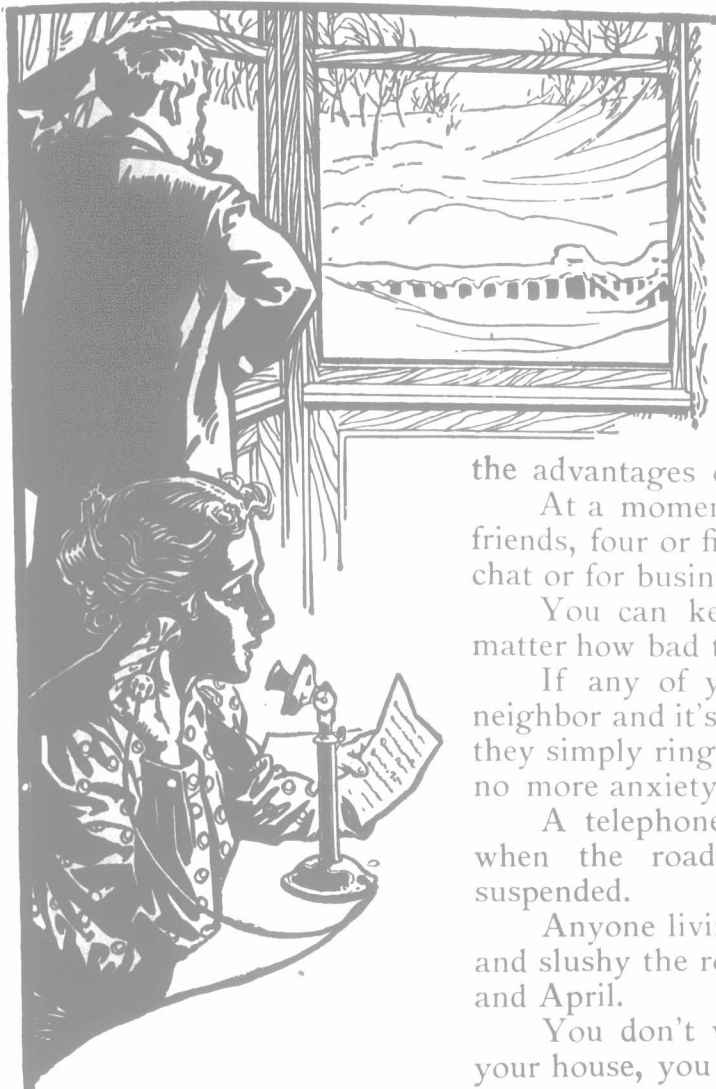


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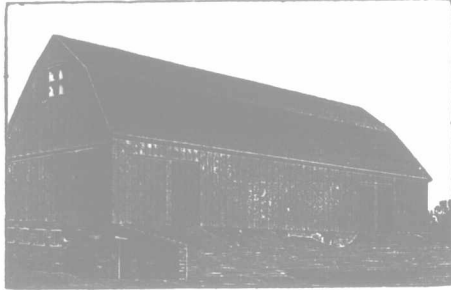
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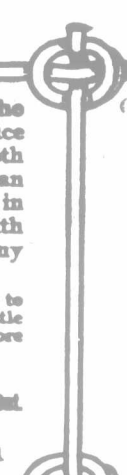


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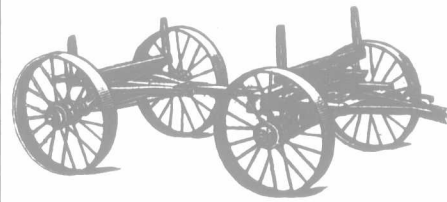
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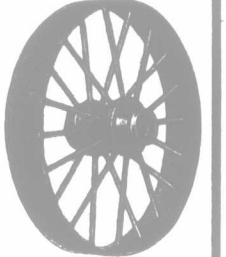
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# The Farmer's Advocate

## and Home Magazine

"Persevere and Succeed."

Established 1866.

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Vol. XLIII.

LONDON, ONTARIO, MAY 21, 1908.

No. 817.

### EDITORIAL

#### THE COSTLY THREE-YEAR-OLD STEER.

A most important phase of economical beef production is emphasized in a contribution to "The Farmer's Advocate" from Thos. B. Scott & Son, Middlesex Co., Ont., who outline their method of rearing calves, to be turned off as finished heaves around ten months of age, at weights of 850 to 900 pounds. Only well-bred calves of Shorthorn blood are raised, liberal use being made of skim milk, on which the calves are pushed rapidly forward, without losing their calf flesh. This system results in the production of plump baby heaves, which outclass all other material for building up a butchers' trade. That there is profit in raising them, no one who has tried it properly will doubt, providing, always, that the calf is out of a cow capable of squaring her own maintenance account at the pail, so that the youngster is not handicapped at the start by a heavy bill charged up against him for his mother's board. It is in the production of these milk-fed heaves that the dual-purpose cow makes her best showing in profit. For their production, perfection of beef type is not of so much importance as in the case of animals intended for marketing at a maturer age. In fact, butchers will often take well-fed Holsteins at this age at the same price offered for Shorthorns, although, as a general thing, the latter breed will give best satisfaction for the purpose. Jersey and Guernsey steers should be avoided.

The writer has raised many veal-heaves, of various strains of breeding, and has found that, with a fair start on whole milk, tapered to skim milk at two or three weeks old, the calf being then fed about a gallon or more (warmed), three times a day, until four or five months old, and then a smaller quantity until ready for the block, weights of 800 to 900 pounds could be easily attained by eleven or twelve months with the use of a very little bran and oil-cake meal, combined with good clover hay, ensilage, roots and miscellaneous roughage. The calves were invariably kept in a comfortable basement stable for the first six months, at least, and usually the whole twelve-month, being tied or stanchioned only at feeding time. The stable was always kept clean and reasonably dry. This is important. Fall calves are preferable to those dropped in spring, and the favorite time for marketing is May or June, when beef almost invariably commands the best price of the year. Sometimes the calves have been sold at considerably less and sometimes considerably over a year, according as might be necessary to strike the best market, for they were fit to kill at any age.

Of course, many may try this plan and fail through lack of pains and kindly interest in their charges. The greatest secret lies not in the feed, but in the feeding and general care, although the feed is certainly important, especially the skim-milk part. By allowing a proportion of whole milk sucked from the cow, and by using skim milk more liberally than the writer of this article has been accustomed to do, Messrs. Scott have secured exceptionally rapid gains. The prevalent practice described by them, of rearing pot-bellied, bloated, scouring, stunted spring calves on a grass lot, with separator milk or whey to drink almost from the first, with flies to pester, and not always shade to protect, is an ideal way to dissipate all hope of ever making them good doers and a source of profit to the community. Some feeder, buying them at two and a half or three years for three and a half or four cents a pound, may scrape a small profit out of his speculation

through the increased value per pound given to the original carcasses, but his profit will not compensate for the loss incurred by the farmer who raised the feeders. If cost were closely calculated, it would be found that the ultimate returns of such a beast ordinarily amount to a sorry price for the total feed, pasturage and care bestowed upon him from birth. The only hope of coming out even is dirt-cheap pasture, and there is very little such that could not be turned to far better account. The three-year-old feeder or stocker has no place in a well-ordered system of agriculture. Eighteen or twenty months should be the limit of age for marketing cattle for the domestic trade, while ample weights for exporters should be attained at twenty-four to thirty. It is a matter of more intelligent business perception, more liberal feeding, and better herdsmen.

#### CO-OPERATION IN THE MEAT INDUSTRY.

In their search for a remedy to combat the undesirable effect on the meat industry of having the trade confined exclusively to one or two firms, Alberta farmers are giving some consideration to a scheme which proposes the establishment of co-operative packing plants owned and controlled by farmers, and supervised by the Government. Also, we believe, some scheme for marketing live stock.

One particular plan that has been quite extensively advocated aims at the adoption of a system modelled somewhat on Danish co-operative lines—a system that could involve both Governmental and individual contribution to the original investment, subsequently to be managed by the individual stockholder and supervised by the Government experts when required.

Alberta has already a number of organizations modelled on Danish lines. She has Government creameries, and Government stations for fattening, killing and marketing poultry. The creameries have placed dairying as an industry in a position better than that in which it exists in any other Western Province. The fattening stations have given an impetus to the poultry business that promises to develop it into one of the most profitable agricultural industries of the Province. Why then, since Government assistance in supervision and management has done so much for these smaller industries, has been so uniformly successful, has operated so markedly to the advantage of the producer, and has demonstrated so clearly that the principle is neither a theory nor a myth; why, in one of our larger industries, should not a system based on similar lines be proportionately successful? And, further, if, in the fattening and marketing of poultry, and in the making and selling of butter, a Government can manage affairs to the profit of its farmer customers, especially since there is no incentive for the customers using the facilities provided, other than the profit that may accrue to them from so doing; why would not a manufacturing and marketing organization in the meat trade, in which farmers were interested as stock-holders, thus being more vitally concerned in its welfare than they would be if merely patrons; why should not such an institution be even more largely successful and advantageous?

This is a favorite argument of those who are advocating Government and co-operative management of the meat business of Alberta. It is an argument, too, which, on the face of things, seems sound. Alberta has built up agricultural trade and manufacturing business on Danish models, which are a credit to the Government that instituted them and a blessing to the in-

terests which they serve. Denmark has demonstrated what co-operation can do in agriculture, and Alberta has shown what Government management can do in the manufacturing and marketing of certain farm products; but from the results of neither is there reason for assuming that a combination of the two would be successful. In fact, we rather suspect it would not. Farmers in Alberta can co-operate for the purpose of managing the marketing of their live stock and meat products, and, given a fair chance, there is some prospect that, at the present time, their venture would be successful. Co-operation among those engaged in any industry can be successfully carried on only when there is economic necessity for concurrent effort. Co-operation among farmers in Denmark, co-operative societies in England, and the trusts, combines and corporations in America, was induced, primarily, by economic causes. Co-operation among the farmers of this country will come when conditions in the agricultural industry, or any department of it, are such that there is a necessity for farmers, as producers or consumers, banding together for the sale of their products or the purchase of their supplies. The indications are that present conditions in the live-stock business are going to induce such a movement in Alberta. Those conversant with the manner in which live-stock and meat products are marketed, have reason to suspect that too small a return is made to the producer and too large a proportion of the total returns of the industry passes to the middleman, the manufacturer, or somebody else, who added little or nothing to the value of the article he extorted toll from. Co-operation, then, in these circumstances, in the live-stock industry, stands a chance of attaining to more success than co-operative movements among Canadian farmers have attained in the past.

But there is a difference between the co-operative management of an industry by those engaged in it, and the joint administration of that industry by the Government and the producer. It would be difficult to keep politics and patronage from any undertaking in which a Government was concerned; and it is to be feared that politics and patronage would not be long getting in their destructive work in such a movement as this. We have seen farmers' organizations ruined before by these same things; and so long as human nature is constituted as it is, we have no reason to believe we will not see it again, especially if the conditions likely to induce disaster are incorporated at the start.

A co-operative organization requires more than the enthusiasm of its members to carry it to success. It must bind in some manner those who enter into it to support its undertakings, and under penalty compel them to be loyal to the organization. It involves some self-sacrifice and self-denial on the part of the individuals or communities entering the movement. They must bind themselves to support and patronize their organization through good report and ill. The members must not be seduced by tempting prices offered temporarily in competition by capitalists interested in breaking up the enterprise, as happened in the case of the Ontario co-operative packing factories. The spirit of individual independence must, to some extent, be sacrificed for the advancement of the communal interest. The community must agree to abide loyally by the decisions of the majority. Even when all these essential principles are observed, there is much chance that the movement may come to naught, especially in this country, where the incentive for union is less strong than in the older lands.

## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

PUBLISHED WEEKLY BY  
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,  
WINNIPEG, MAN.

LONDON (ENGLAND) OFFICE:

W. W. CHAPMAN, Agent, Mowbray House, Norfolk Street,  
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It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.

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LONDON, CANADA.

### THE PREVENTION OF FIRES.

At the last meeting of the Mutual Fire Underwriters' Association of Ontario, a tabulated record was presented which, in a striking way, contrasts the losses from fires in America (Canada and the United States) and six European countries, Australia, Denmark, France, Germany, Italy and Switzerland. In the latter group, the losses per capita range from 12 cents to 49 cents, while upon this continent the losses average \$1.76 per capita! In contemplating this enormous difference in fire waste, two questions naturally arise: How is it to be accounted for, and what measures may be taken towards its reduction? Speaking generally, there can be little doubt but that to the use of wooden buildings and careless haste in their construction may be attributed a large share of the responsibility for the frequently-recurring fires on this continent. In many cities and towns it has been found that stringent regulations, requiring the use of brick, stone or other non-combustible materials have effected a great reduction in the losses by fire. The State of Ohio has what is called a Department of Fire Enquiry, the chief officer of which is the Fire Marshal, under whose direction rigid inquiry is made into the causes of every fire, and he may order the removal of explosives or dilapidated buildings, which are a menace to adjacent property. As a result, the incendiary fires in the State have been reduced from 1 in 6 to 1 in 16. In fact, the very considerable number of States having the fire-marshal system in vogue, has demonstrated its efficiency in reducing fire losses and insurance rates. In some cases the Fire Bureau is supported by the State, and in others the outlay is partly made a charge upon the insurance companies. The Fire Marshal of Massachusetts reports that, during a couple of years, one-third of the total number of incendiary fires were set for the purpose of defrauding insurance companies, nine per cent. from revenge, and three per cent. from mental dis-

orders. In the returns from Ohio, during a recent year, we note the following suggestive table, classifying incendiary fires:

To defraud insurance companies.....	468
Revenge or malice .....	110
Mischievous boys .....	36
Pyromaniacs .....	29
Intoxicated persons .....	28
To avoid or secure work.....	18

A tabulation based on a period of years, for the whole of the United States, shows that over 20 per cent. of the fires are due to various forms of carelessness, such as in the use of pipes, matches and cigarettes, defective stoves and pipes, oil stoves, candles and gas jets, hot ashes, defective flues and smokestacks, fireworks, and so on. The moral of this is obvious, and the remedy lies with the people themselves. The risks from fires have no doubt been increased by the introduction of motive power driven at a high rate of speed, and furnished by the use of inflammable materials, requiring, obviously, greater care in their use. Using cheap or defective lamps and lanterns, and low-grade oils, are fruitful causes of fires. In regard to farm buildings, insurance companies find that lightning is the chief cause of fire, but scientific research and practical experience unite to show the usefulness of lightning-rods for protective purposes. Before the last annual meeting of the Mutual Fire Underwriters' Association of Ontario, Mr. Thos. Sheil, representing the North Blenheim Company, reported that in 45 years no barn protected by rods had been destroyed by lightning; and the London Mutual, a few years ago, made a somewhat similar report. Mr. Sheil stated that there was a very great increase in the number of barns so protected, and, in the interest of the insurance company and of the farmer himself, he strongly recommended that barns should be protected by lightning conductors, good galvanized fencing wire being useful for that purpose. It is essential that the ground connection be made in permanently-damp earth. Specific directions for the erection of homemade lightning-rods have frequently been given in "The Farmer's Advocate," and, since the season for lightning storms is again approaching, the subject is one deserving practical attention, and we will be glad to publish correspondence from readers who have had experience with this class of lightning-rods or others, together with information as to their cost, method of construction and efficiency.

### WHO WORKS THE HARDEST?

A story is told of a farmer's son who concluded that farm work was too hard, and who engaged with a thrifty business firm in the city. Months passed, and the father visited his son in his new place of work. As the two left for lunch, the father inquired, "Well, how do you like your job? Do you find it any easier than it was with us?" The son replied: "Easier? I guess not! When we were on the farm we kept at it pretty steadily. Once a year we had a downright rush, on threshing day. Well, here it is threshing every day."

This anecdote has its lessons. The farmer is not the only busy man. Further, even if he were compelled to work as hard as the city man, his surroundings are such that his vital forces are being restored continually. With the city man, this is not the case. The air he breathes is always more or less vitiated. His ears are assailed by a constant din. The pace at which he is obliged to live is simply killing—so killing, indeed, is it, that many families removing from the country to the city become extinct in the third generation.

At the same time, conditions of country life may be greatly improved. Success, even in farming, is attained at too high a price when it is secured at the cost of premature breakdown. Just now the farmer will do well to plan his summer's work that he can secure regular periods of rest. The weekly half-holiday will be found a paying investment. No farmer regards the time taken for oiling his machinery, for resting his horses, or for sharpening his cutting tools, as wasted. For the same reasons, he will find himself a gainer by arranging for regular periods to be devoted to leisure, or to quietly reviewing his work when his mind is free. Such intervals of rest and relaxation will mean better work during the hours of work, and will mean added years to one's usefulness. This is no experiment, as keen business firms the world over abundantly testify. This is no sentimental gush, but solid, hard-headed business sense. The more enterprising a farmer is, the more alert he is to the importance of good health, alertness of observation and the power of reflection, and this condition requires times of rest, as well as abundance of labor. O. C. Wentworth Co., Ont.

### OUR MARITIME LETTER.

#### THE SEEDS THAT WE SOW.

The visit of the seed-dealer's agent is somewhat like the angel's, but when he comes he throws us into an unusual amount of trepidation. In this country he is an Ontarian, or some representative of Ontarian enterprise from without. As with seed, so with about everything else in the line of merchandise—Ontario seems to set up the standards. Well, Ontario is not generally supposed to have produced much good seed last year. Indeed, the papers tell us (and who would doubt the papers?) that, out of millions of bushels of oats and wheat offered to the Federal Government for seed in the West, only a comparatively few thousands were accepted as fit to put into the ground. As it is with seed grain, so it is usually with grass seed.

No Islander need go to the great old Province for seed oats this year, at least, for he has it himself, better and cleaner and cheaper at home—three qualities which usually determine purchase. But, whatever specialists may say, wheat is seldom or never sown three consecutive times here from the same seed; and this year, in many places, the wheat was not considered especially good. Therefore, there is wheat to be bought, and in plenty. It soars away up in price, too—almost prohibitively. The ordinary mortal cannot see why times are dull, when everything in the line of seeds is sky-rocketing. This is one of the mysteries we must be prepared to meet with in the business world every day, however.

Well, although Ontario buys little from us, and sometimes is inclined to think that she has only a predatory interest in us, we must get our seed from her. There is much clover wanted, and, in this age of agricultural education, clover is a necessary luxury. It was never dearer, but that's not the worst; the temptation of high prices is often too much for the producer's or the middleman's honesty, and he adulterates. The seeds inspection of the Administration is very good indeed, but, as in the fruit trade, and unlike the old wine we hear about, it doesn't improve with years.

True, the schoolmaster has been abroad of late, and the farmers who do not know how to size up the samples of seeds offered to them for sale deserve to be filched. Experience of this kind brightens immensely; but there are certainly many who cannot yet make any sort of fist of detecting inferior seed—not even that loaded with foul-weed seeds. There is, therefore, great need of activity among the public inspectors, that, on the one hand, justification for their generous salaries may be made, and, on the other, protection from sharks be vouchsafed to the unsophisticated.

The very wet season has greatly reduced the local alsike crop; indeed, the mere fraction threshed and cleaned hereabouts is so inferior in quality as to cause grave doubts in the minds of the owners, as to whether or not it should be sown. The red clover product in seed is nil this year. All classes of grass seeds range high. Native timothy is selling for \$3.25—a big price here—and the imported grasses and clovers are all above the normal considerably. Nobody will allow the land to go without grass seed, however; nobody can afford to do so; therefore, the outlay in this regard alone is likely to be heavy with the farmer.

If it requires a dry season to produce good clover seed, and if, as all agree, Ontario has passed through one, the seed she offers should be prime seed. The contrary is predicted of it. North-western Canada has been for many years the principal source of our seed-wheat supply. The last year's shortage, and the inferiority of the grain harvested, have removed it for the time as a seed source from Eastern calculation. Ontario is, then, the main supplier to those who cannot trust to their own seeds. Short as has been her crops in general, then, last year, she stands to bring up the average of value very considerably by the high prices she is receiving for them.

Looking over the census returns, we find that the Province of Prince Edward Island buys less seed per capita of her population than any other Province. This may be a mixed compliment. It was not so intended, we know, for the contention is made that more of our farmers grew more of their own seed between 1891 and 1901 than those of any other Federal division. And, no doubt, this is correct—in oats always, in wheat often, in barley, in buckwheat, in timothy, we have produced fairly clean and fertile seed. In the other grasses we are striving to do something better now than merely supply ourselves. This year, the oats of the Island will carry her name and credit far afield—along the great plantations which skirt the gray Saskatchewan. The "change of seed," if there is really anything in this old farmers' creed, should be ample in this case. And we feel that our little garden Province has paid the debt to the West with her million bushels and more, which she contracted by drawing for seed wheat from the Northwest for many years. We are progressing in the seed line, surely, but there is great need of a more sympathetic reception of

the "Good Seed Movement" in this Province and throughout all of Eastern Canada, in order that agriculture may receive, in due time, its fullest fruition.  
A. E. BURKE.

**HORSES.**

**THE ILLINOIS CLASSIFICATION OF HORSES.**

Professor Obrecht, of the Illinois Experiment Station, in the bulletin recently issued, "Market Classes of Horses," gives the following requirements as to height and weight of the different classes of horses:

DRAFTERS.		
Subclass.	Height, hands.	Weight, pounds.
Heavy drafters	16.0 - 17.2	1,750 - 2,200
Light drafters	15.3 - 16.2	1,600 - 1,750
Loggers	16.1 - 17.2	1,700 - 2,000
CHUNKS.		
Export chunks	15.0 - 16.0	1,300 - 1,550
Farm chunks	15.0 - 15.3	1,200 - 1,400
Southern chunks	15.0 - 15.3	800 - 1,250
WAGON HORSES.		
Expressers	15.3 - 16.2	1,350 - 1,500
Delivery wagons	15.0 - 16.0	1,100 - 1,400
Artillery horses	15.1 - 16.0	1,050 - 1,200
Fire horses	15.0 - 17.2	1,200 - 1,700
CARRIAGE HORSES.		
Coach horses	15.1 - 16.1	1,100 - 1,250
Cobs	14.1 - 15.1	900 - 1,150
Park horses	15.0 - 15.3	1,000 - 1,150
Cab horses	15.2 - 16.1	1,050 - 1,200
ROAD HORSES.		
Runabouts	14.3 - 15.2	900 - 1,050
Roadsters	15.0 - 16.0	900 - 1,150
SADDLE HORSES.		
Five-gaited saddlers	15.0 - 16.0	900 - 1,200
Three-gaited saddlers	14.3 - 16.0	900 - 1,200
Hunters	15.2 - 16.1	1,600 - 1,250
Cavalry horses	15.0 - 15.3	950 - 1,100
Polo ponies	14.0 - 14.2	850 - 1,000

**TRAINING BRONCHOS TO HARNESS.**

Editor "The Farmer's Advocate":

Much has appeared in "The Farmer's Advocate" on the subject of breaking colts. I have been requested to describe the methods which I have employed in training bronchos for general farm work, and shall endeavor, to the best of my ability, to do so. Owing to the high prices of the better class of horses, new settlers of limited means are often perplexed, not being able to decide whether to invest in oxen or some of the cheap, hardy, unbroken, Western horses. And it is sometimes a question which is stronger, their dislike for the oxen, or their prejudice against bronchos. Wild-west shows and broncho-busting exhibitions have given the range-bred horse an unenviable and unjust reputation, and have caused a great deal of harm to the horse-raising industry from a financial standpoint.

It is not the object of this article to advise all newcomers of limited means to equip themselves with native horses, either trained or unbroken. The inexperienced man had better by far purchase oxen, if he cannot afford a docile team of one of the heavier breeds. But the man who is accustomed to horses need have no hesitation in going into a bunch and picking out whatever number he may require for his work. And he will find that, with proper and careful handling, they will develop into faithful servants, and will astonish him at their ability to perform labor that rightly belongs to their larger and heavier brethren. While physical strength is very desirable, yet it is not absolutely necessary for horse-training; a man wants to match his intelligence against the horse's strength, and, by kindness, coupled with firmness, overcome the animal's fear and rebellion against restraint. The writer has had considerable experience in training horses, and has enjoyed a fair measure of success, and he is far from being a strong man.

While it is hardly along the line of this article, let a few words regarding the selection and purchase of a horse might not come amiss. It is a difficult matter to estimate correctly the weight of a green "bronk," as there are so many things to be taken into consideration. But it is well to make a mental discount of the dealer's estimate; he is not very apt to guess too low. The great majority of these small Western horses will only weigh from nine hundred to eleven fifty when in working trim. Of course, many of the better kind will weigh much more when fed and fitted up. It is also a difficult matter to judge temperament in an unbroken horse. To see them standing in one corner of a corral, they do not appear to have much more life than a lot of sheep. But rope any one of them up, and see the change! They are as full of fight as they were sheepish-looking.

In choosing a small horse for heavy work, you cannot be too critical of his chest and hocks; see that he is well set up, otherwise you will soon

strain him to pieces. Sometimes you may find a horse that suits you in every respect, but his feet may be split or broken. Unless they are too bad, do not turn him down on that account, for it is surprising what a little care will do to a bad foot; perhaps, in a year's time no one could ever tell that there was a split in the hoof. Be on your guard against a horse that is halter-broken, unless all or most of the rest of the bunch are too. Some neighbors of mine bought a nice little horse out of a bunch, and he appeared to be halter-broken. He led home like an old horse, but he was a regular demon when they tried to train him. However, they were good horsemen,

thing of striking him in the face and making him pull back till he gives up, is very bad practice. Never strike a blow unless it is absolutely necessary, then make every one count, and don't scold and swear at the horse after you do punish him. Kindness pays. The quietest way is generally the best way in the long run; but never let a horse beat you out. Most people think—and it is quite reasonable, too—that the first step in a broncho's education should be to teach him to lead. But leave that off till the last, for the only correct way to teach a horse to lead up freely is for the trainer to get on his left side, grasp the bridle with his right hand, and keep the animal tapped up from behind with a whip held in the left hand. But this treatment won't do for a broncho, for you must try to gain his confidence. When necessary to lead him, have someone to follow at a safe distance with a whip to keep him up to place, and, if he must be tapped up, let the man behind do it; always let him see that the man at his head is his friend. The trainer and one assistant are all that is needed to handle the horse, but let each thoroughly understand his part before commencing, so as to avoid a lot of talk. And any little device which may be mentioned here, or you have heard of elsewhere, but don't quite understand, just try on a trained horse till you master the details of it.

A good training horse is a great advantage—one that is strong, and has the right temperament and life. And as it is hard work on a horse, a man should never begrudge a dollar or two for the use of a good animal in training his own. As few stables have properly-constructed stalls to harness and handle a green horse in, take him outside and snub him securely to a post or tree, but be sure he cannot corner you in any of his wild, nervous plunging when he feels the leather on him. Do not put on the bridle till the last thing, as one is very apt to hold him by it, and you must avoid hurting his sensitive mouth. A good mouth—one that can stand a steady pressure from the lines—is absolutely essential in a horse, either for driving or for work. A good big straight bit, with a little strap under



Solitaire 518, Vol. II.

Shire stallion colt; foaled May 25th, 1907; sire Nateby King III. (imp.) (23537); dam Black Jewel (imp.) (50267); weight at nine months, seven days, 1,110 lbs. Owned by A. G. Clark, Alloo, Peel County, Ont.



Black Jewel 236 (50267).

Shire mare; foaled 1902. First and champion, Ontario Horse-breeders' Show, Toronto, 1906 and 1908. Owned by A. G. Clark, Alloo, Peel Co., Ont.

and they conquered him, and he turned out to be a useful horse. It was plain to be seen by the horse that he had beaten someone out at some time.

The first requisite in training a horse is a halter. A well-fitting rope halter, with the double head-band, or what is commonly called a hackamore, is the best to use on a green horse, as he will cease to pull back on that sooner than on any other. Tie the horse to something solid, and let him pull. When he has concluded that it is useless, he will quit, and no sooner. This

rope several feet long to the left-hand buckle of the belly-band, for, by so doing, you can bring it up to its place with more safety to yourself. The reaching after the belly-band and the feel of it is often apt to start a nervous horse bucking, but by this method you can retain your grasp of the halter in your left hand, and with a small hooked stick in your right you can gently draw the cord towards you. The horse will generally resent the straps coming underneath him, but hold it there and talk soothingly to him, and when he quiets down you can buckle it up without any trouble.

the jaw to keep the bit from slipping through the horse's mouth, is all that is required; never, on any account, put on a severe bit the first time. In fact, a rubber bit is a good thing on a nervous, sensitive animal, as, by my method of training, a green horse is neither guided or controlled very much by the bit the first few times. In putting on the collar, which is in general use, open it at the top, approach your horse on the left-hand side, take firm hold of his halter with your left hand, and with your right hand gently slip the collar onto the animal's neck upside down. He will likely plunge and rear, but you can hold the collar on him much more easily that way; then, when he calms down you can buckle it and carefully turn it into its proper place. Before putting on the harness, fasten a piece of small

Occasionally one finds a horse that will sulk, and throw himself flat on the ground when the harness goes on him, and a real obstinate animal is much more trying and difficult to train than an out fighter. If the horse refuses to rise after a few stinging cuts of the whip about the flank, take an old sack, folded several times, and hold it across his nostrils; they generally jump up when they begin to strangle. If that fails, then severer measures have to be resorted to; never let him beat you out; stay with him till he gets up. Take a small rawhide riding whip (never use a stick), and thrash him across the tip of the snout for all you are able. It is severe punishment, but it is the only method I have seen that would bring a stubborn horse to his feet, and the beauty of it is it does not work a permanent injury to the horse. He will undoubtedly look pretty tough for some time, but the swelling will go down, and he will remember the lesson as long as he lives. It is astonishing how much pain some horses will endure before they yield, and if you are a delicate man, you may have to tie the animal up and go and lie down for an hour, or probably may have to postpone any further operation till another day. At any rate, a true horse-lover always feels sick at heart at having to resort to such harsh measures.

