided according to height, from eleven hands and under, for ponies, up to 16 hands. For fuller particulars, see the prize list for 1903. J. O. Orr, 70 King St. East, Toronto, will supply prize list for this year when printed.

FEEDING ENSILAGE—WIND WHEEL.

1. Would you recommend feeding ensilage to a breeding herd of registered beef cattle. Is it injurious to the teeth? Are there not more losses with cows and calves?

2. Do you think it advisable to put a 14-foot wheel on a power mill with the heaviest castings and gear, or a 15- or 16-foot wheel to do the work on a 150-acre farm?

3. What will remove tattoo marks from the arm?

A. F.

Ans.—1. When fed with other foods and judgment exercised in feeding, it is not injurious. It is in feeding an excess that trouble arises. Ensilage is not in itself a complete cattle food, but if fed judiciously in connection with such other foods as hay, cut straw or chaff, we do not think there are more losses than from feeding other fodders.

2. On a farm that size, a wheel not less than 15 feet in diameter should be used, and for all ordinary purposes it is just as satisfactory as a larger one.

3. Nothing.

SUMMER PASTURE.

Would like to know what kind of grain would be the best to sow on a few acres in a field that I want to seed down and pasture this summer? I expect I can keep the cattle off it till some time in June.

A. L.

Ans.—We would advise sowing part of the field in peas, oats and vetches, as soon as the ground is fit. About the middle of May, sow another portion with rape. When the weather is fit, sow about one quarter of the field with corn in drills three feet apart, and cultivate. About the middle of June, sow the remaining part of the field with rape. This assortment will give the largest possible amount of feed, but we would recommend cutting and feeding in the stable or paddock. The rape, however, could be pastured. There is no way of seeding the field with grasses to be used for pasture the first season. Sow the peas, oats and vetches about two and a half bushels per acre; the rape four pounds broadcast, or two pounds in drills twenty-four inches apart, and the corn, one-half bushel per acre. The seed for these may be had of seedmen in the cities and in most towns.

The Daniels Incubators

Are of the 20th century make, right up to date. Our 50-EGG CYCLE INCUBATOR, PRICE \$6, is the wonder of the age. Perfect ventilation and operation. We have a 100-egg machine \$12. We make 7 sizes. Used and endorsed in all the Dominion Government Experimental Stations and Colleges. Just drop a postal card. Our new catalogue is free, and tells you all about us and our goods.

C. J. DANIELS
196-200 River Street, TORONTO.

LIDLAW PRODUCE COMPANY
169 1/2 SPADINA AVENUE.

OUR SPECIALTIES:
Butter, Eggs, Potatoes,
Dressed Poultry

Correspondence Invited. TORONTO.

EGGS FOR HATCHING from B. P. Rocks, bred from a winter laying strain; also Rouen duck eggs, price \$1.00 per setting. Musgrove Bros., Wroxeter, Ont.



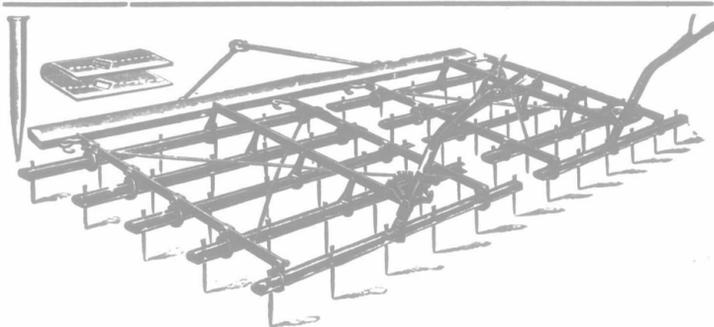
LONG DISTANCE SINGLE BARREL SHOTGUN \$650

Send us \$1.00 deposit, state if the \$4.50 or \$7.50 gun is wanted. State gauge desired, and we will send this guaranteed long distance single barrel shotgun C. O. D., by express, subject to examination, you to pay the express agent the balance and express charges, after you find it perfectly satisfactory. This Fine Gun is made by expert gun makers, every part and piece fitted perfectly and reinforced so it cannot shoot loose or shaky, strong rigid

steel frame built extra solid to withstand the use of any NITRO POWDER, latest improved top snap and rebounding hammer, best quality steel works, extra strong spring, fine walnut stock, heavy rubber butt plate, full pistol grip, thoroughly tested for pattern, penetration and strength. For \$7.50 in all we will furnish the same gun with latest improved automatic shell ejector which throws shell out automatically, making it possible to reload and fire in rapid succession. Order to-day or write for our Special Gun Catalogue which contains single barrel shotguns at \$3.75 up, and everything in rifles, revolvers, ammunition and sportsmen's goods at factory prices.

T. W. BOYD & SON, 1683 NOTRE DAME ST., MONTREAL.

BLAINE PATENT BOLTLESS LEVER HARROW



IS THE BEST HARROW ON THE MARKET.

Ask your dealer for a set, and take no other. If he won't supply you, write us and we will fill your order direct from the factory. Prices and particulars on application.

THE BLAINE HARROW MFG. CO., Limited,
48 Richmond Street West, TORONTO, ONT.

QUESTIONS AND ANSWERS. Miscellaneous.

SHERIFF'S SALE OF SHARE OF ESTATE.

1. Can one person's share of property be sold for debt, if no will has been made, judgment being taken before owner of property died; all claimants of property being of age?

2. Can they sell, by sheriff sale, before a settlement is made? SUBSCRIBER. Ont.

Ans.—1 and 2. Yes.

ELECTION OF SCHOOL OFFICIALS.

In school section No. — the ratepayers met at the annual meeting and appointed Mr. F— for section auditor for the next year, which he accepted, and was declared elected by the chairman. Later on, he was nominated for trustee, and having more votes than the other candidate, Mr. B—, he was again declared elected by the chairman, and accepted the second position. Mr. B—'s electors declared that he was elected trustee, as Mr. F— was not a legal candidate, on account of having the auditorship. The meeting was not adjourned, but a number of the ratepayers went home. Mr. F— and his three sons and some of his friends then agreed that he should resign the auditorship, and appointed Mr. J—, who positively refuses to act, as he was not legally elected.

1. Was this business legally transacted?

2. Has the inspector a right to settle this dispute when asked?

SUBSCRIBER.

Ans.—1. No. 2. Yes, under sub. sec. 8 of sec. 15 of chap. 39 of the Public Schools Act (1 Edw. VII.); but no complaint can legally be entertained by him unless made to him in writing within 20 days after the holding of the election or meeting.

Burton Holmes says that while he was in Seoul, the capital of Korea, recently, he asked an intelligent Korean what side his nation would take in a dispute between Japan and Russia.

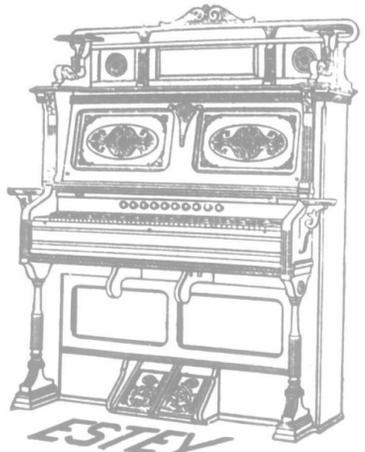
"You have seen two dogs fight over a bone?" asked the Korean.

Mr. Holmes assented.

"Well," continued the Korean, "did you ever see the bone do any fighting?"

If you have no musical instrument in your home, you cannot afford to overlook this offer of

New Estey Organs



By special arrangement with the makers, and as the result of large purchases, we offer an ESTEY six-octave piano-case organ of the handsomest and finest style (see illustration) at a price hitherto thought impossible.

We use no fulsome words of praise in describing this instrument. Its being an ESTEY is sufficient guarantee of superiority. If you have ever used one you will know this. If you haven't, remember we ship subject to approval; and if after trial you don't agree with us, send it back and we will pay the return freight.

Our Offer.

Style 671—6 octaves, 11 stops, 2 sets of reeds throughout, 2 couplers, 2 knee swells, etc.; solid walnut case, handsomely carved and with mirror top as per illustration; height 5 feet 10 inches.

Instalment Price \$105.00
Cash Price \$94.50

This includes a new stool and cost of packing.

Terms of Payment.

You may suit your convenience as to method of payment. We suggest several:

1. \$10.00 Cash and \$4.00 per month until paid, without interest.
2. \$15.00 Cash and \$12.00 every three months until paid, without interest.
3. One-third Cash, one-third in 12 months, one-third in 24 months, without interest.

An enquiry regarding the instruments, price or terms will be answered promptly.

We welcome correspondence.

Gourlay, Winter & Leeming

188 Yonge St., Toronto.

A few choice SILVER-GRAY DORKING COCKERELS, a DOMINIQUE and ROCK (barred) to spare.

R. RENNELSON, GALT P. O., ONT.

EGGS We offer eggs for hatching from Barred Plymouth Rock hens, good in size, shape, color and laying qualities, mated with good cockerels, at \$1 per 15, \$2 per 45, \$4 per 100. Circulars free.

H. GEW & SONS, Selkirk, Ont.

Snelgrove Poultry Yard Barred Rocks

exclusively. Eggs for hatching \$1.00 per setting, three settings \$2.00. W. J. CAMPBELL, Snelgrove P. O., Ont.

RUPTURED Horses, Colts & Calves CURED.

177 Circulars and Testimonials Free. MOORE BROS., V. S., Albany, N. Y.

QUESTIONS AND ANSWERS. Miscellaneous.

A VICIOUS DOG.

A dog in our neighborhood comes out on the road and endangers people's lives when they pass. Have I a right to destroy him? He is a perfect rover.

Ans.—Yes, if attacked by him, or apparently about to be attacked in the way described. The owner, or harbinger, ought to be expressly notified, at once, of the dog's vicious habit.

STATUTE LABOR.

My assessment is \$5350. The clerk reduces the assessment sixty per cent., which leaves the assessment \$2140. Section 102 gives me nine days' statute labor, but the clerk puts on two days extra for the \$140. Can he legally do so? I own two hundred and eleven acres of land.

Ans.—No, unless by virtue of some by-law of your municipality.

A DISAPPOINTED PURCHASER.

I bought a mare at a sale. She was advertised and sold as being nine years old and in foal. Since, I have found out she is thirteen years old, and she is not in foal.

- 1. Can I collect damages? I paid a big price for her, as I wanted to raise a colt from her.
2. How would I proceed to recover damages?
3. What would be a reasonable sum to ask?
4. Would I be safe in breeding her before taking legal proceedings?

CONSTANT READER.

Ans.—1. Yes. 2. By demand, and then, if necessary, by suit.

3. The difference between what you paid and the real value of the animal.

4. Probably you would, but we think it would be advisable for you to see the other party first with a view to amicable settlement.

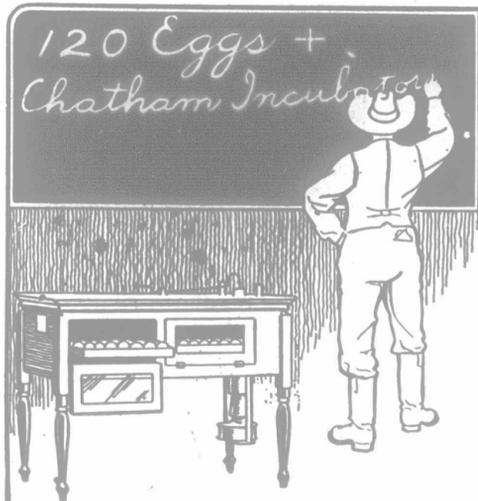
CISTERN BUILDING.

I want to put in a cistern, and intended to use a galvanized-iron tank. Do you think concrete would be better, and how should I build it? Would you advise using a wooden tank for molding? Would the concrete harden the water? What do you think of bricking the excavation up, and plastering over the brick?

R. W.

Ans.—We would advise a concrete cistern, the size depending upon circumstances. A good cistern could be made by bricking up and plastering with cement. A good concrete floor should be put in, however. Concrete cisterns are best built by using a circular wooden frame; circle for top and bottom is usually made from two-inch plank with two by four scantling as staves, nailed to top and bottom of the segments; these circles, for convenience in handling and to get through the manhole of cistern, are divided into twelve segments—this refers to cistern six feet across. Dig the cistern perpendicular and true, twelve inches larger than the frame, so as to allow two inches for staves and four inches for concrete walls. Now, put frame in place, and ram all around with concrete evenly until finished one inch above the staves; be sure to ram thoroughly. Across the opening on top place a two-inch plank, just long enough to catch, say, two inches on each side of frame. Support each end and middle of plank with uprights from below. Now place short boards from this plank to side of segments. Should there be any small holes, cover with paper. Now, pile sand in a cone shape, and place the cast-iron manhole ring on the top of the cone. Cover the sand before putting on concrete arch with empty paper cement sacks. Now, commence and ram the concrete all around against the clay, about eight inches thick; keep doing so until arch is finished. In about eight days take out through manhole all the wooden frame, and plaster the inside with a very thin coat of one part cement and one part fine sand, all over inside. Put on bottom of cistern about one inch thick of two parts sand and one part cement. Be sure to place a few stones or brick on the bottom where the water drops. The inlet and outlet pipes can be placed where required. Concrete does not harden the water.

"May is the best month to set Incubators, as chickens hatched then mature to make layers for next fall. A larger percentage of eggs will hatch in May than in any other month."



You can Count Your Chickens Before They are Hatched in a Chatham Incubator.

Every fertile egg you put into a Chatham Incubator will come out a healthy, sturdy chick. That is the record the Chatham Incubator has made for itself—and the Chatham Brooder will bring them up better than the most motherly hen. We don't want you to take our word for it. Read what three purchasers of Chatham Incubators have to say:

Three testimonial boxes: 1. '50 Fertile Eggs, 50 Chicks' by David Howe, Niagara-on-the-Lake, Ont. 2. '200 Fertile Eggs, 200 Chicks' by Mr. Paul Caron, L'Islet. 3. 'An Excellent Incubator' by Mr. F. J. G. McArthur, Carman, Man.

There is big money to be made in raising chickens with a Chatham Incubator. The farmer who overlooks this branch of his business is neglecting one of the greatest profit-producing departments of his farm. Canada is not producing enough chickens to supply their own wants, and Great Britain is always clamoring for more. Chicken raising is profitable. Why don't you try it?

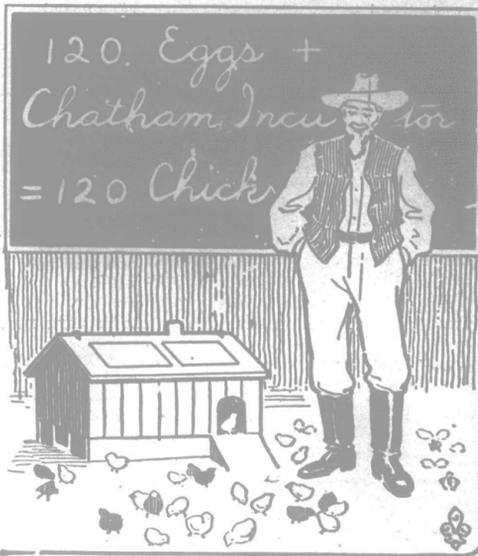
Buy a Chatham Incubator and Pay for it in Three Years

The terms on which we sell the Chatham Incubator are the most reasonable ever offered. We are so certain that our Incubator will live up to every claim we make for it that we will give you three years to pay for it. It will make many times its cost for you in that time.

On receipt of your order we ship the Chatham Incubator to you—we pay the freight—if it is satisfactory set it up and pay us for it in three yearly payments. Could terms be easier? Could a proposition be fairer?

We depend on every Incubator we put out to sell dozens to your neighbors. It will prove such a profit producer that they will all want them.

Write us to-day, and we'll send you full particulars. Write now, before you forget it. M. CAMPBELL FANNING MILL CO., Limited, Dep 201 CHATHAM, CANADA. Manufacturers of Chatham Incubators and Brooders. Distributing Warehouses at Montreal, Que.; Halifax, N.S.; Brandon, Man.; Calgary, Alta.; New Westminster, B.C. Factories at CHATHAM, Ont.; DETROIT, Mich. Also manufacturers of the FAMOUS CAMPBELL FANNING MILLS. Mention this Paper.



Advertisement for A.E. Sherrington, Walkerton, Ont., importer and breeder of Barred P. Rocks. Includes details about eggs for hatching and Buff Orpingtons.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

OWNERSHIP OF FENCE MATERIAL.

A sold to B a portion of his farm. Can B claim all fence material? There being an old rail fence thrown down in piles, and posts and wire lying on the ground to build a new one. Nothing being said about material in agreement of purchase, and the material being in center of land purchased?

Ans.—It does not appear from your statement of case that he (B) is entitled to it.

AGREEMENT FOR LEASE.

I rented a farm last fall; was to have a lease for three years. Landlord gave permission to plow and draw on to the place manure, which I agreed to do. I did the plowing and drew twice the amount of manure I agreed to; and I have put myself into a great deal of expense, thinking I would get a lease of the place. When I went to see about getting the lease, the landlord was thinking of selling the farm, but did not know what he would do. He wants me work the farm for one year without a lease.

1. Can I compel landlord to give a lease for three years which he agreed to do before April?

2. Is landlord entitled to full amount of rent for the one year, without a lease?

Ans.—1. We think that you are entitled to hold the farm for the three years, as tenant upon the terms agreed upon, without a formal lease, but that you ought to insist that such lease be given you as arranged.

2. No.

A DISPUTED BOUNDARY.

The line between three lots, or so, has never been run, only the concession lines and side roads. One man was not satisfied. When the surveyor was around, I asked the man if he wanted to have the line run, and he said he would; so we had it run, and he says he will not give up what he cleared over the line. All the rest of the people went by the line around here but him. Some had just as much to give up as he had.

1. What are the best steps to take? It is three years since the line was run, and it has been cleared, I guess, ten years before the line was run. It is only the half width of a lot the trouble is over. The rest is bush on his side, and ours is cleared since his, about eight years, and neither of us had a very good idea where the line ought to be.

2. Can he be made fence half of each lot? He has three, and so have we. There is no dispute where the bush is. It is only this little piece through the field, and it spoils the looks of ours for sale. We are paying taxes for it, and he is getting the use of it. He put the fence up there in the first place, and there needs to be a fence up again pretty soon.

Ans.—1. The appropriate legal action would be "ejectment," but litigation ought to be avoided, if possible. Perhaps a hint to the party that he is liable to have an ejectment suit brought against him might make him disposed to arrange the matter satisfactorily.

2. He is legally obliged to do his just proportion of the necessary fencing, and may be compelled to do it. But if you would yield somewhat in this matter, he might give way in respect of the other, and we would suggest, for the avoidance of trouble, that a compromise be tried for along those lines.

BRITISH



TROOP OIL LINIMENT

FOR

Sprains, Strains, Cuts, Wounds, Ulcers, Open Sores, Bruises, Stiff Joints, Bites and Stings of Insects, Coughs, Colds, Contracted Cords, Rheumatism, Neuralgia, Bronchitis, Croup, Sore Throat, Quinsy, Whooping Cough and all Painful Swellings.

A LARGE BOTTLE, 25c.



is the special work of our

Telegraph Department.

It is under the direction of an experienced railway despatcher, who, with three assistants, give the best instruction obtainable. Write for particulars.

Central Business College
TORONTO, ONT.

W. H. Shaw, - Principal.

HECLA HEATING

in your home means well-ventilated rooms, an even distribution of heat, the absence of dirt and dust, a saving of fuel, and many other advantages described in our booklet "About Heating," which will be sent upon request.