It rests with the judgment of the trainer whether to put the crupper under the tail the first time or not. But if you decide to do so, first carefully put the bridle on, then unfasten your rope from the post, and lead your horse out into the open. Run the end of your tie rope through the left ring on the bit, and take a firm hold with your left hand on the rope, just so that when you are working near his hips his head will be slightly drawn towards you. Should the horse attempt to jump and kick, his hind quarters are thrown away from the trainer every time. This method is a safe and simple one, only be careful not to jerk the animal, and as soon as you are through take the tie shank out of his bit.

Take every precaution against spoiling your horse's mouth, for "no mouth, no horse," is my motto. The broncho is now ready to hitch. Have your neckyoke securely fastened to the tongue; also have end of the doubletree on the side of your training horse fastened back evenly. As he generally has to take the lion's share of the weight, it is much easier on him. Always train your horse attached to some vehicle; don't try to drive him about without. The reasons for this are plain to any thinking man.

Place your vehicle where you have a good clear start, with the point of the tongue near a tree or good stout post. Tie the broncho to the post and bring along your training horse and get them coupled together and the neckyoke on, which is never very difficult. Then hitch the inside trace of your broncho; afterwards hitch your training horse. Have a thin rope, about 15 feet long, handy, and, after carefully getting down the outside trace, as you stand near his head, fasten the rope near the end of it. By walking out around a respectful distance, you are able to get the trace back and alongside your horse. This part of the performance is generally where the fuss comes in, for by this time a nervous horse is looking for trouble, and is going to kick right now if there is any in him. Keep the trace moving easily up and down his side, and at the same time talk soothingly to him. If he should kick, just hold your trace up in place and let him kick till he sees he can't do any good by it, and that the thing at his side is not going to hurt him. Be sure to keep the trace held high enough that he does not kick over it, and do not attempt to fasten it till he cools down. During this time the assistant should stand at the head of the training horse, to keep him quiet, and also see that he does not bite or annoy the green horse in any way. In fact, this constitutes the sole duties of the assistant, till the horses are hitched and the trainer in the rig. Fasten a rope or lariat into the jawband of his halter (don't fasten it to the animal's jaw, but to the halter); pass the other end through the terret ring on the outside and carry it back into the rig, to be held by the driver; it should afterwards be held by the assistant after you are once started. The trainer should now get into the rig and get his line ready. If the horse becomes excited, talk gently to him, and keep the training horse quiet; do not unfasten him till he calms down. Let the assistant carefully unfasten the tie rope and secure it to the hame of the training horse, just tight enough that the broncho cannot get out the full width of the spread lines, and then get into the rig just as quickly and as quietly as he can, and take charge of the rope that is on the outside of the horse. Likely, by this time you are off, but let them go at first, for otherwise a green broncho can show you more tricks than any confectionist you ever saw. If you have been properly anchored to the training horse, and your assistant keeps control of his rope, you will not need to annoy him by much pressure on the bit; in fact, the lines are chiefly used in guiding your training horse.

I have never seen the least mishap when this method was followed, nor seen one horse spoiled

by these precautions. But right here I would say, if you are training in a wagon, be sure to fasten your box down securely. A chain or rope around near the head of the reach, and then brought tightly over the box, is a very good way. The brutal method of attaching ropes to a horse's front feet, and throwing him down on his nose if he attempts to run, is as unnecessary as it is cruel. There is some excuse for putting a rope on one front foot and lifting that up, letting him run on three legs should he start to kick, but there is no excuse for the other. Should a horse persist in bolting, take a lariat, or, if you have none, an ordinary rope with a good ring fastened on the end will do. Make a noose and place it on his neck, well up on his throat; fasten it to the top of the bridle so it cannot slip down on his neck, but do not hinder the rope from slipping freely through the ring. Carry the end of the rope on your hand, along with your lines, and if he attempts to bolt just curtail his supply of fresh air for a while; a few applications will stop him. But these vices are never developed in a horse that is properly handled from the first. Follow up this method of hitching till you are sure he is reasonably quiet, for one little fuss with a partly-hitched team will undo nearly all the careful training you have done. Do not expect him to learn too quickly; remember everything is new to him, and don't be too eager to load him heavy, even if he is willing. See that his collar fits well, and that the belly-band is reasonably tight, for no horse can work to advantage with an ill-fitting collar or a great loose belly-band. Teach him the words of command distinctly and separately.

One would think, by the way so many drivers couple the words "Whoa!" and "Back!" together, that the English language had no single word to express the desire of the driver when he wished the animal to slacken speed. But it is not the case, as "Steady!" expresses the command, and the sound is so distinctly different from the others, that there is no chance of the horse being mistaken. "Whoa!" should mean to stop, and "Back!" mean to throw the weight and strength backward into the harness. It seems to me that it is expecting rather much from the horse to ask him to interpret the will of the driver, for that is what he has to do when he hears the one word of command, or what must seem the one word to him, used for several entirely different things. It is certainly quite a delicate matter to teach a nervous, high-strung team to go steady, but it can be done. The writer has one unusually high-lived little team that will slow down almost to a crawl when a load is pitching and rocking on a rough road. It took time and patience to teach them, but it paid. It is also a difficult matter to teach a horse to stand while getting in or out of the vehicle, but a little patience will work wonders here too.

Don't pick up the whip and start him off full speed as soon as you get in the rig, for it only makes him worse next time. Let him start easy for the first half mile or so, even if you have to make double time after that; he will soon learn that you do not desire him to burst off at full speed on the start. The popular plan of attaching a rope to the end of the lines and carrying it back behind the buggy when closing a gate, is worth being observed, for it cannot be improved on, and the team soon learn to stand. The teaching of tricks to horses cannot be too strongly condemned; let him master the necessary knowledge, and that is enough for the average animal. When we were boys, it tickled our imagination to read of wonderful horses, that would not move unless the rider knew the combination, so to speak. It took a certain little pull of the mane or tinkle on the ribs, or some other equally mysterious performance, to get them to display their powers. But nowadays horse-training is a business proposition, and when a man buys a horse he doesn't want to have to carry a code-book around with him to discover how many pinches it takes to make him do this, or how he should whistle to get him to do something else. In conclusion, let me say, take good care of these brave little animals, even if they do try your patience at times. If they are well fed and well handled, they will do a tremendous lot of work, and you can raise up a splendid cross of horses by crossing these small mares with a draft sire, especially a Clydesdale. "WESTERNER."

When you come to think of it, says Geo. B. Hulme, of New York, automobiles have their uses. The roads in our parks used to be closed for renewals about once in three years; now they are closed three times a year. That benefits the contractor. Again, those roads used to be as smooth as a floor; now we have to send our carriages into the shops for repairs every season. That benefits the carriage builders. And many an honest dollar has been earned by the farmer hiring out a team to draw back to the nearest garage an auto out of commission. That benefits the farmer. Therefore, as the auto benefits the farmer, it benefits the entire country.

## LIVE STOCK.

### THE SHORTHORN VS. THE DAIRY COW.

Editor "The Farmer's Advocate":

It is very satisfactory to have Mr. Bollert make the following statement in his defence, in "The Farmer's Advocate" of April 30th: "Had Mr. Campbell not made the misleading statement that dairying does not pay, I certainly would not have found any objection to his letter." Most gladly do my heartfelt thanks go to meet that commendation of what I have been writing on this subject.

But I never made such a statement as is credited to me by Mr. Bollert. Have I not declared all along that, where dairying is specialized, it has been a pleasant duty to commend it, because of its profit. My contention is and has been that dairying, as a whole, does not pay, as now carried on. Listening to and reading reports of addresses by such high authorities as Prof. Robertson and Prof. Dean, we learn the fact of the average dairy cow in Ontario being kept at a loss. Mr. J. G. Clark, recently of Ottawa, a dairyman of long experience and successful as a showman—being the only Canadian breeder of dairy cattle who had the courage to exhibit at the St. Louis World's Fair, and very successfully—stated in my hearing a dozen times at Institute work, winter of 1907, the same old story of "the average cow does not pay." Other dozens of times have we heard or read the same statement, until we are convinced it has become a standard one at dairy conventions and meetings of dairymen. Just before me, in our last week's county paper, "The Post," in connection with the cow-testing association, is the following: "The average output in Ontario now for milk cows for a season is 3,000 pounds." All over, and everywhere, dairymen say that the average cow is a loss. Granting what is so generally stated—and Mr. Bollert does not dispute it—then, I follow, and state most emphatically that, with the average a loss, the whole must be a loss. That is as clear as that two and two make four.

Mr. Bollert does not attempt to justify the Government expenditure of nearly \$160,000 annually in aid of dairying, while practically nothing is spent, to speak of, to promote the beef industry. He does state, "I do not see why Mr. Campbell should object when the Government tries to help the unprofitable (as he intimates) dairy industry to its feet." Because that has been tried for a great many past years, and still calls for more pap, without showing that its feet are getting any stronger. Apparently, there are not results to justify the continuation of such assistance, and little to other equally as important live-stock industries, to those engaged in them.

But let me turn the light for a little on Mr. Bollert's line of argument, and see how it bears out in his own case. He tells us of selling his Holsteins at \$600, \$800, \$1,000, and getting \$1,200 for another. He also mentions Mr. Rette getting up to \$1,500 for some bred directly from Mr. Bollert's stock. With such values, why does Mr. Bollert seek to justify the very large Government expenditure in aid of dairying, so far as he and Mr. Rette are concerned. Does it not look like getting all you can and looking for more? Mr. Bollert does not attempt to explain the extremely small returns per dairy farm in that fifteen miles square in his own township. Will he tell us what the average cow makes in that ideal dairy section mentioned in his letter of March 19th, where it averages, according to his figures, but \$138 per 100 acres?

Let us get right down to the practical average, which is the basis of the whole. Now, does Mr. Bollert, or any dairyman, attempt telling us why their particular line of work should have a great amount spent annually on its behalf, while other Ontario citizens engaged in the lines to their liking, get not a tittle of the public money spent on dairy promoting. Let us have fair play, even at this late date, for why should there be favoritism? No dairyman seems to be ready to justify the enormous cost of forty-two instructors and inspectors.

Be that as it may, it is quite evident that Governments, like individuals, may and do make a hobby of one line, and neglect others which have as good a right to recognition as the favored one. If our country is to reach its greatest possible success in products and outputs, that happy time will come by all concerned being encouraged to discard the unprofitable and put on the market the best of products, produced at a minimum cost.

Victoria, Co., Ont. JOHN CAMPBELL.

## SHEEP SHEARING.

Sheep-shearing will soon be in season. The weather up to the present time has been so cool that little thought has probably been given to this subject, but with such weather conditions as usually prevail about the end of May, the sheep, if they are not too thin in flesh, will be more comfortable without their coats. Most of the more progressive breeders now make it a rule to shear their sheep unwashed, before turning them out on grass, finding that sheep in good condition suffer no discomfort from shearing early in April if kept in fairly warm quarters for a few days after being clipped. Buyers of wool in this country make more than a fair difference in the price paid for washed and unwashed wool, otherwise it would be better and safer for the health of sheep to shear them unwashed, as there is always some risk to the health of the sheep and the men who do the washing in cold water, and the fleece is not at all thoroughly cleansed by such washing. But if such washing is to be done, the men should wear heavy woolen under-clothing to protect them from becoming chilled, and the sheep should be carefully handled, so as to worry them as little as possible. It is cruel to force such timid animals to jump from the river bank into deep water, and to plunge them overhead in the water, as some careless and thoughtless people do. We have known cases where sheep have died in the hands of the washer from the shock of such treatment, and others so weakened by the worry that they were unable to stand when coming out of the water. There is no need for such treatment, and it should not be allowed. The sheep should be quietly led into the water and carefully handled, their heads kept above water, and the wet wool squeezed between the hands to get out as much of the dirt as possible, and the sheep quietly led out and held for a minute to get its breath before being released. It is usual to defer shearing for a week or ten days after washing to allow the natural grease to rise from the body of the sheep into the wool, which adds to its weight and keeping quality, and also facilitates the work of shearing.

Shearing may be done on a cleanly-swept barn floor, on a temporary platform of boards laid on crosspieces, or on a grass plot of ground, the sheep being penned convenient to the place to save time in catching and handling them. Clipping machines similar to those used in clipping horses are being used, with quite satisfactory success, where large flocks are kept, gasoline engines or other power being used, while in smaller flocks hand-power is found sufficient for the purpose. But for the average flock shears are used, and an experienced shearer can readily strip thirty or forty sheep in a day, while an expert may shear twice that number, or more, and a novice will be satisfied with one-half the number. The writer's choice of shears is the straight, long-bladed sort, which make quicker work than the crooked and shorter blades. The common procedure is to set the sheep on its rump, and commence clipping at the throat, opening down to the chest, then stripping the belly, the inside of the thighs and the buttocks, then returning to the cheek, shearing around from the throat to the back of the neck, and so all the way down the one side to the tail, clipping to the spine; then turning to the other side, working from the spine to the throat and belly, and finishing at the tail. Another, and perhaps a better way for the comfort of the sheep and shearer, is to commence by laying the animal on its side and placing one foot on the wool of its throat, commence clipping at the inside of the hind legs and the buttocks, then stripping the belly, the skin of which is so stretched that there is less danger of cutting into it than by the other method; then, returning to the left cheek, clipping from the throat to the spine, and continuing as before described. The expert in the use of the shears opens the blades but little, and pushes them along with scarcely any sound, leaving the shear marks in ridges, meeting at the spine like ribs, and leaving a very neat-looking job.

It is good practice to trim the feet of every sheep with a sharp knife while on the shearing floor, as the hoofs are liable to grow long during winter on soft bedding, and to harbor dirt, which may cause foot-rot or lameness from the pressure of foreign matter between the claws. It is also well to have on hand a small phial of powdered bluestone to apply in case there be any soreness found, or bleeding is caused in trimming the feet. When the ewes are sheared, any ticks that are on them will take to the lambs, where there is more wool to nestle in. For this reason, the lambs should be dipped about a week after shearing in some solution, such as one of the coal-tar preparations advertised, or in a tobacco solution, for the destruction of the ticks. It will pay well to dip the ewes at the same time, especially if there is any sign of scab in the flock, but ordinarily by pouring or rubbing on their backs what is left of the solution from the lamb dipping, the flock will be tolerably clean, and, if treated by dipping or pouring late in the fall, before going into winter quarters, will suffer no discomfort from vermin or skin disease, unless sheep from neglected flocks

are added, carrying the infection with them. For this reason, any sheep purchased, or taken in for any purpose, should be treated by dipping or pouring before being allowed with the flock. Pouring is done by opening the wool at intervals of a few inches and pouring the solution from a coffee pot or other vessel, so that the whole of the skin is covered with it.

## THE BACON TRADE AND THE FARMER.

Editor "The Farmer's Advocate":

The export bacon trade has reached a somewhat critical period in its history. For several years hog-raising has been one of the most profitable sources of revenue the Canadian farmer has had. Prices have averaged up well, and, where care has been exercised in the management of the business, it has furnished profitable returns. But there is grave danger now of this important trade retrograding to a pretty small compass, if it is not extinguished altogether.

To get at the facts, let us go back a little in its history. In 1900 Canada exported to Great Britain 194,996 boxes of bacon. Allowing six hogs to a box, this is equivalent to 1,169,976 hogs killed in Canada for export. During the same year, the extent of the Danish killings was 1,087,000 hogs. The Irish killings during 1900 were 416,500 hogs. Seven years later, in 1907, we find the situation has materially changed. Canada's exports of bacon fell off to 133,990 boxes, or the equivalent of 803,940 hogs; Irish killings advanced to 482,656 hogs. But the most striking feature of that year's trade was the enormous increase in Danish killings, which reached the total of 1,767,970 hogs.

These figures show a marked change in conditions, and in Canada's relation to the export bacon trade. In 1900 Canada was the largest exporter of bacon to Great Britain, her exports exceeding those from Denmark by 82,976 hogs. In 1907 Denmark had increased her exports by 680,970 hogs, and Canada had decreased hers by

nearer the market. Packing-houses are small, and within driving distance. The farmer delivers his own hogs at the packing-house, and is paid according to how they kill out—firsts, seconds, and so on. He has some disadvantages, however, as compared with the Canadian farmer. He has to buy more feed for his hogs. He has not the competition among packers for hogs to keep their establishments running that our farmers are supposed to have. The price for bacon is arranged by a central committee, and the value of hogs is fixed accordingly. This may be an advantage in that prices are more regular than in Canada. But there is no scramble for hogs, as in Canada, when prices go beyond what the market will warrant paying. The packing-houses are run partly by private individuals, and partly by co-operative concerns owned by the farmers. On April 27th last, these private concerns were producing bacon to sell at 52s., and the co-operatives to sell at 50s. In the case of the latter, a certain amount is reserved till the close of the season to cover contingencies, which will account for the difference in price. On the same date, Canadian packers were producing bacon to sell at 55s. 6d., and let them out even. On that date, also, the Danish farmer was paid for his hogs on a basis of 40s. to 41s. by the co-operatives, and 43s. by the private concerns. For the week of the big run, as above, the Danish farmer was paid on a basis of 37s. for his hogs. The price there varies, as here, according to the market.

This is a brief summary of the situation, as shown by the experiences of the past few years. The phase of the question that is of prime importance to the Canadian farmer is that the Danish farmer is gradually but surely taking his export bacon market from him. Can he afford to let him do so? Is Canada's export bacon trade of so little moment that we can afford to let it go by default, and the country be none the worse for it? Will a cessation of this trade altogether lessen materially the profits which our people make out of their farming operations? Is

this branch of trade worth catering to? Is it worth making a sacrifice to retain? A sacrifice will certainly have to be made to regain the ground we have lost during the past year or two. Denmark has, during the past six months, been flooding the British market with her bacon and displacing Canadian. Is it worth while to keep in the game and retain our hold on the export trade? These are some of the problems in connection with this industry that confront the Canadian farmer at the present time.



Sheep-feeding on a Colorado Ranch.

(Courtesy of National Live-stock Bulletin.)

366,036 hogs, her exports for that year being considerably less than one-half of the total exports from Denmark. Even in the face of these figures, which are gleaned from reliable sources, the situation would not be so serious were it not for the fact that the decrease of Canadian exports, on the one hand, and the increase of Danish, on the other, have been more or less gradual. For several years the Danish farmer has been steadily increasing his output of hogs. The Canadian farmer's operations have been largely of the spasmodic order, blowing hot and cold as the price varied, and as his fulminations against the packer grew strong or weak. This disparity in Canadian and Danish exports is further accentuated by a comparison of the first three months of 1907 and 1908. During January, February and March, of 1907, Canada's exports of bacon were equivalent to 215,358 hogs, and Denmark's 392,000 hogs, an increase of 176,642 in favor of the latter. Contrast this with the figures for the first three months of the present year. Canada's exports decreased to 166,560 hogs, while Denmark's ran up to 510,606 hogs, an increase of 118,600 over the corresponding period of 1907, or 344,040 hogs more than Canada exported for the same period. And this is not all. Danish killings still keep up to a high level. For the week ending May 2nd, there were 57,060, making a record. During 1907 the average Danish killings were about 35,000 weekly, as compared with about 22,000 in 1900. In 1900 Canada's weekly killings for export ran about 24,000, as compared with about 17,000 in 1907, and about 13,000 during the first three months of 1908.

In some respects the Danish farmer has an advantage over his Canadian competitor. He is

I have tried to be fair in the facts, as presented, and to judge of the situation from a purely export-market standpoint. To many farmers, the packer is the fellow who is preventing progress, and who is to blame for the condition in which this important trade finds itself at the present. It is not our mission to defend him or condone his offences in any way. He is a factor in the Canadian trade who cannot very well be dispensed with just now. Co-operative packing establishments were tried a few years ago, and with what success everyone knows. If the business is to be continued, the packer, as we have him to-day, becomes necessary to its success. He claims that he has lost money in the export bacon trade, and has had to add other branches to his business in order to make it profitable. But as to that, the farmer is not concerned. The packer has equipment for handling at least three times as many hogs as he is now getting. So long as these conditions remain, there will be more or less of a scramble to get hogs, and the farmer will get all the market will allow, and in some cases, perhaps, a little more.

But be this as it may, and judging of the business on its merits, is the farmer justified in keeping in the hog-producing business and in increasing the supply, for the supply of hogs must be increased if the export trade is to be maintained? We think he is. Covering a period of years, it is safe to say that hog-raising has been one of our most profitable branches of agriculture. To leave out the periods of high prices, and judge of the business solely from the low-price periods, as many do, is not treating the industry fairly. For several years previous to the recent period of low values and increased cost of feed, the



average price paid for hogs was sufficient to afford a handsome profit to the farmer who managed the business well. High prices are bound to come again, sooner or later, and, judging from present conditions, they will not be long delayed; and, averaged up with those of the past fall and winter, will afford a margin on the right side of the ledger.

Judged from this standpoint, will it not pay farmers to produce hogs in sufficient numbers, at least, to consume the coarse grains grown on the farm? The trouble in the past has been that too many farmers have gone into hog-raising on too large a scale, and have sacrificed some other branch of farming in order to do so. When a slump in price has come, these have been hard hit. The farmer who has made most out of hogs, and who will continue to do so, is the one who has had to buy as little feed as possible for them. He is not hard hit when a slump in price comes, and makes a big profit when prices are high. If every farmer would do this, the supply could be kept up to a steady quantity year in and year out. The trade would be firmly established, and the market for Canadian bacon in Great Britain retained.

CHRONICLE.

#### SOME SYSTEMS OF STABLE VENTILATION.

In my last article, issue March 5th, I made mention of a stable 30 x 36, that should accommodate 20 head of cattle. Taking this as the stable to be ventilated, any one of the systems described below might be installed. These systems have all been tried by the writer, and all found fairly satisfactory.

It will be remembered, however, by any who happened to read my previous remarks on this subject, that I expressed myself of the opinion that properly-built walls and ceiling are an absolute necessity where thorough ventilation and perfectly sanitary conditions are hoped for, whatever be the system decided upon. Constructions likely to prove fairly satisfactory are indicated in the wall structures illustrated in the diagrams showing the different ventilation systems.

#### SYSTEM OF VENTILATION "A"—PIERCED WALLS.

This system of ventilation is simple and cheap of installation. All that is required is the piercing of square or round holes on all sides exposed to air. These holes or openings in our standard stable (30 x 36) should be 4 inches in diameter, at 3-foot intervals, or 6 inches in diameter at 6-foot intervals, in at least three sides of the building. They had better be provided with some sort of door or key to control either incoming or outgoing currents of air. The fresh air will, if permitted, enter from the side against which the wind strikes. Hence, the openings serving as inlets one day, or at one moment, may be outlets the next moment or any other day, depending, of course, upon the direction of the wind. When calm prevails, internal influences will exert the controlling force as to which openings shall act as inlets, and which others as outlets.

The controlling and limiting of the rate of inflow of air is essential. The outflow will usually require that the controls or keys be fully open. The temptation to partially plug the holes with wisps of hay or straw must be guarded against.

#### SYSTEM OF VENTILATION "B"—VENTILATION BY CONVECTION.

In the system described below, the proper distribution of pure air throughout the stable depends for the most part upon convection or circulation of air in the lower half of the stable, due to the heat from the animals, causing displacement of the lower air, which, when warmed, will ascend and be displaced by cool, fresh air entering by "A" or "B," or by both, or numerous similar openings.

The impure air leaves the stable by outlet D. C C are windows hinged at the bottom, and held in position by small chains from A to B. The windows may be of any desired width or height. If very high, it is advisable to have the lower half stationary, and the upper hinged thereto, as in B.

The outlets D E F, for such a stable as mentioned, if single, should be about two feet square. If it is preferred to have two outlets, as is probably somewhat better, then each outlet should be 1½ feet square. This outlet pipe D E F may be in the center or to one side. So far as satisfactory working is concerned, I may say that I have had almost equally good results when the pipe took the courses D E F, D E E I, F I, or D I E I F I, provided always that the outlet F or F I was 2 or 3 feet higher than H, the apex of the roof. To prevent in some measure inflow of snow or rain, a cap, G, should be constructed over the outlet pipe. If conveniently situated, D might serve as an opening through which to drop bedding or feed.

The amount of air to escape through the outlet is controlled by the trap, T, which may be regulated by cords descending into the stable.

#### SYSTEM OF VENTILATION "C"—THE RUTHERFORD SYSTEM.

This system is no doubt pretty well known to most agricultural newspaper readers, but a few descriptive paragraphs will probably not be taken amiss. It is the system most commonly used here, for the reason that it has proven to be most simple of manipulation, and affords the least opportunity of being badly worked or blocked by cattlemen unwisely anxious as to the comfort of their charge.

This system requires that the air enter at or near the floor level. The best plan of bringing it in is probably as shown on the left-hand side in the diagram, where the arrows at A indicate the entrance of the air and its passage through A B C under the wall. When the air current enters the stable, it has an upward direction which it retains in some degree, but once free from the confining passage it diffuses and takes usually the course indicated by the arrows.

If for any reason it is not considered advisable to pass under the wall, then an opening

the ceiling, while the fresh air came in at different points from the floor to the ceiling, according to the system being considered.

The advocates of the King system claim that, since carbonic-acid gas is the chief impurity in the stables, and since this gas is heavier than pure air, it is likely to be found in largest quantities near the floor, and, therefore, outlets for impure air should begin near the floor level.

In the cross-section diagram, the inlet is shown by arrows running from A to C. The outlet begins at B, and the foul air goes up the tube and out at E. Both inlets and outlets occur on each side, and should be at intervals of about 10 feet, say three of each on each side. Where this number are provided, then each inlet and each outlet should have a cross-sectional area of at least 60 square inches, say 4 x 15 in. Where it is intended to install this system, it should be provided for when building the walls. Spaces between the studs will serve for both inlets and outlets.

The outlets B L E might be modified to take the course B L M, in which case it would be necessary to extend M above the apex of the roof. At O, openings should be made into the outlets, so that the warm air at the ceiling may be allowed to escape when the average stable temperature rises too high.

The chief objection to this system is the large number of long pipes or boxes necessary to admit pure and discharge foul air, as the case may be.

This objection is particularly in evidence when it becomes necessary to install the system in an old building. A modification of the system, and one that is easy of introduction in an old or new wooden building, is given below.

#### SYSTEM OF VENTILATION "E."

This system, a modification of the King, admitting of cheap and easy installation in either new or old frame or log buildings, is one which the writer devised and put into operation some years ago in stables at the Experimental Farm and elsewhere. It has worked very satisfactorily where fairly tried. That it is cheap, as well as effective, is proven by the fact that, in a stable for 22 cattle, it cost \$12 for labor and material. The pipes in this system are entirely inside the stable. For 20 cattle, in the standard stable, they should be six in number, each about 12 in. by 6 in., or 12 in. by 7 in., in cross-section, three on each side (east and west sides, if possible).

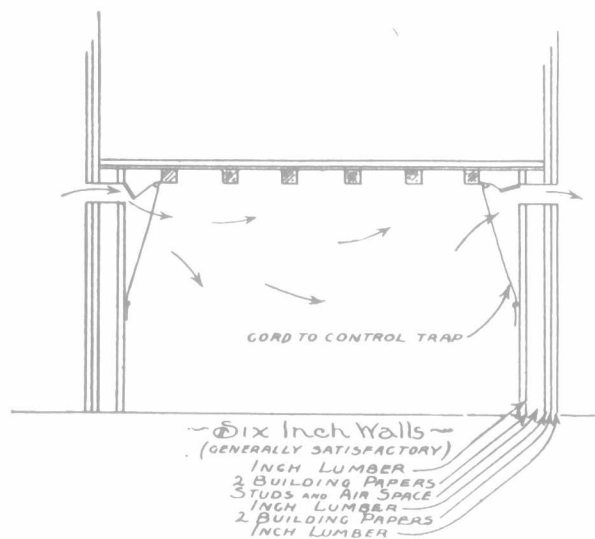
Each ventilating pipe must have two openings to the outside air, one an inch or so below the ceiling level, as a and b, and the other 6 to 8 in. above the floor-level, as c and d. These openings should be of the same dimensions as the pipes. The air enters the building by passing into the right-hand pipe at D, up past E, and into the stable at F, at the ceiling. It circulates through the building, enters the outlet pipe at A, passes up through B, and out at C. If the wind were blowing from the left, however, it would enter at x, up through B, and out into the stable at y, finding its way out by entering the right-hand tube at d, passing up through E, and out at b.

H J L N represent barriers or trap-doors, hinged at G I K and M, respectively. As set in diagram, air enters by D E F, and discharges by A B C. If set as per dotted lines, then entry would be X B y, and discharge by d E b.

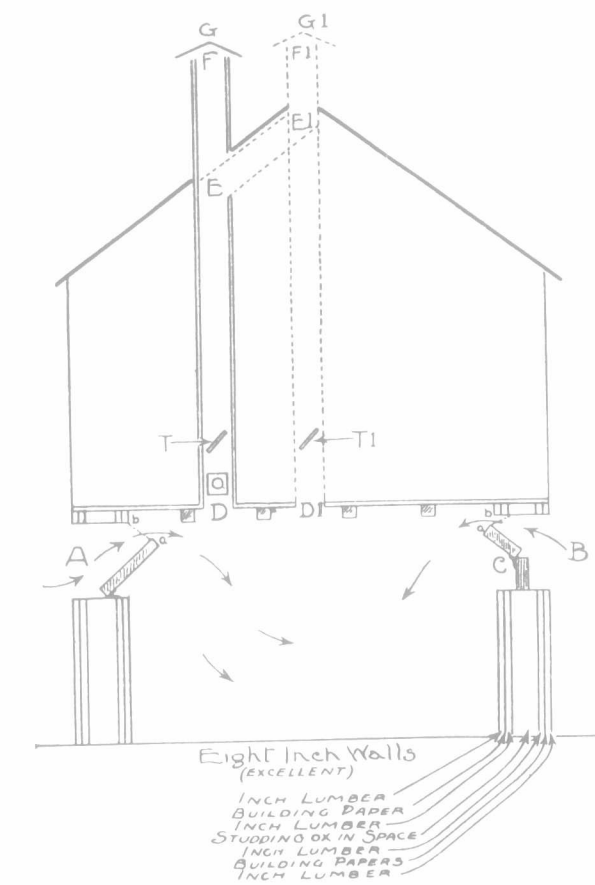
When properly attended to, this is an exceedingly satisfactory system, but when neglected, does not always work well. If desired, trap-doors H J L U may be arranged so as to permit of air entering directly—that is, by flowing through X A and D d—and leaving stable at ceiling—that is, b and Y C—which would be a modified Rutherford system. This latter modification works well in warm weather.