Clare Bros. & Co., Limited,
Preston, Ont.

EXCELSIOR LIFE INSURANCE COMPANY.

HEAD OFFICE, - TORONTO.

ASSETS, ONE MILLION DOLLARS
Insurance in force over - \$6,000,000

A Company with an unparalleled low death rate, low expense rate, and earning over 6 per cent. on assets, is a desirable Company to insure in and a good Company to represent. Agents wanted. Liberal contracts offered good producers.

E. MARSHALL, Sec. D. FASKEN, Pres.

Canadian Dairying,

BY PROFESSOR HENRY H. DEAN,
of the Ontario Agricultural College. A thoroughly practical book, illustrated; price, \$1.00, postpaid.
William Briggs, 29-33 Richmond St. West,
Toronto.

GOSSIP.

An Irish advocate was representing a plaintiff who was trying to recover the price of a pig which a neighbor had killed. The pig had broken loose and trespassed on the defendant's property. An Irish contemporary gives the lawyer's argument thus: "Gentlemen, is there no protection for a man and his property in this country? Do you twelve intelligent men think the defendant was justified in killing the pig? It was nothing more than robbery. If yes find for the defendant, the toime is fast approaching when none of you will be safe in leaving your own dooryard."

Scientific language is full of pitfalls for the uneducated, but the nomenclature of everyday life may occasionally prove a snare to the learned who happen to "err therein." A good example of this recently occurred at the Manitoba office of the Canadian Crown Lands Department. In a report sent to the Dominion authorities at Ottawa, the chief clerk at Winnipeg thought it well to mention the damage done to the trees by the small worms known as "borers." His warning sentence said that "the borers were menacing the timber on the eastern shores of Lake Winnipeg." Now, in previous reports he had had occasion to give information against squatters who were cutting timber without a license, and the Department no doubt thought the destructive grub was also of the human species, for a peremptory telegram immediately arrived from the Crown Lands Office at Ottawa, reading, "Arrest borers without delay."

TRADE TOPIC.

PREPARE FOR HEAVY CROPS.—The oldest inhabitants tell us that after a winter such as we have had in Canada this year, we may expect unusually heavy crops of hay and grain. Such predictions are welcome and doubly so when we have prepared for harvest by securing the latest hay-making and harvesting implements. When buying such, we like to know we are getting the best and are dealing with a reliable firm. Both these requisites are secured with machinery bearing the name David Maxwell & Sons. Their haying implements are particularly popular at the present time.

Dates Claimed for Public Sales.

May 3rd.—D. Jones, Jr., Villa Nova, Ont., Holsteins.

May 3rd.—H. S. Fallows, Evelyn, Ont., Shorthorns.

June 15th.—D. C. Flatt & Son, Millgrove, Ont., Yorkshire swine at Hamilton.

June 28th.—Hudson Usher, Queenston, Ont., and others, Shorthorns at Hamilton.

Nov. 8th.—H. Cargill & Son and W. G. Pettit & Sons, Shorthorns at Hamilton.

\$50 to California and Return

Via The Chicago, Union Pacific & North-Western Line, from Chicago, April 23 to May 1. Choice of routes going and returning. Correspondingly low rates from all points. Two trains a day from Chicago through without change. Daily and personally conducted tourist car excursions. Write for itinerary and full particulars regarding special train leaving Chicago April 26. B. H. Bennett, 2 East King St., Toronto, Ont.

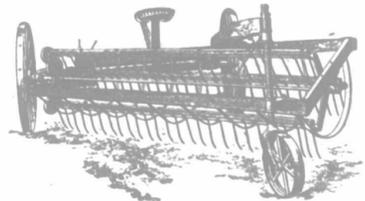
HAYMAKING

is made easy by using



Dain Loaders

AND



Side Delivery Rakes

The Side Delivery Rake delivers the hay into a loose, continuous windrow, so the wind and air can penetrate same, giving air-dried hay instead of sun-burnt, leaving all the substance in the hay with a good color, making it more valuable for feed or sale purposes. The Dain Loader takes the hay from the swath or windrow made by the Side Delivery Rake—rakes clean under either condition. Both these machines are without doubt the most convenient of the kind.

SEND FOR CIRCULARS
AND PRICE LISTS.

Dain Manufacturing Co.,
PRESTON, ONT.

MAN WANTED FOR ALBERTA FARM

A thoroughly competent man wanted to take full management of one of the finest farms in Alberta. Applicants must be prepared to invest from \$3,000 to \$5,000 in the business. The farm, which is situated 2 1/2 miles from an incorporated town on the C. & E. Ry., is well equipped in horses, machinery, implements and utensils. It consists of 1,100 acres of choice lands; 186 acres in high state of cultivation, 110 acres ready for seed. Hay meadow cuts 150 tons. Comfortable and commodious house, barn, granaries and other buildings. Dairy for 50 cows and piggery for 200 hogs. Plenty of good spring water. Lots of timber for building and fuel. Owner has cleared on this farm \$6,000 in the last 4 years. Must leave it for other interests. A good chance for the right man. None but fully-qualified persons need apply. Address: Opportunity, care of Farmer's Advocate, Winnipeg, Man.

SEPARATOR FOR SALE

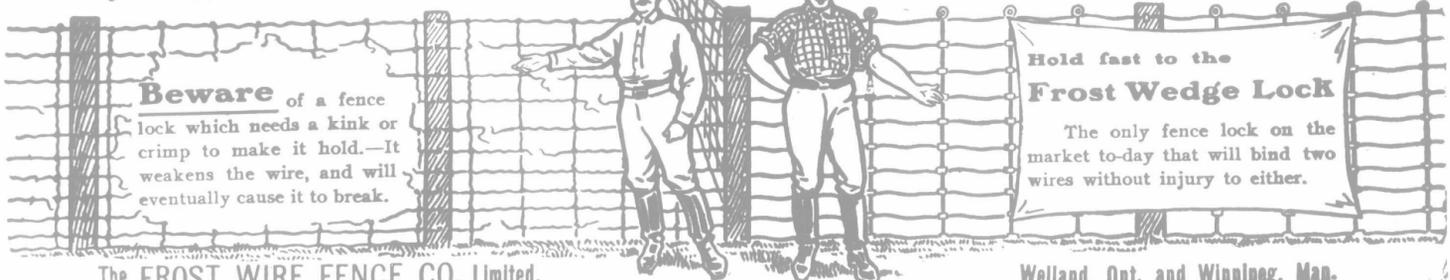
De Laval. Good as new.
E. Jones, "Belvedere," Brockville, Ont.

AGENTS WANTED. A few reliable men with rigs to appoint agents and sell our standard household remedies. Good positions to right parties. The R. H. Co., 207 St. James St., Montreal, Que.

ZENOLEUM

Famous COAL-TAR Carbolic Dip.
For general use on live-stock. Send for "Piggies' Troubles" and "Zenoleum Veterinary Advisor" and learn its uses and what prominent stockmen say about it. Books mailed free. All druggists, or one gal., express paid, \$1.50; 5 gal., freight paid, \$6.25.
ZENNER DISINFECTANT CO 113 Bates St., Detroit, Mich.

FARMER BROWN.—"Never again will I buy woven fence or any fence that wraps one wire around another."



Beware of a fence lock which needs a kink or crimp to make it hold.—It weakens the wire, and will eventually cause it to break.

FARMER JONES.—"Well neighbor try Frost Fence. I have had this fence for many years, and it is as tight to-day as when put up."

Hold fast to the Frost Wedge Lock

The only fence lock on the market to-day that will bind two wires without injury to either.

The FROST WIRE FENCE CO. Limited.

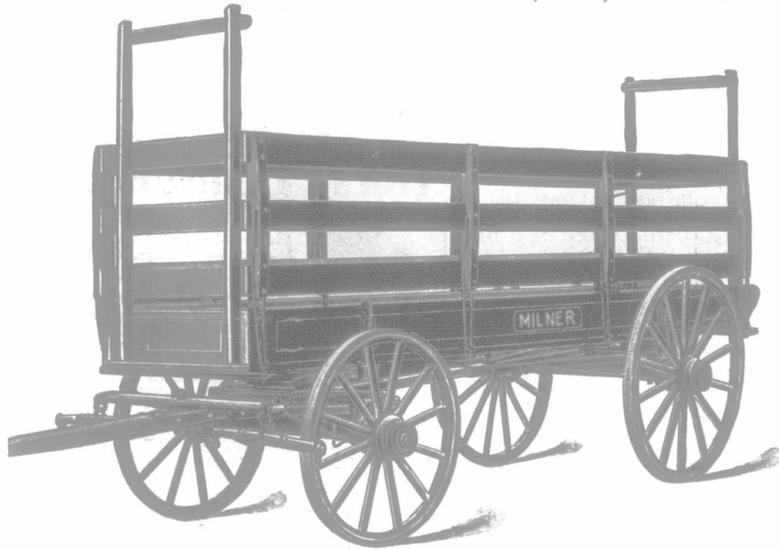
Welland, Ont. and Winnipeg, Man.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

This out represents our
FARM TRUCK

WITH COMBINATION STOCK AND HAY RACK.

Height of wheels: Front, 3 ft. 6 in.; Hind, 3 ft. 10 in.



It is a very popular wagon for all general purposes. Sold with or without the rack.

We make all kinds of FARM and TEAMING WAGONS, from one to eight tons' capacity.

In EXCELLENCE OF DESIGN, WORKMANSHIP and QUALITY OF MATERIAL they are unsurpassed.

MILNER PETROLIA WAGON CO. LIMITED
PETROLIA

WRITE FOR OUR NEW ILLUSTRATED CATALOGUE.

The WHEEL YOU WANT
 For Farm and General Work ALL IRON

OUR QUEEN CITY HANDY WAGON
 with iron wheels, strong and of light draft, low and convenient to load and unload; a perfect wagon for the farm. Carries five thousand pounds. Write for catalogue of both wheels and wagons. This wagon should not be confused with the cheap American wagon with iron wheels now on the market.

DOMINION WROUGHT IRON WHEEL CO.
 ORILLIA, ONT. LIMITED.
 H. F. ANDERSON & CO., Winnipeg, Agents for Manitoba and the N.-W. T., always carry a full stock of our "Handy Wagons," but to save time order wheels direct from factory.

FARMERS ARE ASKING FOR IT.
 Dealers' sales are doubling up. Those who formerly bought two or three are now ordering dozens of the

New Harrow Cart.
 Attaches to any harrow and avoids driving man and team. Turns on castors. Secure agency now. Liberal dealers' terms.

THE WESTERN IMPLEMENT MANUFACTURING CO., Ltd., Winnipeg, Manitoba, Canada.

Varicocele Cured to Stay
Hydrocele Cured in 5 Days
 No Cutting or Pain. Guaranteed Cure. Massey's Method.

VARICOCELE Under my treatment this insidious disease rapidly disappears. Pain ceases almost instantly. The stagnant blood is driven from the dilated veins and all soreness vanishes and swelling subsides. Every indication of Varicocele vanishes and in its stead comes the pleasure of perfect health.

I cure to stay cured, Contagious Blood Poison, Kidney and Bladder Troubles, Nervous Debility, and allied troubles. My methods of treatment and cure are original with me and cannot be obtained elsewhere. I make no experiments. All cases I take I cure.

Certainty of Cure Guarantee to cure you or refund your money. What I have done for others I can do for you. My charge for a permanent cure will be reasonable and no more than you will be willing to pay for benefits conferred. I CAN CURE YOU at Home.

Write me your condition fully and you will receive in plain envelope a scientific and honest opinion of your case, FREE of Charge. My home treatment is successful. My books and lectures mailed FREE upon application.

H. J. TILLOTSON, M. D., 255 Tilletson Building, 84 Dearborn Street, CHICAGO.

GOSSIP.

Mr. D. Milne, Ethel, Ont., writes: "I have made the following sales of Short-horns lately: To D. K. Livingston, Moncreiff, Ont., the young Rosebud bull, Prince Imperial, and to Wm. Cole, Glen Williams, Ont., the bull calf, Lovely Duke, and a young Berkshire sow to Mr. Hyslop, of Jamestown, Ont. Mr. Cole, who bought his bull calf without seeing him, writes: 'I am well pleased with calf, and think he will make a good bull. He is doing fine. I feel obliged to you for using me so honorably, and wish you success.' We have a few bulls of the right sort yet for sale."

May 3rd is the date fixed for the sale, by auction, of 40 head of registered Holsteins, belonging to Mr. D. Jones, Jr., Fairmead Stock Farm, Villa Nova, Ont., 16 miles south of the city of Brantford, 5 miles east of Waterford on T. H. & B. and M. C. R. R., and 6 miles west of Hagersville on G. T. R. and M. C. R. R. Morning trains will be met at Waterford and Hagersville. The cattle for sale are an exceptionally fine lot. Their breeding is of the best, and the quality excellent. This is one of the best opportunities recently offered to Canadian dairymen to secure good dairy stock. The herd is composed chiefly of young cows, and there is not a cull in the entire lot. Last year the milking herd numbered 18, and made an average of \$70 per cow for the year at the cheese and butter factory. Over and above that, all the calves were raised and fed new milk until three months old. At the head of the herd stands the bull, Prince Yonintje Clothilde De Kol, which is one of the finest sires in Canada. This bull was imported from H. D. Roe, Augusta, N. J., breeder and owner of the world's champion cow, which gave at the age of four and one-half years in a recent official test 92.25 pounds milk in a day; 620.95 pounds milk in seven days, and 31.34 pounds butter in seven days. Prince Yonintje Clothilde De Kol possesses some of the same breeding as this noted cow. All the young animals for sale are sired by this bull, and from cows which have given from 50 to 70 pounds of milk in a day.

BUYS A PERCHERON.

While on his way to the United States to look up a Percheron horse for the use of the breeders about Laurel, Ont., Mr. W. H. Maltby, himself an experienced breeder and importer, stopped off at London, Ont., to inspect the horses at the branch barn of Trumans' Pioneer Stock Farm, of Bushnell, Ill., and was so well taken with the massive conformation and snappy action of Robinot (44423), an imported four-year-old, that he concluded he need go no further. According to Mr. Maltby, Robinot is just the horse the farmers in Wellington and Dufferin counties require. He possesses the weight and action that is required to do farm work easily and fast, and with him, as with other horses sold from the Pioneer Farm, went a gilt-edged guarantee of usefulness, or he would be replaced. Robinot's sire was Napoleon 43046, dam Mirabelle (35374), by Isborg (13156). He is a black with a few gray hairs, and weighs over a ton in his four-year-old form. Mr. H. W. Truman reports the enquiries through their advertisement so numerous that he will have to make another draft on the home barns to supply the demand of the Canadian trade.

TRADE TOPICS.

THE BLAINE HARROW, advertised in this issue by The Blaine Harrow Mfg. Co., Toronto, is claimed to be the best on the market. Write them for particulars.

SATISFACTORY IMPLEMENTS.—It's like trusting your oldest and truest friend to purchase a Massey-Harris implement. Nothing that insures efficiency is omitted from their list of improvements, and customers may rest assured that if a satisfactory machine can be secured anywhere, it will be among the Massey-Harris equipment. Durability, strength and lightness of draft compatible with conditions on all classes of soils are sensibly combined in these modern farm necessities.

There are more than a hundred reasons why folks who try it like the

Empire Cream Separator

better than any other, but the reasons may all be summed up in this:

The Empire does better work, gives less trouble and makes more money for the farmer.

Our books about the Empire Way of dairying are free for the asking. Send for them.

Empire Cream Separator Co.
 28-30 Wellington St., West, Toronto, Ontario.

METAL SHINGLES
METAL CEILINGS

ASK FOR FREE SAMPLES CATALOGUE AND ESTIMATES

Use metal inside and outside and your building will be warm and dry, lightning, fire, wind and weatherproof, possessing a beautiful appearance at small cost.

METAL SHINGLE & SIDING CO. LIMITED
 PRESTON, ONT.

RAISE YOUR CALVES cheaply and successfully on

Blatchford's Calf Meal

AND SELL THE MILK.

Free Pamphlet - How to do it.

CHAS. COWAN, LONDON, ONT.

This Outfit as shown here would cost \$2.50 in any Sporting Goods House.

FREE TO BOYS

This Baseball Outfit and \$25.00 Cash

This Outfit contains 1 piece, full regulation size. The Ash Bat is 32 inches long. The Mitt is made of heavy wire, full size, 9 1/2 inches long. The Catcher's Mitt is finely made, being 9 inches long by 8 inches wide. The Ball is strongly attached and finely finished. The Caps are hand sewed and come in red, white and blue. A tanned leather Fielder's Glove and adjustable Fancy Baseball Belt complete this dandy Outfit. All you have to do is to send me \$2.50 worth to get this Handsome Outfit. You also become a contestant for our Extra Cash Prize, the list price of which is \$25.00. Send name and address, and we will mail you, postpaid, 25 packages of Marvel washing Blue, the great laundry help, to mail at 10 cents a package. We send handsome Gold-finished Scarf Pins and Brooches to give away with the Bluing.

Every lady needs Bluing. When sold, return us the money, \$2.50, and we will send you at once the handsome Baseball Outfit, also a Cash Prize Certificate. No money wanted till goods are sold. We take back all you cannot sell. We have 50 other extra handsome presents for Boys. Address at once, **THE B. & W. BLUING CO., Baseball Dept 901, Toronto, Ont.**

WE SHIP ON APPROVAL

without a cent deposit and allow 10 DAYS FREE TRIAL on every bicycle. Any wheel not satisfactory returned at our expense.

Highest Grade \$8.75 to \$17
 1904 Models \$7 to \$12
 Coaster Brakes, Hedgehorn puncture proof tires and best equipment.
 1903 & 1902 Models \$7 to \$12
 Best Makes
 600 Second-Hand Wheels
 All makes & Models \$3 to \$8
 good as new

Great Factory Clearing Sale at half factory cost.

BEAN A BICYCLE taking orders from sample wheel furnished by us. Our agents make large profits. Write at once for catalogues and our special offer.

AUTOMOBILES, TIRES, Sewing Machines, Sundries, etc., half usual price.

MEAD CYCLE CO., Dept. 254D, Chicago

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

NOTE THE KNOT---IT CANNOT SLIP

Ideal Woven Wire Fencing

The life of any wire fence is the life of its smallest wire. The Ideal is made of large (No. 9) hard steel galvanized wire throughout, making it the most durable and the strongest.

The "Ideal" improves permanently the property which it protects. Write for Illustrated Catalogue of Fencing and Gates—Free.

The McGregor-Banwell Fence Company, Limited,
WALKERVILLE, ONTARIO.

LONG LIVE THE POTATO!

DEATH TO THE BUGS!

Buy the

Canada Paint

COMPANY'S

Paris Green.

GUARANTEED PURE IT IS THE BEST.
IT IS PURE.

Directions upon each package bearing the name of the

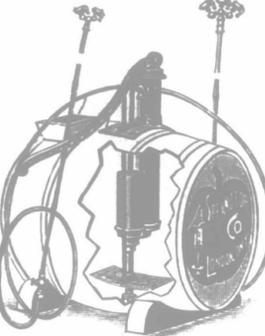
CANADA PAINT COMPANY.

WHY DON'T YOU DO IT? is the name of a new circular which we are on our mailing list. Did you get one? We would like you to have one, as it gives a detailed account of the operations the SPRAMOTOR will perform.

SPRAY YOUR ORCHARDS NOW.