#### THE CANADIAN STEER.

There is little chance that the embargo on Canadian cattle shipped to Great Britain will be removed, and the cattlemen of the Dominion—especially the Western exporters—had better make up their minds to try and send properly-fitted steers to the British market in future. A Canadian contemporary has been interviewing a number of gentlemen with large experience of the Anglo-Canadian cattle trade, and one and all are of opinion that it is worse than useless to ship poor stuff to the mother country. Year after year the bulk of cattle from the Canadian ranges arrives in an unfinished condition—probably 1907 was a record year for badness in this respect—and the result is that there is a prejudice in the minds of British buyers against the Canadian range steer, except, perhaps, in Scotland, where Baillie Watson, of Glasgow, spoke recently of "the thrifty Western steer," in words full of regretfulness. Good stuff fetches a good price in the British market, but the lower grade is barely on a par with the chilled beef of Argentina. Canadian cattlemen should remember that the capacious all-red route into John Bull's abysmal stomach is only open to the best that goes on four legs—[Canada (London, Eng.).



Plan A—Pierced Walls.



Plan B—Ventilation by Convection.

through the walls, at the level of the floor, will serve the purpose. In such case it will, however, be found necessary to so surround the opening into the stable as to give the entering air current an upward tendency. The air current would then follow the directions indicated by the arrows on the right side. As to the outlet, the same plan serves as was described in writing of Ventilation Plan "B."

#### SYSTEM OF VENTILATION "D"—THE KING SYSTEM.

Like the system just discussed, the King system is well-known to readers of "The Farmer's Advocate." It has many admirers, and many have succeeded with it. It is most remarkable in this, that the foul air is drawn from the floor, and the fresh air enters at the ceiling. In the previously-discussed system, as will be remembered, the foul air in every case was drawn from

**BEEF AND DAIRY COMBINED.**

Editor "The Farmer's Advocate":

Our cows are mostly Jersey, with a few Short-horns. If a beef calf is not a real good one, it is not worth raising; if it is a good one, it must be raised well, or raised at a loss. There are many easy ways of losing money in raising a calf for beef. The most common is to summer him on skim milk and grass. The flies usually get the blame for his slow growth. His first winter finds him a scrawny little fellow, and the winter usually adds very little in either flesh or growth. He goes thin onto his second summer's grass, but this time, if he has good grass, it does him very much more good than the first summer. His second winter begins to show what breeding he has. If he has done well enough to reach 1,000 to 1,200 pounds, John Campbell, of Woodville, or Thos. McMillan, of Seaforth, may buy him. These men are both skilled feeders, as well as close buyers; but, with a gain of 1½ to 2 pounds per day for an animal of that weight, the profit certainly cannot be very large—certainly not so much as the first man lost. Why starve a calf intended for beef for two years in order to feed him at a loss the third year? The use of the scales would indicate that that was bad policy. For the last four years we have been weighing calves intended for beef. We have been weighing some calves just now. Here are the weights of one of these: At between two and three weeks old he weighed 107 pounds. His nurse is a little old cow, with a few teeth left, that had nursed a calf last summer and stripped through the winter. Besides this, he gets milk warm from the separator, but not so much as he would take. He is nibbling ensilage, with a little ground oats and corn, and picking a little hay. In 25 days he had gained exactly 50 pounds, and in 19 days his gain was 41 pounds, thus in 44 days he had gained 91 pounds, or a little over 2 pounds per day. Now, if a little calf can make two pounds per day at that age, why wait till he is 1,200 pounds to get a pound and a half per day? Two other calves on a fresh cow that gives them so much milk that the amount of skim milk taken has been very little, made a gain of two pounds less in the same time, which would indicate that a calf does not require much new milk, provided he has sufficient skim milk to give him growth. Anyone who has been weighing calves will find nothing startling in these figures. Four years ago, a calf kept going from the start, made, at 10½ months old, over 900 pounds, and the average since at that age has been from 850 to a little over 900 pounds. We have one now, a little under ten month that tips the beam at 911 lbs., and is gaining at the rate of 3½ pounds per day. He was not good enough to go with four others that were sold in February. Since that he has been getting ten quarts skim milk from separator morning and night. His mate could not be induced to take skim milk, and is making a gain of a shade less than two pounds per day. We think it is safe to assume that this extra weight could not be made without the use of skim milk, and that the average weights could have been increased if the supply of skim milk had always been sufficient.

By adopting this plan of feeding, we have no yearlings, two-year-olds or three-year-olds, unless heifers that are intended for milkers.

THOS. B. SCOTT & SON.

Middlesex Co., Ont.

**SPRING POETRY ON THE HOG QUESTION.**

Editor "The Farmer's Advocate":

I would like to say a few words on the hog question. I am not writing this in any spirit of harshness towards anyone, but I noticed in the issue of March 12th, Prof. Day writes again and says the figures he has offered are the best he has, and would welcome additional facts regarding this important industry. Now, as I have read with pleasure the letters from Prof. Day, J. C. T. and J. G., I would like to say a few words in regard to Prof. Day's letter of December 5th. I think, in his letter, that he is trying to show that there is more money made in the hog industry than there really is, as he seems to make light of pigs being sold at 50 cents each at weaning time, or slaughtered to stop their demand for food, and I am sure there are plenty of farmers in this part of the country who would have been more money in pocket by giving away or slaughtering their hogs last fall, considering the prices of grain and of pork all through the winter. He also says and farm animals, and especially hogs, consume and turn into valuable meat many products which would have otherwise been wasted, and I cannot agree with him there, as all feed, except a little kitchen swill, is as good as the money. He goes on to show that, in selling the grain, instead of feeding it to the hogs, he has sold a lot of valuable fertility, and hence will lessen his next year's crop; but, as I have been in the habit of keeping a great many hogs, I have proved for myself that the quantity of fertility you would get from hogs,

although rich in value, is such a small bulk that, if a farm were not built up until it was built up from keeping hogs, it would be a long time before it was much richer. In speaking of what the pigs were fed, and who fed them, J. C. T. says, in December 26th issue, that there are not many farmers who have bran, shorts and skim milk for their hogs; and Prof. Day, in another letter,

thinks that J. C. T. has misunderstood him, and wants to make it plain that two-thirds of the hogs were fed by hard-headed, intelligent farmers, and not at the College. But I cannot see that it makes any difference whether they were fed at the College or by farmers. Now, all will agree with me that hogs will do much better with the skim milk and middlings than without them. Gaining at the rate these hogs gained, at 5 cents per pound live weight, they would return \$23.87 per ton for meal, 20 cents per hundredweight for skim milk, and 10 cents per bushel for roots. We will grant him the skim milk and roots at the values he states, but just look into the grain question. The prices that were paid early last fall and this winter were as follows: Peas, 90 cents; barley, 85 cents, and oats 50 cents. These three grains will average a fraction over \$31.60 per ton, and \$1.00 for chopping will make \$32.60 per ton. Now, take \$23.87 per ton, which he got for his meal that was fed to the hogs, from the \$32.60, and you will see that the farmer is losing \$8.73 on every ton of chop that he feeds, if he is only getting 5 cents for his hogs, not saying anything about driving horses through the snow banks after the chop. And I don't find it as Prof. Day says, that you can always feed it just as it comes from the machine, as sometimes there is small, bitter seeds in it, and if you chop it that way the hogs won't eat it. Now, if that's the way they gained when fed properly, with lots of skim milk, how under the sun will a farmer feed them, if he has a lot, and make money, when he has to pour in the cold water with the chop. I think if we could make them eat straw and hay, and chew their cud, we might make some money out of them.

Now, I have not said it all,  
As my thought are few and small,  
But I hope you'll agree with me, one and all,  
That the farmer in his place  
Has to run a very hard race;  
And that all you print or do  
Will be to help the farmer through.

But, as for my part, I expect to do as Prof. Day told those other gentlemen to do—drop out of the hog business.  
HENRY ARNOLD.  
York Co., Ont.

**THE FARM.**

**MANGEL - SOWING WITH GRAIN DRILL.**

Editor "The Farmer's Advocate":

As the time for mangel seeding is come, and we have ours sowed, I thought perhaps others would like to use our plan. Take a common grain drill (ours is a 10-hoe Champion), have the hoes all in line, then take off all but two, the third from the right and the fourth from the left. This makes it sow from 24 to 30 inches apart. Then put a cultivator tooth on each side of each hoe for covering with. Take a piece of wire, and fasten the hoe to the left at the front of the machine, so as not to let the seed drop too deep. Fill the cup in the drill box with seed (just the one sowing), which will be enough to sow forty rods or more. The seed can be carried in a dish or box in the seeder, and filled any time. Set the index pointer at between 2 and 3 pecks on the lowest line, and it will sow about 4 pounds per acre. Roll before and after sowing. When sowing, the hoe can be raised or lowered by the length of wire, according to depth wanted, and the cultivator teeth make a little drill and a good guide, as the wheel goes back in the cultivator tooth mark every time.

Ripley, Ont. YOUNG FARMER.

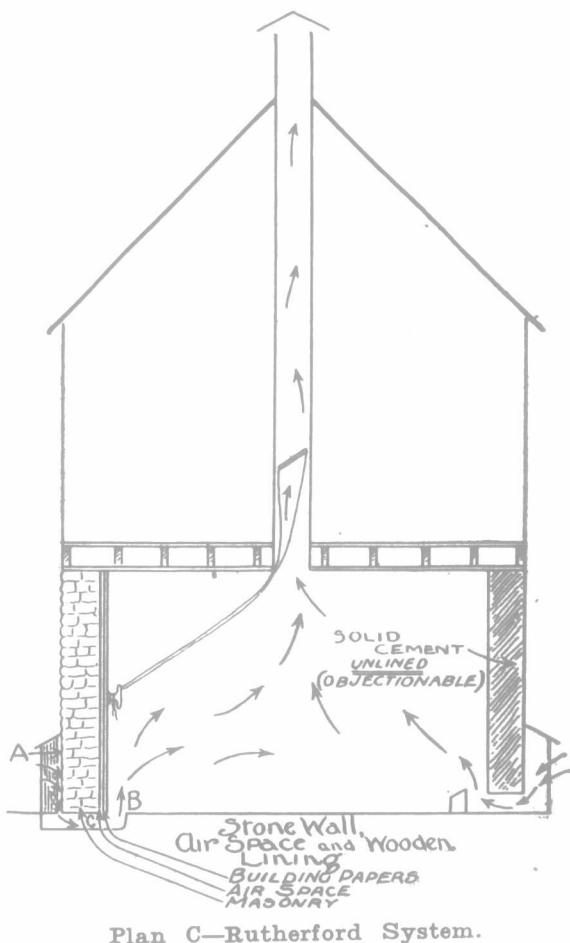
**FOUNDATION FOR STABLE FLOOR.**

Editor "The Farmer's Advocate":

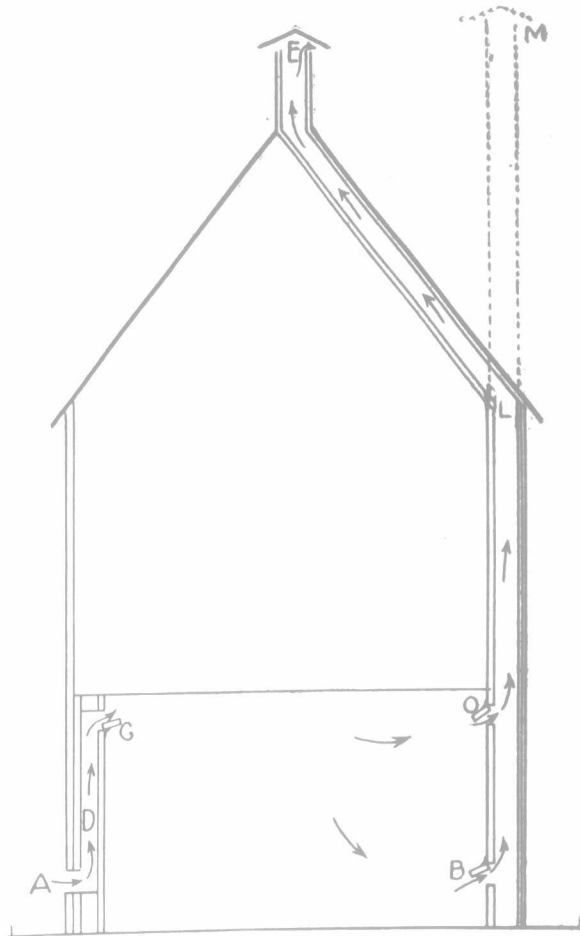
On page 779, your answer to correspondent reads: "A good clay bottom, well rammed, if necessary, to make it solid, is as good a foundation for laying a concrete floor as can be had. Having had many years' experience with concrete floors, I have come to the conclusion that no concrete floor should be laid directly on the earth, as the cement always has a tendency to draw moisture from the earth; therefore, you will have a damp, raw, cold floor. My plan is to under-drain around the building first, then grade at the lowest point 18 inches, at the highest point 12 inches, deeper than the concrete, this to be filled with any kind of stone, large in the bottom and smaller towards the top, on which the cement is to be laid. This plan gives a floor that one could sleep on. Many floors have been condemned as being damp for no other reason than simply that of the cement drawing moisture from below."

JOHN FIXTER.

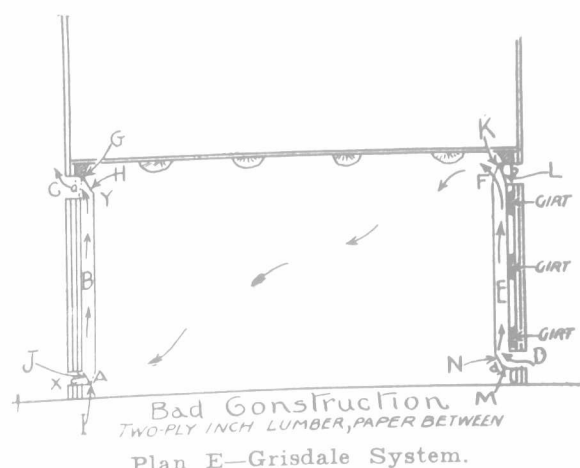
Macdonald College, Ste. Anne de Bellevue, Que.



Plan C—Rutherford System.



Plan D—King System.



Plan E—Grisdale System.

## ALCOHOL FOR FARM USE.

Editor "The Farmer's Advocate":

The very frequent inquiries in your valuable paper for information regarding cheap farm power, and the excessive cost or unsatisfactory results reported, of the means at present in use, leave the farmer in doubt which way to turn to solve the problem. Wind-power is not always reliable, gasoline is becoming more expensive, and only a few of us can ever hope to have electricity convenient for use.

For very many reasons, it appears that alcohol will, to a very great extent, solve the problem of light, heat and power upon the farm.

The difficulty at present is the excessive cost, on account of the excise, which is \$1.90 on alcohol made from grains other than barley; from barley, \$1.92; from imported molasses, \$1.93, per proof gallon. This, added to the cost of production, puts it out of any possible chance of competing with gasoline or kerosene. In order that alcohol may be able to compete with these products, we would ask our Government to grant what many European countries have granted; also the Republic to the south: "The privilege of using alcohol duty-free for power and manufacturing purposes." In order that it may not be misused and the Government robbed of revenue, the alcohol is denatured, or something put in it which unfits it for drinking purposes, and yet does not interfere with its usefulness for manufacturing purposes. Alcohol can be produced from anything containing sugar or starch. The best quality of grain is necessary to produce it fit for beverage purposes, but a poor or damaged grain will produce it fit for commercial use. It is produced very cheaply from roots, vegetables, molasses, and refuse from canning factories—almost any sort of refuse produced upon the farm. Good authorities tell us the waste from an ordinary house will produce enough alcohol, if properly manufactured, to light it.

Germany is producing more alcohol and making more use of it to-day than any other country. There the potato has become the great source of production. Tax-free alcohol has been in use there since 1887. During that time, completely denatured alcohol has increased in use from 3,600,000 gallons to 26,600,000 gallons in 1904. The price varies there as follows: 1903, 13¢; 1904, 30¢; 1905, 18¢; 1906, 29¢. The variation is according to the productiveness of the potato. The result of this use of the potato is that to-day Germany is the greatest potato-producing country in the world, growing some varieties that produce as much as 500 bushels per acre, and especially adapted for alcohol production. A great redeeming feature of alcohol production is that its production is so easy upon the soil, alcohol being composed only of carbon, hydrogen and oxygen, the nitrogen, phosphates and other valuable substances for vegetable production being returned to the soil in the wash and by-products, which are valuable food for stock.

A bushel of corn will produce from 2½ to 3 gallons of alcohol. Prof. Wiley, of the U. S. Department of Agriculture, is authority for the statement that, "if the corn is taken just in the glazing stage, and corn, stalks and everything manufactured into alcohol, it will produce twice the quantity of the grain alone." Therefore, an acre of corn capable of producing 50 bushels of corn would yield, when completely manufactured, 250 or 300 gallons of alcohol. The source of alcohol in this country is almost unlimited, and no matter how much we might produce and use, or export, not a particle of soil fertility would be wasting.

Gasoline is the great competitor at present, but the price of gasoline has doubled the last ten years, and the supply becoming less, while the experience of other countries in alcohol is that the more consumed, the cheaper it is produced. Coal and oil, our principal materials for light and heat at present are controlled by monopolies, and we have to pay their price. Some of the European countries grant the farmer the privilege of using a small still, under certain restrictions. There are over 71,000 of these in use in Germany alone, and cost about \$35. If the farmers of this Dominion had some such privilege as this, we might snap our fingers at combines and coal strikes, manufacture our inferior waste stuff, and make a more profitable market for the best.

Our Government is getting a nice revenue from the sale of alcohol to-day, and are not anxious to grant anything of this sort. The greatest benefit to be derived from free denatured alcohol is for the farmer, to grow his own stuff, manufacture it cheaply, and use it to light and warm his house and run his farm machinery, and do it with greater safety, cleanliness, and more cheaply than any other way. Let us unite as one man and demand this privilege. FRANK M. LEWIS. Brant Co., Ont.

[Note.—Controlling the manufacture of alcohol for useful purposes, and economically denaturing the product, in order to safeguard the country from the menace involved in its general production, are doubtless among the problems to be

solved by the Government in connection with this subject. The experience of other countries, closely studied, will prove of service.—Editor.]

## AN IMPROVED TWO-HORSE CULTIVATOR.

Editor "The Farmer's Advocate":

I noticed in April 30th issue a short writing entitled "Re Two-horse Corn Cultivators," and, as the writer asks that there might be a little discussion upon the subject, I will give my experience. I have used a two-horse cultivator for the past two seasons, and find it such a necessary implement that, where help is scarce, corn can scarcely be raised without one.

The first season I used the cultivator help was scarce, there being only three men on 170 acres of cleared land, so I took a little time first to experiment. Unfortunately, it was a borrowed implement, and I could only use it a little while at a time. I started on the dirtiest side of the field, and straddled every other row. But this proved unsatisfactory, as the row that was not straddled was not cultivated closely enough. But, determined to finish my experiment, I went to the other side of the field that had been cultivated a few days before, and cultivated a piece, straddling every other row. In two or three days, the piece that had only been half done could be picked out easily.

Last season I began to study how to care for the corn. At last I settled on a plan. I went to the spring-tooth cultivator and took the two outside sections and the horse-rake wheels. I then made a rectangular frame of 6-in. plank, 49



Residence of Elias B. Hoover, Ontario Co., Ont.

by 41 in., and bored holes through the side planks (41 in. in length) about 3 in. from the rear end, and put a piece of gas pipe through for an axle. In front, I bolted two pieces of plank that stuck down about 10 inches in the middle of each row, and braced them to the tongue. Then I made two hooks, with a burr on the end, and put one in each plank for a draw-jack. Then put a rod through the holes of the sections and through the hook, and attached short chains to prevent sliding or tipping. A lever from an old disk harrow, and a bent rod, which fastened by a boxing on the tongue, was used to lift the sections. The tongue bolted exactly in the middle of the frame, and the seat was on the back end. Shields may be fastened where teeth are bolted onto the sections. The little shoe on the rear end gauges the depth.

I made it rainy days and spare time early in the spring, and did all the work, so that it did not cost us a single cent. It answered a very fair purpose, doing very good work. I cared for 16 acres of corn last year with it, and it was fairly clean. I cultivated the whole piece in two days, making only eight-hour days. This certainly must be an improvement on the old way, as it saves a man, and does better work. Your arch is set, the shield keeps the teeth from covering the corn, so that you can cultivate closer and not hurt the corn. Every row must be straddled, as it cannot be properly done unless they are. Some say that those who use the two-horse riding cultivators, as a general thing, have a dirty piece of corn. I think that where dirty corn is found, it is generally because the cultivator has not been used, or else it has been gone through in that slipshod way of straddling every other row. Corn should be cultivated once a week, and not less; if anything, more, as weeds start in three or four days.

Again, complaint is made that they drag ditches shut, but if care is taken to steer clear of those cultivators with the teeth dragging after, behind, there will not be any trouble. I crossed a ditch last summer in every round I made, and didn't drag an inch of ground in the bottom. It also does away with that old, tiresome, leg-weary job that makes the shoulders ache. Time is saved in turning at the end, and also in making the round, as you do not get tired, and can hurry the horses along faster. I also believe that a top would be quite a help, as the sun gets pretty warm. We think it is the only way in taking care of corn, as it saves so much time.

Haldimand Co., Ont. A YOUNG READER.

## FARMYARD PHILOSOPHY.

The cow that will produce from \$60 to \$80 worth of butter-fat each year is under no obligation to bring a \$10 calf for the butcher. It is strange how long it takes some folks to find this out.

The yearly cost of feed for the average dairy cow is about \$30. Unless the income from the sale of her milk exceeds this amount, the cow is clearly not paying her way. The only satisfactory method of determining this question is by weighing the milk and testing the per cent. of butter-fat it contains by the Babcock test. A cow that does not pay takes up just as much room as a profitable one. Sell the poor cow for beef.

How many farmers thoroughly groom the horse's once a day? It is too bad to allow the

dirt and dust, dried with sweat, to remain upon the horse's coat, clogging the pores and spoiling his appearance. Look after his feet when evening comes, and see that there is nothing to torment him. See that the harness fits properly, for the horse cannot tell his owner if the harness chafes or the collar hurts his shoulders.

A man saved his horse from bleeding to death from a wounded artery by a mixture of salt and wheat flour, bound on with strips of muslin.

The way to have an easy time with the weeds is to stop them before they get started to grow.

If you want to know what kind

of a farmer a man is, look at his cultivated crops; they tell the tale.

How about the garden? Some farmers seem to think it foolishness to bother with a garden, and yet they greatly enjoy fresh vegetables. What is the sense of buying vegetables or fruit from the truck pedlar when one could have them fresh out of his own garden. And the home-grown ones taste the best. FARMER JOHN. York Co., Ont.

## TURNIP CULTURE IN NOVA SCOTIA.

For best results in animal husbandry, succulent feed is necessary during the winter months, especially in Maritime Canada, where the period of winter feeding is long, and millfeeds and grain are more expensive than further West. The two crops capable of supplying this succulent feed are roots and ensilage corn. Corn has been grown on the Provincial Farm (now the Agricultural College Farm) at Truro, N. S., with fair success, for fifteen years, although this is not the best locality in Nova Scotia for the crop. Without denying that it has been profitable, Mr. F. L. Fuller, for fifteen years manager of the farm, emphatically asserts that, in his opinion, it would be a mistake, in that Province, to grow corn to the exclusion of roots. Short summers render the maturing of large-producing varieties of corn somewhat uncertain, but the conditions for turnip culture are unsurpassed. Mangels are scarcely better food, require more labor, and in Nova Scotia are less certain than turnips, not being so well adapted to some kinds of soil prevailing there. The average yield of turnips in the Maritime Provinces is asserted to be about 200 bushels per acre greater than in Ontario. Notwithstanding these favorable considerations, the area

of turnips grown in Nova Scotia, particularly in the eastern portion, is much less than it should be.

EXPERIENCE OF SUCCESSFUL TURNIP-GROWERS.

In trying to devise a means of inducing more farmers to take up root-growing, the agricultural authorities sent out a number of questions to leading root-growers in different parts of the Province. Correspondence was invited from 40 farmers, and complete answers received from 25. Their replies constitute the groundwork of Bulletin No. 4, entitled "Root-growing in Nova Scotia," by F. L. Fuller, now Superintendent of Agricultural Societies in Nova Scotia, with an appendix discussing feeding value, prepared by Principal Melville Cumming, of the Agricultural College, Truro.

The response to the first question, "How many roots do you grow?" indicated a range of from one to fifteen acres, averaging 3 1/2 acres per farm. Minimum yield, 600 bushels per acre; maximum, 1,200; average, 864. The cost of production per bushel was variously estimated at from 2 1/2 to 15 cents; average, 6.4 cents. Twenty-one men used commercial fertilizer in addition to manure, and four used none. Opinions as to drills versus level culture, found only one advocate of the latter. The proper distance apart in the row was placed as low as 10 and as high as 18 inches, the average being 12.4 inches. As to thinning, ten used the hoe only, and fifteen used both hoe and hands. Twenty-five of the correspondents fed turnips to milking cows. [It seems heresy to print this, but facts are facts.] The question as to which were considered better feed, mangels or turnips, elicited four replies that they were equally good, three favoring mangels, two favoring turnips, while six preferred turnips for cattle and sheep, but mangels for hogs.

TURNIP CULTURE ON THE COLLEGE FARM.

Proceeding to discuss his personal experience in turnip-culture, the author states that when he took charge, fifteen years ago, of what is now the Agricultural College Farm at Truro, he determined, rather against the advice of farmers in the vicinity, to grow roots extensively, commencing with one acre, and gradually increasing to ten. The yield for fifteen years has ranged from 800 to 1,200 bushels per acre, averaging 1,000 bushels. The root crop followed either a clover sod or a hayfield which had grown a crop of oats the previous year. If the former, the sod was plowed as soon as possible after the clover was off, then rolled and harrowed immediately to assist in rotting the sod. Later in the season it would be manured at the rate of about 25 loads per acre, and plowed again somewhat more deeply than before, leaving the surface rough and exposed more thoroughly to the action of frost. When a stubble field was to be prepared, the only difference in treatment was that it would be disked as soon as the oats were off, and plowed only once, instead of twice. In spring, as soon as the field was dry enough, it would be harrowed, in order to start weed seeds. Later it would be plowed thoroughly, worked up, drilled and sown. In drilling, 600 to 1,000 pounds of commercial fertilizer were used, applied by sowing in a light mark made by the drill plow, and making the drill directly over it. The author has applied the fertilizer this way because it is necessary in experimental work, but thinks that in commercial practice equally good results would be obtained, with less labor, by broadcasting it over the land. The most profitable kind of fertilizer for each particular farm should be determined by making a few simple experiments. On the College Farm, they found that acid phosphate (a purely phosphatic fertilizer) increased the yield at a cost of only 2.9 cents per bushel. While acid phosphate is, generally speaking, a profitable turnip fertilizer, especially when used in conjunction with barnyard manure, still, results in other cases might not be so marked. Experiment is necessary on each farm.

The drills were made 28 inches apart, and, until a few years ago, it was their practice on the College Farm to drill up only the number of rows it was intended to sow immediately, so as to provide a fresh, moist seed-bed. As the farm was badly infested with mustard, attempt to combat this was made by drilling a small portion of the turnip field early in the season, allowing the weed seeds to germinate before the crop was sown. Before sowing, the drills were gone over with a chain harrow (a brush harrow or half of a spike-tooth harrow turned upside down would do), and the seed sown immediately. It proved a splendid process for killing weeds, and, notwithstanding a dry season, the turnip seed came up more quickly and grew more rapidly than on the adjoining portion of the field where the drills were made and the seed sown the same day. The following year a large portion of the field was sown the new way, with even better results, and it has since been practiced with the entire crop. Whether it would be equally suitable for all parts of Canada, or all soils, is a question open for settlement.

The quantity of seed sown per acre was 2 to 3

pounds, put in with a first-class seeder of Scotch make. With a less-reliable seeder, thicker seeding would be advisable, although the thicker the seeding, the greater the work of thinning. Where a turnip drill is not available, a field of turnips may be sown by hand. A bottle with a quill through the cork, or a tin cup with a hole punched through the bottom, makes a good device for hand-sowing. A mark for the seed may be made with a pointed stake, and it may be covered with the back of a hand rake. Cultivation is commenced as soon as the plants are up sufficiently to enable one to follow the row, and continued at intervals of a week to ten days, until the leaves are so large as to prevent it. Thinning is begun as soon as the third leaf is well out, using a hoe only, and leaving the plants from 12 to 15 inches apart. A second hoeing cuts out plants that have been missed, and kills any weeds that have so far escaped.

A detailed statement of the cost of growing an acre of turnips is submitted, as follows:

In the fall of 1901 a stubble field was taken, and disk-harrowed as soon as the oats were taken off:

1901	Cost per acre of harrowing.....	\$ 0 75
	25 loads stable manure .....	25 00
	Hauling and spreading manure.....	8 00
	Plowing field .....	3 00
1902	Harrowing field (before plowing)...	75
	Plowing .....	3 00
	Preparing for drilling .....	1 50
	Drilling .....	2 00
	Commercial fertilizer .....	10 00
	Sowing fertilizer .....	75
	Seed .....	60
	Sowing seed .....	50
	Thinning .....	5 00
	Cultivating .....	3 00
	Hoeing (second time) .....	3 00
		\$66 85

CR.

By half value stable manure .....	\$12 50
By one-third value of commercial fertilizer .....	3 33
	\$15 83

The yield was 1,000 bushels ... \$51 02



"Bridging Distance."

Getting out poles for the Scarborough Independent Telephone Co., York Co., Ont.

The yield was 1,000 bushels, which would make the cost of growing 5.1 cents per bushel. When you add to this 1 cent, or less, for harvesting, you still have the cost about 6 cents per bushel.

If the items of credit for manure left in the field need any explanation, it can be found in the fact that this field is expected to produce a crop of grain and at least two crops of hay without any further dressing of fertilizer, and then to be in as good shape as it was originally. If this result is obtained (and experience bears it out), the estimate is sufficiently low. If to anybody the amount for thinning and hoeing seems small, it may be stated that for several years the author hired a man for \$1.50 per day, who did his work well, and made a daily average of one-half of an acre.

"I am aware," he adds, "that some farmers would grow more roots if they had better cellar accommodation. Those who have basement stables should not be confronted with this trouble. To others I would say it is not necessary to have expensive cellars for keeping roots. The ordinary barn usually has one main driveway or floor, and a hay mow on either side, or a hay mow on one side and a stable on the other. This floor is usually several feet from the ground, and a good cellar may be cheaply made by digging out under this floor to get a sufficient depth, and putting up ordinary wooden partitions next the hay mows. If a single partition is not considered safe, a double partition may be made of rough boards, and the space between stuffed with straw."

DIFFICULTIES.

"The chief difficulties that may be encountered in connection with growing are the ravages of the turnip flea-beetle, or 'turnip fly,' and club-root. We often hear farmers say that they would grow turnips if it were not for the turnip fly. I am free to admit that I have seen small patches of turnips almost entirely destroyed by these pests, but have never seen a large field seriously affected, and am of the opinion that, as a menace to root-growers, this trouble is more imaginary than real. The best remedy is to have your field in a good state of cultivation, and use good seed. The plants will then grow rapidly, and give the fly little opportunity to get in its work. It is considered by some to be a wise precaution to sow late. I do not, however, consider this necessary, because, if the first sowing should happen to be destroyed, the field can be reseeded, with a good chance of success.

"Club-root, once a foothold is gained, is of a more serious nature, and needs to be carefully guarded against. Roots should not be grown frequently on the same piece of land. At the first appearance of the disease, the affected roots should be carefully separated, and not allowed to get into the manure which is to be subsequently used for growing this crop. In every case where I have known of any serious trouble with this disease, it has been on farms where roots have been grown for several years in succession on the same fields. Where a judicious rotation of crops is followed, the disease is almost unknown."

FEEDING VALUE OF ROOTS.

While it is difficult to institute a precise comparison of the relative value of feeds differing so much in character as turnips and bran, Prof. Cumming cites experiments indicating that, in a general way 5 to 7 1/2 pounds of roots have been found equal to 1 pound of bran. A pound of bran costs, in Nova Scotia, about 1 1/2 cents; so that, taking the less-favorable comparison as a basis, 7 1/2 pounds of roots equal 1 1/2 cents' worth of bran; i. e., one bushel of turnips are worth 10 cents for feeding purposes. According to the figures presented by Mr. Fuller, a bushel of roots can be raised, under average Nova Scotia conditions, for 6 2-5 cents. Moreover, where a farmer is reduced to straw or poor hay for his stock, the results of including a few turnips in the ration will be even more marked. Moreover, there will be fewer cattle unhealthy or off-feed in a stable where roots are fed than when the cattle are compelled to subsist altogether on dry forage, or dry forage and grain. Roots cool the blood, distend the digestive tract, improve the appetite, add relish to the other foods, and will save many a dollar that has heretofore found its way out of the Province to purchase bran and other millfeeds. While it would not, in our opinion, be advisable to feed turnips to the exclusion of grain in the case of dairy cattle, finishing steers, or even growing young stock, we heartily subscribe to the above arguments, and reiterate the concluding motto of the bulletin, "Grow and Feed Roots."

THE DAIRY.

CHEESE MARKET IN ENGLAND.

Discussing the English cheese market, in a letter published in the Weekly Report for May 4th of the Trade and Commerce Department, Ottawa, P. B. MacNamara, Canadian Commercial Agent in Manchester, Eng., writes: "The following report is furnished by one of the most important firms in the trade: 'The cheese market for the past few weeks has been very disappointing to holders on this side, trade having remained in an almost stagnant condition since the beginning of the year, and so holders of September cheese, bought some time ago, would like very much to be able to see some of their money back again. This is more than anything the result of the New Zealand influx. This colony has shipped a good quantity into London, and it is finding its way all over the United Kingdom. But for this district it does not take so well, as it is rather too stiff, and does not show enough "meat" to suit the Manchester district. If, however, the New Zealand makers catered for this market by making the class of goods salable here, there is no doubt it would have an effect upon the Canadians, coming, as they do, at a time when Canadians have ceased being made. Importers will, therefore, have to take this new competition for the British markets into serious consideration, if the shipments continue in anything like the quantity they have been doing during the past season.'

"Reports from Canada state that the season there is backward, and, while full prices are being asked for fodder cheese, they are absolutely of no use at the time of writing. Prices will have to show a material reduction if the trade is to be any good to anybody. Prices are at a very awkward level, indeed, and with many in the trade selling at 7d. retail, there is very little profit left for the grocer."

[Note—While the prospects of New Zealand

competition are rather overdrawn, according to the opinion of those who should be qualified to judge, it can do no harm for Canadian dairymen to be apprised of the sentiment and rumors current in the British trade.—Editor.]

### DAIRYING IN WISCONSIN.

(Continued.)

Part II.

#### COW'S MILK—SOME OF ITS CHEMICAL AND PHYSICAL PROPERTIES.

During recent years considerable has been heard about the bad effects of rusty cans upon milk contained in them. All the dairy instructors report a very marked improvement in recent years with reference to the purchase and use of good clean, bright tin milk cans. In our own experience we have found it difficult to get good milk cans. We have tried various firms who have been recommended to us as having a reputation for turning out cans of superior quality. The first lot of cans we ordered would probably be very good, but there has usually been a marked falling off in quality afterwards. Sometimes cans for which we paid an exceptionally good price have leaked the first time they were used. I know of no part of dairy utensils which is more in need of renovating and improving than is the tinware branch. So much shoddy material is now sold that it is very difficult to know when a good article is purchased. From a comparison between tinware as sold in Europe and America, we are free to say that the latter is decidedly inferior. Tinning on copper, we believe to be the solution of the trouble. If copper be so cheap as is now reported, it would seem to be a good time for some enterprising firm to put out a line of good tinned-copper milk vessels, and see how the trade would take to them. We are inclined to think that users of such milk vessels will not readily go back to the old tinned-iron vessels which are now so common, and which so soon become rusty.

All this leads up to a reference to the "Influence of Metals on the Action of Rennet," as reported in the 24th annual report of the Wisconsin Experiment Station. The writer points out that, for cheddar cheesemaking, a short period of coagulation is desirable; the time should not be allowed to exceed 20 to 30 minutes. This is a very important point to be observed in cheesemaking. Anything which unduly delays the coagulation of the milk means loss of fat and other cheesemaking material.

In the experiments made, it was noted that milk in nickel-plated copper vessels required 40 minutes to coagulate; in copper and nickel, 35 minutes; tin and iron, 23 minutes, and glass, 20 minutes. In experiments with rusty pans, it was noticed that the milk in the rusty pan gave evidence of a retarding influence on the rennet action, compared with that in the glass. Wherever there has been a retarding influence on the rennet action, there has also been a retardation of the acid development as well. Milk is frequently hauled to creameries and cheese factories in poorly-tinned or rusty cans. The question may be raised, What effect, if any, have such cans upon the milk delivered to the factory? We know from the above data that nickel, copper, iron, rusty pans, etc., have a strong prejudicial effect upon rennet action. Glass produces an accelerating influence upon rennet action. If the price of rennet keeps on advancing, it may be economy to use glass cheese vats, in the light of the foregoing. What would be lost in first cost might soon be saved in the cost of rennet. Who can tell? Illustrations of rusty cans are given. The comment on a wagon-load of cans, which was photographed, and reproduced in the report, is: "Nearly all of these cans are unfit, and should be rejected." The comment on another lot is: "Cans like the three to the right would injure the milk for cheesemaking." We are pleased that these photos were taken in Wisconsin, and not in Ontario. Further comments are: "Milk kept over night in cans of this kind, when treated with rennet, would require from three to forty minutes longer to coagulate than milk kept in good ones. The reason for a slow or retarded action of rennet, which cheesemakers have often experienced, possibly may be attributed to the acid action upon iron in cans of the above type, and not entirely to the amount of salts present in the milks, as was formerly supposed."

#### SHRINKAGE AND COMPOSITION OF CHEESE FOUR YEARS OLD.

Some experimental cheese were kept at the Station for four years. The shrinkage on cheese weighing 18 to 25 pounds when new, was 18.5, 15.1 and 17.3 per cent., respectively, for cheese made from milk containing 3, 4 and 5 per cent. fat. The following percentage composition of the cheese is of interest:

CHEESE MADE FROM MILK CONTAINING:			
	3% Fat.	4% Fat.	5% Fat.
Water	29.97	28.78	28.52
Protein	31.25	27.38	24.50
Fat	31.67	38.49	42.39
Ash	4.03	4.28	4.12

The comment on this table, showing composition of cheese four years old, is: "As the cheese increases in richness (presumably fat), the water, protein and ash decrease."

That the percentages of moisture in these cheese are not abnormally low is indicated by the fact that two samples sent to us recently tested 23.6 and 29.6 per cent. water. The regular cheese at the College runs about 33 to 34 per cent. moisture when one month old.

#### SALTY MILK.

Some farmers are frequently troubled with "salty milk." This trouble usually appears when the cows are advanced in lactation. The sample reported on contained 9.52 per cent. total solids and 2.16 per cent. fat. All the solids except ash were low; especially is this true of the fat and protein contents.

#### HUMAN MILK.

Nineteen samples of milk obtained from the wives of professional men were analyzed. In all cases the infants were reported as not doing well. The analyses showed a great variation in the fat content, 1.26 to 7.8 per cent. The average of the 19 samples showed 87.72 per cent. water, 3.69 per cent. fat, 1.44 per cent. protein, 6.9 per cent. sugar, and .25 per cent. ash. As compared with cow's milk, the samples were low in protein (muscle-forming constituents), high in sugar, and low in ash.

#### THE CHEMISTRY OF MILK CURDLING.

This is a very difficult subject. Little is known as yet about the question. Every person is familiar with the curdling of milk by rennet and acids, but few, if any, understand it. Cheesemakers see the phenomenon every day; none can explain it. Why and how do rennet and acids curdle milk? The writer refers to the opinion that milk curd is a compound of casein in definite proportions with lactic acid or other acid in curdling milk. The most recent researches have shown that the proportion of acid to casein in curd is not fixed, but varies with the kind of acid, the concentration, temperature, and physical condition of the curd.

The experiments upon which conclusions are based are of a most elaborate nature. The significance of the facts detailed is to prove that all of the constituents of milk, and not the acids alone, take part in the chemical reaction known as curdling. The whole milk serum is thus regarded as a chemical compound. The elevation of curdling temperature produced by adding one per cent. or less of salt to overripe milk may find useful application in pasteurization or separation of cream or other operation where occasionally overripe milk must be heated.

Casein in milk is under the chemical influence of every other milk constituent, and it may be truly said to be chemically combined with every constituent by attractions of greater or less intensity.

The foregoing extracts will give readers an idea of the scientific nature of the investigations. They are doubtless leading up to a satisfactory explanation of many difficulties at present little understood.

#### AUTOMATIC CHEESE PRESS.

As a result of experiments, it was found that about 48 pounds per square inch on the end of the cheese is sufficient to close any curd, even if firm, provided that it has been properly handled before pressing. We were ready to exclaim, "Now, there will be no more complaints about 'open' cheese!" but that "provided" clause seems to put us just about where we were before. The press illustrated appears to be an ordinary gang press, having a large pulley, with rope and weight attached in such a way that it gives continuous pressure.

#### BACTERIA IN MACHINE MILK VS. HAND.

The conclusion from somewhat limited studies of machine milk is stated as follows: "The data, while not large, are sufficient to show that, under such conditions as obtained in these trials, with reference to cleanliness of machine and other utensils, the condition of animals, and the amount of dust in the barn air, the use of the milking machine will produce milk with as low germ content, or even lower than that drawn by hand." We are pleased at this testimony from so reliable a source.

#### CELLS IN MILK.

This is a most interesting study of milk. We should like to quote largely, but space forbids. In a word, it was found that apparently normal and perfectly safe milk may contain quite a large number of cells; that the number of these cells appears greater in milk of older animals, and that the authors consider the presence of large numbers of leucocytes (white blood corpuscles) are suggestive, rather than final. The conclusions are tentative, based on individual samples, and are not to be regarded as applying to herd milks." H. H. P.

#### EASTERN DAIRY SCHOOL, KINGSTON, ONT. SOME VALUABLE EXPERIMENTAL AND INVESTIGATION WORK.

Although the main object of our institution, as its name implies, is to afford cheese and butter makers an opportunity to obtain a thorough training in the various branches of dairying and allied subjects, such as Bacteriology and Chemistry, yet we have found time, in addition, to do more or less experimental and investigation work. As most of the problems bear upon dairying in a practical way, we would briefly summarize some of the work done, and the results obtained.

#### NEW CREAM BOTTLE FOR BABCOCK TEST.

During the past year we brought out a modified form of cream-test bottle. The trouble with the old style of cream bottle, which is graduated for reading for 18 grams, is that by the time that 18 grams of cream are taken and a little water and the necessary amount of sulphuric acid added, the bowl of the bottle is so full that there is no room for shaking the bottle and properly mixing the contents; and, furthermore, a sufficient quantity of water cannot be added to insure against charred readings. The new style of bottle devised by us, while it has the same size of bowl as the old, has a smaller neck, graduated to read per cent. of fat for 9 instead of 18 grams. Its advantages are obvious. One can take 9 grams of cream and add 9 c. c. of water and the usual amount of acid, and still leave plenty of room for readily mixing the contents, while the large amount of water added prevents the sample from charring—two decided advantages.

#### MOISTURE TEST.

For a long time practical dairymen have felt the necessity for a practical moisture test. Mr. W. O. Walker, of the School of Mining, and Lecturer on Dairy Chemistry in our School, and the writer, made a thorough and exhaustive investigation of this subject, and examined the different tests in use, and decided that each lacked, in one respect or another, the essentials of a practical moisture test for curd, cheese and butter. A test, to be practical, must be reasonably accurate, rapid, simple, and inexpensive to operate, easy to clean, durable, easily and cheaply kept in repair, and moderate in price. They undertook to devise such a test, and feel that they have succeeded in doing so. As a full description and cut of it will appear in bulletin form, it will suffice, at present, to say that it is reliable and speedy, easy to conduct, can be conducted at a small cost, and is equally satisfactory for determining the moisture in curd, cheese and butter, while the apparatus is practically all metal, and hence very durable.

#### THE MAKING OF BUTTER FROM WHEY.

During the session just closed, we made a study of the making of butter from whey, and although we are not prepared to speak finally upon the subject, we feel that we gleaned some information that will prove of interest.

On different occasions we ran our separators with a view to determining the fuel cost of elevating and separating the whey. Water was used for this purpose, as it has practically the same constituency as whey. Each test extended over a period of three hours. We ran the engine to pump the water from the separators, and used steam-turbine separators. The amount of water in the boiler, the steam pressure and the fire were left practically the same at the close as at the beginning of the test. Soft coal slack, at \$1.00 per ton, was used for fuel. The cost of elevating the water and running the separators was about 2½ cents per 1,000 pounds. Taking three pounds of butter as an average yield per 1,000 pounds of whey, the cost per pound of butter for this portion of the work would be ¾c. We are strongly of the opinion that, were an ejector used, instead of a pump, for elevating the whey, the cost would exceed this somewhat.

During the session we conducted a number of experiments in the making of butter from whey. While it was usually of good quality when first made, it did not prove to be possessed of good keeping qualities. It readily deteriorated in flavor. Of course, the milk, and frequently the whey, was old, and this may have had much to do with the keeping quality of the butter. However, it suggests the necessity for a thorough investigation of the whole subject, and this we purpose doing during the season of 1908, under regular factory conditions. It would be wisdom on the part of factorymen to await these results.

Another thing we learned during our experiments was that, by increasing the speed of the separator slightly, you can separate—and separate efficiently—fully 60 per cent. more of whey than the machine is rated to separate of milk; that is, a machine with a rated capacity of 3,000 pounds will readily separate 5,000 pounds of whey. Of course, this calls for a cover with a larger inlet tube.

#### MAKING OF CHEESE FROM RICH AND POOR MILK.

During the session just closed, we were afforded

a splendid opportunity of investigating this point, as we were able to obtain milks varying in fat content from 3 to 4 per cent. On several occasions we put like quantities of the different grades of milk into different vats, and made them up separately. When the cheese were made, the yields differed so much that, when they were placed side by side they resembled a flight of stairs. Let us give an example, which could be multiplied many times if space afforded:

Lbs. Milk.	% Fat.	Lbs. Cheese.	% Fat in Whey.
325	3.0	27.0	.2
325	3.4	29.5	.2
325	3.8	35.5	.2

Furthermore, there was a marked difference in quality, the cheese from the richer milk being quite superior to that from the poorer. The lesson is obvious. We should certainly pay in cheese factories according to quality, and not by the pooling system.

This work was conducted by our instructor in cheesemaking, Mr. G. G. Publow, and, needless to say, was carefully and skillfully done.

**A COMMON AND UNSUSPECTED CAUSE OF CREAM TESTING LOW IN THE FALL, WHEN THE MILK IS RICH.**

One other investigation of considerable interest to creamerymen: While it is well known that changing the cream screw or the speed of feed, or a difference in the richness of the milk, will alter the richness of the cream, these do not furnish a reason for the cream supplied to our cream-gathering creameries so commonly testing lower during the fall of the year than during the summer, despite the fact that the milk has increased in richness.

Under the direction of our instructor in butter-making, Mr. Stonehouse, we made an investigation of this subject, with the result that we fully satisfied ourselves that this apparent anomaly is really due to the partial cooling of the milk, during the cool weather of this season of the year, before it is put through the hand separator. The following data will serve to illustrate this point:

Machine.	Temp. of Milk.	Test of Cream.	Test of Sk. Milk.
A.	80	27	.10
	95	31	.10
B.	80	25	.08
	95	28	.06
C.	85	40	.025
	95	43	.025

The different letters represent different makes of machines.

In all cases we took the same milk and divided it, separating one portion at the lower and one at the higher temperature, as indicated.

The explanation of the foregoing, no doubt, lies in the fact that as the milk cools it becomes more viscous or syrupy in its consistency, and, as a result, does not flow out of the skim-milk tubes so readily, thus causing a larger percentage to be taken as cream.

J. W. MITCHELL, Supt.

**POULTRY.**

**POULTRY IN MANY LANDS.**

Editor "The Farmer's Advocate":

From Port Said to Yokohama, the broiler is the main and very often the only form of flesh-food obtainable by the traveller or white resident. This also applies to most parts of Africa and to the many islands scattered about the Indian and Pacific Oceans; in fact, to all that part of the world which lies within the region known as the tropics. Pork is usually plentiful, but is not considered wholesome in hot countries. Beef is scarce and nasty; raising beef especially for food is practically unknown, and it is only when an occasional cart bullock or mill bull has outlived his usefulness and threatens to become a dead loss to its owner that beef is killed for food. So the resident in a tropical country has to depend almost entirely on the broiler to supply his table, especially in emergencies.

The broiler in these countries is not the delicate, milk-fed article found in Canada or America, but generally a long-legged, very worldly-wise member of the chicken tribe, who has had to wrestle hard for his living, with one eye constantly on the watch for possible enemies, and the other on the look-out for something to steal. When wanted for the table, he is chased by the entire family under whose protection he has been living, and is beaten to death with anything that comes handy. Although there is always a large and ready sale for poultry and eggs in the vicinity of the towns and seaports, very few whites seem to have made any serious attempt at poultry-raising as a business. This is mainly because most of the white residents in these countries are

engaged in enterprises which leave them very little time or energy for other work, and if the care of the poultry is left to native servants, the result is almost always disappointing, owing to the natives' unbounded faith in Providence as a labor-saving institution. The result is that poultry-raising is almost entirely left in the hands of the natives, who are generally too lazy to go in for it properly, each family keeping just enough hens to eat up their waste food.

Although lazy, the native is distinctly ingenious, and his method of brooding is worthy of notice. Where a number of hens are kept for raising broilers, a few capons of a large breed are always retained as well for brooding purposes. They are treated as pets by the family, so that they become accustomed to being handled. When a hen hatches, she is not allowed to waste her time brooding her own chicks. A few days before the chicks are hatched, the capon is placed in a coop, and when the chicks are ready he is lifted up carefully at night, and a quantity of strong tobacco smoke is blown into his face, which for the time being seems to make him quite intoxicated and silly. The chicks are then placed under him. In the morning, when he wakes and finds his new family, he seems to take them quite as a matter of course, and when let at large with them in the day time, he scratches and gives them as much if not more attention than the hen would. One of the advantages of this system is that chicks from various hens, and differing several days in age, can be placed in the care of one capon. A big capon will brood as many as fifty chicks, and the hens are brooded loose after a few days, to lay and sit again. The tropical hen does not usually lay a great number of eggs. She nearly always lays away, and, if possible, hides her nest, sitting as soon as she has sufficient eggs, thus clearly showing her near descent from some sort of wild fowl.

The writer has used capons, as described above, for brooding incubator chicks, with marked success, and believes this system is worthy of more general adoption. The Chinese are said to use caponized geese for this purpose, and it is a well-known fact that a female goose, if from any cause her own eggs have failed to hatch, will adopt a brood of newly-hatched chicks or ducklings.

The great drawback to poultry-raising in the tropics is the abundance of pests. These vary in different countries, but are always there in one form or another, the most general thing being hawks and other birds of prey which abound nearly everywhere. In some of the islands of the Indian Ocean there is a creature known as the Tang Rat. It looks like a cross between a rat and a hedgehog, and smells like a skunk. This animal is very fond of eggs and young chicks, but is more dangerous after death than in life. There seems to be an irresistible attraction about a dead Tang to the fowl-mind. They devour them greedily when rotted, and invariably die within a few hours. Their death is said by the natives to be caused by swallowing the small spines which cover these animals.

The Iguana is a confirmed poacher, and is found pretty generally all over the tropical parts of Asia. However, he is very easily trapped, as he always follows the same run.

In the Malay Peninsula the local pest is the Python or boa-constrictor, who takes a regular toll from any fowl house in his vicinity. These snakes are easily shot, as the fowls generally give the alarm when one is around at night. They are sometimes trapped by making the sides of the fowls' house with wire netting. The snake enters easily enough through the mesh, but, on attempting to escape after having had his feed, that part of his length which contains the slaughtered fowls is unable to pass through the netting, and so prevents his escaping before the owner of the poultry arrives and dispatches him.

In spite of many disadvantages, provided sufficient care is taken, there is good money to be made at poultry-raising in most tropical countries. Land can be rented cheaply; poultry food, such as bananas, tapioca, yams, pomace, broken rice, etc., are easily grown or cheaply bought. Insect food, of course, exists in abundance. Bananas form an excellent shade in a poultry run. They cost very little to plant, and go on bearing for many years, with little or no attention. The fruit can be picked in nine months from the time of planting, and yields at the rate of about 20 tons per acre. The fruit can be dried in the sun and stored in a dry place for future use, and also makes an excellent flour. The breadfruit and jak fruit are also among the many trees bearing fruit suitable for poultry food. A large breadfruit tree bears from one to two thousand fruits each season. The fruit is round, and about the size of a Dutch cheese, weighing, as a rule, three pounds. There is plenty of scope for improving the present breed of tropical fowls by importing some heavy pure-bred poultry. The local fowl is generally a sort of game, and bears a strong resemblance to the wild or jungle fowl.

BASIL O. ROBERTS.

New Westminster, B. C.

**FRUIT TREES IN THE POULTRY YARD.**

Editor "The Farmer's Advocate":

The practice of planting fruit trees in the poultry yards is becoming quite general among poultrymen and farmers. It has much to recommend it, since it is good for both fowls and trees. The shade during the hot summer months is a very desirable feature. The loose soil under the trees (the top of the ground should always be kept loose about the trunk) affords excellent opportunities for exercise and dust baths, and the insects which are certain to be attracted to the trees furnish a wholesome change of diet. The destruction of these insects, of course, works to the benefit of both trees and hens, while the constant fertilization and tillage the trees will receive promotes a healthy and vigorous growth.

The favorite trees for this purpose seem to be the plum and pear. The latter is liked because of its sturdy, upright habit of growth; the other because the hens answer the hardest question of the plum-grower: how to get rid of the curculio. Apples, or the larger-growing varieties of cherries, may be equally satisfactory, and it would seem that the quince might be planted to great advantage in the poultry yard. This fruit does not ripen until late in the season, and is generally picked off before it gets ripe enough to fall, so that the problem of what to do with the hens while the fruit is ripening is solved with much less difficulty than if cherries, plums, apples or pears were used.

Any of the lighter breeds of chickens could easily learn to fly into an ordinary plum or cherry tree, and would play havoc while there, while most varieties of apples and pears have a habit of ripening gradually and falling one at a time. With any of these fruits, it is almost a necessity to have another lot into which the chickens can be turned while the fruit is ripening.

One caution may be given to the man who thinks of planting trees in his poultry runs. Do not plant too many trees. Shade is good for chickens in hot weather, but sunshine is a necessity. Do not have the trees so close together or so arranged that all the lot will be shaded by them at any time of the day. Be sure, especially, to give the early morning sun a chance to get in. Remember, too, the trees are liable to make a very vigorous growth if the soil is at all suitable, so care must be taken not to plant them too close together.

E. E. M.

York Co., Ont.

**GARDEN ORCHARD.**

**COLD STORAGE OF FRUIT NEAR ORCHARDS.**

Increasing attention is being given by fruit-growers throughout Australia to the advantages of cold storage for holding over fruit in good condition when market prices are unsatisfactory. It is said that the cold stores erected several years ago by the Victorian government, as an experiment in storing fruit near the orchards, have proved so useful to local growers that additional storage capacity is to be provided to meet the demand for space. The rates charged at these stores near the orchards vary from two to three cents per bushel case per week. Experience has shown that it requires a minimum storage capacity of 10,000 cases to make a cold-storage plant pay, because in the winter months the stores are empty, and the earnings during 12 to 15 weeks in the summer are required to cover expenses for the year.

**BEST TEMPERATURE FOR FRUITS IN COLD STORAGE.**

The engineer in charge of the experimental cold stores for fruit states that the best temperature for all fruits is 33 degrees F. Peaches, if kept over two or three weeks, do well in a temperature of 32 degrees. Apples ought to be graded and wrapped before being placed in the cool room, or the skin wilts. Pears do better unwrapped. Peaches should also be wrapped if they are to remain in the cool chambers for several weeks. The humidity of the atmosphere in the cool-chamber is important. It is controlled by being passed through calcium chloride before entering the chamber. This removes impurities and regulates the degree of moisture. Pears keep better in a drier atmosphere than apples, which require a fair amount of humidity. William's Bon Christien pears have been kept in perfect condition in the cool-chamber for three months, so that, under proper conditions, this, the most profitable of all pears, should carry safely to London, although this has rarely been done. Soft fruits, as cherries, plums, apricots and peaches keep well for several weeks without loss of flavor. It is found that fruit, after being taken out of the cold chamber, should be placed in a cool room, where its temperature may be gradually adjusted to that of the atmosphere.

## RENEWED GRANT FOR CO-OPERATIVE SPRAYING

The Ontario Department of Agriculture is again offering a grant to any five or more farmers or fruit-growers in the Province who will unite to form a fruit-growers' association for the proper spraying of their orchards. We understand that \$6,000 is available for the purpose. There is no restriction this year as to the kind of machinery to be bought, as it was found that last year some of the best work was done with the large pumps, operated by hand-power, such as are now used at Simcoe and St. Catharines. Following is a copy of the regulations:

## REGULATIONS AS TO CO-OPERATIVE SPRAYING.

1. A grant will be made to any five or more farmers or fruit-growers who will unite to form a fruit-growers' association for the proper spraying of their orchards.
  2. These grants will be distributed on the basis of so much per acre of efficient spraying, as determined by the inspection of the officials of this Department.
  3. At least 25 acres of fruit must be thoroughly sprayed during the proper season by each association applying for a grant.
  4. At least one acre of fruit must be sprayed on the farm of each of the parties subscribing to the above agreement.
  5. Such associations, before receiving any portion of the grant, shall satisfy an inspector of the Department of Agriculture that the above conditions have been complied with. Such inspector shall have free access to the orchards throughout the season for this purpose.
  6. Before the end of November, a short report as to the results of the spraying and general crop conditions in the acreage covered shall be sent to the Department of Agriculture, on a form provided for that purpose.
  7. No restriction as to the outfit to be purchased shall be made. It will pay to purchase the best equipment possible, as thorough work is absolutely necessary to success in spraying.
  8. On request, the Department of Agriculture will, if possible, send a man well qualified in the preparation and application of the various spray mixtures to assist in starting the work or advise as to methods.
  9. The grant will be payable on completion of the spraying season, and the receipt of a report from the inspector that the work has been carried out in accordance with above conditions.
  10. Regularly organized co-operative fruit-growers' associations will be given preference in the distribution of the grants.
  11. Where an association or member of an association has participated in the grants given during the previous year, such association or member thereof shall be entitled to receive a grant on the acreage previously taken into reckoning at only one-half the amount given to newly-organized associations.
  12. All applications for consideration must be filed with the Department of Agriculture by June 1st.
- NELSON MONTEITH,  
Minister of Agriculture,  
Toronto.

## A GOOD NAME.

Reputation tells, and will in some degree redound to the advantage of an individual, a company, or a state, even in spite of occasional shortcomings, albeit one lapse works it more injury than many months of faithful fulfillment can overcome. In a report, some weeks since, to the Department of Trade & Commerce, at Ottawa, W. A. MacKinnon, Commercial Agent in Bristol, Eng., reported that Canadian apples still held a leading place in the markets, in spite of unusual complaints as to poor quality and irregular grading. In a subsequent communication, he was pleased to report a most satisfactory and encouraging incident: A Bristolian, wishing to obtain some particularly good apples, ordered, on his advice, some boxes of Northern Spy, put up by the Mount Nemo Fruit-growers' Association, Halton Co., Ont. The fruit turned out exactly as represented, with not more than one or two damaged apples in each box. "This," adds Mr. MacKinnon, "is the sort of trade which can be extended almost without limit, so long as everything is strictly as represented, quality and packing being both maintained at the highest standard."