This is what the Department of Agriculture of Canada are now doing, using the

Spramotor Automatic Power Sprayer



with the object of giving the farmer and fruit-grower lessons in spraying, which they do with the hope of this treatment being continued. The Government of your Province use the SPRAMOTOR. Isn't that a PROOF of its being the best machine obtainable?

WE ARE PREPARED

to supply you the apparatus as illustrated, comprising the following: 1 Spramotor, No. 2; 2 lines hose, each 10 feet; 2 hand valves; 2 bamboo extension rods; 2 two-nozzle clusters, for spraying; for \$26.00. This outfit will fully take care of 400 trees or less. If you do not require such a large outfit, write us for prices on a smaller one.

Do you think you can afford to refuse this? We will furnish full particulars on receipt of your enquiry. Please let us have it, addressed to

SPRAMOTOR COMPANY,
68-70 King St., LONDON, CAN.

Mention the FARMER'S ADVOCATE.

HANDSOME TALKING MACHINE FREE



Reproduce songs, speeches, band music, &c., loud and clear like a \$50.00 machine; enormous volume, can be used at concerts and entertainments, beautifully silver finished metal amplifying horn, spring motor, speed regulator, horn rest and all attachments same as on expensive machines, handsome ornamental base. Don't pay from \$15 to \$25 for a Talking Machine, we give this grand Talking Machine FREE for selling only 36 packages at 10c. a package of MARVEL WASHING BLUE, the great wash day help. Send your name and address, we trust you and send Bluing by mail post paid; we also send Handsome Gold Finished Scarf Pins and Brooches to give away with the Bluing, you can sell it quickly every lady needs Bluing. When sold send us the money, \$3.00, and we will send you this handsome Self-playing Talking Machine complete, also one Musical and Song Record My Old Kentucky Home, Laughing Water, Bedelia, Sun Dance, Dixie Girl, Annie Laurie, Carry Me Back to Old Virginia, The Old Oaken Bucket, Hiawatha, Where is My Wandering Boy Tonight? I'll Give You Back to Dixie, Maple Leaf Forever, Home Sweet Home, Way Down Yonder in the Corn Fields etc. Send for the Bluing now and you can have the Handsome Talking Machine in a few days! Remember this Machine is not a Toy but a full size Talking Machine. It is open for inspection at our offices any time after 9 a.m. We will forfeit \$100 to anyone who sends us \$3.00 and can prove we did not send the Talking Machine complete. Address at once

THE MARVEL BLUING CO. PREMIER DEPT. 465 TORONTO, ONT.

TRADE TOPICS.

SAGGING AND HEAVING.—Farmers who want fence posts that will not heave and gates that will not sag, will be interested in the announcement of the Canadian Portable Fence Co., Toronto, Ont., which appears elsewhere in this issue. Get their catalogue.

DERMATOLOGY.—Sufferers from eczema, or any other form of skin disease, are referred to the advertisement of the Graham Dermatological Institute, Toronto. All forms of skin troubles and complexion defects are successfully treated by this institute.

FENCING.—Before finally deciding upon the kind of fence to build, we ask all intending purchasers to look into the merits of the Hercules field fence, and the patent hollow steel posts, manufactured by the Munro Wire Works, New Glasgow, N. S.

They were rehearsing their parts in an amateur drama. "Oh, I beg your pardon," said Herbert, looking at the book again. "I kissed you at the wrong place."

"Isn't that too bad!" exclaimed Amelia. "Now we'll have to do it all over again."

A FARM MANAGER who desires a good position, and has a sum of money to invest, should look up the advertisement addressed "Opportunity," care of "Farmer's Advocate," which appeared in the March 30th issue. The farm is said to be one of the finest in Alberta, and well equipped with live stock and machinery.

A BOOKLET.—The Vancouver Tourists' Association have just issued a beautiful booklet, descriptive of that lovely city and the coast generally. It is profusely illustrated and charmingly written. It is well worth writing for by anyone unacquainted with the splendid possibilities of the "land of the setting sun" for a pleasure trip. It may be obtained by mentioning this paper and addressing the president, Mr. J. J. Banfield, Vancouver, B. C.

It is simply labor wasted to wash white goods and then fail to get a proper finish on them for want of a first-class starch. Linen, properly ironed, should have a certain amount of gloss, and should be smooth, so that the dust will not adhere to it. In this connection we wish to call attention to the goods advertised in another column, by the Brantford Celluloid Starch Works. Their starch is the modern article. Try it.

The attention of our readers who are lovers of music and appreciate the value of a musical instrument in making the home pleasant, is directed to the advertisement of the New Estey organs, catalogued in this paper by the well-known firm of Gourlay, Winter & Leeming, 188 Yonge St., Toronto. Look up the advertisement, and note the reasonable price and the favorable terms of payment and conditions on which the Estey organ is sold, and write the firm for further necessary information.

May is said to be the best month to set incubators, and that a larger percentage of eggs will hatch in May than in any other month. This is affirmed in their special advertisement in this paper by the M. Campbell Fanning Mill Co., of Chatham, Ont., who manufacture the Chatham incubator, which they sell on most favorable terms, in yearly instalments. See their advertisement on another page, and write them for full particulars.

\$33.00 to the Pacific Coast

Via the Chicago-Union Pacific & North-Western Line from Chicago daily during March and April, to San Francisco, Los Angeles, Portland, Seattle, Tacoma, Vancouver and other Pacific Coast points. Very low rates to Helena, Butte, Spokane, Ogden and Salt Lake City. Corresponding low rates from all points. Daily and personally-conducted excursions in Pullman tourist sleeping cars to San Francisco, Los Angeles and Portland, through without change; double berth only \$7.00. Choice of routes. For particulars address B. H. Bennett, 2 East King St., Toronto, Ont.



Lump Jaw

Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use

Fleming's Lump Jaw Cure

No trouble—rub it on. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free illustrated book on Lump Jaw and other diseases and blemishes of cattle and horses. Write for it today.

FLEMING BROS., Chemists,
45 Front Street, West, Toronto, Can.

Horse Insurance.



You can insure your horse against Curb, Splint, Spavin, Sprained Cord and all forms of Lameness, by using

Tuttle's Elixir.

The safe plan is always to have a supply on hand. Used and Endorsed by Adams Express Company.

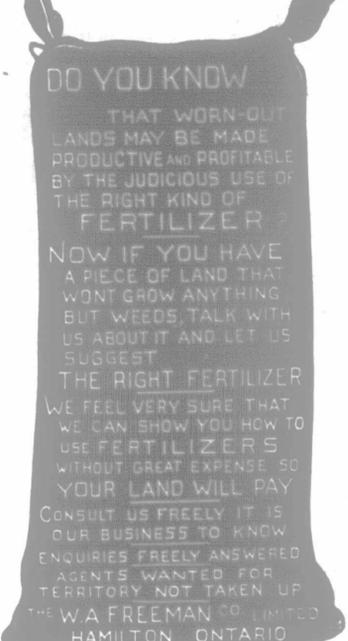
Tuttle's American Condition Powders
—a specific for impure blood and all diseases arising therefrom.

TUTTLE'S FAMILY KIDDER cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

Dr. S. A. TUTTLE, 66 Beverly St., Boston, Mass.

Beware of so-called Elixirs—some genuine but Tuttle's. Avoid all others; they offer only temporary relief, if any.

LYMAN, KNOX & SON, Agents,
Montreal and Toronto, Canada.



DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WONT GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER

WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY

CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP

THE W. A. FREEMAN CO. LIMITED
HAMILTON, ONTARIO

BRITISH COLUMBIA.

"Fruitland," Kamloops, B. C.

Newly-developed irrigated lands in the beautiful fertile valley of the Thompson River, on the main line of the C. P. R., within half a mile of the City of Kamloops, the inland capital of British Columbia, and a well-known health resort. Magnificent soil for fruit of all kinds: Apples, pears, cherries, plums, peaches, grapes, strawberries, and all kinds of vegetables grown in abundance. Perfect climate; air dry and bracing. Good schools, churches, boating, shooting, fishing, etc. For full information apply to:

Manager, Canadian Real Properties, Ltd.,
Box 185, Kamloops, B. C.

RELIABLE MEN WANTED

In every locality to introduce our goods and represent us in their district. Salary or commission, \$60 per month and expenses. Steady employment to good men. No experience needed. Write for particulars. **THE EMPIRE MEDICINE CO., London, Ont.**

MEN WANTED

THROUGHOUT CANADA AND UNITED STATES.

SALARY OR COMMISSION—\$240 a year and Expenses, payable weekly, to good reliable men representing us in their district, introducing our goods, distributing large and small advertising matter. No experience, only honesty required. Write at once for instructions. **WALSH MEDICAL CO., London, Ont.**

BARREN COW CURE

makes any animal under 10 years old breed, or refund money. Given in feed twice a day. Particulars from **L. F. SELLECK,** Morrisburg, Ont.

HACKNEYS

WANTED: Registered Hackney mare weighing at least 1,050; state age, height, weight, color, etc. **M. 4007 Dorechester St., Montreal.**

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Veterinary.

PERSISTENT HEAT.

Will you please tell me through your paper what to do for a cow that is in heat all the time? C. H. R.

Ans.—This condition seldom occurs except after abortion. There is no use breeding her till she becomes regular in her menses; in fact, harm is done, and the condition prolonged. Give her rest, and if you do not succeed in getting her in calf in reasonable time, you had better fatten her, as she may affect other cows.

SPAVIN—MAMMITIS.

1. A jack spavin appeared this winter on one leg of trood mare, in foal. She is quite lame; will foal in June. Would it be wise to blister it now?

2. Cow has one side of udder swollen and hard, has been so since she calved, about three weeks ago. Let me know what to do for it. J. H. F.

Ans.—1. Blister with biniodide of mercury, two drams; powdered cantharides, two drams; lard, two ounces. First, clip off the hair, and make the skin soft by washing with warm soft water and soap. Tie up the head so she cannot rub the blister off. Repeat the blister several times, and keep the part greased.

2. Bathe with hot water; draw the milk often; rub well with a liniment composed of alcohol, three fluid-ounces; turpentine, two ounces; spirits of ammonia, one ounce; gum camphor, four drams; water to make a pint. Feed lightly on good hay, bran mashes, roots, or other succulent food. A home remedy is goose oil and spirits turpentine mixed, and well rubbed in.

NEGLECTENCE OF VETERINARY—A SUSPICIOUS CASE.

1. We had a veterinary surgeon to castrate three calves. The day after, they began to swell, and in three days one died, and in two days more another, and in two days after the third died, all in the same way. Can I do anything with the veterinary surgeon in way of making him pay for them, or not?

2. On April 29th, 1903, we hired a young Englishman, about 25 or 30 years of age, for one year. About a month after he came, one of our calves took sick and died. In about two months, another took sick and died under same circumstances as the first; that is, a lump appeared on the side of the belly and in a few days the calf died. Now, in the second case, I can prove this Englishman kicked the calf on the belly about three or four days before it died, and believe that was the cause of death, and also of the death of the first calf. Can I hold him for value of calf? FARMER J. I. C.

Ans.—1. Assuming that the loss of the calves was due to actual negligence or gross lack of skill on the part of the veterinary, he would be liable in damages, and the same could be recovered in an action. We cannot tell, though, from your statement alone whether the plaintiff in such action would be likely to succeed. He would certainly be expected to prove his case very strictly.

2. We doubt your having sufficient evidence to warrant your venturing upon a suit against him.

Miscellaneous.

COST OF SURVEYING.

If two farmers, A and B, got a township surveyor to run a line between their farms, and after the line was run, one of them was not satisfied, and the unsatisfied man brought on a provincial land surveyor, would he have to pay all costs? D. P.

Ans.—It depends, of course, upon the agreement between the parties if such agreement makes express provision for the expenses; but if it does not so provide, then it would seem, from what you say, that the expense of the first survey should be borne by both parties, but that as to the second the cost of it should be paid by the party who called for it and employed the surveyor.

Satisfactory Gate-Posts and Satisfactory Gates

ARE ASSURED BY OUR SYSTEM OF POST ANCHORAGE AND ADJUSTMENT.



It is impossible for our STEEL TRUSS POSTS TO HEAVE. It is equally impossible for our STEEL FRAME GATES TO SAG. Add to this the Adjustable Features of our Posts, and we have fulfilled our claim for SATISFACTORY GATES and GATE-POSTS. Write for catalogue—Fence, Posts, Gates, etc.

The Canadian Portable Fence Co'y, Limited, JARVIS STREET and ESPLANADE, TORONTO.

\$200.00 GIVEN AWAY

FOR CORRECT ANSWERS TO THIS SEED PUZZLE

We are spending thousands of dollars to advertise our business. Each of these six small pictures represents a well-known Garden Vegetable. Can you think out the names of three of them? If so, the money is surely worth trying for. Three correct answers win. If you cannot make it out yourself, get some friend to help you.

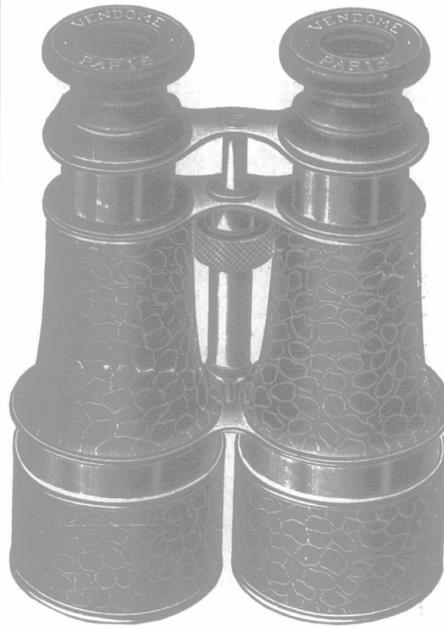
EACH OF THE SIX PICTURES REPRESENTS A GARDEN VEGETABLE. CAN YOU NAME THREE OF THEM?



It does not cost you one cent to try and solve this puzzle, and if you are correct you may win a large amount of Cash. We do not ask any money from you, and a contest like this is very interesting. It does not matter where you live; we do not care one bit who gets the money; if you can make out the names of three of these Garden Vegetables, mail your answer to us, with your name and address plainly written, and if your answer is correct we will notify you. We are giving away \$200.00 for correct answers, and a few minutes of your time. Send in your guess at once, with your name and address, to THE MARVEL BLUING CO., DEPT 1400, TORONTO, ONT.

Regular \$10.00 DAY AND NIGHT FIELD GLASSES Only \$3.65 FOR FIELD OR MARINE USE

Buy direct from us and save the Wholesaler's and Retailer's Profits



We offer you this High Grade Field Glass as the equal of anything you could buy from your local dealer at three times the price. It is an exceptionally fine instrument, perfect in workmanship, finish and optical construction, and we can guarantee it to give perfect satisfaction. It measures 9 inches long, when fully extended, is strongly and handsomely made, the trimming, cross bars and draw tubes being heavily nickel plated and the covering the best grade of brown tan leather, alligator pattern is provided with extension sunshades which may be pulled down over the object lenses thus enabling the Glasses to be used with remarkable results at night and is fitted with 6 specially ground lenses, (the outer or object lenses being over 2 inches in diameter), of four times magnifying power, fine definition and great clearness. We could not think of offering this Field Glass at such an extremely low price were it not that we had a large number made specially for us by one of the biggest Field Glass manufacturers in France, during their slack season in the winter. Thus by buying from us you not only save the Wholesaler's and Retailer's profits but you get the benefit of our close prices, obtained by having our goods made this way. We also give you the same privilege you would have in any store to see and examine the Glasses before paying for them.

SEND NO MONEY

Just your name, address and the name of your nearest Express Office and we will ship the Glasses C.O.D. in a strong, waterproof canvas case with leather carrying strap to your nearest Express Office where you can call and EXAMINE AND TEST THEM BEFORE PAYING ONE CENT. Compare them with any Glass you have ever seen at double our price, and if you find them in any respect inferior, you can return them at our expense and we will pay the charges both ways. Could we make a fairer offer? If you think of the many advantages to be gained by having a powerful Field Glass, of the miles of travel such an instrument will save you every year, of the money you will save by purchasing from us, you will not hesitate to write us. Address: THE NATIONAL TRADING CO., Dept. 527, Toronto

ADVERTISE IN THE FARMER'S ADVOCATE.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Miscellaneous.

PIGEONS.

- 1. What kind of pigeons would you advise me to raise on a farm for profit?
2. Where can I secure a book on pigeons, and what would it cost?
3. What kind of place is needed for pigeons, and do they need warm quarters? J. M.

Ans.—We would not say that there is profit in any kind of pigeon. Write the U. S. Department of Agriculture, Washington, D. C., for Bulletin No. 177, Squab Raising.

INFECTED MEAT.

We have recently removed from a house, but before we had got our meat out the family of the new occupant took scarlet fever. Will the meat be infected? It was salted dry. Would it be fit to smoke? E. D.

Ans.—Salt of itself is a good antiseptic, and would preserve the meat from infection. Smoking would further preserve it; and if it should be that the germs of any disease infested the meat, they would be destroyed in cooking.

STEAK FROM BEEF-RING.

We wrote you a few weeks ago for cut for beef ring with twenty shares. You sent us a back number with twenty-share cut, but only divided into roast and boil. Kindly give us a twenty-share cut with a roast, a boil, and a piece of steak to each member. J. W. A.

Ans.—Taking the chart furnished in our columns, a piece of steak could be cut from all except four shares. We have, so far, not been able to devise a scheme whereby each patron would receive a piece of steak. We think the chart furnished pretty satisfactory.

POOR LAND.

A piece of land is sand, ten or twelve feet deep, with clay bottom, is high, well-drained, and about eighteen feet square. Salt, lime and ashes have been applied, but failed to grow a crop. Grain crops start, grow three or four inches high, then it turns yellow and dies. Surrounding land grows good crops of any grain. What treatment should I give it? W. J. H.

Ans.—There may be gas arising at this particular point that destroys growth. Possibly there is oil below. We can only suggest working in four or five inches of black muck from a swamp, and top dressing with short barnyard manure.

HUSBAND SELLING HOME.

I am in a little trouble and come to you for help. We have a lovely home farm all paid for and out of debt. My husband has been sick, and, so, a little discouraged. He has advertised in our home paper the place for sale, I not knowing about it until I saw the advertisement.

- 1. Can he sell everything about the place and the farm without my consent?
2. Can he let or lease the place for fifty years, which, of course, means the same thing, as we are getting along in years, and compel us to go to a place in a village? A MOTHER.

Ans.—1. Yes; but, as to the farm, only subject to your dower interest, if any; and you are entitled to dower, if you were married prior to May 1st, 1895.

2. Yes; but such lease would also be subject to dower, if any.

FARMING ON SHARES.

A gentleman let his farm out to me in the spring, March 20, 1903, and he supplied me with everything. What share should I get? Ought I not have a third of everything? He told me at first that I was to have a third of everything straight through. Now he says that I ought to feed my third up to the stock, then to take a third of the increase. He says if I take a third and a third of the increase, I am getting too much. My third would be worth more than the increase, and besides I am doing the work. I could not live on one-third of the increase alone. The time or me to leave is the coming fall. What have is to be mine then? Would I have to put in the fall wheat? F. F.

Ans.—We consider you entitled to the third of everything, including increase, for your own use and benefit; but that for all that appears from your statement, you may fairly be expected to put in the fall wheat.

QUESTIONS AND ANSWERS.
Miscellaneous.

LITTER CARRIERS.

Please give a plan of a track having a box with a false bottom for purpose of cleaning out stable. A.

Ans.—Write Lyman C. Smith, Oshawa, Ont., who advertises litter carriers in this paper. He will furnish all information on such subjects.