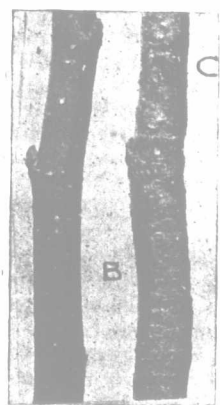
It is said that influential firms of produce distributors in the district of Leeds, England, have been on the look-out to secure the buying or selling agency of Canadian firms exporting canned fruit. The most active demand is for canned apples put up in gallon tins, but it is said that almost any fruit could find a market in supplying the demands of restaurants and other trades. Those interested should correspond with the Department of Trade and Commerce, Ottawa, Can.

## SUCCESSFUL WAR WITH ORCHARD PESTS.

## A CURE FOR APPLE AND PEAR SCAB.

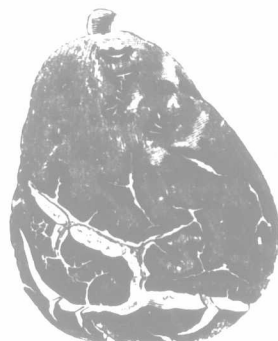
Next to the San Jose scale, there is, perhaps, no pest more terrifying to the commercial apple-grower than the apple scab, the former one of the most minute forms of insect, the latter of fungus, life. About the year 1860, when the writer first began practical orcharding, the scab was almost unknown in Ontario, and the beautiful, clean, bright samples of Fameuse and early harvest apples, and Flemish Beauty pears, were a joy to gather and pack for market. In those days, I have put up in barrels, from my own orchard, a whole carload of fall pippins without a spot, and sold them f. o. b. at Grimsby as high as \$2.50 a barrel. Alas! nowadays the above-mentioned varieties are so badly affected with scab that they are almost worthless, unless subjected to the most careful spray; while scab and codling moth, together, often destroy nearly one-half the apple crop.

In view of the evident fact that the scab is on the increase in our orchards, it is most gratifying to learn that careful investigators have found a cure. This fungus, like some others, has a winter stage, that winters on the young apple-wood, which "presents a blistered appearance, due to the presence of numerous blackish pustules of spores, which break through the bark." Our illustration, reproduced from the Gardener's Chronicle, shows at B a cutting of healthy wood, and at C a cutting of wood showing the pustules of spores breaking through the bark. These pustules are each a cushion-like mass of fungous spawn, and the young spores which escape are shown at D, with three of them germinating. This they will begin to do immediately under



Apple Twigs.

B—Healthy wood. C—Wood affected with apple scab.



Unsprayed Pear Affected with Scab.



Scab Spores.

favorable conditions, so that, in early spring and summer they are blown off the diseased wood upon the leaves and fruit, and immediately begin to affect them. I have given this account of the fungus to show how it is that our fruit-growers, who have sprayed their orchards faithfully in April or May, before the leaves appear, with the lime-sulphur wash, have, to their surprise, found their orchards afterward in a remarkably healthy condition, and free of scab.

To make sure of perfect success, however, it is well to follow the lime-sulphur spray with the Bordeaux as soon as the leaves and young fruit appear.

The remarks regarding apple scab apply so nearly to the pear scab that we need not repeat them. Our cut of a scabby pear, taken from the Gardener's Chronicle, will remind our readers of the usual appearance of the untreated Flemish Beauty pear at harvest time.

## THE POLE FOR GATHERING PRUNINGS.

To gather and burn the prunings of the winter in the orchard is a very formidable task, unless one knows how to do it. In the old days we counted ourselves wise in having a brush boat, made of 2x4 runners, twelve feet long, with cross beams, and covered with inch boards. We had movable stakes, and the load was picked up by hand and unloaded with a fork. Now, this method is antiquated. Instead, the pruner simply forks his prunings into the middle of the rows, and the man with the pole clears it. The

one used in my orchard is a young tree, cut about eighteen feet long, and perhaps four inches in diameter at the butt. The chain from the doubletrees is attached about four feet from the butt, and the man takes hold of the small end; and while one man drives the team, the former handles his pole to gather immense loads of prunings. Reaching the fire, the horses are swung around the far side in such a way as to drag the load well into it, after which the horses complete the round and pull back the pole out of its entanglement.

In this way the work, which once occupied weeks in our large orchard at Maplehurst, is now finished in a few days, and the ground cleared ready for the plow. The same method is used in clearing the prunings of the vineyard, but if the rows are too long for one trip to carry, it is necessary to begin the first well down the row.

## BLIGHT AND BLACK KNOT.

Now is the time to clear the orchard of these fungi. While we cannot explain the cause of pear blight, we notice how it spreads in early summer, if neglected, especially in a very vigorous young orchard. Cutting out and burning without delay is the safe precaution, while the tillage and manuring of the ground should be managed so as to bring about early maturity and less succulent wood.

Black knot is a fungus well understood, the spores of which fly from the winter form in early spring. A sharp look-out should be kept in the orchard of plum trees, and of Pie and Duke cherry trees, and every knot carefully cut out, and at once consumed in the fire. A few years' neglect of these precautions often proves the ruin of a fine young orchard. LINUS WOOLVERTON.

## APIARY.

## GERMAN DEMAND FOR CANADIAN HONEY.

There appears to be no reason why Canadian honey should not enjoy a larger sale on the British market than it does at the present time, writes John B. Jackson, Canadian Commercial Agent in Leeds and Hull, Eng. From such countries as Jamaica and Australia, considerable quantities of this product arrive; in fact, only recently a large consignment of 444 barrels, weighing close upon 40 tons, was imported into the above district from Chili. The largest honey buyers in Britain are undoubtedly those firms engaged in the manufacture of patent medicines, sweetmeats and confectionery goods. At the same time, however, it should also be of interest to those dealers in Canada who may be inclined to open up the trade to know that large quantities of honey are used in the lager-beer industry in Germany. Indeed, manufacturers in that country are said to be keen competitors with local buyers for the supplies that reach English ports. When imported in anything like large quantities, this commodity is generally sent in barrels holding from 1½ to 6 cwts. Canadian exporters, however, would do well to remember that, as there are so many sources of supply, it is necessary to always forward samples when submitting prices to English buyers.

## THE FARM BULLETIN.

## EQUANIMITY TOWARDS AUTOS.

Editor "The Farmer's Advocate":

We have been taking "The Farmer's Advocate" now for some little time, and I have been an interested reader of the letters about automobiles running on country roads. I think most of the correspondents are unfair and one-sided. I don't see why the automobile has not as much right on the road as any other frightsome-looking vehicle. And if people would use a little common-sense, accidents could be avoided. I have driven my horse now two years, and it is terribly frightened of one, and I have neither been thrown out or killed yet, for in every case the driver of the automobile has led my horse carefully past, for which I did not forget to thank him, as some evidently do.

Some claim that these people do not pay taxes, or help to keep up the roads in any way. Now, only yesterday, I met a Jew with a load of rags, and my horse put me in the ditch, while he grinned at the fun, and never thought of offering to help me past, and how does he help keep up our roads?

Others claim that the women and girls cannot drive out for fear of meeting these awful machines. Now, that amuses me, for ninety-nine cases out of a hundred, the class of horses women and girls drive would not frighten at anything, no matter how frightful it looked.

So I say, let the automobile come; the more there are, the sooner our horses will get used to them. I have been put in the ditch by autos, but so I have with lots of other things; but I don't blame the autos; I blame the horse, which was not properly trained in his youth, as were some of these people who want the whole road to themselves. There are dozens of other things that frighten horses just as much as the auto, only we don't hear of them so much, as people think these loads must go on the roads, so they put up with

them in silence. Hoping nothing will ever frighten me more than an auto, and wishing your paper every success.

Perth Co., Ont.

### THE LESS - FORTUNATELY CIRCUMSTANCED.

Editor "The Farmer's Advocate":

Having seen in your issue of March 26th two replies to "Farmer's Son's" letter of Feb. 27th, I am constrained to write a few words also. In the first place let me say I think both your correspondents of March 26th are unnecessarily hard on "Farmer's Son." I do not know who "Farmer's Son" is any more than does "Fidelity's Wife," but I do know I can sympathize with most of his feelings on the subject of farming. All people's experiences of farm life are not the same, the different experiences varying according to the different farms. There are good 200-acre farms and there are poor 100-acre farms. It is very true what "Farmer's Son" says, that many young people leave the farm because there's nothing there for them but a bare living, after years of hard toil. This state of affairs does not exist on every farm. There are good farms where there is time for leisure, and means not only for comforts, but luxuries. We see the children from these farms are fairly well helped by their parents. But there are also poor farms, where there is an eternal scraping and grinding for a living, and I know a number of farmers who would agree with "Farmer's Son," that there is no harder-earned dollar in Canada than the dollar earned by the farmer.

"Fidelity's Wife" says: "The pen-sketch of the farmer, robbed of all legitimate leisure for mental and physical relaxation, must be out of date, and anyone who considers well this statement knows well that this is not true of the farmer of to-day." From close observation and personal experience I know that it is true. It is not only unfair, but utterly foolish for a person to write as though what was practicable on a good farm was practicable on all farms. I wish it could be arranged that "Fidelity's Wife" and her husband could step into the shoes of any one couple out of ten I could mention off-hand; just take their work and their means to work with, and I would guarantee that at the end of a year "Fidelity's Wife" had changed her views. When you have to look ahead and see how far you can make a dollar reach, and utilize every minute in order to earn another dollar—when that is done, there is not much time for reading or other recreation. In her new home, "Fidelity's Wife" would find the daily programme was continual toil. The long winter evenings, when the farmer can read and study, exist in the imagination. But the winter evenings he spends on the return trip, after hauling wood for sale, or spends grinding his axe, mending horse collars, fixing up hames, sewing a child's boot, and many more necessary things—these are a reality, not to be avoided. It is true the work is relieved now and again by a social gathering of the neighbors, concerts and picnics, but even these must be indulged in sparingly, for they take both time and money. There are plenty of people in circumstances like these, and they are not all people of the "pint" ability either.

I imagine I can hear "Fidelity's Wife" saying, "But I wouldn't remain on a farm where I had to work death and life for a competence. My aspirations are higher than that. I would soon be on a farm where the work I did would not yield so little remuneration." In reply to this supposed answer, I may say there are people with every bit as much ability as "Fidelity's Wife" on poor farms against their will. There are different circumstances which prevent people from moving, and even if they were at liberty, the good farms are limited in number, and held at high prices.

Your correspondent also says there is no excuse why farmers should not live on the best of the land. She is either very ignorant of farming in general, or else so narrow-minded that she can't see past her own favorable lot in life. Here, again, is another instance of saying what is possible on one place must be true for all. I know farmers—not bad managers either—who are obliged to sell the best beef cattle and keep the scrubs, sell the chickens and eat the old hens; sell all the butter they can, and be very sparing on the cream they use—practicing this economy, not because they are grouches, but from sheer necessity.

When a farmer is doing his best to eke out an honest living under difficult circumstances, it is exasperating to be treated with scorn and derision by those in more favorable circumstances. The epithets sometimes thrown at farmers by city and town people are anything but flattering to the farmer, and extremely uncreditable to the latter. The city "young man" who calls a decent inquiring farmer "Hayseed," "Corn-cob," "Wayback," etc., is much more to be censured than "Farmer's Son" is for quoting what the Agricultural College Professor said; and, while on that point, let me say I cannot see why the use of that quotation proves "Farmer's Son" to be ungentlemanly. The general strain of his letter proves otherwise. The meaning I took from it was that farmers could acquire wealth, but at what a cost! I know of farmers who are on good farms, wear fur coats, drive fine horses, and appear to be prosperous; but you mustn't ask them for a cent for the Bible Society; they can't afford to give a dollar to the minister's stipend; they are too busy to take any trouble with a church picnic or Sunday School entertainment. Yet, although they are most unapproachable as regards these things, they have the cash to invest in threshing machines, mines, etc., and can also go to the concerts in the nearest town. When

we see cases like that, we are led to believe there is truth in what the Agricultural College Professor said. In justice to all, I must say there are wealthy farmers who are generous, broad-minded, whole-souled people, and who are looked up to in their community. I also know it is not giving to the church and its schemes, nor to charitable institutions, which makes a man poor, but it is very evident if he didn't give to these things he would have more for his personal use.

Although much can be said about the dull side of farming (and what occupation hasn't its dull side), yet very few farmers are blind to the pleasures of country life. I do not want to unduly condemn farm life, but I want to show that some sympathy should be felt for those who find the work somewhat disagreeable. So many good articles have appeared in your paper from time to time, Mr. Editor, about the bright side of farming, that for me to add more would be superfluous. I would like to have seen a reply from "Farmer's Son," but as none has been forthcoming, I hope you will find space for this in your paper. Farming is not an occupation by which to gain wealth. Most of us would like more time for reading and study; we would like more money with which to enjoy a good rest or excursion. As long as there is any hope left in us we will bend our energies in that direction; and if it be that we strive vainly for it, yet the labor is not altogether without reward, for there is consolation in the line:

"The rapture of pursuing is the prize the vanquished gain."  
"FARMER'S WIFE."

Renfrew Co., Ont.

### PREPARED TO RESIST AGGRESSION.

Editor "The Farmer's Advocate":

A letter by F. Elliott, in your issue of April 30th, discussing "Militarism," seems to me to be written by someone who reads his paper more closely than I, as, while claiming "The Farmer's Advocate" to be right, he makes some very strange statements. Unless he interprets his clerics as he does his Bible, he certainly deals with an unusual lot.

He wishes to take a different "tack," and asks "Who is responsible in this day of civilization, of refinement, that people must slaughter each other to settle their differences? At the risk of trespassing on your patience and very valuable space, may I answer, 'the party who thinks to find his neighbor 'unprepared,' and is not above taking him at a disadvantage.'" I suppose that if his friend "Tom Jones" calls at Mr. Elliott's house some fine day, and at the point of a weapon demands a good meal, and makes a raid on the valuables (to say nothing of the family that needs protection from the morals of a garrison town), then will friend Elliott be glad he has beaten his sword into a reaping hook? "Whatsoever ye would that men should do unto you, do ye so unto them," hangs over the door. So, while F. Elliott meekly "turns the other cheek" (?), Tom Jones will say, "Well, here is one Christian," and his sleeve won't hold his laugh. True, we do not want our "homes burned or our country swept by the besom of destruction," but pray, whose property went up in smoke in 1813, when Niagara was burned in the middle of winter? And that "tack," "who was responsible?" Perhaps, to treat our neighbors to the south "as we would," etc., we should say the lack of military-trained farmers. The former asked a very pertinent question when he asked, "Well, ye wait . . . ere ye learn how a gun is laid." If they don't want their homes burned, they must have some plan. I am thinking military-trained farmer would get a letter, and it would be:

Tommy this, and Tommy that,  
And Tommy you're a brick;  
And when I'm back of Hudson's Bay,  
Why you must do the trick.

And they quote the Bible! Truly, on the eve of His own victory He said: "My kingdom is not of this world, else would my servants fight." He recognized the spiritual, also the material kingdoms. He says, "Render unto Caesar the things that are Caesar's, and to God the things that are God's." Perhaps we might get F. Elliott to show some inconsistency between the sermon on the mount and the wrath with violence displayed against the money-changers! He quotes the apostle, "Might I ask who says, 'Be a good soldier of Jesus Christ?'" Also, "Fear God and honor the king?" Permit me to point out that one result of such teaching was a most loyal legion of Roman soldiers, known as the praying legion—a legion of chaplains, if you please.

The dreamers and faddists of the East are not so dangerous as those of the West, and while we are all opposed to militarism, the "peace-at-any-price" people will never prevent it, as there are not enough of them.

Lanark Co., Ont.

T. E. LOYALIST.

### DEATH OF RICHARD WAUGH.

Not a few of the older farmers and breeders in Eastern Canada, who have been in Manitoba and the Northwest, will remember the characteristic figure and work in agricultural journalism and upon the platform of Richard Waugh, who died last month, at the age of 78 years. A native of St. Boswell's, Scotland, he came to Winnipeg in 1882, and gave up his occupation as a builder, arrested by the agricultural enthusiasm of the West, thoroughly familiarizing himself with its methods. His modest career was a useful one, and all his efforts were in the direction of betterment, whether on the farm or in the general affairs of life.

### A WARLIKE WORLD.

Editor "The Farmer's Advocate":

Your correspondents on the subject of militarism seem to have a confused idea of this present gospel age, by mixing it up with what we generally call "The Millennium."

I was about ten years old when the "Great Exhibition" of 1851 was held. How the orators held forth of peace and unity of all nations! We boys used to sing, "There's a good time coming, if you will only wait a little longer." The exhibition closed on the 15th of October, and on the 2nd of December the streets of Paris ran with blood, through Napoleon's celebrated "Coup d'Etat." Then came the Crimean War, the Indian Mutiny, etc.; wars great and wars little, till I can count over fifty, and to-day I agree with your correspondents—Europe is an armed camp, and Japan and China are following their lead, and beating their plowshares into swords, and their pruning hooks into spears. I left England thirty-five years ago, and settled in the backwoods of Canada, because I loved the old flag, but I must confess my blood stirs at the thought of an enemy invading my adopted land. Is this wrong; or is it implanted in our nature by our Creator? In the seven-years' war, Austria, Russia, France and Saxony tried to crush Prussia; twice her capital, Berlin, was entered by the enemy; the women gave their hair, to sell it and help the king. To-day she is at the head of the German nation. All history confirms that nations go down under their vices, and make room for the virile races of the earth. I would be sorry to see military training introduced into our schools. The navvies who went to the Crimea could do twice the work of the stiff-back soldiers. It looks very pretty on parade, but was useless in the Boer war against farmers who were horsemen and good shots. Washington, with his irregulars, saved the remnant of Braddock's army when they were being shot down wholesale. Let our boys learn the use of the rifle, and we need not fear any enemy, and Canada does not want to be aggressive—she has enough and to spare.

Parry Sound.

F. C. JUDD.

### SUBSTITUTES FOR PASTURE AND HAY.

Editor "The Farmer's Advocate":

A recent meeting of the Brant Township Farmers' Club, the initial account of which appeared in "The Farmer's Advocate" of April 30th, was well attended, considering the busy seeding season, and the fact that the Horticultural Society had a meeting in town the same night. The attendance of 25 farmers gives some idea of the interest taken in the Club. Farmers are beginning to realize that they do not know it all. The more they learn the more they realize how little they know. It is the recognition of this that makes the majority of farmers of to-day so anxious for information regarding farming. Up-to-date farming has its scientific and educational phase, as well as its toiling phase. To be an up-to-date farmer requires as much headwork and judicious planning as the vocations of our town friends. Unfortunately, some farmers keep their children away from school too soon, thinking that to be able to read, write and multiply is all that is necessary for a farmer. Many a young farmer is to-day bemoaning the lack of earlier education, and the future farmer will need education even more than the one of to-day. Give the boys and the girls all the schooling they can get in the public school. They will find use for it.

The topic for the evening was "Substitutes for pasture and hay for the coming year." Many an intended hay field had to be plowed down in this locality on account of the poor catch, and how to supply this lack of hay and pasture becomes a question of utmost importance. The topic took the form of open discussion, and was opened by Mr. J. Bell, who gave his experience in raising corn for winter feeding and rape for fall pasturing, in the following manner: Corn is a splendid substitute for hay, supplying the need of bulky food. The best way for keeping large quantities is in the silo. Last year he had eight acres under corn. Corn, he says, is better planted on hills than in drills. It allows cultivation both ways, and promotes the growth of cobs, which is very desirable. The cobs contain far more and stronger nourishment than the stalks, and should therefore be encouraged. He plants corn on sod, plowing down a dressing of farm manure. For harvesting he uses a sharp, short-handled, heavy hoe, instead of a sickle. A tread-power, owned by several neighbors, supplies the cutting power. To allow the silage to settle, they change places every day. Sixteen loads can be cut in a day. The addition of water to make it damp is not necessary. If silo is square, great care should be exercised to tramp the corn down well in the corners. For fall pasture, he advocates rape sowed with drill. The seed goes further, and the rape is not so liable to be tramped down.

Mr. Jas. Coulter objected to corn as profitable food. He claimed that, considering the amount of work necessary to get a good crop, it did not pay to grow it. He believed that if we can't make a profit over and above the work we apply we had better do without it. He would feed a mixture of cut hay and straw, with chop and roots.

Mr. B. Whitehead reported favorably on alfalfa, he having taken three crops from some patch in three successive years. Cattle seem to like alfalfa pasture better than hay. High clayey soil is the best for alfalfa.

Bruce Co., Ont.

A. E. W.



## SECOND ANSWER TO A MILITARY-TRAINED FARMER.

Editor "The Farmer's Advocate":

It would be wrong of me to let this opportunity pass without some explanation. Those readers who have not seen the beginning of this correspondence might think by reading "A Military-trained Farmer's" letter, in "The Farmer's Advocate" of April 23rd, that I have been running down the good people of Nova Scotia. I am not a Nova Scotian, so I am at liberty to say that if farmers from Ontario would like to visit this Province they will, by their courteous and hearty reception, find that Nova Scotians are as fine a set of people as are to be found anywhere—intelligent, active, and go-ahead.

I have been guarded in my statements, having said nothing on my own authority about the military camps. I quoted men who live in Kentville, and who ought to know.

Mr. Military Farmer says that I am averse to quotations. Where did he get that information? In order to save the editor's space, I did ask him to read Longfellow's "Arsenal at Springfield."

With regard to that choice bit of sarcasm which says that I am "not alone in my aversion to the bearing of arms, for there are Doukhobors in Ontario who are embued with the same prejudice," I rejoice to say that I am not alone. On looking over the noble army of peace workers, I find Victor Hugo, Herbert Spencer, John Bright, John Morley, Lloyd-George, Andrew Carnegie, W. D. Howells, Cardinal Gibbons, Booker T. Washington, W. Randall Cremer, M.P., Richard Cobden, Sir David Brewster, Henri La Fontaine, Frederic Passy, Hodgson Pratt, Baroness Von Suttner, George Angell, Jean de Bloch, Hugo Grotius, Leo Tolstoy, Frederic Harrison, William Penn, Immanuel Kant, Hon. David Dudley Field, Lord Clarendon, David L. Dodge, Henry IV. of France, Channing, Burritt, Longfellow, Zola, Lowell, Whittier, Garrison, Sumner, and a host of others.

"Prejudice" is not the correct word to use in this case. Rather would we sing with Whittier:—

"Our path is plain; the war-net draws  
Round us in vain,  
While faithful to the HIGHER CAUSE  
We keep our fealty to the laws  
Through patient pain.

"The levelled gun, the battle brand  
We may not take;  
But, calmly loyal, we can stand  
And suffer with our suffering land  
For CONSCIENCE'S sake."

Mr. Military Farmer is in error when he says that almost all thinkers of the day advocate military training. Added to the above list I could mention many powerful thinkers whose names are to be found in the various Peace reports, not to mention private people, who will leave the world better than when they entered it, and who would agree with the Toronto Globe in saying that "Calisthenic exercises are certainly better for physical culture than military training. They have the greater advantage of concentrating the mind on personal improvement instead of on the killing of foreigners."

Another Ontario paper, the Weekly Sun, says:—  
"Step by step the militarists are endeavoring to win their way to their ultimate goal, which is universal military service, with a considerable standing army and an annual expenditure of not less than ten million dollars. Those who are opposed to this policy should make their stand when the proposition comes before the Legislature of this Province. If the scheme is blocked here the onward movement will be turned back; if it is not, the time will soon be within sight when the goal imperialists and jingoes are striving for will be reached."

By these extracts it will be seen that the Doukhobors are not the only people in Ontario who object to military drill in schools. The Eastern Chronicle informs us that the farmers of Pictou are dead against the new regulations for military training for the young. This is as it should be. Farmers, wake up! If we will foster the war spirit it will be a long time

"Till the war-drums throbbed no longer and the battle-flags were furled  
In the parliament of man, the federation of the world."—Tennyson.

Our military friend is fond of quoting Kipling, who has been styled the "poet laureate of brute force." Has the Military Farmer ever noticed the expression of that writer in the "Torpedo," in which he mentions the "hate that backs the hand?" Or in his "Drums of the Fore and Aft," "You must employ either blackguards or gentlemen to do butcher's work with efficiency?"

Why should we create this war spirit (which is defiance and not defence) by forcing militarism on the school children, many of whose parents object to it?

The Duke of Wellington declared that "men who have nice notions of religion have no business to be soldiers."

The numerous spires pointing skywards indicate that we profess to be Christians. If it were not so, I should have no more to say on the subject. With the money we spend on militarism we are undoing what we spend towards the propagation of the Gospel of Peace. We have too much religion and too little Christianity.

It is no wonder that Benjamin D'Israeli suggested that we "should take down the image of Christ from our altars, and raise the statue of Moloch in its place."

Do not misunderstand me by thinking that I am condemning "Tommy Atkins," but rather the men who urge him to become a soldier. True, his glory or his pay are not great, especially in the Old Country, where war veterans are found begging or passing the end of their lives in some workhouse. The "glory" usually falls on the commander, not the commanded.

If the men who make the wars—statesmen, contractors, yellow-press men, and others who have axes to grind—were to go to the front, there would be no wars. But now, as your correspondent says, "It's Tommy this and Tommy that"; but let Tommy remember the words of James Russel Lowell:—

"Ef you take a sword and drov it,  
An' go stick a feller thru,  
Guv'ment aint to answer for it,  
God'll send the bill to you."

King's Co., N. S.

EUNICE WATTS.

## CHEERING WORD FROM P. E. ISLAND.

May 12th, and work just commencing on a few of the earliest farms. This is about the same time we got to work on the land last year. We still have time to get the biggest part of the crop in in May, if the weather is fine. The clover on the new meadows is starting up beautifully. There has not been such a promising start of clover for years. There are no misses, but seems to be a good healthy plant wherever a clover seed was dropped last season. This makes the farmer smile quite broadly, as he feels almost sure of abundance of the best of stock feed for next winter. Nothing can make up for the loss of the clover crop here, as we are not in the corn belt, and, consequently, cannot depend on silage. Farmers will be encouraged to sow more clover than usual, even with the price at 25c. a pound, in hopes that they may get as good a catch again next year.

Stock has wintered well, and there is abundance of feed to last till the grass. There is a lively trade in horses this spring, and hundreds are being shipped every week to the other Maritime Provinces and Newfoundland. Prices range from \$250, for extra drafters and drivers, down to about \$150, and \$100 for express horses and horses for the coal mines. The great demand for horses is a big stimulus to horse-raising this spring, and farmers are looking round for the best stallions to breed to. There are some very fine heavy draft horses in the stud here, and they will be all well patronized this season, as will also the heavier class of blood horses. The market for beef cattle is quite brisk, and prices high; from 5c. to 5½c. for anything fair to good. But beef is scarce, and there are few cattle to export. Large quantities of oats are going forward to Maritime markets, much of which is for seed for the farmers of Nova Scotia and New Brunswick. Seed oats sell for 50c. a bushel, and commercial oats at 45c.

John Richards, of Prince County, has shipped to parties in Belleville, Ontario, a fine bunch of young Aberdeen-Angus bulls for breeding purposes. Mr. Richards has a superior herd of the black doddies, as well as a good herd of Shorthorns. He is now adding to the latter herd some of the very best specimens of milking Shorthorns he could find in his recent extended visit to Ontario. Walter Lea has been making some selections for his herd of Holsteins from the celebrated Nova Scotia herd of Logan Bros.

The Farmers' Institutes, as well as many individuals, are importing bulls—Holsteins and Ayrshires—to improve the milking quality of our dairy stock, and we look for good results to our dairy business in the near future. Very few of the dairy stations will begin business till June 1st. The prospect for good pasture is much better than at this time last year. W. S.

## STEADFAST FAITH IN THE DAIRY BUSINESS.

That Ontario dairymen have every confidence in the stability of the dairy industry is shown by reports received at the Provincial Department of Agriculture from time to time.

The producers who were short of feed during the past winter did not hesitate to expend considerable money in securing proper feed to carry their cattle through the winter in good condition. Farmers in the vicinity of one town in Eastern Ontario purchased over \$150,000 worth of hay during the past winter, one farmer paying out \$650 on hay account.

The proprietors of factories have this year made very extensive improvements in equipment. Although the bulk of cheese made during 1907 was considerably below that of preceding years, and although the patrons suffered severely in the failure of crops, the confidence of both classes as to the future of the dairy industry for this Province has not been shaken in the least.

Thirty-five instructors are now making regular visits to the factories and creameries throughout the whole of the Province. Every manufactory has been included in one or another group, and the ground is being thoroughly covered by men who have been specially trained to give instruction, not only to the makers in methods of manufacture, but also to the producers in up-to-date methods of taking care of the raw material and in delivering it to the factory in a proper condition.

While the spring has been somewhat backward, and the make of cheese up to the present time considerably below last season's output, the pastures are now in good condition in many localities, and the prospects are that the output from this on will be quite up to the average.

Department of Agriculture, Toronto, May 14, 1908.

## BUCKWHEAT AS A NURSE CROP.

Editor "The Farmer's Advocate":

Buckwheat is a crop that we hear very little about, perhaps because the straw is of no use as a fodder for stock; and then, again, on account of it being an uncertain crop. But sometimes a field of buckwheat works in nicely at the end of seeding for a grain crop, as most farmers value it for poultry, but there are other facts about buckwheat that perhaps every farmer is not aware of.

Buckwheat, sown on a field in succession, will grow a good field of oats after the ground is run out for buckwheat. The writer has had some experience in sowing clover and timothy with buckwheat, which has proved very successful. When I first heard it said buckwheat was a good nurse crop for clover or timothy I thought it nonsense, but I thought it worthy of a trial at least. Having a lot of home-grown clover seed of my own, I seeded ten acres down with buckwheat; I sowed two of clover and one of timothy, at the rate of twelve lbs. to the acre. When I came to cut the buckwheat I found I had an excellent catch of both clover and timothy. In the following year I had an excellent cut of hay on a field that I thought was too poor to grow even grass. For three years the hay was good, and not being anxious to break up the field, I left it, as there was a heavy timothy sod on it. I cut good hay the fifth year. Last year it was a failure, on account of the drouth, but I see this spring that there is a good showing for timothy again. Since my first trial I have sown out other fields with good results. The buckwheat must add something to the soil that causes the clover and timothy to grow, for, as a rule, buckwheat is sown on the poorest field on the back lot, where manure is entirely out of the question. Now, I would like to hear, through the columns of "The Farmer's Advocate," some other farmer's views regarding this subject, or anyone who might throw some light into the matter. J. E. M.  
Lanark Co., Ont.

## TOBACCO CULTURE.

The Dominion Department of Agriculture is undertaking a campaign for the improvement of Canadian tobacco. Felix Charlan, an expert from France, who for two years has been experimenting with the selection, raising and curing of tobacco in those districts of Quebec, Ontario and British Columbia adapted to its culture, will be assisted this season in Quebec by Mr. Cheveller, another expert. A man is also to be secured for Ontario. Though tobacco growing has been carried on for years, it is felt necessary by the department to ascertain the most suitable districts for certain classes of "the weed" and perfect them as far as possible. Certain districts of Quebec are peculiarly adapted for growing uniform grades of binders for cigars, and it is thought that home-grown seed may be substituted for the foreign article. The recent changes in the excise law, placing Canadian leaf on a par with the imported leaf, were made for the benefit of the grower. The new men engaged will devote their time largely to investigation and instruction, travelling among growers for that purpose.

## FAIR DATES FOR 1908.

June 18th to 20th.—Galt Horse Show, Galt, Ont.  
June 18th to 27th.—International Horse Show, Olympia, London, England.  
June 30th to July 4th.—Royal Agricultural Society's Show, at Newcastle-on-Tyne.  
June 29th to July 9th.—Dominion Exhibition, Calgary, Alta.  
July 11th to 17th.—Winnipeg Industrial Exhibition.  
July 21st to 24th.—Highland Society Show, at Aberdeen.  
Sept. 23rd and 24th.—St. Thomas Horse Show, St. Thomas, Ont.

The St. Thomas horse show will be held this year in St. Thomas, under the large covered rink, on September 23rd and 24th. The show will be larger in both classes and premiums than ever, special attention being given to the breeding classes. There is every prospect of last year's success being repeated. Officers elected for the present year are:—President, R. D. Ferguson, Port Stanley; Vice-President, O. P. Geary, St. Thomas; Secretary-Treasurer, Walter B. Kingsmill, St. Thomas.

An amendment to the Nova Scotia Motor Vehicle Act was passed at the recent session of the Legislature, authorizing cities, towns and municipalities to make regulations prohibiting the use and operation on certain days of each week of motor vehicles upon any of the public highways of such city, town or municipality, subject to the approval or modification of the Governor in Council.

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MARKETS.

TORONTO. LIVE STOCK.

The total receipts of live stock at the City and Junction markets last week were 227 carloads, composed of 3,876 cattle, 2,559 hogs, 403 sheep, 1,033 calves, and 207 horses. Taken altogether, the quality of the cattle was better than for the previous week. Trade was brisk in all classes, excepting calves and hogs. Prices for cattle were firmer. H. G. Whaley, live-stock dealer of Buffalo, bought, some three weeks ago, 900 distillery-fed cattle from John Scott, of Waterloo, at \$6.50 per cwt., to be delivered not later than the month of June. Mr. Whaley turned them over to Gordon & Ironsides at a slight advance on the first price. The highest price yet recorded for cattle on the Toronto market this year was for a choice load of steers, 1,300 lbs. each, fed by Rennie Bros., York Co., Ont., who received \$6.25 per cwt.

Receipts of cattle at the Junction on Monday, May 18th, amounted to 1,781; quality not as good; prices a little easier. Export steers, \$5.50 to \$6.12 1/2; bulls, \$4.25 to \$5.25; choice picked butchers', \$5.70 to \$5.90; loads of good, \$5.50 to \$5.70; medium, \$5.15 to \$5.40; common, \$4.75 to \$5; cows, \$3.75 to \$5; hogs, \$2 to \$3; bulls, \$4 to \$4.75; milch cows, \$35 to \$65; calves, \$3.50 to \$5 per cwt. Sheep, \$5 to \$6 per cwt.; yearling lambs, \$6.50 to \$7.50 per cwt.; spring lambs, \$4 to \$7 each. Hogs, \$6 for selects, fed and watered, \$5.75, f. o. b. cars at country points.

Exporters.—Export steers sold last week from \$5.50 to \$6.25; export bulls, \$4.25 to \$5.25.

Butchers'.—Prime picked lots of butchers' steers and heifers sold at \$5.90 to \$6.20; loads of good, \$5.60 to \$5.85; medium, \$5.25 to \$5.50; common, \$4.75 to \$5.15; cows of good to choice quality, \$4.50 to \$5.25; medium to good cows, \$4 to \$4.50; common, \$3.50 to \$3.80; canners and rough cows, \$2.50 to \$3.25.

Stockers and Feeders.—There has been a good demand for feeders and stockers, but few of good quality are being offered. Prices ranged as follows: Good steers,

1,000 to 1,100 lbs. each, at \$4.75 to \$5 per cwt.; good steers, 900 to 1,000 lbs. each, at \$4.25 to \$4.75; good steers, 800 to 900 lbs. each, at \$3.90 to \$4.25; good steers, 600 to 900 lbs. each, at \$2.25 to \$5.90; light stockers, 400 to 600 lbs. each, at \$3 to \$3.25.

Milkers and Springers.—There was a good demand for all the desirable milkers and springers. The market was active, and receipts were not large enough to fill the demand. Prices ranged from \$25 to \$60 during the week, for inferior to choice grades, with the bulk selling at \$35 to \$45.

Veal Calves.—Receipts were moderate, with prices ranging from \$3 to \$5.50 per cwt., with a few prime milk-fed veals at \$6 per cwt.

Sheep and Lambs.—Receipts light, with prices firm. Export ewes, \$4.75 to \$5.75; rams, \$4 to \$4.50 per cwt.; yearlings, \$6.75 to \$7.75 per cwt.; spring lambs, \$3.50 to \$8 each.

Hogs.—Deliveries light, and prices lower. Selects, \$6, at the market, fed and watered, and \$5.75 to \$5.85 to drovers, f. o. b. cars at country points.

Horses.—At the Union Stock-yards Horse Exchange last week over 140 horses were offered for sale, of which about 100 were sold. Among the offerings were a number or extra choice, but the majority were of the cheaper class. Intermediate horses and wagon horses are still scarce, as farmers and breeders are asking such high prices that the dealers cannot handle them at a profit. Prices ranged: For drafts, choice, \$160 to \$210; seconds, \$130 to \$165; general-purpose, \$145 to \$190; drivers and carriage horses, \$110 to \$185; a number of ponies were sold on Monday from \$35 to \$140, and two pairs of ponies, with outfits, at \$275 and \$325 each; serviceably-sound horses of all classes sold from \$25 to \$95. Northwest trade is still slack, but more horses are required yet. There is still a good fair demand for wagon horses and drivers in Toronto.

BREADSTUFFS.

Wheat.—No. 2 white winter, sellers, 96c. to 97c., outside points; No. 2 red, 96c., outside; No. 2, mixed, 95c.; Goose, 91c.; Manitoba, No. 1 Northern, \$1.19; No. 2 Northern, \$1.16; No. 3 Northern, \$1.11, Georgian Bay ports.

Rye.—No. 2 wanted at 88c.

Barley.—No. 2, 55c., holders asking 60c.

Oats.—No. 2 white, 49c. to 49 1/2c., outside; No. 2 mixed, 47c.

Peas.—No. 2, 92c. to 94c., outside.

Buckwheat.—No. 2, 64 1/2c. to 65c.

Corn.—No. 3 yellow, 75c. to 76c., Toronto.

Bran.—Car lots, in sacks, on track at Toronto, \$25.50.

Shorts.—Car lots, in sacks, on track, at Toronto, \$26.50, and scarce.

Oil-cake Meal.—\$1.70 to \$1.75 per cwt.

Flour.—Ontario, 90 per cent. patent, \$3.50 bid for export. Manitoba patent, special brands, \$6; seconds, \$5.40; strong bakers', \$5.30.

COUNTRY PRODUCE.

Butter.—Receipts becoming larger, and dealers are quoting prices 1c. per lb. lower on each grade. Creamery, pound rolls, 29c. to 30c.; separator dairy, 27c. to 28c.; store lots, 24c. to 26c.

Eggs.—Meat prices being high, eggs are being consumed in large quantities, causing prices to be firm at 17 1/2c. to 18c.

Cheese.—Market steady. Large, 14c.; twins, 14 1/2c.; new make, 12c. for large, and 12 1/2c. for twins.

Honey.—Market quiet. Extracted, 11c. to 13c.; combs, \$2.75 to \$3 per dozen for No. 1 clover.

Potatoes.—Market firm. New Brunswick Delawares, in car lots, on track at Toronto, 90c. to 98c.; Ontarios, 85c. to 90c.

Beans.—Market firm. Primes, \$1.70 to \$1.75; hand-picked, \$1.80 to \$1.85.

Hay.—Baled, in car lots, \$15 to \$15.50, on track at Toronto, and scarce.

Straw.—Baled, in car lots, on track at Toronto, \$8 to \$9.

Poultry.—Receipts light; prices firm. Turkeys, 18c. to 23c.; last year's chickens, 16c. to 18c.; fowl, 14c. to 16c.; spring chickens, 50c. to 55c. per lb.; squabs, \$2 to \$3 per dozen.

HIDES AND SKINS.

E. T. Carter & Co., 85 Front St., E., Toronto, were paying the following prices: Inspected hides, No. 1 cows and steers, 6 1/2c.; inspected hides, No. 2 cows and steers, 5 1/2c.; country hides, cured,

5c.; calf skins, city, 10c.; calf skins, country, 9c.; horse hides, No. 1, \$2.50; horse hair, per lb., 24c. to 25c.; tallow, per lb., 4 1/2c. to 5 1/2c.; sheep skins, 70c. to 80c.

TORONTO BACON MARKET.

There has been little change in prices on the Toronto market for bacon. Breakfast bacon, 13 1/2c. to 15c.; backs, 16 1/2c. to 17 1/2c.; long clear, 10 1/2c. to 11c.; hams, 13c. to 14c.; rolls, 10 1/2c.

TORONTO FRUIT MARKET.

The apple market shows a little more activity. Fancy Spies sell at \$4.50; other grades are at a discount, and sell from \$1 per bbl. upwards. Southern States strawberries are plentiful, selling from 15c. to 18c. per quart.

MONTREAL.

Live Stock.—Shipments of cattle from the port of Montreal during the week ending May 9, amounted to 1,449 head. The supply of cattle on the local market was rather larger last week; but, as the attendance of buyers was large, and their demands in proportion, prices were forced up about 1c. a lb. The tone of the market continued very firm, owing largely to the scarcity of good stock in the country. Exporters took all the suitable stock they could get their hands on at 6 1/2c. a lb. Butchers' in some cases paid as high as 6 1/2c. for choice stock; fine sold around 6c.; good, 5 1/2c. to 6c.; medium, 4 1/2c. to 5 1/2c.; common, 3 1/2c. to 4 1/2c., and inferior down to around 3c. Supplies of sheep and lambs are very limited, and, as the demand was good, prices held firm. Yearling lambs sold at 7c. to 7 1/2c., and sheep at 5 1/2c., spring lambs bringing \$3 to \$6 each, supplies of these also being rather limited. Trade in calves was fair, prices ranging from \$1.50 to \$5 each, according to quality. The offerings of hogs showed quite an increase, and, as a result, prices declined almost 1c. a lb. Deliveries were being made on previous contracts at 7c. a lb. for selects, but dealers were only paying 6 1/2c. to 6 1/2c. a lb. for current trading, weighed off cars.

Horses.—Dealers were trying to put through a few small sales last week, and meeting with considerable difficulty in doing so. The market was too high for export, and practically the only horses required are a cheap grade of farming horses. Heavy-draft, 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$225 to \$275 each; good blocks, 1,300 to 1,400 lbs., \$200 to \$225 each; express, \$150 to \$225; common plugs, \$50 to \$75, and choice saddle and carriage animals, \$300 to \$350 each.

Dressed Hogs and Provisions.—The market for dressed hogs continued practically unchanged, notwithstanding the decline in the price of live hogs. Choice fresh-killed, abattoir-dressed stock sold at 9 1/2c. a lb. Pure lard, 12 1/2c. to 13 1/2c., and compound at 8 1/2c. to 9 1/2c. Potatoes.—Stock costing \$1 per 90 lbs., carloads, on track here, with prospects of an increase. Dealers were asking 10c. advance to those carting potatoes away from the cars and demanding \$1.15 to \$1.20 bagged and delivered into store.

Eggs.—Market for eggs became very firm, owing mainly to competition between Eastern and Western buyers. Early last week purchases could not be made at less than 19c., in a wholesale way, while dealers were demanding 20c. from grocers, but later prices eased 1c. to 1c.

Maple Products.—Sale of good maple syrup, in wood, has been made at 4c. a lb., perhaps the lowest figure reported for many years. In tins, about 1c. more can be made, wholesale. Sugar, 7c. a lb. Supplies of both large.

Butter.—The market has been gradually easing off, and 25c. to 26c. represented a fair range of quotations last week. The quality is good, although some of the stock is spotted. The make is now about equal to consumption. There is no export. Very little butter has yet been bought in the country at lower prices than those mentioned above, but on Monday morning, May 18th, a decline to 22 1/2c. was recorded.

Cheese.—The market seems to have firmed up last week, some very high prices having been paid in the country. Some colored fodder cheese has been available at 11 1/2c. here, but 11 1/2c. was being asked for it. It is doubtful if

white could be had at less than 11 1/2c. to 12c., but it was not being offered on this market to any considerable extent. Apparently quite a little inquiry from the other side.

Grain.—The market for oats firm. Prices advanced 2c. per bush. Eastern Canada No. 2 white oats were quoted at 52c. to 54c. per bushel, carloads in store; No. 3, 50c. to 51c.; No. 4, 48c. to 48 1/2c., and rejected, 46 1/2c. to 47c.; Manitoba rejected being 46 1/2c. to 49c.

Flour.—Turnover of limited volume, but prices firm, owing mainly to the strong wheat market. Manitoba spring-wheat patents, \$6.10 to \$6.20, seconds being \$5.50 to \$5.70 per barrel, in bags; Ontario winter-wheat patents, \$5.10, and straight rollers, \$4.50 to \$4.75.

Feed.—Market holds steady, and demand continues active; \$23 per ton, in bags, for Manitoba bran, and \$25 for shorts; Ontario bran, \$23.50 to \$24, and shorts, \$24.50 to \$25; ground oil cake and nutted cake, \$33 to \$34 a ton, and gluten meal, \$1.50 per 100 lbs.

Hay.—No. 1 timothy scarce, and selling at \$16 to \$16.50 a ton, carloads, Montreal; No. 2 extra, \$14.50 to \$15, and No. 2, \$13 to \$13.50; clover mixture, \$12 to \$12.50, and pure clover, \$11.50 to \$12 a ton.

Seeds.—Demand for seed has been falling off a little. Prices of red clover continue at \$23.50 to \$25 a 100 lbs., alfalfa being \$21 to \$22, and timothy, \$6.25 to \$7.50.

CHEESE BOARD PRICES.

Napanee.—White sold at 11 1/2c.; 10 1/2c. offered for colored, and 11 1/2c. for white.

Brantford.—No sales. The board adjourned till May 29.

Kemptville.—Bidding, all 11c. for colored, and 11 1/2c. for white. No sales.

Picton.—11c. bid.

Belleville.—White at 11 1/2c.; colored at 10 1/2c.

Alexandria.—All white, sold at 11c.

Winchester.—Nearly all sold on the board at 11c. for white, and 10 13-16c. for colored.

London.—No sales. Bidding, 10c. to 10 1/2c.

BUFFALO.

Cattle.—Prime steers, \$6.75 to \$7.25.

Hogs.—Heavy and mixed, \$5.65 to \$5.70; Yorkers, \$5.50 to \$5.70; pigs, \$4.50 to \$5.05; dairies, \$5.40 to \$5.60.

Sheep and Lambs.—Lambs, \$5 to \$6.90; yearlings, \$6 to \$6.25; wethers, \$5.50 to \$5.75; ewes, \$5 to \$5.25; sheep, mixed, \$2 to \$5.50.

CHICAGO.

Cattle.—Steers, \$5 to \$7.25; cows, \$3.75 to \$6.25; heifers, \$3.50 to \$6.75; bulls, \$4.40 to \$5.75; stockers and feeders, \$3.25 to \$5.75.

Hogs.—Choice heavy shipping, \$5.40 to \$5.45; butchers', \$5.40 to \$5.45; packing, \$5.20 to \$5.45; bulk of sales, \$5.35 to \$5.45.

Sheep and Lambs.—Sheep, \$5 to \$6; lambs, \$6 to \$7.40; yearlings, \$5.50 to \$6.25.

BRITISH CATTLE MARKET.

London.—Cattle steady at 18c. to 18 1/2c. per pound, dressed weight; refrigerator beef is quoted at 11c. to 11 1/2c. per pound.

Where Will You Go This Summer?

If you desire rest and recreation, why not try

"The River St. Lawrence Trip?"

Folders descriptive of the Thousand Islands, Rapids, Montreal, Quebec, Murray Bay, Tadoussac, the far-famed Saguenay River, etc., on application to any Railway or Steamboat Ticket Agent.

For illustrated guide, "Niagara to the Sea," send 6c. in postage stamps to H. Foster Chaffee, A. G. P. A., Toronto, R. & O. Navigation Co.

Adam looked at his helpmeet thoughtfully.

"Well," he said, in his emphatic way, "there's certainly one honor that is indisputably yours, my dear."

"And what is that, Ad?" queried our first mother.

Adam suddenly smiled.

"Nobody can dispute the claim that you are the first lady in the land," he said.



## Life, Literature and Education.

[Contributions on all subjects of popular interest are always welcome in this Department.]

### A CANADIAN ARTIST.

Out upon Indian Road, one of the most pleasant of Toronto's suburban avenues, stands a house which, though modest and unpretentious to an extreme, is yet unusual enough, picturesque enough, artistic enough, to mark its owner as someone in some way different from the ordinary rank and file of people whom one meets every day. A peep inside, even were the place unoccupied, would confirm the opinion, for originality, personality, is expressed in every detail. There are, of course, a small dining-room and the usual chambers, etc.; but, whereas the ordinary house is cut up into a number of apartments otherwise, this one makes one great room serve the purpose of drawing-room, library, living-room—yes, and studio, for, as may readily be guessed, this is the home of an artist.

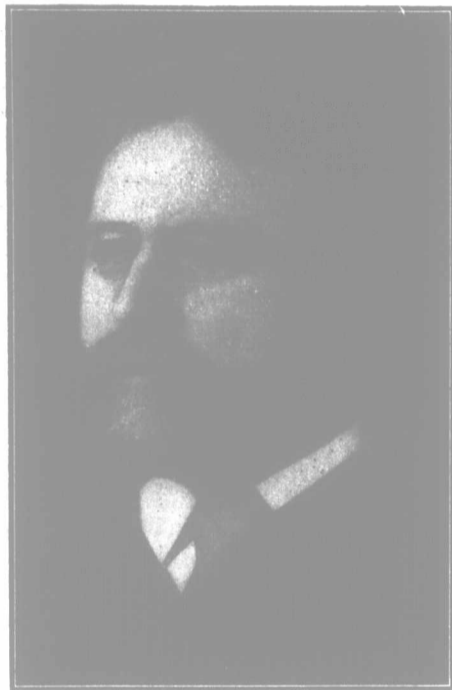
This room, for we do not leave it lightly, is unique in more ways than one. It is wonderfully spacious and airy, running up, as it does, to a beamed ceiling high above. Across one end runs a gallery, from which various apartments open, and which might remind one of the galleried castles of the Old World; at one side there is a fireplace and a charming ingle-nook; at the other a series of small-paned windows which flood the apartment with light. And yet the atmosphere is distinctly Canadian, too, with weathered oak to remind one of southern Canada, and native pine everywhere, in the ceilings, the panelled walls—everywhere that pine can be used and can reveal, through a simple stain, the attractiveness of its graining. Perhaps, as you look, a good fairy will tell you several things: that the owner of the home is a patriot, holding that the free use of our native woods may confer a dignity of its own; that he is also a man of ideas and imagination—a man who recognizes that, in building a home, it is not sufficient to cast one's self upon the mercies of a stranger, who may possibly possess utterly different tastes and ideas, but that every man's home should be an expression of himself; and, finally, that the owner of this home has been his own architect.

And so it is not surprising to find out that this home is that of a noted Canadian artist, Mr. G. A. Reid, and his clever wife, Mrs. Mary Reid, also an artist of no mean ability.

Mr. and Mrs. Reid almost invariably spend their winters here. In the summer they go away to the Catskills, where, at Tarrytown, on the Hudson, they gather rest and inspiration for the beautiful works of art with which their names, wherever heard, are associated.

Readers of "The Farmer's Advocate," even when far removed from the cities where these pictures may be seen, are not unfamiliar with the name of Mr. G. A. Reid. He has,

ere this, favored us with articles from his pen, while from time to time reproductions of his paintings have appeared in the columns of our journal. They have, moreover, another reason for being especially interested in him, for he is, in truth, one of themselves, having been born near Wingham, Ontario, where he



Mr. G. A. Reid, P. R. C. A.

grew up, attended a rural school, and occupied himself with the usual tasks which fall to the farmer's son.

He was destined, however, to do something other than till the soil. By one of those strange accidents which sometimes happen, throwing a soldier into the midst of the most



Residence of Mr. G. A. Reid, Indian Road, Toronto.

peaceful community, or a musician a thousand miles from orchestra or organ, Mr. Reid, at an early age, knew himself an artist, and although, until reaching the age of eighteen years, he had never seen an original painting, he decided to enter the Art School at Toronto.

In 1878, accordingly, he entered this institution, where, under the teaching of Mr. Robert Harris, he remained for the next four years. Going thence to Philadelphia, he studied for three years in the Academy of Fine Arts, under Thomas Eakins; and three years later he went to Europe, where, after visiting all the principal galleries, he finally settled down for a year's study in Paris, under the tuition of Benjamin Constant and Dagnan-Bouveret. During this time he won the prize of the combined academies for the painted figure.

Upon returning to Canada, he immediately took his place as one of the leading promoters of Canadian art. In 1890 he was elected to the Royal Canadian Academy, which had been founded ten years before by H. R. H. the Princess Louise and the Marquis of Lorne. Five years later he became president of the Ontario Society of Artists, and in 1906 he was made president of the Royal Canadian Academy, in which capacity he has proved a worthy successor to the three preceding presidents, Mr. O'Brien, Mr. Jacobi, and Mr. Harris.

Mr. Reid has also been identified with other art movements, and has filled, among others, the offices of president of the Canadian Society of Applied Art, secretary of the Toronto Art Museum Council, and member of the Board of the Guild of Civic Art. He has been especially interested in mural decorative work, combining figure and landscape in partially conventionalized designs, and was, in fact, the first to introduce this work into Canada, having painted the fine panels over the doorway in the entrance of the City Hall, Toronto, as an example of what may be done in this way towards the decoration of buildings.

paintings as "Tranquility," "The Aiter-glow," etc., pictures in which suggestion is rich, and which, in their half-mystery, leave something for the imagination still to follow.

Regarding the development of Canadian art, Mr. Reid is hopeful, but he recognizes—none more clearly—that art in the Dominion is still in its infancy. So far, he says, Canadian artists have been chiefly influenced by the French and English schools, but he feels that this stage will pass, and that the Canadian brush is bound to have for its ultimate end the expression of Canadian life, sentiments, and characteristics; the expression, in short, by genre pictures, and by symbolic and historical conceptions, of the idea of nationality, and the development of a country so vast as ours.

Mr. Reid's first most notable laurels were won by his scenes of farm life, the well-known "Mortgaging the Farm," "The Foreclosure of the Mortgage," "Family Prayer," etc., but of later years he has branched into a variety of subjects, both landscape and figure, and has produced many fine paintings of different character, yet bearing the unmistakable stamp of the distinctive "Reid" brush. Among these paintings may be mentioned "Dreaming," "The Berry Pickers," "Logging," "A Modern Madonna," "A Study in Green," "Iris," "Adagio," and "Spring"—a mural study of which "The Farmer's Advocate" presented to its readers a colored reproduction in the Christmas number for 1906. Many of these paintings have become well known on two continents, for Mr. Reid has frequently exhibited at the Paris Salon, and at other large exhibitions on the Continent. At the World's Fairs of Chicago and St. Louis he was among the favored few who won medals; and so highly has he been esteemed among the artists that at the Pan-American Exposition he was appointed as Canadian representative on the jury of awards.

In closing, may we urge our readers who may purpose visiting the Canadian National Exhibition of the coming autumn, to look for Mr. Reid's pictures in the Art Gallery. In the world of art, as a rule, time but ripens genius, and each year's work is likely to be better than that of the preceding.

### THE DAUGHTER'S PORTION.

As we received our April 30th number yesterday, I noticed in it the Editor's query, asking the opinion concerning the daughter's portion. Mr. M. E. B., of Elgin County, asks the question, "Are there not many who do not deserve more than board and good clothing? Now, I think if any daughter is not worthy of more than just board and clothes, there is something very wrong with her disposition, or she has had very bad early training. A girl who is needed at home, and takes an interest in the home life, as girls should, and as most of those of my acquaintance do, has no occasion to gather and sell notes—that would be all right for little boys for pocket money—nor should she have any occasion to take to sewing. I think that a daughter does her share

and helps in the home life, she has a perfect right in the home profits, unless her people are too poor to keep her. In that case, she would better go and work for somebody else. You ask the question, "Is living with a brother and his wife likely to be pleasant for an unmarried girl?" I would answer, Not in one instance out of a hundred. As a general rule, when the new wife comes into the home, she is the lady of the house, and the unmarried sister is supposed to do the drudgery, as she is depending on her brother for a home. No, no; I would never leave my daughter depending on her brother for a home. Of course, boys and girls are supposed to have more than just wages, as they are not only working for themselves; but the parents have been working for them ever since they were born. That is the ambition of all good parents, to have something for the children. But, of course, when we are dividing, we are supposed to give the boys the land property and provide a home for them, as they are supposed to provide for a wife and family; while, if the daughter marries, her husband is supposed to provide for her, and the father should give her into her husband's care with a good stock of clothes and furniture for her and her home, in accordance with his means; some stock, and some pocket-money to start with, so she will be independent for a while. But if she remains single, I think she has equal rights with the brother, and she should be left so she would not be depending on him for a home, or have to accept anybody she does not want. Of course, some poor people cannot provide for their families; in that case, I would say to the daughter, if she has not been educated to fill some of the good positions which girls can get now, to go into some respectable family and work for wages; and if the right man never comes along, she will be at least independent. All girls who help in the poultry business, or any other paying business, should have a share of the profits to do as they please with; and if they just help in the general work, they should not only have as good clothing as the father and mother can afford to give them, but they should also have some pocket money to do as they please with, to teach them how to spend money and how to economize.

I like that chatty letter from Frontenac County; it was almost like having a visit with someone from there. I think conditions are about the same here as there. Like that gentleman, I think the editorials are worth the price of the paper. I hope that lady from Nova Scotia will not have too bad an opinion of the Ontario farmer. Those that I am acquainted with do wash themselves occasionally, and there are a few bath-tubs which are not used for hens' nests or for ornament either.

I like all the editorials. It is fine to read the opinions of different people; in fact, we like the whole paper.

A MOTHER OF SONS AND DAUGHTERS.  
Hastings Co., Ont.

OUR DICTIONARY PREMIUM.

An indispensable volume in every farm home is a good dictionary of the English language. Memory is treacherous; new words are constantly coming into usage, and in correspondence nearly every week inquiry is made as to how this or that word should be spelled, or what is its meaning? Many words have several significations, and the dictionary must be taken down to settle the dispute. Then there are questions of pronunciation, technical terms, abbreviations, forms of address, phrases in foreign languages, etc., of interest to various members of the household, and especially to the young people attending school, in connection with home studies, and their correspond-

ence. The popular premiums offered by "The Farmer's Advocate and Home Magazine" to those who obtain new subscribers, have included many excellent volumes, and we have frequently been urged to include a comprehensive dictionary in the list, but the difficulty has been to find one combining the necessary merit, at a moderate cost. At last, however, we have been fortunate in securing the Chambers' Twentieth Century Dictionary, with which we feel certain our readers will be delighted as a premium. It is cloth-bound, profusely illustrated, and, although of very convenient size, owing to the superior quality of paper

The Quiet Hour.

A WONDERFUL OPPORTUNITY.

"A child's deep eyes were upon me,  
And held me as with a spell;  
But why, thought I, should I wonder  
At a sight I know so well?  
"Then I paused, for a thought crept  
O'er me,  
As I tarried with doubtful feet:  
God's holy angels are keeping watch  
O'er these children in the street."

The other day I came in feeling unusually tired after a busy day among

them every day. Just think of the wonderful opportunity that is ours—the opportunity of "receiving" the Son of God, GOD HIMSELF, in the person of any little child we meet. With that thought warm at the heart, how glad we, who are given the privilege of working especially among the children, should be. Our Lord's tenderness towards little children can hardly fail to touch one's heart. He always seems to have been so glad to press an innocent child to His loving heart. It is not only the guardian angels who are deeply interested in these wild street-children, I am very sure of that. As I lean out of the window of our little tenement, high up in the narrow street, listening to the noisy, happy children shouting down below (for city children are by no means the miserable specimens of humanity that some people love to picture them), I sometimes look up in awed, yet sweet certainty that my dear Lord is looking down on them too, that He is glad to know that I love them—these rough, dirty, affectionate little souls. The other day, when I was shut in with a lame knee, our little sitting-room was crowded with visitors—the children who had come up to see how I was—and I know that Christ made one of that contented company. I got out a pile of "Farmer's Advocates," and they studied them thoroughly, asking each other riddles from the "Children's Corner," reading jokes aloud, and completely ignoring the "Quiet Hour." If they had cared to read that, I should have thought them most unnatural, for it is not written for children.