NELSON ROWLAND'S WHEREABOUTS.

Can you inform me through the columns of your valuable paper as to the whereabouts of the Standard-bred trotting stallion, Nelson Rowland 14351? He travelled in the London district the last few years, but has been sold. Give name and address of owner. A. D. C.

Ans.—We are informed that he is owned by a Mr. McCarthy, of Park Hill, Ont., proprietor of a stage route there.

KEEPING EGGS—FEEDING CARROTS.

1. How is the best way to pack eggs for keeping, and how long will they keep?
2. How often and in what quantity should carrots be fed to driving horse that is inclined to be a little washy?

SUBSCRIBER.

Ans.—1. Eggs can be kept quite well for a season in a solution of water glass (sodium silicate) one part to water eight parts. Put the eggs in a crock and pour the liquid over them. Lime water made by two pounds of fresh slacked lime, a pint of salt and four gallons of water is also a good preservative. Only the clear water is used. For keeping eggs a few weeks, pack them in bran and store in a cool place.

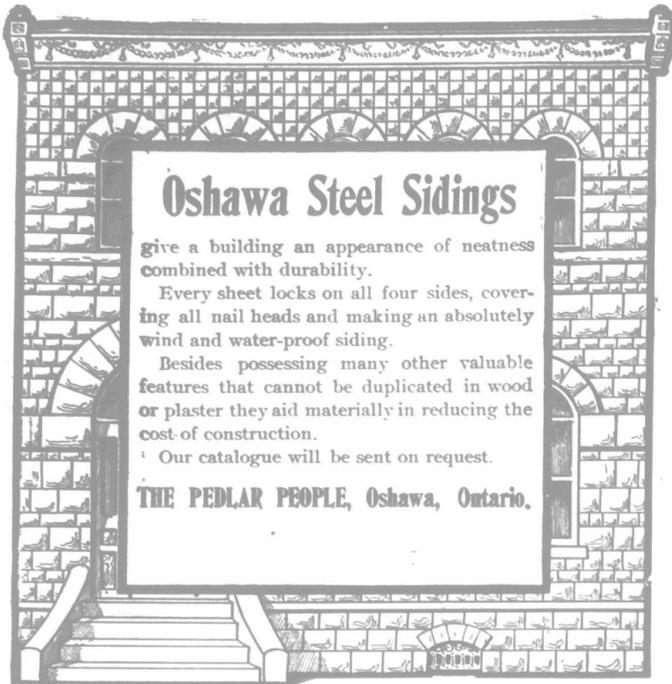
2. Would not feed more than one a day, and that after the dry feed had been eaten.

BLACK WALNUT AND WHITE PINE.

Would you kindly let me know where I can get black walnut trees for transplanting, or the nuts. What kind of soil is needed? How long would it take for them to grow to about 12 to 14 inches in diameter, and how far apart should they be planted? Should they be planted in rows or broadcast? Would they grow in Parry Sound District, anywhere along Grand Trunk line, and also white pine trees? Kindly give full particulars, if you can. SUBSCRIBER.

Ans.—We cannot find that walnut seedlings are produced and sold in Canada at prices suitable for practical reforestation. The same applies to the nuts for planting, which can be had, however, by arrangement with someone in the Lake Erie district, where the tree now grows, or with some of our leading seedsmen. Trees at the Central Experimental Farm, Ottawa, grew from a height of 12 inches to about 18 feet, on the average, in 15 years, and attained a diameter of 3½ inches. Trees are usually large enough for making lumber at from 40 years upwards, and reach their full size at about 100 years. In the Ottawa plantation, the seedlings were planted 5 feet by 10 feet in rows. In Northern Ontario, this tree succeeds best on warm, sandy loams, and fails in cold or wet soil. It is also important that the snow should lie deep around it to protect the taproot from severe freezing or sudden changes. There are trees now growing probably 10 to 15 years old at Bala, Muskoka, and Sir Henri Joli de Lotbiniere has succeeded in growing them still farther north on his estate in Quebec. The nuts should be kept over winter, mixed with moist sand and exposed to frost. They should be planted in spring, as soon as the soil will permit, but care must be taken to protect them from squirrels and mice, both before and after planting. In 1899, hickory and walnut were planted in the forest reserves of Eastern Ontario, and information as to these could, no doubt, be obtained from Mr. Southworth, of the Department of Crown Lands, Toronto. White pine grows at its highest perfection in the Parry Sound District: would be best propagated by seedlings, such as the Ontario Government proposes to grow for farmers at Guelph; but would, in most localities, propagate itself in time, if protected from fires. The growth is much slower than walnut, requiring about 80 years to make merchantable timber.

W. H. MULDREW.



Oshawa Steel Sidings

give a building an appearance of neatness combined with durability.

Every sheet locks on all four sides, covering all nail heads and making an absolutely wind and water-proof siding.

Besides possessing many other valuable features that cannot be duplicated in wood or plaster they aid materially in reducing the cost of construction.

Our catalogue will be sent on request.

THE PEDLAR PEOPLE, Oshawa, Ontario.



ARNDT TREE PROTECTOR

(BRASS BAND.)

SIMPLE, EFFECTIVE, INEXPENSIVE.

Absolutely the most positive preventive against all creeping and crawling insects. It will save the trees. Save time and labor. Save money.

This simple brass band is patented and put upon the market as pre-eminently the very best and surest device yet invented for preventing the encroachment of all creeping and climbing insects. It is made of brass, does not corrode or rust, does not take an expert to place on a tree, and when once overcomes all the difficulties met with by other methods of tree protection, and lasts for years. No chemicals used. The Arndt Tree Protector comes in coils of twenty (20) feet, neatly and securely packed in boxes, with brass fasteners and cotton wadding, and with full directions for using on each box.

ARNDT TREE PROTECTOR, Limited

F. V. PARSONS, Manager.

Office: Standard Stock Exchange Bldg., No. 43 Scott St., Toronto, Ont.

Write us for pamphlets giving full particulars and rates.

Live agents wanted.

A New Record

For draft geldings of any breed was made in the Chicago Auction Market on March 23rd last, when a high-grade Clydesdale Gelding was sold for \$665 to Messrs. Armour & Co.

We are the oldest and largest importers of **Clydesdales** in America, and are now offering extraordinary bargains in this breed, and also in **PERCHERONS, SHIRES, SUFFOLKS, HACKNEYS and GERMAN COACHERS.**

ALEX. GALBRAITH & SON,

JANESVILLE, WIS. BRANDON, MAN.

If your district is not supplied with a good stallion, write at once to **MR. JAMES SMITH, Manager Manitoba Branch.**



International Importing Barn

J. B. HOGATE, Prop., SARNIA, ONT., IMPORTER OF

CLYDESDALE, SHIRE AND HACKNEY STALLIONS

Last importation Nov. 9th, 1903, consisting of stallions sired by Sir Everard, Hiawatha, Black Prince of Laughton, King of Kyle, Sir Thomas, Royal Carrick, Clan Chattan, Lord Lothian, Balmedie, P. Charming, Prince of Airies, and from noted dams. Several are tried horses. If you want first-class horses at right prices, terms to suit, write for particulars, and come; I will pay one-half railroad fare. Think I can save you money.

H. H. COLISTER, Travelling Salesman.

IMPORTED CLYDESDALES

I have just returned from Scotland with a fine lot of Clydesdale stallions of great breeding and individuality. They are indeed a fine lot and just the kind the country needs. Write for prices and description, or, better still, come and see and be convinced of what I say.

WM. COLQUHOUN, on **MITCHELL P. O. AND STATION (G. T. R.), ONT.**

ELECTRICAL ENGINEERING.

Please inform me where one can learn electrical engineering. R. S. T.

Lambton Co.

Ans.—At the School of Practical Science, Toronto, Ont., and between terms working in an electric lighting or street railway electric power house.

A BAD WEED.

Will you kindly give a remedy for a very bad weed growing in pastures, known as carpet-weed? It is getting very common and spreading rapidly here. It could, I presume, be destroyed by plowing; but my pasture and many of my neighbors' pasture land is broken land, which can't be cultivated.

SUBSCRIBER.

Ans.—The best treatment for such weeds on broken lands is to manure the land in winter with a light coat of barnyard manure; or in the summer with ashes, or the commercial fertilizers advertised in this journal. The grass should also be renewed by a seeding of white clover and other grasses suitable to the soil. This treatment is not destructive of the weeds directly, but stimulates the grass, which, naturally, is more persistent than the weed.

MAMMOTH CLOVER.

Have a field of Mammoth clover. Would it not be better for me to cut it for hay, if it grew rank; and then keep the second cut for seed; or if it were only a medium crop, to leave the first cut for seed?

2. For what purpose is the seed used?

3. Should it be the same price as the common red?

4. Had a calf castrated about two o'clock in the afternoon, and next morning it was dead. What was the cause? It had not suffered, for the bedding was not scattered. W. J. S.

Ans.—1. Our experience with Mammoth clover was on a field in good tilth, and the crop grew quite rank, so we cut it early in June, and later in the season for seed. We know it is quite customary to take but one crop in a season, but would do as you suggest, depending upon character of the growth. In some parts it is pastured until about June 10th.

2. The seed is used for seeding purposes to grow a crop for soiling, for manure, or for hay.

3. The price will depend upon the supply; but we should expect it to be more expensive than common red, as it is not as easily grown.

4. It would be hard to say what was the cause of death without an examination. It may have bled too much, or died of shock.

HEATING AND VENTILATING SCHOOL.

Would you please give a description of how to heat and ventilate a schoolhouse of three rooms, two below, and one above one of these; to obtain a sufficient supply of cold air and let out the impure air; to get heat from the lower rooms; there being no excavation below.

S. S. W.

Ans.—We would judge that your cheapest and most satisfactory plan would be to have a small-sized excavation made and an ordinary furnace, or box-stove furnace, put in. If, however, you do not wish to do this, we do not see how you can avoid using two stoves. The so-called "ventilating stove" would, perhaps, be the best for the purpose. It is simply an ordinary stove, about which is placed a cylinder (not a closed case) of zinc or tin. Beneath the stove, a large hole to which a pipe from the outside enters, is cut through the floor. The fresh air coming in through the pipe is thus heated about the stove before passing into the room. For the removal of foul air, it is also necessary to have an opening made and connected with the chimney. This opening is best placed close to the floor, and as near the stove as possible. Openings at the top of the room for this purpose are not now recommended by the best authorities. By having them at the bottom, ventilation of the room and more equable heating, by reason of the warm air being drawn downward again on its way out, are accomplished at one stroke. Since you have an upper room to be heated, we would say to have a large-sized stove in the room immediately beneath. Over part of the top of this stove, place a tin hood or enclosure from which a pipe may run to the upper room. This, with the stovepipe, should heat it adequately, provided the foul-air escape is placed as described above.

QUESTIONS AND ANSWERS. Miscellaneous.

BREEDING SOW WHILE NURSING.

Will a sow accept service while suckling a litter, and when is the proper time to breed her? J. K.

Ans.—Some sows will when her litter is three to five days old, but we have never known a case of conception taking place at such time, and do not think it is proper or wise to allow mating under such circumstances. Generally the sow will come in season within five days after her litter is weaned, and it is then proper to breed her.

BALANCED RATION.

Please give me, in your next issue, a balanced ration, made up of ensilage, oats and barley chop, mixed timothy and clover hay, oats and wheat chaff; add to this what you think would be needed for a cow giving 40 lbs. of milk daily and weighing 1,200 lbs. Would you feed ration wet or dry? F. S.

Ans.—A good ration would be for a cow of that weight, 24 lbs. of silage; hay, 8 to 10 lbs.; chaff, 6 lbs.; oat chop, 6 lbs.; barley, 3 to 4 lbs.; oil cake, 2 1/2 lbs., per day. This would give a nutritive ratio of about one to six. Mix the meal with the ensilage and chaff or cut hay. Feed dry.

WHEY TANK.

We built a whey tank last year of stone and cemented inside. Think, perhaps, cement was not right mixed; held whey for two months. What is best to do? J. C. A.

Ans.—Such a tank should hold whey, if the inside were plastered with good concrete; say one of rock cement to two of sand, or one of Portland cement to four of sand. Make the coat about one-quarter inch thick, and put it on with a steel trowel and float. Cement plaster should be sprinkled with water once a day to prevent cracking.

CONCRETE FENCE POSTS.

Could you inform me how to make concrete fence posts? What proportions of cement and gravel, and what size mold should be used? J. M. C.

Ans.—Make a fairly strong concrete— one of rock cement to five of coarse sand or gravel, or one to nine of Portland cement. The molds commonly used are about 4 x 4 inches, having spikes to mold holes through the post, through which the wire is to be run, the number of holes depending on the height of fence to be built. Quite an expensive machine is used to make these posts. Two strands of wire are embedded on two sides of the post to give it strength.

POULTRY QUERIES.

What is the best way of stopping hens of "clocking"? What is the best egg-producing food? G. S. W.

Ans.—It is a natural inclination for hens to want to sit. Some breeds have the instinct more highly developed than others. We know of no other way than breaking up their nests and changing their surroundings. If sitters are not wanted, it might be well to keep hens of the light non-sitting breeds, with a few Plymouth Rocks or Wyandottes to do the hatching. A mixture of foods is better than any one grain. Much also depends upon the breed, the temperature of the house and other surroundings. Authorities will give different rations for egg production. Two we think very good are:

Morning—Mash compound as follows: One bushel corn, two bushels oats (ground fine); to each 200 pounds of this mixture add 100 pounds bran and five or six pounds beef scraps; moisten with milk; feed in troughs, returning after ten or fifteen minutes to take up any feed that may be left, and give a second feed where needed. At noon—Green food, mangels or cabbage in winter, clover or kale in summer; sometimes a light feed of mixed grain in litter. Night—Mixed grain, in winter two bushels each wheat, oats, buckwheat and corn; in summer the corn in the mixture reduced one-half.

Laying ration for twelve hens: Morning—One quart wheat in litter. Noon—Green food, clover, mangels or cabbage. Evening—Mash, eight parts corn meal, eight parts fine bran, four parts buckwheat middlings, three parts meat meal, two parts oil meal, a little salt, all mixed in warm water and fed crumbly; all they will eat clean.

A Short Cut to Health

If you want to enjoy vigorous health take

BEECHAM'S PILLS

They are a veritable short cut to lasting and perfect health.

Prepared only by the Proprietor, THOMAS BEECHAM, St. Helena, England. Sold Everywhere in Canada and U. S. America. In boxes, 25 cents.

TRUMAN'S CHAMPION STUD.



INTERNATIONAL WINNERS.

SHIRE, PERCHERON, BELGIAN, SUFFOLK AND HACKNEY STALLIONS.

Seven importations within the past twelve months. More select prizewinning Shire stallions than all our competitors. Seven stallions sired by the 1904 London champion, Blaisdon Conqueror, for sale. Twenty-six years importing Shire stallions.

We have opened a BRANCH STABLE at LONDON, ONT., for the convenience of our Canadian customers.

Will charge no more for our first-class stallions than others are doing for common stock. Write for new catalogue.

Truman's Pioneer Stud Farm

Address H. W. TRUMAN, Care City Hotel, London, Ont. BUSHNELL, ILL.

LARGEST STUD IN THE WORLD OF AMERICAN-BRED PERCHERON, SHIRE and HACKNEY STALLIONS AND MARES

Won more First Prizes and Gold Medals in past 3 years than any firm in America; ages 2 to 6 years. Prices to Canadian buyers for next 30 days will run from \$600 to \$1,200 for choice of my barns, except 2 horses which are not for sale; also R. R. fare to my place and expenses while here. Time of payment made to suit customers. Every stallion sold to get 60 per cent. of mares in foal, also a safe delivery.

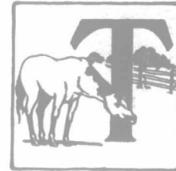
LEW W. COCHRAN, 607 West Main St., CRAWFORDSVILLE, IND.



TRADE TOPICS.

LONG LIVE THE POTATO and death to the bugs is the burden of the proclamation of the Canada Paint Company in their advertisement of guaranteed pure Paris green for the destruction of potato bugs, and for use in spraying for immunity from insects in general. Paris green has been the salvation of the potato crop wherever the bug has appeared, and in this way has been worth millions to the farmers of Canada.

HEAVES.



THE feeding of undue quantities of bad, musty or dusty hay—or severe exercise after full feed—is the usual cause of heaves in horses. Red clover in large quantities, too, is especially apt to produce this disease.

Symptoms.—Animal will show first symptoms after full feed and large draft of water if put to fast work. The onset of the disease is characterized by a dry, hacking cough, which may appear several months before there is any other signs manifest, such as lifting of the flanks and distension of the nostrils. A very constant symptom is slight, frothy discharge from the nostrils and rattling in the head and windpipe.

Bronchitis is also very frequently associated and is characterized by moist, coarse rales or rattling. In severe cases the abdominal walls are lifted with each expiration. This is done to expel air from the lungs, which in health is done by the elasticity of the cell walls.

Treatment.—Feed with care, avoid dust of every kind. Horses suffering from this disease should never be permitted to gorge themselves with food or drink. Large quantities of bulky food should be avoided. Hay and grain should be made damp an hour or two before given. The following formula gives excellent results: Fluid extract of stramonium, fluid extract of lobelia, of each one ounce; Fowler's solution of arsenic, six ounces; mix and give a tablespoonful in half a pint of water on food, two or three times a day.

When relieved follow this treatment with regular, small doses of Dr. Hess Stock Food, the great horse tonic, and the horse will become strong and active, with a brilliant coat, and be immune from all the common ailments. His food requirements will be less; all his food will be eaten with relish, and all of it will do him good.

For every disease and condition for which Dr. Hess Stock Food is not recommended the little yellow card in every package entitles you to a letter of advice and special prescription from Dr. Hess (M.D., D. V. S.), who formulated Dr. Hess Stock Food. This stock food is endorsed by medical and veterinary colleges. If these colleges know of nothing better than Dr. Hess Stock Food for horses, cattle, hogs and sheep, it must be good. No unprofessional manufacturer can equal it.

Sold on written guarantee, 100 pounds, \$7.00; smaller quantities at a slight advance. Fed in a small dose.

Dr. Hess Stock Book, a standard work consulted and commended by veterinarians, will be sent free if you state what stock you have—how many head of each, what stock food you have used and mention this paper. Address Dr. Hess & Clark, Ashland, Ohio, U.S.A. -om

GOSSIP.

Mr. A. E. Sherrington, Walkerton, Ont., importer and breeder of Barred Plymouth Rock fowls, of which he makes a specialty, advertises in this issue eggs for hatching from first-class stock.

Mike is a very much married man. He has married no fewer than four times, and all his wives are still to the fore.

According to Michael's own account at the Dublin Assizes, where he was tried for bigamy and found guilty, his experiences have not been altogether satisfactory. The judge, in passing sentence, expressed his wonder that the prisoner could be such a hardened villain as to delude so many women.

"Yer Honor," said Mike, "apologetically, 'I was only trying to get a good one, an' it's not aisy!"

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Veterinary.

AN OVERDOSE.

In your issue of April 7th, on page 506, in answer to question re indigestion in a mare, by J. C., I noticed the prescription reads 2 drams powdered opium; 4 ounces fluid extract of belladonna, and 2 ounces nitrous ether. This should read, 4 drams (half an ounce) fluid extract of belladonna. Two ounces would be a large dose if given by itself, and when combined with opium, in two-dram doses, about half an ounce only of belladonna should be given. V.

IRREGULAR STRANGLES.

Colt has distemper; at first it swelled under the jaws, but did not break. Breathing became difficult for a time, but is better now. He swelled on the breast and hind legs. I lanced the breast, and yellow pus escaped. R. M.

Ans.—This is a case of irregular strangles. It is always serious, as abscesses are liable to form any place, and many complications may arise. I advise you to employ a veterinarian. Abscesses must be lanced, and the cavities dressed with a five-per-cent. solution of carbolic acid, three-dram doses of hyposulphite of soda should be given three times daily, and complications treated as they appear. Difficult breathing has often to be relieved by inserting a tube into the windpipe. V.

YOUNG PIGS DYING.

I had a litter of young pigs five weeks ago, cross between Tamworth and York., and they have all died within this last week. The mother was fed one gallon of oat chop, night and morning; at noon, change of turnip and shorts. The mother had eight young ones come through, and they were rolling fat; in fact, you could not see finer pigs. They seemed to take ill all at once, and keel right over. The size of the pen was 10 x 12, and they had the run of it. What do you think was the matter with them. I am only a beginner in the pig business, and this is the first winter I have had any come. Anyone can raise pigs in summer, but it is a different story in wintertime. SUBSCRIBER.

Ans.—Your pigs died through kindness, the cause of death being either apoplexy or thumps. More exercise and lighter feeding will avoid such trouble in future. Some people refrain from using barley for sows nursing pigs. In any event, give your brood sows plenty of exercise, summer or winter, and don't feed heavily with rich food during the nursing period.

Miscellaneous.

SOWING FALL WHEAT IN SPRING.

I have some four or five bushels of winter wheat, and as it is a nice sample, and clean of all weeds, would like to sow it this spring. Would it ripen same time as spring wheat? W. A.

Ans.—It would require several seasons, and a selection of seed, before fall wheat could be changed in its characteristics to resemble the spring sown grain. A few heads might ripen.

COLOR OF CROSS-BREDS—TURKEYS WANTED.

1. I purchased a Yorkshire sow, eligible for registration, bred her to a registered Berkshire hog. The pigs came with black spots on them. Is this any indication that the sow is not pure-bred?

2. I would like to correspond with breeders of pure-bred Narragansett turkeys. Perth Co. J. M.

Ans.—1. No.

2. Breeders of turkeys should advertise

FEEDING CALVES.

I have fed ground linseed to my calves for some years past. I had it boiled and mixed with milk. Should the results be as good if it was fed dry with provender after the milk? This I would like to know, as it would save a great deal of trouble. J. A. P.

Ans.—For young calves, we would prefer steeping and boiling it, making a jelly; but as the calves get older and learn to eat chop, we would feed the ground linseed with other grain and bran and clover hay.

Horse Owners Should Use
GOMBAULT'S
Caustic Balsam
The Great French Veterinary Remedy.
A SAFE, SPEEDY AND POSITIVE CURE.



Prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud.

SUPERSEDES ALL CAUTERY OR FIRING
Impossible to produce any scar or bluish. The safest, most efficient ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blenches from Horses or Cattle.
As a **HUMAN REMEDY** for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.
WE GUARANTEE that one tablespoonful of **CAUSTIC BALSAM** will produce more actual results than whole bottle of any liniment or spavin cure mixture ever made.
Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
THE LAWRENCE-WILLIAMS CO., Toronto, Can.

Thorncliffe Clydesdales

THORNCLIFFE STOCK FARM has for sale some excellent **YOUNG CLYDESDALE STALLIONS** of right stamp, and a number of superior **MARES** from imported dams, by imported sires, and now in foal to the imported stallion "Right Forward." For prices, etc., apply to

ROBERT DAVIES
36 Toronto Street, TORONTO.

Clydesdales & Hackneys

We handle only the best of their representative breeds. We have on hand more good young stallions and mares than ever before. Large importation just arrived. Correspondence and inspection invited. Farm only **ONE MILE** from station. om



Graham Bros., Claremont, Ont.

CLYDESDALE MARES

Registered mares, from three years old and upwards, for sale.

NELSON WAGG.

Claremont station, C. P. R., 3 miles.
Stouffville station, G. T. R., 4 miles. om

CLYDESDALES

AYRSHIRES and POULTRY.

R. Ness & Sons, Howick, Que.

Importers of Clyde, Percheron and Hackney stallions, Ayrshire cattle, and poultry, have for sale 5 Clyde stallions, sired by Baron's Pride, Sir Everitt, and Royal Carrick, 1 Percheron, and 1 Hackney weaner. Ayrshires of both sexes, and poultry. om

MERTOUN CLYDESDALES

Two choice young stallions and one filly of good breeding and quality, also one good Shorthorn bull. Prices right. Visitors will be met at Seaford, G. T. R., on application to

D. HILL, STAFFA P. O., ONT.

DEATH TO HEAVES
Guaranteed
NEWTON'S Heave, Cough, Distemper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can, mail or express paid. Newton Remedy Co., Toledo, Ohio. Your druggist has it or can get it from any wholesale druggist.

CARE OF A HEDGE.

Will it injure a cedar hedge planted last spring, and a year ago last spring, to grow climbing flowers beside it, such as nasturtiums or sweet peas? M. W.

Ans.—No.

SALT ON ASPARAGUS.

How much salt is the proper amount to sow per acre on asparagus, and when is the proper time to apply it? R. S.

Ans.—Salt may be applied to asparagus to such an extent as to kill all weeds without injury to the asparagus, but as a fertilizer it does the asparagus little or no good. If used, we should apply it during the period when the weeds were most numerous. Manure should be applied in June and cultivated into the soil.

PLUM TREES BARREN.

I have some very fine blue plum trees, six years old, planted in rows with apple trees, in good rich soil. The first year they bore well, but since have had no fruit. What is the cause, and what would be a remedy? A SUBSCRIBER.

Ans.—Your trees are probably making rapid wood growth, otherwise there is no good reason why they should not produce fairly good crops at that age. Try heading back, by cutting back half or more of the year's growth on the terminal shoots. Do this about the middle of summer. You say they bore well the first year after planting. If so, that is rather unusual, and it is possible they may have been injured by it. But as you say the trees are very fine ones, the first suggestion will probably answer.

TURKEYS DYING.

I had 25 little turkeys last year, and when they were ten days old, I greased their heads and in under their wings with lard to prevent lice, and in three or four days they started to die four or five a day, until there were only about five left. I fed them a custard made of fresh milk and egg and bread and cut up green onion tops every day for them, and kept moving their pen to have it on clean grass. Do you think this greasing their wings caused their death? If not, what do you think killed them? M. J. E. R.

Ans.—The greasing of the heads and wings would not kill them, but they may have been weakened by lice before treated. As they appear to have been well attended to, it is most probable they died of some internal complaint, or from the effects of dampness.

HENS DYING.

Our hens look well and are laying, but several have died this winter. They get dull and apparently weak, linger sometimes a few days and some a few weeks, but all die; have a good appetite, but don't drink heavy; don't usually scour. Breed, Plymouth Rocks, kept in a good new poultry-house, frame, cement floor, well bedded, large windows to the south, plenty of coal and wood ashes, also coarse sand. Fed on mixed grain, usually oats, wheat and barley. W. T. Ontario Co.

Ans.—A variety in the food, such as raw mangel, cut clover, meat scraps, etc., would be beneficial. Let up a little on the grain. Give plenty of fresh air and exercise, and try one of the poultry tonics advertised in this journal.

ARTESIAN WELLS.

What size of pipe should be used in making a drive well? How many, and how large should the holes be? Is there any limit to the depth it may be driven? For a well 40 feet or over, what kind of pump should be used? C. W. B.

Ans.—Where there is a reasonable hope of the water rising within forty feet of the surface, pipe as small as inch and a half can be used; but if the water has to be pumped more than forty feet, nothing less than three-inch pipe should be driven so that the mechanism of the pump can be installed. Such pipe has a specially-made point, and is simply driven into the earth. There is practically no limit to which it can be driven. Through rock the well is drilled. The putting in of these wells requires some experience, and the person undertaking such a job would be able to give information regarding size of pipe, depth, etc. Frequently no pump is required. At other times the water rises quite near the surface, and requires some pumping. Consult a local dealer when the well has been driven.

OUR LAST IMPORTATION OF PERCHERONS



arrived in good shape. Among them are several international prize winners and horses that will mature to ten weighters; most likely black. Intending purchasers should see

our stock before buying. Address
I. A. & E. J. WIGLE,
Box 204, KINGSVILLE, ESSEX CO., ONT.

Imported Clydesdales



My offering now consists of

The Imported Three-year-old Clan McLeod Stallion

Of choicest breeding, best quality and immense size. Inspection invited.

Geo. Stewart
Howick, P. Q.

16--Clyde Stallions--16



I will have in Toronto, during week of Spring Stallion Show, March 2nd to 4th, 16 Clydesdale Stallions from 3 to 5 years old, 12 of which are imported, and which will be sold on small profits. These horses are by such noted sires as Baron's Pride, Prince Thomas, Sir Thomas, Sir Robert, Clan Chattan, Ascot, etc.

Intending purchasers will consult their own interest by looking them up before buying elsewhere.

T. H. HASSARD,
MILLBROOK, ONTARIO.

"THE REPOSITORY"

WALTER HARLAND SMITH, Prop.



Cor. Simcoe and Nelson Sts., TORONTO.

Auction Sales of Horses, Carriages, Buggies, Harness, etc., every Tuesday and Friday at 11 o'clock.

Special Sales of Thoroughbred Stock conducted. Consignments solicited. Correspondence will receive prompt attention.

This is the best market in Canada for either buyer or seller. Nearly two hundred horses sold each week.

FOR SALE Clydesdale stallion, 3 years old, Lyon Macqueen (3632), sire Macqueen (imp.) (462) 3513 (5200), dam Blossom (imp.) (361), by Lord Lyon (459); 2nd dam Rose of Inch (3800), by Warrior (602); 3rd dam Jess of Eldridge (1603), by Clyde (462); 4th dam Maggie of Challock, by Lochend Champion (448). J. H. MILLARD, Altona, Stouffville Sta., G.T.R. o

FOR SALE: CLYDESDALE STALLION. 3 years old, registered (4151) Vol. 13, Clydesdale Studbook. Apply to **WILLIAM WOODLEY,** Dundas, Ont., near G. T. R. Station. o

FOR SALE.

Seven Imported Clydesdale Fillies,

2-year-olds, sired by the prizewinning stallions, Ascot Corner, Handsome Prince, William the Conqueror, etc. All have been bred to stallions. For further particulars address: o

PATTEBSON BROS., Millbrook, Ont. Millbrook on G. T. R. Cavanville, C. P. R.

FOR SALE: Three imported Clydesdale stallions—Uamvar 2129, Vice-Admiral 3447, and Knight of Park 2921; also two registered Canadian-bred stallions, 2 years old. For further particulars address: o

DAVIS & GRAHAM, Schomberg, Ont.
FOR SALE. A French Canadian Stallion. Black Joe 308, registered in the French-Canadian Studbook. He is jet black, rising 10 years; weight, 1,300 lbs. o Write **JAS. A. STEWART, Sr., MENIE, ONT.**

In answering any advertisement on this page, kindly mention the *FARMER'S ADVOCATE*.

QUESTIONS AND ANSWERS. Miscellaneous.

EXPORTERS—SCOTTISH FARMER.

1. Would you give me the names of some of the largest dealers in export cattle in Ontario?

2. Where is the "Scottish Farmer" published?

Ans.—1. See advertising columns of this journal, and answer to similar query in this issue.

2. 93 Hope St., Glasgow, Scotland; A. MacNeillage, editor.

HENS DYING.

What is the cause of hens dying? They get weak and lame, but they eat till they die. Have been feeding them oats.

Ans.—These symptoms might indicate different diseases, as debility, rheumatism, leg weakness, indigestion, etc. Would insure dry, light, clean, comfortable quarters. Give a mixed diet with some animal food throughout the winter. Most probably the lack of this has brought on the complaint. As a tonic and stimulant, you might try some one of the poultry foods advertised in this journal; this with a change of diet and spring weather will effect a cure.

MEADOW—WARBLES.

1. Had a new meadow last year, but hay was too thin. Would you advise me to sow clover on same when snow goes off, and what kind would be best to cut for hay this season?

2. Is there any way to keep warbles out of cows' backs that run on pasture in summer and wintered on straw?

Ans.—1. Yes; sow red clover early on frozen ground, but it may not be ready for the first cutting. If you could get on a light coat of manure, or have wood ashes to spread on the field, it would make a wonderful improvement in the grass crop. This is probably what it needs more than anything else.

2. See article in March 24th issue, on warbles. There is no way to entirely prevent them.

PASTURE GRASS.

What grasses would be best adapted for pasture on a red, sandy soil? Would lucerne be good; and if so, what time would be best to sow the seed, and how long a time would it be before the cattle should be turned on; and how many years would it be good as pasture?

Ans.—We should sow white clover, two pounds; alfalfa, four pounds; alsike, two pounds; red top, four pounds; blue grass, four pounds; red clover, four pounds, with a crop of barley or wheat, or upon a fall-wheat field. Keep the stock off the stubble, and cut for hay the first year; afterwards use for pasture. On such soils a light coat of manure each winter would be of immense value. Such seeding will be good for seven years' pasturing, if a good catch is secured.

WATER IN CELLAR.

Water comes into cellar in spring; is drained, but very shallow, inconvenient to drain deeper; outlet quite a distance. Could it be remedied by cementing? If so, how thick should it be?

1. Would it be advisable to put it down on one heavy coat, or on different coats, allowing first coat to dry before second coat is put on?

2. What proportion of cement and gravel should be used? Would coarse sand or fine gravel do, or is coarse gravel preferable?

3. Would it be advisable to cement up the sides of walls some height? What is the difference between Portland cement and other cement?

Ans.—It would be best to secure drainage; but concrete can be made to turn water. It will always be damp, however, when the water is high. Put the concrete down in two layers, the first six to one of rock cement, or ten to one of Portland; and the second, two to one of rock, or four to one of Portland. The first layer should be at least two inches thick, and the second about one-half inch. Would extend the concrete up the sides first, then the floor would fit close to the walls. Portland is a special mixture of substances ground together in water and afterwards dried and powdered. Rock cement is a natural cement found in rocks; is ground fine, and is then ready for market.

A crop that pays may not pay as well as it should.

Potash

is a plant food which all crops must have. Without sufficient Potash to feed upon no crop can reach that point where it pays best. Experiments have demonstrated the value of Potash.

We will send free, to any farmer who will write for it, a little book that will give facts in full. GERMAN KALI WORKS 93 Nassau Street, New York.



FEED IS SCARCE

The long and cold winter has necessitated feeding larger quantities of grain, etc., than usual. The best means of making what you have left go double as far is to feed

Worthington's Canadian Stock Tonic, 10-LB. BOX, 50C. 50-LB. SACK, \$2. Manufactured only by the Worthington Drug Co., Agricultural Chemists, Guelph, Ont.

WHY RUPTURED?

You can be Cured at Home, Without Pain, Danger and No Loss of Time from Work. No Case too Bad or too Long Standing

MR. JOHN MORRIS, Niagara St., St. Catharines, Ont., is cured of a dangerous rupture and lost no time from work. A Valuable Book, telling how all ruptures can be cured and a Free Trial Method sent sealed post-paid, free of all cost to all sufferers. Write at once; correspondence confidential. DR. W. S. RICE, 2 Queen St. East, Dept. (271), Toronto, Ont.

Handsome Gold Watch Free AND \$25.00. This elegant stem windand set guaranteed watch. It has a magnificently finished heavy gold laid case, handsomely and elaborately engraved in the most beautiful designs. American movement, hand-some dial, expansion balance, quick train, warranted to keep correct time. You will feel proud to own one of these remarkably fine and truly handsome watches. It has the appearance of a \$40.00 SOLID GOLD WATCH. Every watch fully guaranteed. We give this elegant watch free to anyone for selling only 25 packages of Marvel Washing Blue, the great wash-day help. Every family needs bluing. You can sell it quickly. Send your name and address, we send bluing by mail postpaid. You also become a contestant for our extra cash prizes, the 1st of which is \$15. We send handsome gold-finished Scarf Pins and Brooches to give away with the bluing. When sold return us the money, \$2.50 and we will send you at once the handsome watch, also a cash prize certificate. We are giving away these watches to quickly advertise our business. Write for bluing to-day. Address: Marvel Bluing Co., Watch Dept., 565 Toronto, Ont.

ENGINE GIVEN FREE AND \$25.00 CASH. Handsome, upright Steam Engine: powerful and smooth-running; easy to operate; strongly made of steel and brass; bright steel boilers; cannot explode; has safety valve, a can dome, steam pipe, safety lamp and everything complete. A beautiful Engine, fully tested. Send name and address and we will mail you postpaid, 12 packages of Marvel Washing Blue, the great wash-day help, to sell at 10 cents a package. We send handsome Gold-finished Scarf Pins and Brooches to give away with the bluing. You also become a contestant for our extra cash prizes, the 1st prize of which is \$15.00. Every lady needs bluing. When sold return us the money \$1.20, and we will send you at once the handsome Engine—all charges paid, at a cash prize certificate. No more wanted till goods are sold. We take back all you cannot sell. Address: Marvel Bluing Co., Engine Dept., 522 Toronto, Ont.

FEATHER-PULLING.

Kindly inform me what you think is the trouble with my Plymouth Rock hens, and how to cure them. Mostly all the hens are losing their feathers around their necks. O. W. F.

Ans.—This is probably due to the lack of meat food, or it may be that they are lousy. Attend to both conditions, and by the aid of spring weather they should improve.

CLOVER SEED PER ACRE.

What amount of seed of red, alsike and alfalfa clover should be sown to the acre? G. M.

Ans.—Ten to twelve of red, five or six of alsike, and fifteen to twenty of alfalfa, when each is to be grown separately. If a mixed meadow is wanted, sow eight of red, four of alsike, and four or five of timothy. Always sow alfalfa alone.

DESTRUCTION OF SHADE TREES.

Can any individual or municipal council cut or destroy shade trees along highway? Trees were not planted, but grew wild along fences.

SUBSCRIBER.

Ans.—Not without permission from the owner of the land adjacent to the highway and nearest to such shade trees, unless under by-law of the council, and when deemed necessary for any purpose of public improvement.

HENS DYING LAME MARE.

1. Some of my hens are unable to walk, and after a few days they die. What is the cause and treatment of this disease?

2. Mare, four years old, got a kick on the hip joint about six weeks ago. Got some liniment from the veterinary, and applied, but the mare is still lame. What can I do for her? W. M. D.

Ans.—1. See that they are free from lice, and not too fat. Provide plenty of exercise by giving them scratching litter. It may be that they have roup, but the symptoms given are not full enough to decide.

2. Give her rest and more time to recover. Rub the liniment well in, and otherwise give her a chance.

CUTTING LOGS—GINSENG.

1. When logs are custom sawed at a mill, can the owner of the mill legally claim the slabs or sawdust. In buying logs is it legal for the buyer to measure the small end, or should he measure both ends, and strike an average?

2. Will ginseng thrive in an ordinary bush, and where can I obtain seeds or cuttings (whichever is preferable for starting) most conveniently? J. H. B.

Ans.—1. In such cases, the custom rate is generally fixed on the assumption that the mill owner gets the slabs and sawdust. If he did not the custom rate should be stated, as the former practice is so common that it is always understood. The log-measure is always laid on the small end.

2. Yes; on the ordinary Canadian loam soil. A. J. Martin, Kinmount, Ontario, advertised seed and cuttings for sale last fall.