But I have been rambling on, talking to you as though we were chatting together, forgetting that this weekly opportunity of a talk with you should be something more than a pleasant conversation. I have offered you a "wonderful opportunity," even the opportunity of receiving into your homes the Lord of the whole earth. Think how pleased Zaccheus was when our Lord looked up and said: "Zaccheus. . . . I must abide at thy house." Would you not be glad if He said that to you?—and that is exactly what He is saying: "Whoever shall receive one of such children in My Name, receiveth Me."

Yesterday I received a letter from the "Toronto Children's Fresh-Air Mission," asking me to put a short letter about their work in a May number of "The Farmer's Advocate," and the full account in the middle of June. So I am only reminding you that we are getting near the time when you may "receive"



Adagio.

From a painting by G. A. Reid, P. R. C. A.

used, contains over 1,200 pages, and bids fair to supersede all other inexpensive dictionaries. At the price, we have never seen its equal, and it certainly does credit to the old publishing house of W. R. Chambers, Limited, of London and Edinburgh. We are in a position to offer it, post-paid, as a premium to our readers who obtain two new subscribers to "The Farmer's Advocate and Home Magazine," and trust that in every neighborhood many will avail themselves of so favorable an opportunity to equip themselves with a work so useful, so excellent, and so up-to-date.

the children. I was almost too weary to read, but opened my Bible at random, hoping to find something simple and restful as a pillow for my aching head. And God was good to me, as He always is. This was the message He laid in my hand: "And He took a child, and set him in the midst of them; and when he had taken him in His arms, He said unto them. Whoever shall receive one of such children in My Name, receiveth Me; and whoever shall receive Me, receiveth not Me, but Him that sent Me." Surely a text like that is enough to glorify the most commonplace existence—for God's little children are everywhere, and we may minister to



Interior of Residence of Mr. G. A. Reid.

Christ in the person of some of His poor children. The Secretary writes:

"Some of the friends who took the children last year wrote to us saying that they would have to send the children home, because they would not eat, and they were so afraid they might get sick. The children would have been all right in a few days. The reason why they do not eat what is given them is that the sight of so much food seems to almost frighten them—at home, very often, they only have bread for breakfast, dinner and tea, and can hardly understand seeing so much. Then, too, they will not drink the milk when they see the cows, as one little fellow said, he 'could not drink the milk unless it was from a wagon, for that was where they got it at home.' And eggs, too, they hardly ever have, consequently they say they don't like them. When we ask the children how they like the country, they almost always say, 'We had all we could eat,' which shows what a marvel it is to them. If they are only let alone for a day or two, they will eat all that comes to them, but at first it seems to frighten them."

It is said that President Lincoln once found that a robin's nest, containing three little robins, had been knocked off an evergreen tree near the White House by a careless cab driver. He put the nest and nestlings back into the tree, saying: "These birds are helpless, and I'll make them happy again." Surely the King who watches in careful tenderness over every sparrow that falls to the ground, is always pleased when we try to make the smallest of His creatures happy—especially the children, who are of more value than many sparrows. Sins of omission are very apt to pile up day by day. Think of the wonderful opportunities of ministering to our Lord, in "the least of these," that we are letting slip. He has told us that these wasted opportunities will rise up to condemn us in the last day. Each one of us should be a link binding the whole creation closer to GOD, the Creator. As one of our own Canadian poets has written:

"All Life is one; this truth sublime,  
Shall permeate all realms of thought,  
And nearer bring the golden time,  
We have for ages striving sought.

"For no one can another harm,  
And himself know no pang of pain,  
Since the same omnipresent Arm,  
Doth great and small alway restrain.

"All Life is one, and I am one  
With bird and bee and flowers,  
That gladden mead and forest lawn,  
All through the lovely summer hours.

"All from a single source do spring,  
All from one Cosmic Oversoul,  
And to the self-same God they sing  
The loving, all-embracing Whole.

"Though I am one with fragile flower,  
That nestles in the silent sod,  
And singing-bird in wildwood bower,—  
Yet I am also one with God."

If there is one talent we all have in our hands which can do great things, it is surely the power of showing kindness. The other day a visitor offered me some tracts to give away, but I assured her that I was strongly of the opinion that tracts did harm rather than good, rousing people's antagonism to a religion that made its votaries meddlesome as to the private concerns of others. She did not agree with me, of course; and many of our readers will probably feel like arguing the question with me—which will be a useless waste of energy on their part. I am quite willing that they should distribute tracts, if they choose, and I shall steadily refuse to do so. But—though Christians may differ on that subject—surely we are all agreed that kindness, done from pure and lofty motive, is never wasted. Yesterday, I was busy writing this Quiet Hour when one of my dear Jewish boys came in to call on me. Do you think I was wrong, or turning from a high duty to a low one, when I left my typewriter in order to play a quiet game with him? I don't. I saw in him someone sent by my Master. As—for once—I was not pressed for time, it would have been actually unkind to have made the shy boy feel himself a bother and an interruption. I could get into touch with him in a game more quickly than in any

other way; therefore, this letter, addressed to thousands of people, seemed to me for the moment of less consequence than the warm, living fellowship with one of my neighbors. How often we repel these young souls by making them think themselves of less consequence than a bit of fancywork. How often a mother will grow steadily away from her children just because she is always "too busy" to meet them on their own ground, just because she is too absorbed in housekeeping to be interested in their games and playfellows. The other day I was calling on the mother of one of my boys, and she said: "I am afraid the room is not very tidy, but my boy has one of his friends in here. I never want my children to think that their mother thinks more of any room in the house than she does of them." That boy cares little for street games, and prefers to take his friends home with him. He is quiet and gentlemanly, a credit to his up-bringing; but such cases are sadly rare. More often the children feel themselves always in the way. Is it likely that they will grow up with a strong perception of the value of their own immortal souls, when they see that the one who loves them best on earth is utterly careless about the invisible growth that is hardening so steadily through habits into character? The mind of the age is waking up to the influence of soul on body. The connection is always there, though too often it is overlooked. For instance, one noted doctor says that he has reasons for believing that cancer has had its origin in prolonged anxiety. His opinion is backed by other medical observers. It is now generally conceded that, as Prof. Clouston writes in *British Medical Journal*: "Those predisposed to special disease find a sound and well-working mind and cortex their great protection. When disturbed in mind, they fall victims to their diathesis. I have no doubt, myself, this is the strongest of all the forces from within that preserve health and protect from disease. For the healing, as well as the prevention of disease, a sound cortex and a cheerful and buoyant mind are all-important." So the best way of keeping healthy as well as happy is to obey Christ's orders and cast all our care on Him. Then, with hearts free from anxiety, and hands ready to serve, we make life bright and beautiful; wherever we are if we value invisible realities of fellowship and personal influence—the influence of a pure and lovely soul—above the outward things which too often crowd our days over-full. I am not pleading for neglect of necessary duty, but for a correct balance. There is not time enough nor strength enough to do everything we should like to do; therefore let us choose to spend all the time possible in doing what will tell for eternity in our own souls or in the souls of others, especially in the plastic, growing souls of the young. And, as I have said, cheerful, ready kindness is a passport to fellowship in every land. No matter how busy we may be, let us never be foolish enough to fancy that we are wasting time when we are reaching out in simple fellowship to get into touch with God's other children. As someone has said: "Love is not only the greatest thing in the world, but it is the greatest power in the world to work the good of mankind." We all waste a great deal of time in hard work; as the Psalmist says, it is often "vain for you to rise up early, to sit up late, to eat the bread of sorrows"; because, while the bodily affairs are receiving such minute attention, the soul is being neglected and starved. Don't let us devote all our time to the lesser things of life—the visible things—letting slip each day the wonderful opportunities given us of soul-culture. Souls count most, in this world as in the next, and it is utter folly to spend a lifetime in scraping wealth together by unremitting attention to this absorbing pursuit, and find at last that we have to drop all we have gained, and go out into the world of realities, naked and poor. Day by day, hour by hour, a wonderful opportunity is given us of laying up treasure in a land where neither moth nor rust doth corrupt, nor thieves break through nor steal. Do you really care about this incorruptible treasure? Are you constantly letting slip this wonderful opportunity? Let us see to it that the seed of Life within our souls is not

choked with cares and riches and pleasures of this life.

"The world is too much with us: late and soon,  
Getting and spending, we lay waste  
our powers;  
We have given our hearts away—a  
sordid boon."  
HOPE.

## About the House.

### CARE OF THE TEETH.

Once in a while, after meeting with a score of examples of the wrong sort, one is constrained to ask the question: Do the farming classes, as a rule, give proper attention to cleanliness of the teeth? Or, do they, in the hurry of getting up and out with the lark in the mornings, sometimes neglect this very necessary duty? If so, time thus gained is very sorely misspent.

There are very many reasons why absolute cleanliness of the teeth is essential. In the first place, nothing is more unattractive, more repulsive one may say, than a mouthful of yellow fangs, grimed and marked with the tartar which is almost sure to collect on these neglected members. . . . In the second, preservation of the teeth and gums demands cleanliness. Particles of decayed food lodging undisturbed for days at a time in crevices from whence they are not readily dislodged during the process of eating and drinking speedily set up a microbial action, which works upon the enamel to form a tiny opening, after which the process of decay, with all its train of toothache and misery, is rapid. On the other hand, with the growth of the tartar—a hard yellow substance, deposited by evaporation of the saliva on the teeth, especially close to the gums—the gums recede, bleeding often ensues on the slightest provocation, even while cleaning the teeth, and a generally unhealthy state of the mouth is induced.

In the third place, health itself is affected by the condition of the teeth. When they are not cleaned carefully every day, bits of food, which are decayed and fairly reeking with bacteria, are continually being dislodged and swallowed. Reaching the stomach and intestines, each of these proceeds to multiply rapidly, generating a foul brood of similar bacteria, and so disorders are very likely to be set up.

Care of the teeth should begin as soon as they make their appearance. The baby mouth should be gently washed out several times a day, and the small teeth rubbed clean. As the child grows older, a "baby" brush should be used, and when older still he should be taught to clean his own teeth, and the necessity of the duty should be impressed upon him so strongly that so long as he lives he will be as willing to go without his breakfast as without cleaning his teeth.

Teeth should be thoroughly brushed, gently, yet firmly, twice a day, on getting up in the morning and immediately before going to bed at night; they should also be well rinsed by forcing quantities of water through between them after every meal.

While brushing, a rotary motion from the gums towards the edge of the teeth should be adopted; it is of little use to brush only crosswise, a process which cleans the outer surface of the teeth, but forces food particles into the interstices between them.

The use of tooth powder is, of course, to be recommended, although a few people in whose mouths there is but little tendency to the formation of tartar, find clear water sufficient. There are many good tooth powders on the market, but camphorated chalk is, perhaps, as good as any, and has the additional advantage of being cheap. It should be kept in a closely-corked bottle. . . . Once in a great while, fine table salt, rubbed through a sieve, may be used with benefit; but charcoal, which is sometimes recommended, should be used with discretion, as it is likely in time to form a dark rim around the gums. . . . Tooth pastes, Euthymol, etc., are also very useful, being antiseptic and cleansing. . . . Where the gums show symptoms of disease, a little listerine rubbed all over them every night before retiring will be found beneficial, as well as a

frequent massaging of the gums with the fingers.

All this will not take up very much time, and teeth-cleaning is not strenuous work. When one gets into the habit of giving the teeth proper attention, the time will not be missed, and it will certainly be well spent.

Finally, if you wish to have sound teeth, do not neglect visiting a reliable dentist at rather frequent intervals; once a year is not too often, if there is any weakness of the enamel and consequent tendency to decay. You can't fill your own teeth, neither can you evade the suffering which must ensue if they are not kept filled. Do not wait until the cavities are large. Have them attended to while small, and the operation will cost you less, both in money and pain.

If you prefer to make your own preparations, you may use one of the following:

1. Take prepared (ground) chalk, one pound; camphor, one to two drams. Powder the camphor; moisten it with a little spirits of wine, and mix well with the chalk.

2. Six ounces prepared chalk, one-half ounce cassia powder, one ounce orris. Mix well.

3. Powdered orris root, one ounce; Peruvian bark, one ounce; prepared chalk, one ounce; myrrh, one-half ounce.

### DRESSING FOR MATERNITY.

There are still women who, as soon as the garments usually worn begin to be uncomfortable, think they must don wrappers and stay at home. Others make a pretence at altering these ordinary garments to be "presentable" a few weeks longer; then, they, too, stay at home. But if these women only knew how comfortable and "presentable" the real maternity garments are, they would never again attempt to wear ordinary clothes during this period; and, since it takes considerable time for the figure to return to its natural proportions, these special garments are still serviceable for some time after maternity takes place.

Special patterns for maternity skirts are shown in all fashion plates; but if one is at all experienced in dressmaking, an ordinary skirt pattern may be altered to suit. The front and side gores are lengthened at the top, the center of the front being about four inches longer than the usual pattern, and the side gores are tapered to the natural waist-line, just back of the turn of the hips. The waist measure is increased from twelve to fourteen inches, and the hip measure from sixteen to eighteen inches. The back gores are not changed at all, but are fastened to a band, and finished as usual. The front fullness is regulated by a draw-string run through a casing, which is stitched by hand to the inside of the skirt. This string is tied in the center of the front gore, and is loosened as required. As greater length is required, the casing is taken off and raised sufficiently to preserve a properly-hanging skirt at the floor.

An ordinary blouse waist may be used if it has a very full front, but it must be finished at the waist and worn outside the skirt. If a lined waist is wanted, the front dart is not stitched up, but up each side of it is placed a row of ordinary eyes, through which a round elastic lace is run. Another method is to cut the lining front as usual, but do not cut out the darts; take a piece of lining the full length of the darts, and wide enough to cover the extreme edges of the dart portion. This lining is pinked about the edges, then basted over the dart portion, and stitched in double rows across to form casings about an inch apart. Through these casings, elastic is run, fastened at the end, and the other end drawn up until the waist fits neatly. The stretch of the elastic gives comfort for a time, and may be let out as needed. Many like a lining waist made on this principle, to wear instead of a corset cover, as it gives a neater appearance than the ordinary-trimmed underwaist. In finishing the bottom of the blouse-waist, it must be separate from the lining in front, and finished with a draw-string. The girdle may be of bias material, and should be cut sixteen inches longer than the ordinary belt. It may be tacked to the waist at back and sides, and the front ends, overlapping each other, are tacked under the waist. A rather nearer

finish is given by hemming both ends of the girdle; tack one end at the under-arm seam, or a little in front of it; carry the other end around the waist, fastening at center of the back and the other under-arm seam. The remaining end is carried around over the other end and hooked to a loop in the girdle. This loop will need to be changed frequently as the size of the waist increases.

All maternity gowns should be made of soft, rather light-weight material of inconspicuous coloring, brown and dark blues being, perhaps, the favorite colors, and cashmere, voile, albatross, etc., the favorite materials.

The underwear should be specially made also. The petticoats are cut much as the outside skirts are, but instead of allowing the extra length at the top, the petticoat is lengthened by lowering the flounce. To make this more convenient, it is well to use buttons and button-holes to attach the flounce to the skirt across the front. The back of the flounce will not need changing, and so may be firmly attached to the skirt. The drawers are made with tucks laid across the abdomen, and if tight are worn, they may be enlarged by little yokes across the fronts. If you do not feel like buying the regular maternity corsets, take an ordinary pair, cut off the front and back steels, and insert bias strips, 1 1/2 to 2 inches wide. If more room is needed, insert a similar piece under the arm on each side, and remove all stiff steels. Use only elastic laces, and be sure they are never drawn tight. Sometimes it is well to wear a little padding across the bust, if the top of the front steel troubles one.

For house wear, dressing sacks, with maternity skirts, or Empire gowns, are most desirable. The large, rather loose aprons, so frequently shown (not the Mother Hubbard), are more satisfactory than the neater-fitting ones; but for washing, baking or washing dishes, an oilcloth apron, cut like those worn by grocers and butchers, is very handy, as it can be slipped off in a moment.

For outdoor wear, the long, loose coats are most desirable, and as they are made in every weight of material, from fur-lined broadcloth to silk-lined lace, surely there can be no trouble in finding a suitable wrap. But be very sure that it is roomy enough to hang with some degree of grace, even at the most advanced period. Nothing makes one quite so conspicuous as a tight coat.

Middlesex Co., Ont. MRS. R. J.

### Current Events.

On Thursday, May 7th, the Emperor Francis Joseph of Austria celebrated the diamond jubilee (sixty years) of his reign as Emperor of Austria-Hungary.

Of a total of 204,157 immigrants arriving in Canada during the last fiscal year, 38,323 were children under twelve years of age.

A city of tents, upon the Plains of Abraham, has been planned for the accommodation of visitors to Quebec during the Tercentenary, as it is expected that the hotels will be entirely inadequate to accommodate the crowds.

The City of Toronto has signed a contract with the Hydro-Electric Power Commission for a supply of electric current from Niagara Falls.

After a very exciting contest, Winston Spencer Churchill has been elected to represent the City of Dundee in the House of Commons, and is now qualified to take his seat as President of the Board of Trade.

The strike of the C. P. R. freight-handlers, at Owen Sound, which threatened to become serious, has been settled by mutual concessions on the part of the strikers and the company.

A loss of nearly 10,000 lives was caused by a tidal wave at Hankow.

China, recently. A wall of water twenty-six feet in height swept down the Yang-tse-Kiang, without warning, overwhelming thousands of junks and small boats, and wrecking some large river steamers.

### "THE FARMER'S ADVOCATE" FASHIONS.



5953 Misses' Coat.

6695 Misses' Straight Plaited Skirt.

The above patterns will be sent to any subscriber at the very low price of ten cents per pattern. Be careful to give Correct Number and Size of Patterns Wanted. When the Pattern is Bust Measure, you need only mark 32, 34, 36, or whatever it may be. When Waist Measure, 22, 24, 26, or whatever it may be. When Misses' or Child's pattern, write only the figure representing the age. Allow from one to two weeks in which to fill order, and where two numbers appear, as for waist and skirt, enclose ten cents for each number. If only one number appears, ten cents will be sufficient.

Address: "Fashion Department," "The Farmer's Advocate," London, Ont.

### FARMERS' AND WOMEN'S INSTITUTE MEETINGS.

The announcements are out for the summer series of Women's Institute meetings in Ontario, and a special series of Farmers' and Women's Institutes in Northern Ontario, 372 of the former and 137 of the latter. For the women's branch of this great educational campaign, there is a staff of thirty trained speakers, and the programme of subjects covers almost every phase of domestic work and home life on the farm. A special feature of these meetings will be the distribution of a leaflet to those present, containing recipes for the cooking of cereals and the preparation of milk, eggs and cheese dishes, compiled under the direction of Miss U. M. Watson, of the Macdonald Institute, at Guelph. A number of the speakers will also give demonstrations in the preparation of various dishes. The dates range from the latter part of May till the middle of July, and cover seventeen discussions. Our readers are strongly advised to be on the lookout for dates, which are all announced locally, or may be had in leaflet form from the Superintendent, Geo. A. Putnam, Parliament Buildings, Toronto, who is to be congratulated upon the splendid programme arranged.

It is with youth as with plants, from the first fruits they bear we learn what may be expected in the future—Phenolphorus.

## The Ingle Nook.

Dipping into my topic drawer this afternoon, wondering whether I should, like little Jack Horner, pull out a plum, or just a little old dried-up currant, I drew a slip upon which were two headings, suggestions, rather: (1) "Just 'going at' things"; (2) A quotation from Ruskin, "In the main we require from buildings as from men two kinds of goodness, first the doing their practical duty well; then that they be graceful and pleasing in doing it; which last is another form of duty."

It was scarcely incongruous that these should appear on the same slip, for both refer to one thing, duty.

Is it not often a duty just to "go at" things? Perhaps you have been for days and days feeling that a certain thing should be done; but it has seemed hard, and so you have put it off again and again, until, one day, out of sheer desire to be done with it, you have set to work and got it out of the way.

And, then, it was that the surprise came to you. The task was not half the awful thing you had imagined it to be,—or if just as hard, it was at least interesting, and you found a real pleasure in the consciousness of overcoming its difficulty. There is always satisfaction in doing hard things, in feeling that one is really mounting step by step to heights that seemed almost impossible, and that in so doing one is learning valuable lessons which can never be forgotten.

The greatest tendency to procrastinate is, perhaps, in regard to things which are not absolutely necessary to our bread-and-butter, or the raiment wherewithal we shall be clothed, but which, nevertheless, could we see things in their true proportion, might appear much the more important. For instance, there may be an invalid whom you should visit, or a letter you should write to one whom you know to be lonely. You intend carrying out these duties, but day by day you put off doing so, and thus the weeks pass, and the months. Then one day you find that the invalid has passed away, and the lonely one tells you what a letter from you might have meant had it come in the right time. Then, for you, there are only regrets—when it is too late.

Or, perhaps, there are books which you feel you should read, or music you should practice. There are spare moments that you might devote to these, but you dawdle them away, week in week out, month in month out, year in year out. You have neglected the development of your mind, until it has become a comparatively empty thing; for want of use, it may even have become seemingly incapable either of concentration or of penetrant, effectual thought; or, on the other hand, by the neglect of the music you have forgone an opportunity of endless pleasure to yourself and your friends.

Ah! when you think of it, how many sins of omission we must all plead guilty to, simply for the want of a little backbone in just getting up and going at things. . . . However, there is one grain of consolation: "It is never too late to learn." This is no mere maxim, but an absolute truth, as evidenced by scores of examples. I think I have told you of the old man in this city who began the study of botany at the age of fifty-three, and is now one of the most enthusiastic botanists in the country. I can think of many other examples—of one woman who began taking painting lessons, and another music lessons at sixty; of the great English novelist, De Morgan, who wrote his first novel, "Joseph Vance," at sixty-seven; of many others. Of course, we cannot all take lessons, nor write novels, yet we can all read, and think, and so improve ourselves, perhaps, beyond our wildest dreams.

In regard to the second text, I shall have little to say. It surely explains itself. Many of you, I suppose, are building new homes this summer, and how interested you are in them, to be sure, how anxious that they shall serve their purpose well, and be as beautiful as circumstances permit. I can just wish for you that they shall be as comfortable, hygienic, graceful and simple as country houses should be, not mere town edifices set down in the country and ap-

pearing from every aspect foreign to it. And when they are all finished, and you have proved how well they are doing their duty, and how "pleasing in the doing of it," I trust you will write all about any extra good wrinkles for our little help-one-another society—the Ingle Nook.

Last of all, if you have no new house, I trust you have, this year, if never before, planted a few flowers and shrubs, and perhaps a vine, to give you delight all through the hot summer. These fairy growing things are the most beautiful things we can have, and they cost so very, very little. D. D.

### OUR SCRAP BAG.

In ironing the pleat of the back of a shirtwaist, on which the tiny buttons are sewed, try laying on flannel or a Turkish towel as you do embroidery. The buttons sink in, and the material is ironed.

A very easily-made icing: Mix plain icing sugar with butter, adding a little orange juice and grated orange peel to flavor. Spread on the cake when it is thoroughly cold.

Be sure to keep two or three small five-cent scrubbing brushes in your kitchen. They are invaluable for cleaning vegetables, glassware, tea-stains about cup handles, etc.

A writer in a popular magazine extols the value of Swiss chard as a vegetable. "The long, smooth stalks," she says, "were stripped of their outer part, consisting of a lettuce-like leaf, and these stalks were cooked exactly as asparagus, only not so long. Another time it was cooked and dressed like spinach, and was most appetizing."

A housewife who knows how to economize strength says she does a good share of her ironing with a clothes wringer. She takes all sheets, pillow-cases, towels, etc., while still damp, folds them straight, and puts them through, then hangs them where they will dry thoroughly.

Try oil-cloth or waterproof aprons, with bibs, for kitchen use. They save laundry work, as they can be cleaned by rubbing with a wet cloth.

Cook green vegetables, potatoes, carrots, parsnips, onions, etc., in hard salted water. Dried peas and beans should be cooked in clean rain water, caught as it falls from the clouds (not the drippings off a roof), or in hard water to which a little soda has been added.

Horse radish may be quickly made ready for use by running it several times through a meat grinder.

### Sore Mouth.

A member of our family has, for over two years, been badly afflicted at short intervals with nursing sore mouth, so as to almost entirely prevent the taking of nourishment. She has tried many remedies without effect. Could you or any of your readers kindly give a cure for this trouble? SUBSCRIBER.

We should say to consult a good physician at once in regard to this matter.

### Helponabit on "Success."

Dear Dame Durden and Ingle Nookers,—I have enjoyed the Literary department of our magazine this winter very much, and have been very much interested in the "essays on success." A short time ago I received a paper from a friend in the States. On opening it, the first thing I noticed was the heading of an article, "To Be Loved and Respected is Success." This, to me, was the most satisfactory answer to the question. The article was written by Ella Wheeler Wilcox. I always enjoy her writings and poems, so I knew it would be worth reading. She says, "Money success will never recompense wife and children for a cross, fault-finding, unamiable man. . . . However successful a business a man may be carrying on, unless his footstep is the most welcome sound to those near to him, unless his homecoming means happiness for the family, he is a miserable failure. If a woman is a social queen, or the belle of the neighborhood, she is a failure as a woman if she is not the joy and light of the home. If husband and children, parents, brothers and sisters cannot look to her for sympathy in trouble, for loving, unselfish thoughtfulness in the home, she is

**CROPS A FAILURE. CYCLONES IN THE SOUTH.  
TERRIBLE DISASTERS AT SEA.  
BLINDING SNOWSTORMS IN ENGLAND.  
SCANDALS IN HIGH LIFE.  
FINANCIAL PANIC THAT DISTURBS THE  
WHOLE WORLD.  
CRIME RAMPANT. SUICIDE ON THE INCREASE.  
INSANITY PREVALENT.  
IMMENSE LOSSES BY FIRES AND FAILURES.  
WARS AND RUMORS OF WAR.**

The above are only a few of the many ways in which the attention of the public is called to the general news of the world to-day, but **SICKNESS, PAIN, SUFFERING, DEATH**, what of them? **THE PEOPLE CRY: WHAT SHALL WE DO? WHERE SHALL WE LOOK FOR HELP?** In answer, we say we know of your affliction, and hasten to inform you that **RELIEF IS AT HAND**, and it is your fault if you do not secure it at once.

Coon's Invention De Marvel and Coon's Wonder-Marvel Treatment **STOPS THE PAIN IN FIVE MINUTES** in many cases.

Relieves Suffering, Cures Deep-seated Disease, and Brings Relief to persons who have suffered from **RHEUMATISM, NEURALGIA, LUMBAGO, KIDNEY, LIVER and HEART DISEASE, BRONCHITIS, STIFF JOINTS, CONSTIPATION, INDIGESTION and CHRONIC DISEASES** generally, and who say they can't praise it too highly.

Among others writing of Coon's Invention De Marvel and Wonder-Marvel Treatment, The Latest Great Discovery, we offer the following:

Mrs. Veta Smart, of Bangor, Maine, who was suffering from catarrh, heart trouble and a complication of diseases, says: "I have only used it a short time, but I cannot praise it enough. It is all you claim for it. I cannot begin to tell you what relief your treatment has given me." N. R. Streter, of Rochester, N. Y., a prominent business man and manufacturer, says: "I have been a chronic sufferer from what is called 'Crick in the Back' (LUMBAGO) for the past fifty years. Sometimes they come on so sudden that I can hardly get to my room without help. Recently I felt the trouble coming on, and your 'Invention De Marvel' was recommended to me. I only used it four or five times. I am all right. Many times I have had to have a doctor, and be laid up for ten days. I believe your Invention De Marvel will prove a great boon to suffering humanity."

Prominent physicians and surgeons also endorse it. Are you sick, suffering from pain or affliction in any way? Write us at once for full particulars.

**COON'S DE MARVEL CO., LIMITED,  
SUITE 204. TORONTO, CANADA.**



Children like Bread made from

**PURITY FLOUR**

Give them all they can eat—makes 'em healthy and strong.

715

**WESTERN CANADA FLOUR MILLS CO., LIMITED**  
MILLS AT WINNIPEG, GODERICH AND BRANDON.



**Strong Reliable Guns, Cheap!**  
Single, \$3.00 to \$10.00; Double, \$6.50 to \$75.00.



Money refunded if not satisfactory. Repairs promptly executed. Write us if you want information concerning your gun.

**WARREN & ELLIS, 302 YONGE ST., TORONTO.**  
Toronto's Leading Sporting Goods Store.

**LADIES' SUITS, \$7.50 to \$18.**—Tailored to order. Beautiful voile skirts, \$5 to \$9. New silk coats, \$5 to \$10. Nice cloth skirts, \$2 to \$6. New waists in lawn and silk, 50c. to \$4. Wash jumper suits, \$2.25. Lustré jumper suits, \$4.75. Silk jumper suits, \$12. Linnen suits (coat and skirt) \$4 and up. Send to-day for the sample materials and style book. They are Free. **Southcott Suit Co., London, Ont.**

PLEASE MENTION THIS PAPER.