KEEPING PICKLED BEEF.

Would you give me a good recipe for keeping a large quantity of pickled beef through the hot summer months? M. D.

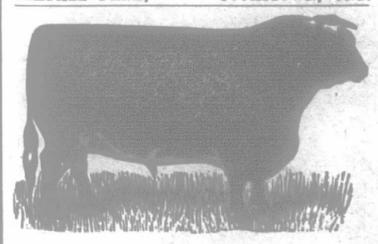
Ans.—The following has been recommended: For fifty pounds of meat, take two gallons of water, four pounds of salt, two pounds of brown sugar, with one ounce of saltpetre. Let boil for ten minutes, skim well, remove from fire, and let stand until cold. Put the pieces of meat in a cask, cover with brine, weight the meat under, cover the top, and set in a cool, dark place. A piece of beef left in this pickle a few days makes the best of corned beef. If left in several weeks, soak over night before using. A handful of mace and cloves thrown into the brine will improve the flavor. If the brine becomes sour drain off, boil, skim well, and pour back upon the meat when cooled. In boiling salt beef, a good flavor is imparted by the following method: Mix tablespoonful of vinegar, same of Worcester sauce, and of stout or beer, add a tablespoonful of brown sugar, a teaspoonful dry mustard, a few cloves and allspice. Stir well, and add to the water in which the beef is boiling, just before it is done. Then let the meat remain in the pot until cool. Attention should be given that brine keeps sweet, and that the meat does not get too "soggy." In some cases, it is smoked and hung in a cool, dark place, but this makes dried beef.

ABORTION and Failure to Breed. Retention of Placenta. Kellogg's Condition Powder. Is a positive cure for these diseases. Prevents scours in calves and garlic in milk. Indorsed by the Iowa Agricultural College, Ames, Ia., and hundreds of the most prominent breeders. Write for booklet giving full information, price list and testimonials. Address: N. W. Kellogg Company, Dept. Y, St. Paul, Minn.

TWEEDHILL ABERDEEN-ANGUS. Four bulls 10 to 14 months, also one 2 years. Good individuals; registered in American Herdbook. JAMES NEARP, ROCKSIDE, ONT. CHELSEA STATION, C.P.R. & G.T.R. FOR SALE: THE GUERNSEY BULL, PONG OF DENTONIA 8091

Sired by Imp. Island Heirloom of Dentonia 7394, and out of Imp. Honesty of Dentonia 13848. Dropped April 15, 1902. Sure and right in every way. For particulars write to JAS. B. DAVIDSON, SUPT. RATHBUN COMPANY FARM, DESERONTO, ONT.

THE SUNNYSIDE HEREFORDS headed by Imp. Onward, for sale. 10 choice bulls, imported and home-bred, from 1 to 2 years old; also 1 bull 13 months old, a high-class herd-head. All bulls are of the heavy, low-down, blocky type. We can yet spare a few choice cows and heifers. Inspection invited. J. NEIL BROS., Southgate, Ont., Luan Station, G.T.R.; Hilderton or Denfield on L.R. & E. 2 Hereford Bulls for sale. One is two years old and one a yearling. Write or call on D. Ernest Coleman, OAKDALE FARM, COOKSTOWN, ONT.



High-class Shorthorn Bulls For Sale. 4 imported bulls. 6 young bulls from imported cows and by imported bulls. 7 young bulls from Scotch cows and on bulls. ARTHUR JOHNSTON, Greenwood, Ontario.

SHORTHORNS. Some extra good young bulls for sale. Catalogue. JOHN CLANON, Manager. H. CARGILL & SON, OAKGILL, ONTARIO.

Pine Grove SHORTHORNS AND SHROPSHIRE. Our herd comprises over 150 females, including our last importation of 30 head, all of the most esteemed strains. Of Shropshires, we offer a few choice Rams, also high-class Ewes bred to first-class Rams. Address W. C. EDWARDS & CO., Rockland, Ont.



Imported and Canadian-bred bulls, cows and heifers for sale of the following families: Broadbroke, Village Maid, Marchioness, Victoria, Beauty, Merry Lass, and other good strains. Four extra good bulls, ready for service. H. J. DAVIS, Importer and Breeder of Shorthorns and Yorkshires, Woodstock, Ont., C. P. R. and G. T. R. main lines.

Maple Cliff Dairy and Stock Farm. For sale, Clydesdales: One Clydesdale stallion coming three, winner of 1st at Ottawa last fall; two registered mares. Berkshires and Tamworths: Young boars fit for service; young pigs, pairs not akin.

R. REID & CO., Hintonburg, Ont.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

COAL ASHES.

Would you be kind enough to answer, in your paper, whether coal ashes are good for trees or strawberries, or are they of any value? L. K. J.

Ans.—No particular good as a fertilizer; are put to a good use on walks or roads, or about yards.

MILK TESTER.

I have a twenty-four-bottle milk-tester, the machine and testing bottles. 1. What more is necessary to make it a complete milk-tester?

2. How long can the milk be kept with bi-chromate of potash for testing purposes?

Please give full particulars how to run. C. A. N.

Ans.—1. In testing milk for fat, one requires: properly-graduated bottles, a 17.6 cc. (cubic centimetres) pipette, a 17.5 acid measure, commercial sulphuric acid, hot water, and the Babcock machine.

2. Generally, milk so kept is tested every month or three weeks. Would advise reading Canadian Dairying, by Prof. Dean; price \$1, through this office.

PUMP IN DRIVEN WELL.

Last summer I put down a drive well, 28 feet, and there is 28 feet of water, but the pump will not lift it out of the pipe. I have tried the pump in a barrel of water, and it works well. What do you think is the matter, or what shall I have to do to get it to work? M. J.

Ans.—The trouble is the air cannot get into the pipe to force the water into the pump. You see, when the pump handle is lowered, it raises the sucker from the bottom of the pump, leaving behind a vacuum. Into this vacuum the air pressure in the well forces the water, but in your well there is no provision for the entrance of air, hence the water is not forced into the pump. You had better make holes in the cap over the pipe, or if the pump is the same size as the pipe, make the hole in the side of the pipe.

VENDOR AND PURCHASER.

A buys a farm from B, to get possession in a year from time of purchase.

1. Can B cut any standing timber?
2. Can he cut any lying timber, or loose logs in bush, or swamp?
3. Does the straw from this year's crop belong to B?

4. Does the horse-fork and track in barn belong to B? A SUBSCRIBER.

Ans.—If there be no express provision upon the subject in the agreement between the parties, or reservation in B's favor in the deed of conveyance, assuming that there has been a delivery of deed, we think that the questions submitted may be properly answered as follows: 1. No. 2. No, with the exception of such as he may require for his own use on the premises, and while still in possession of same under the agreement.

3. Yes, if harvested during the year from date of purchase.

4. Yes, unless attached to the building, and as though intended, when put in position, to form part of the premises, and be regarded as fixtures.

NON-REPAIR OF ROAD.

Supposing, while driving on the road, I came to a place where the road was impassable. I got my horse down and get it badly cut.

1. Is the township responsible for damages?
2. And what can I collect? The pathmaster was notified to fix the road, but neglected doing so.

AN OLD SUBSCRIBER.

Ans.—1. It is probable that the municipality is so liable; but there are so many circumstances to be taken into account in determining the question, and as to which we are not informed by your statement, that we cannot venture any more definite answer. But to hold the municipality to their liability, if any there be, it is necessary to give the municipal corporation very promptly certain notices of injury and action, and a solicitor ought to be seen and instructed in the matter at once.

2. In the event of the municipality being held liable, you would be entitled to such an amount as would fairly compensate you for the lessened value of the animal, the temporary loss of its services, and expenses in respect of veterinary's attendance, medicines, etc.



Burdock Blood Bitters

holds a position unrivalled by any other blood medicine as a cure for

DYSPEPSIA, BILIOUSNESS, CONSTIPATION, HEADACHE, SALT RHEUM, SCROFULA, HEARTBURN, SOUR STOMACH, DIZZINESS, DROPSY, RHEUMATISM, BOILS, PIMPLES, RINGWORM, or any disease arising from a disordered state of the Stomach, Liver, Bowels or Blood. When you require a good blood medicine get

BURDOCK BLOOD BITTERS.

Shorthorns and Clydesdales.

We are now offering an extra good lot of young bulls, home-bred and imported; also stallions, and a few young mares which are in foal.

JOHN MILLER & SONS,
Claremont Sta., C.P.R. on Brougham P.O.

OAK LANE STOCK FARM.

Shorthorns Cotswolds
Yorkshires and Barred Rock Fowls.

Imported and Canadian-bred Shorthorns. Open to take orders for N.-W. trade. Write for prices. Satisfaction guaranteed.

GOODFELLOW BROS., MACVILLE, ONT.

JOHN DRYDEN & SON

BREEDERS OF

CRUICKSHANK SHORTHORNS AND SHROPSHIRE SHEEP.



Catalogue of twelve young bulls of choicest breeding—straight legs, strong bone, thick flesh, good size, splendid quality—sent on application.

Station and Post Office, Brooklyn, Ont.

HUNTLYWOOD FARM

SHORTHORNS AND SOUTHDOWNS

We have for sale two fine young bulls of the noted Broadhooks tribe and one Secret. Write for prices.

W. H. GIBSON, Mgr., Point Claire P. O., Quebec

Spring Grove Stock Farm

Shorthorn Cattle and Lincoln Sheep.



HERD prize and sweep stake at Toronto Industrial Exhibition, three years in succession. Herd headed by the Bruce Mayflower bull, Prince Sunbeam, Imp. Present crop of calves sired by Imp. Wanderer's Last, sold for \$2,005. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns Apply on

T. E. ROBSON, ILBERTON, ONT

T. DOUGLAS & SONS,

STRATHROY STATION & P. O.,

BREEDERS OF **Shorthorns and Clydesdales**

85 Shorthorns to select from. Present offering: 14 young bulls of splendid quality and serviceable age, and cows and heifers of all ages. Also one (imp.) stallion and two brood mares.

Farm 1 mile north of town.

Sunnyside Stock Farm. **JAMES GIBB,** Brookside, Ontario.

Breeder of high-class SHORTHORN CATTLE (Imp.) "Brave Ythan" at head of herd.

Stock for sale.

GOSSIP.

Mr. David Barr, Jr., Renfrew, Ont., makes a change in his advertisement of Large English Yorkshire hogs, bred straight from imported stock, true to type. See the advertisement.

A second-hand De Laval cream separator is advertised for sale by Miss E. Jones, Brockville, Ont. The Jersey herd having been dispersed, accounts for its being offered.

If you want to know how to raise calves cheaply and successfully without milk, address Chas. Cowan, London, Ont., agent for Blatchford's calf meal, which has secured a good reputation for this purpose.

HOLSTEIN MILK AND BUTTER RECORDS.

Following is a brief summary of the official records of Holstein-Friesian cows that have been approved from March 24th to April 4th, a period of eleven days. They were made under the careful supervision of agricultural experiment stations, and the butter estimated on the basis of 85.7 per cent. of a pound of fat to a pound of finished butter—the rule of the American Association of Agricultural Colleges and Experiment Stations.

The phenomenal record of this period was that of a cow that freshened at 4 years 11 months 4 days of age. Eleven days thereafter she commenced a thirty-day record in which she produced 2,640.3 lbs. milk, containing 110,093 lbs. butter-fat, equivalent tutter, 128 lbs. 7.1 ozs., an average of 88 lbs. milk, 3.67 lbs. fat, equivalent butter, 4 lbs. 4.5 ozs. per day. Her highest production for seven consecutive days was 659 lbs. milk, 27.459 lbs. fat, butter 32 lbs. 0.6 oz.

A thirty-day record of a two-year-old heifer was also approved. She dropped her calf at 2 years 2 months 14 days of age, and commenced her test twenty-five days thereafter. She produced 1,339.5 lbs. milk, 42,270 lbs. fat, equivalent to 49 lbs. 5 ozs. of butter.

Of the seven-day records twelve full-age cows averaged, age 6 years 10 months 25 days, days from calving, 21: Milk 434.8 lbs., fat 15.011 lbs., equivalent butter 17 lbs. 8.2 ozs. Seven four-year-olds averaged, age 4 years 3 months 28 days, days from calving, 17: Milk, 445.4 lbs., fat 16.435 lbs., equivalent butter 19 lbs. 2.8 ozs. Eight three-year-olds averaged, age 3 years 5 months 16 days, days from calving 53: Milk, 348.2 lbs., fat 11.485 lbs., equivalent butter, 13 lbs. 13.1 ozs. Eleven classed as two-year-olds averaged, age 2 years 5 months 19 days, days from calving 28: Milk, 313.7 lbs., fat 10.306 lbs., equivalent butter 12 lbs. 0.4 oz.—S. Hoxie, Supt. of Advanced Registry.

TRADE TOPIC.

HINT TO MILK MEN.—The Baltimore Sun relates an incident of the visit of some poor children to a dairy in the country. In the course of the inspecting tour about the place the children were treated to a glass of milk. Each of the little fellows drained the glass eagerly, and upon being asked by the proprietor how they liked the milk, one little waif replied, "Gee, fine"; then, after a moment's pause, "wish our milkman kept a cow." The boy was incorrect in his supposition that the poor quality of milk delivered to the city patrons is due to the failure of the dairymen to keep cows. The trouble is in the failure of the milkmen to give the milk care. Unless preventive measures are taken, milk is seriously contaminated at the time it is drawn, by germs. The air, the milk-vessels and the bodies of the animals all contribute a goodly number of injurious germs unless disinfection is practiced. The remedy is to spray Zenoleum about barns and buildings. It kills germs—it makes pure air. Dirty milk means dissatisfied customers, poor butter and unsatisfactory results all around. Zenoleum has so many uses that it is a necessity. It is made by the Zenner Disinfectant Company, 113 Bates Street, Detroit, Michigan. They have published two booklets which describe fully the various uses for Zenoleum. They are free to readers of this paper who request them. We would suggest that you secure copies of them before the supply is exhausted.

THOROLD CEMENT AND PORTLAND CEMENT

FOR BARN WALLS AND FLOORS, HOUSES, SILOS, PIGPENS, HENHOUSES; AND SEWERS, TILE, ABUTMENTS AND PIERS, FOR BRIDGES, GRANOLITHIC SIDEWALKS; IN FACT, FOR ALL WORK THAT CAN BE DONE WITH CEMENT.

Estate of John Battle THOROLD, ONT.

WHOLESALE IN CAR LOTS ONLY.

Queenston Heights Shorthorns

Derby (Imp.), a Jamieson-bred "Secret," at head of herd. Write for what you want.

HUDSON USHER, - QUEENSTON, ONT.

Farm 3 miles north of Niagara Falls.

IMPORTED SHORTHORNS AND CLYDESDALES

15 imported Scotch Shorthorn heifers, all in calf or calves at foot; 2 imp. bulls; both in pedigree and individually these animals are gilt-edged. Four three-year-old imported Clydesdale fillies, very large and A1 quality.

ALEX. ISAAC, o Cobourg P. O. and Station

DOMINION SHORTHORN HERDBOOK WANTED.

The Dominion Shorthorn Breeders' Ass'n will pay \$1 each for any of the following volume of their herdbooks: Volumes 7, 8, 9, 10, 11, 12, 13, 14, 15; also 1st vol. Clydesdale Stud-book, and 1st vol. Dom. Ayrshire Herdbook. Send by express if possible, unpaid (if by post, postage will be returned with price).

HENRY WADE, Sec'y, TORONTO, ONT.

SHORTHORNS AND SHROPSHIRE. FOR SALE: Young bulls and heifers from best blood. Shearlings and lambs bred from imp. stock on side of sire and dam. Prices reasonable.

K. E. FUGH, CLAREMONT P. O. and C. P. R. Sta.

W. G. PETTIT & SONS

FREEMAN, ONT.,

Importers and Breeders of

Scotch Shorthorns

110 head in the herd, 40 imported and 20 pure Scotch breeding cows. Present offering: 3 imported and 6 pure Scotch from imported sire and dam; 6 Scotch-topped from imported sires; also imported and home-bred cows and heifers of the most popular type and breeding. A few choice show animals will be offered.

Burlington Jct. Sta. Telegraph & Telephone

HIGH-CLASS SHORTHORNS.

8 heifers, in calf to an imported Scotch bull; 6 bulls ready for service; about 15 heifer and bull calves, from 3 to 12 months old. Prices very reasonable, considering quality. Inspection invited. **FRANK W. SMITH,** Walnut Farm, Scotland, Ont. o

5 SHORTHORN BULLS

1 red imported bull, coming 3 years; 2 bulls imported in dam, one red and one roan, coming 1 year; 1 red from imported sire and dam; 1 red, sixteen months, from Scotch dam and sire; also heifers of all ages for sale.

ALEX. BURNS, ROCKWOOD P. O. and STATION, G.T.R.

First-class Shorthorns—Young cows and heifers of fashionable breeding. Also Shropshires of different ages. Write for prices, etc. to **T. J. COLLE,** Bowmanville Stn., G. T. R. o Tyrone P. O.

High-class Shorthorns—Two bulls ready for service. Also young cows and heifers of different ages, of the Lavina and Louisa families. For prices and particulars apply to **BROWN BROS.,** Lakeview Farm, Ononco P. O. Newcastle-Station, G. T. R.

Hawthorn Herd SHORTHORNS OF DEEP-MILKING

FOR SALE: Five young bulls, also a few females, by Scotch sires. Good ones.

Wm. Grainzer & Son, Londesboro, Ont.

CEDARDALE FARM. For Sale, two richly-bred bulls, 9 months and two years old, one sired by Lord Gloucester 28995, the other by Royal Standard 27134; also some good cows in calf, and heifers, all good Scotch blood. **DR. T. S. SPROULE,** Markdale P. O. and Station. o

MAPLE LODGE STOCK FARM, 1854

Am offering a very superior lot of Shorthorn Bulls and Heifers as well as something VERY attractive in Leicesters.

Choice ewes got by imported "Stanley" and bred to imported "Winchester." Excellent type and quality. **A. W. SMITH,** MAPLE LODGE, ONT.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

GOSSIP.

Cooper's sheep dip, which has a world-wide reputation as a convenient and effective application for the destruction of ticks on sheep and lice on cattle, is advertised in this issue.

Mr. L. K. Weber, Hawkesville, Ont., advertises for sale five young Shorthorn bulls of Scotch breeding, twelve to twenty months old; also, a number of females.

Remember the date, May 3rd, of the dispersion sale, by auction, of the entire herd of Shorthorns (25 head) belonging to Mr. H. S. Fallows, Evelyn, Ont., some ten miles from the city of London, and near to Thorndale, G. T. R., and Thamesford, C. P. R., where teams will meet the morning trains.

Maple Shade Farm, Brooklin, Ont., the property of the Hon. John Dryden & Son, situated near Myrtle Station, C. P. R., and Brooklin, on the Whitty & Port Perry branch of the G. T. R., is well stocked with high-class Shorthorn cattle and Shropshire sheep.

Maple Shade Farm, Brooklin, Ont., the property of the Hon. John Dryden & Son, situated near Myrtle Station, C. P. R., and Brooklin, on the Whitty & Port Perry branch of the G. T. R., is well stocked with high-class Shorthorn cattle and Shropshire sheep.

16 Shorthorn Bulls

All pure Scotch, two imp. in dam, 7 from imp. sire and dam, others by imp. sire and from Scotch dams of popular families. Herd numbers 72; headed by Imp Greengill Victor, a Princess Royal; bred by W. S. Marr.

R. MITCHELL & SONS, Nelson Ont., Burlington Jct. Sta.

ONLY THE BEST.

Eight young bulls and 10 heifers of the purest Scotch breeding and of the low-set kind, as good as I have ever offered, for sale at prices that will induce you to buy.

ROBERT MILLER, Stouffville, Ont., Representative in America of Alfred Mansell & Co., Shrewsbury, Eng. The largest exporters of live stock in the world.

HILLHURST FARM (ESTABLISHED FORTY YEARS.)

SHORTHORN herd numbers 30, with Imp. Scottish Hero (Missie) and Broad Scotch (Sittyn Butterfly) in service. Some choice young bulls and heifers for sale, by Joy of Morning, Scottish Beau, and Lord Mountstephen, from imported and Canadian-bred dams of the Forest = 40499 =, and out of high-class Scotch and Scotch-topped cows.

Jas. A. Cochran, Hillhurst P. O., Compton Co., P. Q.

SHORTHORNS

For sale: Two choice bulls, 10 and 11 months old, got by imported-in-dam bull. Also Yorkshires, imported and home-bred. Write C & J. CARRUTHERS, Cobourg, Ont.

WILLOW BANK STOCK FARM

Established 1855.

SHORTHORNS AND LEICESTERS

A grand lot of young stock for sale, rich in the blood of Scotch Booth and Bates families. Rosicrucian of Dalmeny 45220 (imp.) at head of herd. We breed the best to the best Leicester sheep of rare breeding and quality. Address: JAS. DOUGLASS, Proprietor, P. O. and station, Caledonia, Ont.

CHAS. RANKIN, WYEBRIDGE, ONT.

IMPORTER AND BREEDER OF SHORTHORN CATTLE and OXFORD DOWN SHEEP.

Herd headed by Pride of Scotland (imp.). FOR SALE—Females and bulls of all ages, from noted Scotch families.

Shorthorns, Cotswolds, Berkshires

FOR SALE—Seventeen bull and heifer calves, from 6 to 11 months old, from \$55 to \$60 each. Registered, and freight paid to any part of Ontario and Quebec. Also a few young cows and heifers. A few young boars and sows, from 3 to 6 months old.

F. BOWNYCASTLE & SON, Campbellford P. O., Ontario.

SCOTCH SHORTHORNS

Twelve blocky, sappy young bulls, 10 to 14 months old, rich and roans, sired by the Princess Royal bull, imp. Prince of the Forest = 40499 =, and out of high-class Scotch and Scotch-topped cows. Also ten thick-fleshed heifers, in calf to imp. Prince of the Forest, placed at head of herd at cost of \$850. Come and see, or write for prices.

J. & R. OHINNICK, Chatham, Ont.

FLETCHER'S SHORTHORNS

Comprise Cruickshanks, Orange Blossoms, Nonpareils, Crimson Flowers, Myasies, Langshires, Butterflies and Jessamines, and are headed by the noted Duthie-bred bull, (imp.) Joy of Morning (76929), winner of 1st prize at Toronto Exhibition, 1903. Several choice heifers and young cows bred to Joy of Morning, also bull calves suitable for herd headers, for sale.

GEORGE D. FLETCHER, Erin Shipping Sta., C.P.R. o Binkham P.O.

GLENAVON STOCK FARM.

FOR SALE:

SHORTHORN BULLS

2 two-year-olds, both of good breeding and deep-milking strains; and heifers also. Have Berkshire boar open for services.

W.B. ROBERTS, PROP., SPARTA, ONT.

Scotch Shorthorns and Berkshire Swine

At VALLEY HOME STOCK FARM. For sale: 3 young bulls of superior breeding and quality, from 10 to 18 months old, the low down sort and good heavy animals; will sell cheap to make room for our increase in young stock. Also Berkshires of all ages, 3 young boars and a fine lot of sows, due to farrow in one month's time. Stations Meadowvale or Streetsville Junction, C. P. R., and Brampton, G. T. R. Visitors welcomed. Address S. J. PEARSON, SON & CO., Meadowvale P. O. and Telegraph.

Scotch - bred Shorthorns

5 bulls from 12 to 20 months old, of good Scotch breeding, size and quality, at let-live prices. Also several females, re's and roans.

L. K. Weber, Hawkesville, Ont., Waterloo Co.

GOSSIP

The 10th Canadian Horse Show is slated for the dates April 27th to 30th, at the Armories, Toronto. The prize list has been increased, and the prospect is for a record show in all the classes of light horses, while good prizes are also offered for heavy draft mares, singly, in pairs, and in teams of four.

The Thoroughbred stallion, Governor Grigg, No. 519, advertised for sale by Dr. G. J. Fitzgerald, V. S., London, Ont., champion hurdle horse of America at 1 1/2 and 1 1/4 miles, 168 lbs. up and 167 lbs., won second prize at Western Fair, London, 1902 and 1903.

About four miles from Brighton Station, G. T. R., lies the farm of Mr. R. O. Morrow, Hilton, Ont., where he is making a success of breeding Holstein cattle, Cotswold sheep and Tamworth hogs. The Holsteins are headed by Jack Horner, by Emperor, from Rose Evergreen, full sister to the noted sweepstakes cow, Carman Sylva.

Mr. J. G. Truman, Bushnell, Illinois, writes: Never in the history of the Trumans' Stud Farm, which means for the past twenty-six years, have we been able to show the public as strictly good a collection of Shire stallions as we have at the present time.

Our Mr. W. E. Truman arrived from New York with our last shipment by express on April 3rd, and they are certainly better than I thought could be found in England, and that could be purchased at a price that would warrant their being exported to this country, but my father, Mr. J. H. Truman, has taken lots of time in picking them up all around the county in which he lives, and they all certainly do him great credit as a judge of Shire horses.

To anyone wanting a show stallion of the Shire or other breeds that we handle, I would say come here to Bushnell and take a look at our horses, and I will pay your expenses here if you say, after I have given you one of our horse shows, that you have seen a better lot.

We have all ages, from two years to seven, and not a horse on our farm but that when matured will weigh the ton and over, and more of them will now weigh 2,000 pounds than under, that are from four years and upwards.

We have just issued this week a new catalogue, making the second one this season, and shall be pleased to mail it to any of your readers that will mention they saw our advertisement in your valuable paper.

It would be well to state here that we are charging no more for these first-class fresh horses than others will charge you for horses that have been picked over all through the fall and winter seasons.

Come to Bushnell and see more quality on more horses of the draft breeds, which includes Shires, Percherons, Belgians, Suffolks and our high-stepping Hackneys, than can be found at any establishment in the United States or Canada.

Critical Time at Change of Life.

Suffered From Nervousness and Extreme Physical Exhaustion, Now Recommends other Women to use

DR. CHASE'S NERVE FOOD.

Many women date their illness and suffering from the period of change of life.

It is a trying time to all women, and a time when Dr. Chase's Nerve Food will prove of incalculable value.

By supplying an abundance of rich, red, life-sustaining blood, this great food cure helps women to pass in safety the periods of trial in their lives. It strengthens and invigorates the delicate feminine organism, and builds up the whole system.

Mrs. Chas. Keeling, sen., Owen Sound, Ont., writes: "It is a pleasure to tell what great benefits I have derived from the use of Dr. Chase's Nerve Food. I am fifty-five years of age, and for about five years my life was one great suffering from nervousness, weakness and extreme physical exhaustion. I could not sleep, and hot flushes would pass through my body from feet to head. I consulted our family physician and two other doctors, but they told me, about my time of life, I was likely to be troubled that way. I continually grew worse, and despaired of ever being cured."

"Dr. Chase's Nerve Food came to my notice, and, as we have Dr. Chase's Recipe Book, I had confidence in the doctor. I was so surprised at the help I received from the first box that I bought three more. They built me right up, and made me feel healthy and young again. They have proven a great blessing to me, and I hope this testimonial will be of help to some weak, nervous woman, suffering as I did."

Dr. Chase's Nerve Food, 50c. a box, 6 boxes for \$2.50, at all dealers, or Edmanson, Bates & Co., Toronto. To protect you against imitations, the portrait and signature of Dr. A. W. Chase, the famous recipe-book author, are on every box.

The "STAY THERE" Aluminum Ear Markers are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on food trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalogue and prices mailed free. Ask for them. Address: WILCOX & HARVEY MFG. CO., 104 Lake St., Chicago, Ill.

SHORTHORNS AND BERKSHIRES. 4 extra good bulls from 7 to 9 months old, by Bandoleer = 40106 =; also 1 2-yr-old. Cows and heifers, with calves at foot or in calf, heavy milkers in herd. Berkshires—young sows 3 and 5 mos. old, lengthy bacon type, and with pedigrees of best breeding. Prices reasonable. F. MARTINDALE & SON, York, Ont., Caledonia Sta.

Shorthorns and LEICESTERS. Present offering: Young bulls, cows and heifers of the best Scotch families. Also a number of Leicesters of both sexes now for sale at reasonable prices. Address: W. A. DOUGLASS, Tuscarora P. O., Ont. Station—Caledonia, Ont.

SHORTHORNS. 8 young bulls, 11 heifer calves, yearlings, two-year-olds and young cows for sale. Several Miss Ramdeens and the very best families represented. Prices moderate. G. A. BRODIE, Bethesda, Ont. Stouffville Station.

Special Offering in JERSEYS. 1 cow, Zinke Nuna, 8 years old, fresh; 1 cow, Mid-day, 3 years old, fresh; 1 cow, Miss Midget, 3 years old, in calf; 1 bull, not akin to cows, 18 months old; 1 bull, not akin to cows, 16 months old. Special prices if taken at once, either one or more. For particulars write

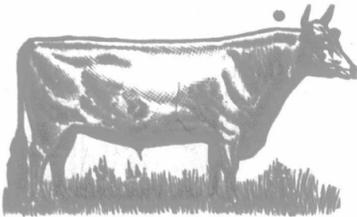
W. W. EVERITT, Box 552, Chatham, Ont. Jerseys and young bulls from high-testing stock. Boars and sows, 3 to 6 months old. Orders booked for pigs from spring pigs. Good young Cotswold ewes for sale. Wm. WILLIS & SON, Newmarket P. O. and Sta. JERSEYS For quick buyers, we are going to sell 15 bulls and 25 females. Owing to the natural increase of our herd and so many heifers coming into milk, we make the above offer. Stock of all ages. State what you want and write to-day to B. B. BULL & SON, om C. P. R. and G. T. R., Brampton, Ont.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

AYRSHIRES

WATSON OGILVIE,
PROPRIETOR.

Ogilvie's Ayrshires won the herd and young herd prizes at Toronto, London and Ottawa in 1909; also at the Pan-American, in 1901, and in 1902 they won all the herd prizes and medals, sweepstakes and diplomas, with one exception. The cows are all imported, and were carefully selected for strength and constitution, style, size of teats, and milk (quantity and quality). The herd is headed by Douglasdale (Imp.), champion at the Pan-American and at Ottawa, Toronto and London, in 1902, ably assisted by Black Prince (Imp.). Stock, imported and home-bred, for sale at all times.



ROBERT HUNTER, Manager.

Near Montreal. One mile from electric cars. Lachine Rapids, P. Q.

Special Notice for Immediate Sale! Two Ayrshires, One Guernsey, registered stock bulls, quality and breeding of the best; prices right. Also Shropshire ram and ewe lambs, from selected dams, imported sire, first quality, woolled correctly.

ISALEIGH GRANGE FARM,
J. N. GREENSHIELDS, PROP. DANVILLE, P. Q.

Riverside Holsteins

90 head to select from. Young bulls whose dams have official weekly records of from 17 to 21 lbs. of butter, sired by Victor De Kol Pisterje and Johanna Rue 4th Lad. Write for prices.

Matt Richardson & Son, Caledonia P.O. and Station.

FOR SALE—35 HOLSTEIN SPRING CALVES of the famous De Kol and Abbecker breeding, from deep-milking dams, for March, April and May delivery; also cows and heifers.

H. GEORGE & SONS, Crampton, Ont.

HOLSTEINS, TAMWORTHS, COTSWOLDS Present offering: Bull calf, 8 mos., won 4 first prizes. Litter 3-months-old pigs, and younger ones; choice animals. Ram and ewe lambs and two 2-shear rams; perfect covering.

H. O. MORROW, Hilton, Ont., Brighton Sta., G. T. E.

Holstein Calves of both sexes for sale. Would also sell a few choice young cows, from 2 to 5 years of age. The record of 13 cows at cheese factory for 5 months was 130,845 lbs., average per cow of 9,295 lbs. Write for prices. J. A. CASKEY, Madoc, Ont.

Special Offerings in Ayrshires for the next 30 days.

On account of the blocked condition of the railroads, I still have 5 first-class bulls ready for service from heavy-milking dams, that I have decided to clear out at greatly reduced prices, in order to make room for spring arrivals; also 3 big bull calves. Write for prices. W. W. BALLANTYNE, Neidpath Stock Farm, Stratford, Ont.

AYRSHIRES The herd that produced the winners in the dairy test at winter fairs five years in succession.

Dairyman of Glenora, bred from Imp. sire and dam, at head of herd. Young bulls fit for service and bull calves and females for sale.

N. DYMENT, CLAPPISON, ONT.

SPRING BROOK AYRSHIRES are bred for profit. Heavy milkers, high test, have good udders and large teats. Orders booked for bull calves. W. F. STEPHEN, Spring Brook Farm Trout River, Que. Carr's Crossing, G. T. R., 1 mile; Huntingdon, N. Y. C., 5 miles.

AYRSHIRES FOR SALE. Four yearling bulls and 6 heifers, and spring calves of both sexes, all sired by Minto (10490). B. ed by A. Hume, Manie P. O., Ont. F. W. TAYLOR, Wellman's Corners, Ont.

AYRSHIRES We are now offering 8 Ayrshire bulls from 5 to 15 months old, smooth, straight and bred right. Prices right if sold quick. Also Buff Orpington Eggs, \$1 for 13.

H. J. WHITTEKER & SONS, North Williamsburg P.O., Morrisburg Sta.

HIGH-CLASS AYRSHIRE CATTLE FOR SALE: Both sexes; bulls and heifer calves from 2 to 9 months old; cows and heifers all ages. Famous prizewinners bred from this herd, including Tom Brown and White Floss, sweepstakes prizewinners at Chicago. DAVID BENNING & SON, "Glenhurst," Williamstown, Ont.

Linden Oxfords. Imported and home-bred stock of the choicest breeding always on hand.

E. J. HINE, Dutton, Elgin County, Ont.

SHROPSHIRE shearing rams, shearing ewes, ram and ewe lambs of choice breeding. Prices right. GEO. HINDMARSH, Allsa Craig, Ont.

Lincoln Sheep and Shorthorn Cattle Choice Lincoln Lambs of both sexes. Several carloads choice yearling rams and two carloads of one and two-year-old ewes, ready for Sept. and Oct. delivery. Also some choice young bulls, cows and heifers, which will make good herd foundations.

F. H. NEIL, PROP. Telegraph and R. R. Station, LUCAN, ONT.

The Burford Flock of Shropshires won eleven prizes at the International. Choice yearlings and lambs, both sexes, by the famous Mansell ram, or lambs by Silver Medal ram at Toronto. 100 ewes bred to the above rams. LLOYD-JONES BROS., Burford, Ont.

FAIRVIEW SHROPSHIRE.

Fairview is now the home of more high-class rams and ewes than ever since the flock was founded. The flock has produced more winners than any other. Twenty-three years' close experience accounts for it, with nothing but the best being always mated. Extra good values offered for summer shipments.

JOHN CAMPBELL, Fairview Farm, Woodville, Ont.

COTSWOLDS

Shearing ram, shearing ewes. Ram lambs and ewe lambs from 450-lb. ram, winner of silver medal, Toronto.

ELAIN F. PARK, Box 21, Burgessville, Ont.

W. W. CHAPMAN,

Secretary of the National Sheep Breeders' Association.

Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: MOWBRAY HOUSE, NORFOLK ST. LONDON, W. C., ENGLAND.

Cables—Sheepcot, London.

"BROAD LEA OXFORDS."

An offering choice ewe and ram lambs, shearing ewes and a few shearing rams for flock headers. Also young Yorkshire pigs of the best bacon types. Teeswater, G. T. R. W. H. ARKELL, Mildmay, G. T. R. om Teeswater, Ont.

"MODEL FARM"

SHROPSHIRE

Everything sold that has been offered for sale. Am booking orders for rams and show flocks. August delivery. Write for prices.

W. S. CARPENTER, PROP., SIMCOE, ONTARIO

FARNHAM OXFORDS

We had the champ'ion flock of Oxfords in 1903. Importations annually. Animals of all ages and sexes, both imported and Canadian-bred, for sale at all times at reasonable prices.

HENRY ARKELL & SON, ARKELL, ONTARIO.

MAPLE LODGE BERKSHIRES. Although leaving Willow Lodge Farm and moving to Brampton, we will still be in a position to supply the same type and breeding as usual, with some fresh blood added, and in as large numbers as ever before. Have a few young boars left, ready for service, and some fine young sows ready to be bred. Our young pig are coming in good form this spring. An booking orders right along. Old customers, as well as new, will find me after 1st April, at Box 191, Brampton. WILLIAM WILSON, om Brampton, Ont.

BERKSHIRES AND YORKSHIRES. For Sale—Boars fit for service; sows in farrow and ready to breed, and younger stock, all of the ideal bacon type. Pairs not akin. JOHN BOYES, Jr., Rosebank Farm, om Churchill, Ont.

FOR SALE:

Yorkshires and Holsteins Best type and quality. Young stock constantly on hand. Prices right. R. HONEY, om Brickley P. O., instead of Warkworth.

Chester White Sows bred for March litters; also a few boars. A 15-months-old Shorthorn bull, registered. For price, etc., write to R. H. HARDING, Mapleview Farm, om Thorndale, Ont.

LARGE YORKSHIRES

GLENBURG HERD—upwards of 100 fine spring pigs, sired by imported Holywell Itewson. Also a few 6 month's boars. Prices reasonable. DAVID BARR, Jr., RENFREW, ONT.

GOSSIP.

Mr. Geo. G. Stewart, Howick, Que., writes that, through his advertisement in the "Advocate," he has sold the imported Clydesdale stallion, Clan McIver, to Mr. C. C. Harrison, Coaticook, Que., and Imp. Craiglever to Mr. Thos. McDowell, Shawville, Que. Mr. Stewart still has the imported horse, Clan McLeod, for sale, and has sailed for Scotland for a new importation. In the meantime, his manager will answer enquiries and show and price the stock.

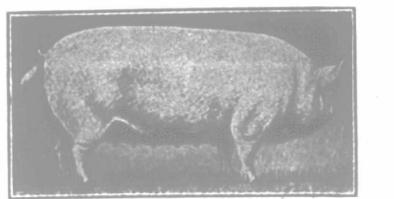
A few miles from Grafton Station, G. T. R., lives the enterprising young breeder of Tamworths and Holsteins, Mr. Bertram Hoskin, The Gully P. O., Ont. In this herd of swine we found upwards of 70, and a better lot it would be difficult to find. The foundation was laid with stock from the herds of A. C. Hallman, Colwill Bros., and others, with a new addition lately as a stock header from the herd of Reid & Co. Mr. Hoskin is thinking of making an exhibit at some of the large exhibitions in the near future, and the probabilities are that he will win his share. Some 25 head is the limit of the Holsteins, with Sir Hamming De Kol and Duke Concordia De Kol at their head. Sir Hamming De Kol is from Woodbridge Belle, which had a 17,000 lbs. milk record for one year. He is strictly a dairy bull. Duke of Concordia De Kol is a grandson of Sadie Vale Concordia De Kol, said to have the world's champion seven-day butter record, viz., 30 lbs. 10 ozs. This herd is built upon a producing foundation, viz., Pauline Paul, Netherland, Cornelia, Tenson, and De Kol, good corner stones to build upon. Mr. Hoskin's advertisement runs in this paper, and his stock is worthy a place in any herd.

Mr. J. M. Gardhouse, Weston, Ont., writes that his Clydes, Shires, Shorthorns and Leicesters have wintered well, and the crop of lambs, though young, are a most promising lot. Sales in horses and Shorthorns, taken all around, were never better, and prices good, although the stallion trade has been quiet. Sales have been made to the following: To Mr. N. G. Giffen, New Minas, N. S., two Shorthorn cows and two heifers; to Mr. Geo. Amos, Moffat, Ont., two cows and two calves, a Nonpareil, two Clementinas, a Cecelia, and also Lady Hampton, a twelve-months heifer, probably one of the best-bred things in the country. She is a dandy heifer, sired by the great Missie bull, Merry Hampton, and her dam, Lady Monarch, won several prizes for Messrs. Robbins. She is an Orange Blossom, sired by the great show and breeding bull, Gay Monarch. Mr. Amos is to be congratulated on securing such a heifer. Mr. J. G. Washington, Ninga, Man., secured Prince Adair, an extra choice young bull, by Mr. Dryden's Prince Gloster. This is a calf we expect to hear from in the show-ring. Mr. Edward Adams, Grenfell, Assa, took three Shorthorn cows, one heifer and a calf. In the lot was a Crimson Flower, and a Bruce Mayflower. Mr. Adams is laying a foundation stock, and has made a selection which should prove profitable. Mr. C. S. Gardhouse, Humber, took the Imp. bull, Scottish Knight; Mr. G. W. Verral, Highfield, two cows and two heifers; Mr. Wm. Boldock, Mount Charles, two cows, one heifer, and two calves; Mr. Robt. Digby, Elmvale, one bull; Mr. A. J. Shaw, Cochrane, Alta., one bull; Mr. Henry Shaw, Colville, Ont., one bull; Mr. Samuel Freeman, Amherst, N. S., two Shorthorn heifers; Mr. Peter Mutch, Holstein, Ont., two heifers, Imp. Pride 10th and Mysie of Avondale; Mr. W. J. Reid, Orangeville, one Strathallan cow. These sales, along with six head sold at the Hamilton sale, which made an average of \$464, make 39 head of Shorthorns we have disposed of since fall. We have still 34 Shorthorns left, six of which are imported, and can spare a few more. Sales in horses have been: One Imp. Shire stallion and one Clyde filly to Mr. L. J. Harris, Canning, N. S.; one Shire mare and one Clyde mare to Mr. E. Adams, Grenfell, Assa; to Messrs. A. & J. McLean, Priceville, Ont., one imported Clyde mare with foal; Mr. Thos. Laing, Eburne, B. C., one Clyde filly. We have three imported stallions, and will sell one or two worth the money. Every one show horses and money-makers.

COOPER SHEEP DIP
Standard of the World
for 60 years. Used on 250 millions annually. One dipping kills Ticks, Lice and Nits. No smell. Keeps flock clean a long time. Increases growth of wool. Dipping Tanks at cost. Send for Pamphlet to Chicago. If local druggist cannot supply send \$1.75 for \$2 (100 gal.) pkt. to EVANS & SONS, Ltd., Montreal and Toronto. WM. COOPER & NEPHEWS, Chicago, Ill.

WILBER S. GORDON, TWEED, ONT.
If you were sure you could buy for 60c. per foot a satisfactory hog trough good for 10 years' hard usage, you would buy quick, wouldn't you? Leal's Patent Steel Trough will fill this bill easy. Honestly made, heavy and strong, nice rounded edges. It's a winner. Money back if not as represented. Every foot guaranteed. Get catalogue from WILBER S. GORDON, TWEED, ONT.

Improved Yorkshires



Over three hundred for sale. The last three years our herd has won ninety per cent. of the first prizes at the leading shows, competing against American and Canadian breeders. We have more imported animals in our herd than all other breeders combined in Canada. We have the best blood from the leading herds in England and Scotland. Prices reasonable.

D. C. FLATT & SON, MILLGROVE, ONT.

YORKSHIRES

FOR SALE, from the Pioneer Herd of the Province Quebec, both sexes and all ages. Satisfaction guaranteed on all mail orders. Also a few Pekin ducks and White Rock cockerels left for sale.

Athelstan, N. Y. C. Railroad stations: (Huntingdon, G. T. R.)

Address: A. GILMORE & SONS, Athelstan, Que.

FOR SALE—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; choice young pigs, six weeks to six months old; pairs not akin; express charges prepaid; pedigree and safe delivery guaranteed. Address: E. D. GEORGE, Putnam, Ont.

Chester White Swine

between four and five months old; either sex; good bacon type. Sires and dams were prizewinners at Toronto and London fairs. Write or prices. W. E. WRIGHT, Sunnyside Stock Farm, Glanworth, Ont.

PINE GROVE FARM HERD OF LARGE ENGLISH YORKSHIRES.

The oldest established registered herd in America. Having sold all boars and sows that were fit for breeding, we are now booking orders for spring pigs. Having a good number of imported sows and boars, also several choice home-bred sows, we are able to mate pairs and tries not akin. Satisfaction guaranteed in all mail orders. Joseph Featherston & Son, Streetsville P. O., Ont. C. P. R. station, Streetsville; G. T. R. station, Clarkson.

TAMWORTHS

At living prices. Have some excellent young stock of good bacon type; both sexes. LOUIS D. BARCHFELD, Grimsby, Ont., P. O. and Station. Telephone on farm.

TAMWORTHS AND HOLSTEINS

Boars fit for service, sows bred and ready to breed, 20 boars and sows from 2 to 4 months; a fine lot of March pigs. Pairs not akin.

BETRAM HOSKIN, Grafton Sta., G. T. R. The Gully P. O.

GLENHOLM HERD OF TAMWORTHS

We are now booking orders for spring litters. Have 5 boars and 5 sows, 6 months old, left, and a fine lot of younger ones.

F. O. SARGENT, Eddystone, Grafton Sta., G. T. R.

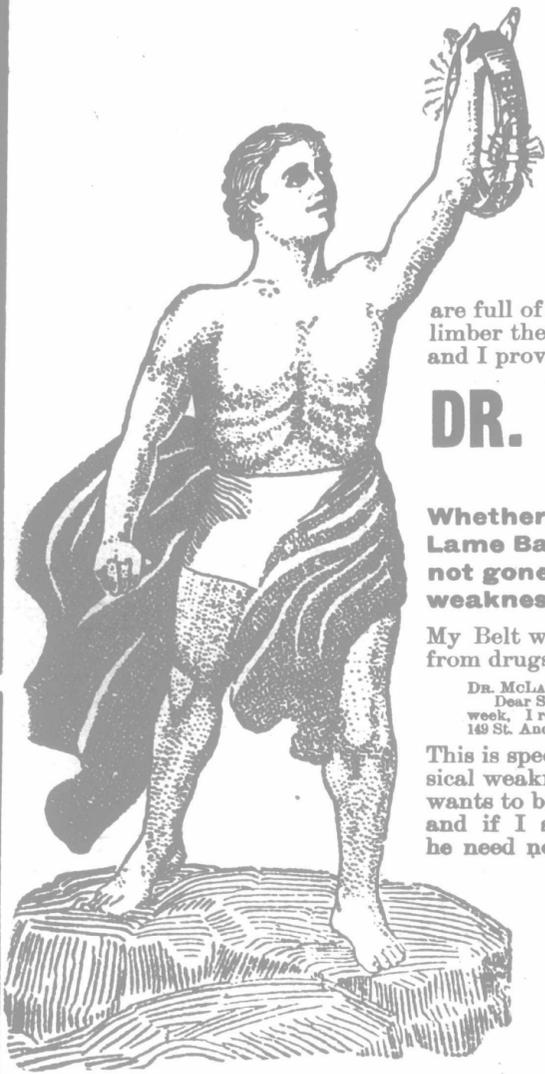
YOUNG SOWS

in farrow by imported boar; 6 sows to farrow in May and June, 5 of them are Toronto winners. Am booking orders for pigs from these sows.

EGGS—Mammoth Bronze turkey and White Holland eggs, \$2.50 per setting. B. and White Rocks, Buff Orpington, Buff Wyandotte and Ruen duck eggs, \$1.00.

T. J. COLE, Box 188, Bowmanville, Ont.

HAIL TO WEAK MEN!



Even unto old age you may feel the vigor of youth, with its light heart, elastic step, courage and tireless energy. You may be free from pains and defy your years.

I want to talk to men who have pains and aches, who feel run down physically, who realize that the old energy which was so evident in youth is absent now; men who can't stand the amount of exertion they could years ago. I want you—if that means you—to see what I have done for others who were just as bad off. That's my introduction. If a friend in whom you had confidence presented someone to you and said, "Jack, here's Brown; he has made good with me and I trust him," wouldn't you trust him too?

Now if you don't feel right, I can cure you with my Electric Belt. If you are full of rheumatic pains, I can knock them out. I can pour oil into your joints and limber them up. I have often said that pain and electricity can't live in the same house, and I prove it every day. It is so different from other remedies, from the fact that

DR. McLAUGHLIN'S ELECTRIC BELT

MAKES A PERMANENT CURE.

Whether it be Nervous Debility, Varicocele, Early Decay, Rheumatism, Lamé Back, Lumbago, Sciatica, any case of Kidney Disease that has not gone as far as Bright's Disease; Indigestion, Constipation or any weakness caused by ignoring the laws of nature,

My Belt will remove the cause, and it will never return. You can't obtain this result from drugs. They may relieve you, but don't cure.

DR. McLAUGHLIN.

Dear Sir: In answer to your letter I wish to state that I am still in the best of health, and gaining in weight every week. I recommend the Belt to everyone I know, for the best permanent cure to be had. I remain, yours truly, L. Roy, 149 St. Andrew St., Ottawa, Ont.

This is specially directed to men who are weak, broken down, old and decrepit in physical weakness, full of pains and aches, gloomy, despondent and cheerless—any man who wants to be stronger and younger than he feels—let him come and tell me how he feels, and if I say that I can cure him and he will show that he is honest and sincere he need not pay me a cent until the work is done.

I don't want money that I don't earn. I don't need it, and am not after it. But I am after the dollars that are now going wrong in the quest of health. Look at these poor wrecks of humanity that are spending all they earn on drugs—dope that is paralyzing their vital organs—that have spent all they have earned for years without gaining a pound of strength for the hundreds of dollars wasted.

That is the money that I am after, because for every dollar I take I can give a thousand per cent. interest. And I don't want it until I have cured you if you will secure me. I have cured so many cases right here that I can easily prove my claims to you. But if that proof is not enough

I'LL CURE YOU FIRST AND THEN YOU CAN PAY ME.

Is that fair? Most of the Belts that I am selling now are to men who have been sent here by their friends whom I have cured. I think this is the best evidence that my business is a success from the standpoint of cures as well as on the dollar side.

Knocked Out His Pains.

Dr. McLaughlin,

Dear Sir: Before I used your Belt I was all full of pains, and could hardly walk at times. Now I have hardly any pains left and am improving every day. I feel like singing and whistling in the morning. I don't have that nasty pain in my left side. It has disappeared entirely. Yours is the best Belt that I have ever seen, and I thank you for all your trouble. I have spoken to several people about your Belt. I remain, yours, C. A. Oder, 108 Bridge street, Hamilton, Ont.

Stomach and Heart Trouble in a Bad Form.

Dr. McLaughlin,

Dear Sir: I was suffering from a very severe stomach trouble and weak heart, causing palpitation and loss of breath, at the time I started to wear your Belt. The first time I put it on I was greatly benefited, and now feel quite free from my former stomach trouble and weakness. I have gained flesh and strength. I have been suffering for eleven years, and had been doctoring nearly all that time without any benefit till I started to wear your Belt. Yours very truly, Mrs. Christiana Carter, 268 West Hunter street, Hamilton, Ont.

No man should be weak, no man should suffer the loss of that vitality which renders life worth living. No man should allow himself to become less a man than nature intended him; no man should suffer when there is at hand a certain cure for his weakness.

My Electric Belt, with Special Electric Attachment (free), will restore your power. It will check all loss of vital power and affects every organ of the body. Most of the ailments from which men suffer can be traced to it.

I have cured thousands of men who have squandered the savings of years in useless doctoring.

Easy to Wear. Cures While You Sleep.

READ WITH CARE Every patient wearing Dr. McLaughlin's Electric Belt receives free, until cured, the advice of a physician who understands his case. Agents or drug stores are not allowed to sell these goods.

FREE BOOK. If you cannot call write for my beautiful illustrated book, giving you cuts of my Belts and prices. This little book is of great value to anyone; it contains a lot of useful information to men who are not what they should be; tells how strength is lost and won. I send this book, closely sealed, free to anyone. **I HAVE A BOOK FOR WOMEN AS WELL AS MEN.**

OFFICE HOURS: — 9 A.M. to 6 P.M. Wednesday and Saturday till 8.30 P.M.

DR. M. S. McLAUGHLIN, 130 YONGE ST., TORONTO, CAN.

MELOTTE CREAM SEPARATORS

have machine-cut gears turning on ball bearings which run under oil. They have no worm-threads or any other contrivance causing needless friction. The gear wheels are of high-grade steel, permitting reduction in their size and weight. The suspension of the separator bowl from the spindle is a decided and most important improvement on the old-fashioned plan, in which the bowl is balanced on top of one or more heavy worm-thread spindles held rigidly in position by two or even more bearings. For close skimming it is unexcelled. WRITE FOR BOOKLET NO. 3F.



Melotte Frictionless, Self-emptying and Self-balancing Bowl.

R. ALISTER & CO. LTD.
775 & 787 ST. PAUL STREET
MONTREAL.

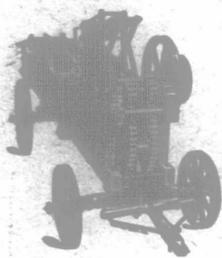
Farm Laborers

from England, Ireland, Scotland, Wales and the Channel Islands arriving at Toronto weekly. If you desire to secure help for your farm, write for application form to

Thos. Southworth,
Director of Colonization, TORONTO.

Columbia Hay Press

BUILT BY THE
Columbia Hay Press Co., Kingsville, Ont.



Having bought the right to build this famous press in Canada, we are now prepared to supply the trade on short notice.

Write for full description, accompanied with testimonials of Canadians who are using this machine. It has a record of 50 tons in 10 hours. Its wonderful capacity is due to the

feeding device and very much improved block dropper.

Every Farmer Should Have a

2,000-lb.

KING EDWARD SCALE

Manufactured by



Get our special prices this month

G. Wilson & Son, Ltd., Toronto, Canada.

BISSELL'S STEEL ROLLER.

6, 8, 9 and 12 foot widths. The favorite rollers for all the Provinces. Write for full description and reasons why Bissell's are the best. Address on

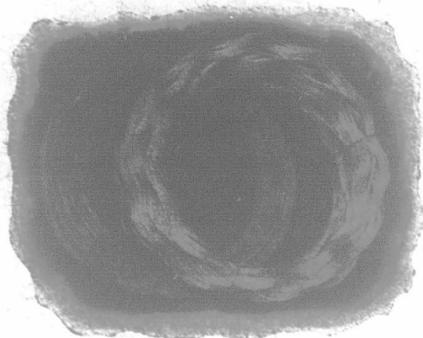


T. E. BISSELL, Dept. W., Elora, Ont.

\$3 a Day Sure

Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once. IMPERIAL SILVERWARE CO., Box 006, WINDSOR, ONT.

Most ready-woven wire fences are not coiled, but are crimped or bent zigzag every few inches, because the looms can't coil it and get an even length of strands.



London Coil Spring Wire

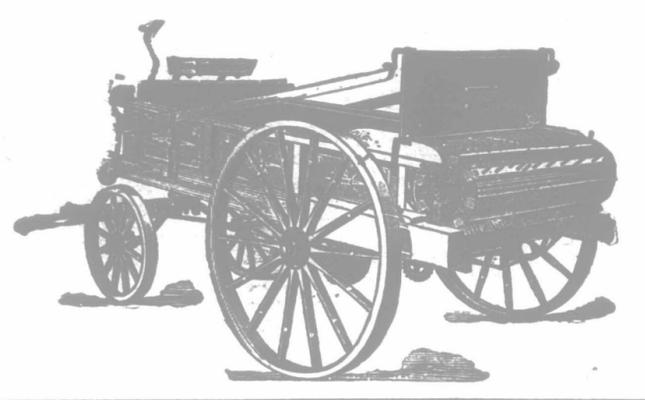
has a proper and equal degree of coil in every particle of its length, not a kink or bend in one place only; it is made from a special kind of steel, which is as hard as possible and still capable of being spliced.

LONDON COILED WIRE and a LONDON FENCE MACHINE will build a fence nearly one hundred per cent. better, for the money invested, than any other in existence.

The London Fence Machine Co'y

LIMITED
LONDON, - - CANADA.

Kemp's 20th Century Manure Spreader.



A CROP-MAKER and A LABOR-SAVER.

J. M. LeMoine, Director, Government Agricultural School, Compton Model Farm, Compton, Que., Aug. 19, 1903.

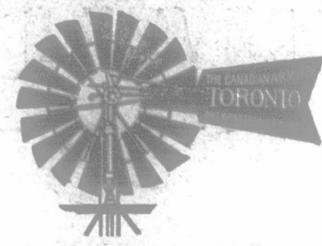
Mr. J. L. Thornton, Barnston, Que.: Dear Sir.—Some years ago I used two of the Kemp Manure Spreaders, which gave me the greatest satisfaction. I found the manure was well pulverized and evenly spread on the land. The result was an even crop. I have no hesitation in strongly recommending your Spreaders as one of the best labor-saving machines of the day. I consider that they are indispensable to good farming at present.

Yours truly, JOHN M. LEMOINE, Director.

Drop a postal card for our Booklet, entitled "Multiplying His Acres."

The KEMP MANURE SPREADER CO., Ltd., STRATFORD, ONT.

WINDMILLS



A CANADIAN AIRMOTOR
in one single year
Will save you Time, Labor and Money.
It has a constitution that will
STAND { Storms, Hard Work and all Opposition.
Investigate for yourself.

Ontario Wind Engine & Pump Co., Limited,
TORONTO, ONTARIO.

GENUINE Pratt's Astral Lamp Oil
SOLD IN ALL COUNTRIES, AND RECOGNIZED AS THE HIGHEST-GRADE OIL MANUFACTURED.
WHOLESALE ONLY.
THE QUEEN CITY OIL CO., Limited, TORONTO.

Standard Scales

For railroad, hay, live stock, dairy, coal and platform.
For prices and particulars write or call on



GEO. M. FOX, YORK STREET LONDON, ONT.
Ask your nearest hardware man or dealer for them.

THE L. O. SMITH FEED & LITTER CARRIERS.
Patented June 16th, 1903.
Can be adapted to any barn or farm building.
Write us for particulars
LYMAN C. SMITH, OSHTAWA, ONT.

Farmers Contemplating Marriage, These Already in Wedded Bliss,

should present their bride or family in the case may be, with a BEAUTIFUL MASON & BISHOP PIANO.
Liberal allowance made for old pianos and organs. Call and get our prices before buying.
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