#### Study at Home.

We give instruction by mail in Bookkeeping, Shorthand, Arithmetic, Commercial Law, Business Correspondence, Teachers' Certificates, Matriculation, Beginner's Course, Agricultural Subjects, Steam Engineering, Mechanical Drawing, Civil Service, etc. Ask for what you need. **Canadian Correspondence College, Ltd., Dept. E. 919 Toronto, Canada**

a failure in the home, no matter what laurels she may wear for the world." I have given you some idea of the article. So it is in the power of every man and woman, every boy and girl, to be "successful." To be loved and respected by those who associate with you daily, that means success. I saw a sentence that set me thinking. It was a long time ago, and since then I have acted as far as possible on the suggestion. "Don't try to please, but give pleasure." Now, Nookers, I wish you all a very pleasant and prosperous summer, and let us all aim to be successful women. "To be loved and respected is success."  
York Co., Ont. — **HELPOXABIT.**

#### Maple Sap Vinegar.

Dear Sir—Mrs. I. L. H., of Carleton Place, asks how to make sap vinegar. This is the way we make ours, and think it the best of all vinegars: Boil sap until a little sweet, then put in a keg with a little old cider vinegar, or other good vinegar, and set out in a sunny place all summer, or until sour enough.  
Brant Co., Ont. — **MISS M. D.**

#### Cure for Rheumatism.

I wish some of my friends in "The Farmer's Advocate" would prescribe a cure for rheumatism in my finger joints. They are getting worse all the time, and sometimes pain me so badly. I will be more than pleased to hear of some help from you.  
**MRS. S. D. W.**

Rheumatism is a rather difficult disease to combat. A doctor told me not long ago that he found the best remedy to be to drink a great deal of distilled water every day. The still can be bought for about \$10, and placed on the stove to boil. The steam condenses to form the distilled water, which is afterwards cooled by being set on ice. A rheumatic person should live in a dry, sunny house, and should wear woollen under-clothing all the year round, thick, knitted garments in winter, and a finer weave in summer.

#### With the Flowers.

##### PLANTING TREES AND SHRUBS.

Trees and shrubs may be set out either in spring before growth begins, or in fall. The former is, perhaps, the better season, since it gives the young growth time to establish itself before the rigors of winter set in. When transplanted from woods or swamps, great care should be taken that the roots are not permitted to dry out, a mistake which might be fatal. When obtained from the nursery, they are usually packed in damp moss, which should be thoroughly wet, and kept so, until the trees are set out. If necessary, because of quantity, to keep any of them for a time before planting, the best plan is to set them in a trench and fill them in with moist earth.

When setting out shrubs or trees, it is necessary to remember that the roots should never be cramped. First dig a hole broad enough to spread the roots out as though growing in the soil, and from three to four feet in depth. At the bottom of this pit, place a bushel of well-rotted manure mixed with good soil, place a layer of rich earth over this, to prevent direct contact of the rootlets with the manure, then set the tree, treading the soil down gently but firmly as it is packed over the roots. If the ground is very dry, water it well, but in any case spread a mulch of manure, straw, leaves, or even dry, pulverized earth over the surface to keep the moisture from evaporating. If the position be exposed, it may be necessary to stake the tree to prevent its being too much disturbed by winds.

Early flowering shrubs should be pruned when in need of the operation, which in the case of most varieties will be seldom after the blooming season has passed. Late-flowering varieties, such as the hydrangea, will require later pruning, say in January or February, when roses may be trimmed off a little in March, and evergreens in May. When pruning, remember that three-fifths are to be retained. Do not cut dead wood, or cut away any of the young shoots, or induce a new growth, which flower clusters may be produced.

Much harm is often done to flowering shrubs by the knife of inexperienced amateurs, who, by ruthless trimming off in spring, cut away hundreds of flower-bearing shoots.

When pruning branches away, always cut close to the trunk, and paint the scar. Never leave a stub, which is almost sure to rot, besides being a disfigurement to the tree.

Vines should be planted in the same way, in a deep bed, worked up and made rich with old, well-rotted manure.

#### PROTECT NATIVE PLANTS.

Every suburban ramble forces the discovery of evidences, and often actual manifestations, of the wanton destruction of native flowering plants. Sometimes the stroller is merely oppressed with evidences of the diminution of floral growth in places where familiar flowers have been successfully sought for years with every recurring season. Sometimes a highly-prized and admired specimen entirely disappears from a favorite haunt, and must be sought at a greater distance. The distressing evidences of slow destruction are occasionally accentuated by the sight of thoughtless children, and even adults, with hands and arms full of flowers gathered only to be carried a few yards and discarded. Some of the flowers collected are annuals, and their destruction destroys all chance of another season's yield.

Moral suasion should be used on all possible occasions, and it might be well to strengthen its influence by an appeal to official authority. The Boston Society of Natural History has done a good work in organizing societies for the protection of native plants, and these have promoted restrictive legislation in several States of the Union. Some such action might be undertaken with success in Ontario. The public discussion of a repressive measure, even if it did not result in the passing of an act, would call public attention to an evil that results largely from thoughtlessness, and might, to a great extent, be corrected. Our native wild flowers are worth a serious effort on the part of all who value their preservation. With the inculcation of a desire to know them, and a spirit of admiration for their many charms, there should be an active effort to impress the need of abstaining from the acts of wanton destruction now too often apparent.

#### LADYBIRD BEETLES.

An "Oxford County Friend" sends some beetles, which she has found from time to time on her drawing-room and bedroom windows, and which she fears might be Buffalo beetles. They are, she will be relieved to know, specimens of the Two-spotted Ladybird beetles, our useful friends, which, in both larval and adult stages, destroy large numbers of plant lice, and other injurious insects. The Buffalo beetles are not a tenth of the size, and are black with a brick-red mark down the middle of the back, while these are orange-red with a round black spot on each side. The grubs of the former, which do the damage to fabrics of various kinds, are much larger than the adults; long, hairy, black creatures; it is a surprise to find that they turn into such small beetles. The presence of the Ladybird beetles does not indicate, as our correspondent fears, that the "Buffaloes" are at work in her house, they have probably been brought in on flowers, and have flown to the windows in their effort to escape.

**C. J. S. BETHUNE.**

O. A. College, Guelph.

#### WORTH THE CANDLE.

I counted up the other day  
The penalties of loving,  
Anxieties and fears it brought,  
The closest heart to ache it taught,  
All love means suffering—I thought  
That hardly needed proving.

But then upon the other hand,  
There's this to say about it—  
The world is often worth the strife,  
Some tears can rank above a smile—  
And though Love may not be worth  
The while.

—H. Pearl Humphrey.

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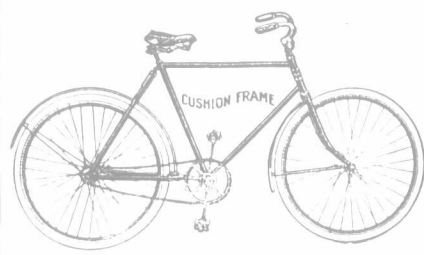
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**The  
FARMER'S  
FRIEND**

Squire Watkins, of York County, remarked the other day that his conscience bothered him a little when he thought of the way "we went for those bicycle fellows a few years ago." "Now," he added, "I consider the bicycle the farmer's best friend—I wouldn't be without one—it saves the horses a mighty heap of work."



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Cleveland,  
Massey Silver Ribbon,  
Perfect.**

Wheels built for work and comfort. Made in Cushion and Rigid Frame Models.

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WEST TORONTO.  
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FOR SALE EVERYWHERE.

SECURE ONE OF OUR PREMIUMS.

**The Young People's  
Department.**

[All letters for Young People's Department must be addressed to Cousin Dorothy, 52 Victor Ave., Toronto.]

**SOMETHING QUEER ABOUT IT.**

Last week Jim cum back from Richmond; he brung de news dat he didn't see nary horse nor mule de whole orn-jurin time he were dar. He say as how all de carrigis un buggies un things jes nachully go long by deyself. Dey tell im de rich folks puts excentrixty in um, un dat meck um go. He never know zackly what dat is, but he say he sho tis sup'n awful curisum. But what heat all wuz, one of dem critters dey call de ortomobilius. Dey skyr you so, dey keep you bilious all de time, un dat give um de name. Law! chile, you pintly ought to hear Jim's speunce uv dat thing. He say it cut mo capers un a Texas mule; it start off un den stop, den pear to start again, un back; den shoot ahade un tar along wuss'n a wile bull, un fus thing you know, it done whirl clean roun un flop over in de ditch. He low evybody gits outin de way uv um, caze dey know dat dey sest uv a evil sperit. Even de folks dat rides in um is kinder tetched in de min; dey sets up wid dey faces red un dirty, dey eyes shot tight, a holdin' dey bref, un dey hyar a flyin evy which a way. I alows hyur dat de devul un money is in jes sich things as dese.—From "Dem Good ole Times."

**CORRESPONDENCE.**

Dear Cousin Dorothy.—This is my first letter to the Young People's Department; but I can say it is very interesting to me, indeed. I was just thinking "Fay" was like me about making pie crust; they never like my pie crust. But I can make cakes that seem to tickle their palates.

I wonder if you could give me a little information concerning stenography:

1. Would you advise anyone to learn at a business college or a regular Shorthand school?

2. Is the Boyds' Shorthand School, at Toronto, to be recommended?

3. Is it very hard to learn, and what kind of an education would one need?

Thanking you and hoping the Young People's Department may ever be a success.

HAZEL.

1. There is probably very little difference. Both shorthand and business colleges provide a six-months' course in as many or as few subjects as one wishes to learn. A stenographer would probably need only shorthand and typewriting. A bookkeeper would require a course in bookkeeping besides. These colleges also act as agencies in providing situations for their students.

2. I do not know. Clark's Canadian Shorthand College, Church and Carlton Streets, has been highly recommended to me. Write to any school for its references.

3. A knowledge of spelling and grammar are the only essentials for an ordinary stenographer. Anyone who is quick at learning can master shorthand with the help of a book; but that is, of course, much more difficult than learning it at a school.

C. D.

Dear Cousin Dorothy,—I have been a constant reader of the Young People's Department ever since it started, and enjoy it very much, but it would be more interesting to the older ones if more of them would write, I think, although the younger ones do real well. I just stopped school last midsummer, and, of course, am now learning housekeeping. It is very interesting, especially the cooking, as I think it is the most important part. My pie crust is similar to that of Fay's. I usually get it good and hard, but I hope we will both prosper better with Cousin Dorothy's recipe. I am the oldest of the family, and have only one baby sister, so I am not responsible for many of the younger one's clothes. I hope Cousin Dorothy thinks my first letter is interesting enough to let it escape the W.-P. B. If so, I may come again. I should like to correspond with "Fay," if she is willing.

THE LILY OF THE VALLEY.

**CONTENTMENT.**

Once on a time an old red hen  
Went strutting 'round with pompous  
clucks,  
For she had little babies ten.

A part of which were tiny ducks.  
"Tis very rare that hens," said she,  
"Have baby ducks as well as chicks,  
But I possess, as you can see,  
Of chickens four and ducklings six!"

A season later, this old hen  
Appeared, still cackling of her luck,  
For though she boasted babies ten,  
No one among them was a duck!  
"Tis well," she murmured, brooding  
o'er  
The little chicks of fleecy down—  
"My babies now will stay ashore,  
And, consequently, cannot drown!"

The following Spring the old red hen  
Clucked just as proudly as of yore—  
But lo! her babies were ducklings ten,  
Instead of chickens, as before!  
"Tis better," said the old red hen,  
As she surveyed her waddling brood;  
"A little water now and then  
Will surely do my darlings good!"

But oh! alas, how very sad!  
When gentle Spring rolled round again,  
The eggs eventuated bad,  
And childless was the old red hen!  
Yet patiently she bore her woe,  
And still she wore a cheerful air,  
And said: "Tis best these things are so,  
For babies are such dreadful care!"

I half suspect that many men,  
And many, many women, too,  
Could learn a lesson from the hen,  
With foliage of vermilion hue;  
She ne'er presumed to take offence  
At any fate that might befall,  
But meekly bowed to Providence—  
She was contented—that was all!

**THE FIRST STOVE.**

The most important uses of fire were taught by fire itself. As the primitive man stood near the flames of the burning tree and felt their pleasant glow, he learned that fire may add to bodily comfort; and when the flames swept through a forest and overtook a deer, and baked it, he learned that fire might be used to improve the quality of his food. The hint was not lost. He took a burning torch to his cave, or hut, and kindled him a fire on his floor of earth. His dwelling filled with smoke, but he could endure the discomfort for the sake of the fire's warmth, and for the sake of the toothsome of the cooked meats. After a time a hole was made in the roof of the hut, and through this hole the smoke passed out. Here was the first stove. The primitive stove was the entire house; the floor was the fireplace, and the hole in the roof was the chimney. The word "stove" originally meant "a heated room." So that if we should say that at first people lived in their stoves, we would say that which is literally true.—Selected.

Lord Beaconsfield's motto: "What has been done can be done again."

**NEVER DID SO AGAIN.**

A prominent lawyer in the States says that fifteen years ago he had never given the matter of cruelty much thought. He had gone through his young farm life thrashing his horse whenever he saw fit. He had quite a fine horse that, when plowing, would once in a while turn round; finally, he took a club and gave the horse quite a beating. At length, he took up a large rock, weighing about three pounds, started again in the furrow, and said if the horse turned round again, he would throw it. He did so, and knocked out the horse's eye. He was so shocked at his cruelty that he went to the house and cried. His father and mother also cried over the terrible injury the horse had received. From that day he has never done a cruel thing to man, child, or beast.

**NOT A MERE MAN.**

A well-known captain of one of the Hamburg-American liners, while on a recent visit to New York, was talking of pride of birth, and he told this anecdote.

**Baby's  
Own Soap**  
Best for Baby, best for you.  
Avoid substitutes.  
Albert Soaps Ltd. Mfrs., Montreal.  
Try "Albert"  
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PEDALS  
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You don't want an organ that can be ruined by mice getting inside and gnawing holes through the bellows; therefore select a

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Mice cannot eat through the nickel frames and heel-guards which protect our pedals. Our pedals also have improved hinges with special bent staple, which prevents pedals from working loose.

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A DOWN DRAFT  
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Heavy cast-iron base and ash pit—large ash pan—heavy triangular grate bars, insuring a fine clean fire—fire-pot made in two sections, heavily ribbed and so arranged that it will not crack—heating dome made of heavy corrugated cast iron, guaranteed never to burn out.

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Burns hard or soft coal or wood—all the heat is extracted from the fuel and leaves very few cinders—less ashes than any other furnace. Destroys the impurities in the fuel air and discharges a sweet, warm air. Heats whole house to an even temperature. This means healthy surroundings and less doctor's bills. Estimates or catalogues sent.

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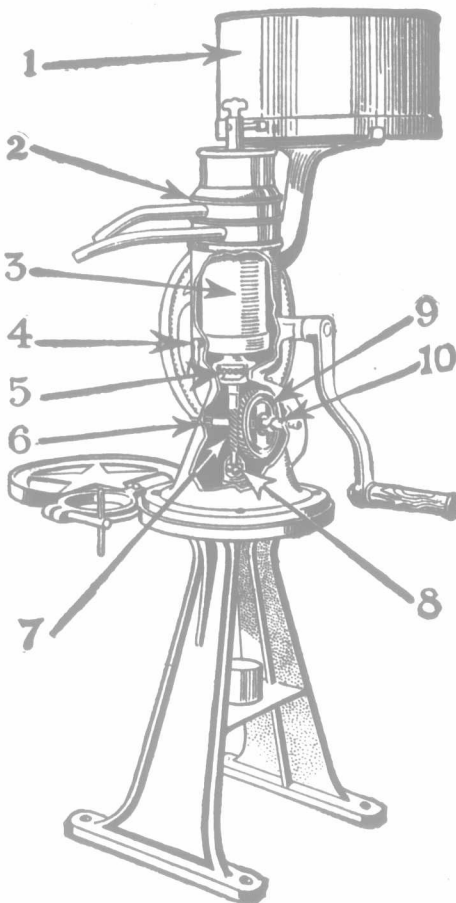


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and, of course, there are a great many more which you will find in our **Big Free Dairy Book** which we will mail to you and as many of your friends as you suggest. It is considered the most interesting Dairy Book of the day. It cost us a lot to prepare, but it is free to you. Send for it to-day.

- 1 Heavy three-ply tin supply can. Holds good supply of milk and is low enough for a woman to easily pour milk into it.
- 2 Feed cup, skim milk cover and cream cover made of pressed steel, tinned. Absolutely true, and doubly as strong as the tin kind used in others.
- 3 Light weight bowl—chief cause of easy running.
- 4 Very simple brake, applied at the base of the bowl, the only place where a brake may be used without injury to the bowl. No wear on bowl—all on a little leather washer.
- 5 Ball Neck Bearing which eliminates all wear on the spindle. Takes but ten drops of oil a day.
- 6 Case hardened pinion gear cut out of worm wheel shaft. No chance of working loose. Practically indestructible.
- 7 Spindle threaded to bowl. If ever wear should occur it can be unscrewed and replaced at less cost than on any other separator.
- 8 Three ball bottom bearing on which the point of the spindle revolves when bowl is in motion. The point costs little to renew. No wear on the spindle proper. Bowl will always adjust itself to proper centre.



- 9 Worm wheel clutch stops all mechanism when crank is stopped, with exception of bowl and worm wheel. No lost motion in again starting crank as clutch grips instantly and without jar to the mechanism.
- 10 Points on worm wheel shaft are case hardened until they will cut glass. Fit into case hardened sockets. Wear is reduced to a minimum. Worm wheel and its shaft may be taken out and replaced by just removing a plug on one side. Cannot be put back wrong. In fact, there is not a single part of the Frictionless Empire that can be placed anywhere but in its correct position.

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dote of a certain brother captain in the transatlantic service:

"A German passenger once fell from the deck of his ship into the sea, and a sailor, seeing him disappear with a splash, cried, 'Man overboard!'"

"What do you mean with your 'Man overboard?'" shouted the captain, who heard the call. 'Graf Hermann von Finkenstein, Duke of Suabia, and Prince of the Holy Roman Empire, is overboard.'"

### HE TREMBLED.

A fine delicacy does not possess the modern advertising man. In the window of a little book store in Eighth Avenue, New York, was recently heaped a great pile of Bibles, marked very low—never before were Bibles offered at such a bargain; and above them all, in big letters, was the inscription:

"Satan trembles when he sees Bibles sold as low as these."

Let a man learn that everything in nature, even motes and feathers, go by law and not by luck, and that what he sows he reaps.—Emerson.

### A ROYAL REMEDY.

Mistress.—Your cold's very bad, Jane. Are you doing anything for it?  
Jane.—Oh, yes, m'm. The chemist 'ave giv' me some cremoniated stincture of Queen Anne.—[Punch.

## POWER LOT A Story of "Down East."

BY SARAH McLEAN GREENE.

[Rights of publication secured by The Wm. Weld Co., Limited, London, Ont.]

### CHAPTER V.—Continued.

"Sure. What for do you take us? There is a store to Bear River."—And to Cuby's mind it comprehended all the variant wants of mankind.—"There it is, off there where you see the team of oxen standin'. Now give to me the clams an' my hoe. I wish you not to go to my 'ouse with me. No—give them to me. You shall be late 'ome, an' Ma'y Sting'ree, she will take her gad-stick from behin' the door"—laughter interrupted Cuby's derision—"an' lick you. What, Rober'?"

"You are cruel, like the rest," said Robert, boyish disappointment and desperation showing on his clear-cut features.

"Not," intimated Cuby, with patronizing tenderness, "not if you make the big bluff."

"Well, give me a kiss to start me bold on that way, Cuby—Cuby, darling."

A la Alva of the tenement-fire, Rob felt a smart slap in his face, and awakened to see Cuby disappearing with the hoe and clam bucket, which she had snatched ruthlessly from his now bereft and aching hands. He gazed after her, forsakenly.

"Don' forget to bring rek, an' pitch-a-fork when you come down to-morrow," she called back to him, brightly affectionate, from a distance.

"All right," he responded, with a rebound of hope in his shout. He watched her retreating form—a step elastic, tireless and graceful.

Rob went in search of the store; entered it with a sense of curiosity and dismay which struck even the hardened case of the proprietor as unflattering.

"I'll take some 'Maud Dancer' cigarettes," said he, jingling the coin in his pocket.

"I ain't got none," replied that authority, without the least accent of regret therefor.

"What kind have you?"

"No kind, an' no segars. No call for 'em. Old X plug's the favorite with my custom. Good for smokin', good for chewin'. Want some?"

"Is there any other store about here?"

"I ain't got time to go out and look," was the entirely sarcastic answer.

"You were known, probably," retorted Rob sternly, straightening himself.

"Sure. I reckon somebody 'd 'a' draped in an' told me. I'm apt ter git the news in here 's soon 's it drops off the wire."

"Give me some of your 'Old X' then," demanded Rob, throwing a dollar on the counter. The storekeeper counted out the change. Rob drew on a glove before he consigned the greasy silver and pennies to his pocket.

Presently he reappeared. "Got anything air-tight to put this stuff in?" he inquired, with some sarcasm on his own part.

The storekeeper grinned, and laid a common clay pipe on the counter. "Have you no other kind?" Rob asked, still severely.

"Nope."

"How much?"

"Cent."

Rob threw the coin down from his gloved hand with disgust and took up the pipe. Presently he again reappeared.

"Give me some matches," he said, crossly, tossing some small change on the counter.

"Now you're all right for a smoke, Mr. Lee," said the storekeeper, good-naturedly.

Rob drew near the man with a genuine glitter of steel in his eyes. "My name is Hilton," he said, through set teeth.

"Somebody's got ye twisted, then; I hearn yer name was Lee. Wal', ef ye're like me ye're ready to say, 'Call me anythin' but Late to Dinner.' Ho, ho! Ha, ha! Wal', come in ag'in, Mister Hilton, come in ag'in."

Rob labored up the hill homeward, perspiring and panting.

"This is infernal," he gasped, his overcoat on his arm, the sweat streaming from every pore of his body.

"When I get up to the top I'll probably strike a wind as cold and stiff as Labrador. There isn't a level foot along here for a fellow to stop and get his wind. I'll get over there into the ditch and brace myself against a bowlder a minute, and see if I can start a fire on this nasty apology for a smoke."

Rob filled the clay pipe, and with considerable difficulty lighted it. The taste seemed to give him an extensive field for nauseous speculation.

"It's molasses and ginger," he said. "No, it's molasses and onions. The only thing there ain't in it is tobacco. Phew," he complained, "and I have to draw on it like a suction pump, at that. Well, such as it is, I'm glad it don't come any easier. Molasses and—call it molasses and Cuby. It's got all kind of flavorin'—exceptin' tobacco."

But at the name of "Cuby," a more hopeful expression flitted over the young man's face. He continued the ascent of the hill, appearing at the summit with the hopeful sign, at least, of a discarded overcoat, and a wise clay pipe that gave back but little molasses and ginger for much strenuous pulling.

### CHAPTER VI.

#### Twenty Cents an Hour.

Mary Stingaree had been reinforced beforehand as to the methods it would be necessary to pursue with that spoiled son of fortune, Robert Hilton. Mary had not sought, nor craved, the disagreeable task; it having been imposed upon her, she stood up to it bravely, and, as was her nature, unflatteringly.

"Of course, you wish to work to pay your board, until you can earn some money of your own for that purpose," she said to Rob. "We will be businesslike about it. Your board will be three dollars a week. Your labor, though you are inexperienced, we will call worth twenty cents an hour. That is the lowest price for board and the highest rate for labor ever paid about here. I wish that you could get in a couple of hours' work on the woodpile this very afternoon. Bate was away so long, the woodpile, as you can see, is getting very low."

Rob's astonishment gave place on the instant to burning inward wrath. The earth had been his, and the fullness thereof. People were fed, and extravagantly fed—and wined, too—as a matter of course. The idea that he must pay for a paltry dinner of beans and coarse bread by actual manual labor was so startling as to plunge him, in his own estimation, to a fatal fall among the scum and outcast of creation. It gave a rigid and exacting tone to existence which his very soul abhorred.

He hated Mary Stingarce as the means used to compel him to this ignominy. For—it flashed over him—he could not, of course, let a woman—who was of no kin to him, at that—confessedly put the bread of charity into his mouth.

Moreover, Rob was growing irritable from the unusual deprivation he was suffering from having no strong drink at his command. It was a fierce dilemma for him—a craving that began to possess him, blindly, madly. And unreasonably now, one thought made a glowing focus for his distemper—he hated Mary Stingarce.

Mary, apparently, was too much preoccupied to perceive either his dislike or his displeasure.

"The ax and saw are out there by the woodpile," she said, brightly and encouragingly, and turned to continue her own work in the house.

Rob, pulling away at his unsatisfactory pipe, sauntered malignantly to the woodpile and stood with his hands in his pockets, like a child making a flamingo-show of independence.

Then, from a wild desire to forget his misery and his thirst, he began to saw. The saw went flat, sideways, reeled like a drunken man. Fear of ridicule added to Rob's wrath, for he was in full view of the house-windows and the whole surrounding hamlet. He laid down his pipe, put off his overcoat—put off, presently, his very coat, and clenched his teeth in a desperate struggle with this unwieldy subject. He smothered his gasps, he ignored his aching back; the sweat ran from his wet hair down his face; he even felt a drop fall now and then on his blistering, swollen hands. When he did lift his head occasionally, willfully unconscious that his mortal frame was really a pathetic spectacle of red and wilted exhaustion, he whistled.

In spite of all—and it was, indeed, his utmost—the pile of sawn wood seemed to increase, but exceeding slowly. And he meant to dawdle down to the shore again that afternoon, not to hide himself in melancholy contemplation on a spar, but to stand out conspicuously against the bluffs as a possible target for the approach of beautiful, gay-colored Cuby Tee-bo.

"Old Fly-by-Night," said Rob, many times, under his breath, not of sweet Cuby, but of that other woman, who, with her bright regal eyes pondering many things, was singing unconsciously as she washed the dishes, "tidied up," tended her poor mother, and set about preparing the chowder for supper.

Bate left his plow in the adjoining field to come over to the spring for a drink of water. He paused a moment at Rob's shoulder, even his morose nature affected by the moving spectacle of that young man's perspiring pains.

"Say, you look beat out," he volunteered, in growling sympathy.

"Nonsense," panted Rob, "the wind has changed, that's all. It's turned as hot as Tophet."

"No, the wind ain't shifted, neither," replied Bate, very literally, "it's you."

Rob had seen him drink at the spring, and he could bear it no longer. He marched over and fed at that pellucid fountain, deep and long. When he returned, Bate was still standing by the little pile of sawn wood, contemplating it with judicial pity and wonder.

(To be continued.)

BOOK REVIEW.

CLEAN MILK.

Probably no dairy subject is receiving greater attention in current literature than the production of clean and wholesome milk, and the latest volume to reach us is from the pen of Kenhelm Winslow, M. D., M. D. V., B. A. S., an author and expert of repute. It is essentially a volume for those in the milk trade rather than patrons of factories or creameries, though most of its teachings are of general application. The volume deserves hearty commendation. In a clear and practical way, the author shows how milk becomes contaminated, and, in detail, the steps necessary for its preservation. The whole treatise hinges around the idea of cleanliness, and is a valuable addition to the libraries of milkmen and health officers. In fact, we have not seen its equal in these particulars. Referring to the common habit of laying all the blame on the dairy farmer, the author points out that contractors and dealers have their responsibilities, but shows that in the last analysis the chief responsibility lies with the consumer. The essential object is to awaken the public to the dangers of unclean milk and emphasize the fact that it is impossible to produce and obtain clean milk, except at unusual expense. The chapter on the milking machine probably takes rather much for granted without an independent research, as does the section relating to the Hegelund method of milking (manipulation). The book is splendidly printed and generously illustrated by William R. Jenkins Co., publishers, New York, and may be ordered through this office at \$2.60 per volume.

TRADE TOPICS.

The hoe and the rake have not yet been discarded in garden practice, but their use is much less than formerly, as other tools and implements do a great deal of the work of stirring the soil better and more expeditiously. Elsewhere in this paper appears an advertisement of the Lou Dillon Tandem Garden Cultivator, handled by the Ontario Seed Co., 47 Moore Ave., Waterloo, Ont. Write for descriptive catalogue.

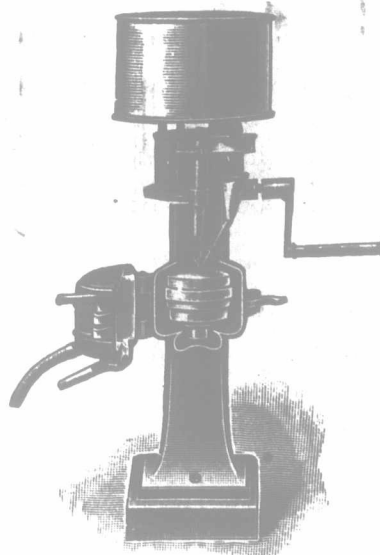
The Vermont Farm Machine Co., whose advertisement of the far-famed U. S. cream separator appears in this paper, have many satisfied patrons in Canada, as evidenced by numerous testimonials, of which the following is a sample:

West Shefford, Que., Sept. 18, 1907.  
I have now been using one of your No. 6 separators for twelve months, and it is giving me perfect satisfaction. It is easy to turn, and easy to wash. I had the skim milk tested at the butter factory, and the loss of fat was only 1-100 of 1 per cent. (.01) per 100 lbs. of milk. One thing I especially like about your machine is the uniform density of cream it delivers. The tests have never varied more than four per cent., always being between 28 per cent. and 32 per cent. of fat per 100 lbs. of cream. It has cost me nothing for repairs.  
LEON JOLLY.

GOSSIP.

THE HENDRIE SHORTHORN SALE.  
Thursday, June 11th, is the date fixed for the dispersion sale, at Toronto Junction, of the entire Shorthorn herd of the late Mr. Wm. Hendrie, of Hamilton, Ont. The herd comprises 43 head, young and old, a considerable number being imported, or directly descended from recently-imported stock, many of the cows having been purchased from the well-known importers, W. D. Flatt, W. C. Edwards & Co., and Hon. M. H. Cochrane. Among the prominent families represented in the herd are the Strathallan; Bruce Marigold and Rosewood; Marr Missie, Cruickshank Cecelia, Duchess of Gloster and Red Rose; Campbell Mina, Jealousy and Rosebud, besides a number of good old dual-purpose strains, noted for their milking qualities. There are eight bulls, including the red imported Bruce Marigold bull, Magstrand, in the sire of many of the young things in the sale, and the roan two-year-old Scottish Fashion, by Imp. Prince of Fashion, and out of Imp. Scottish Rose. For fuller particulars, see the advertisement, and send for catalogue.

"One Melotte will wear out two separators of other makes."



A few facts which have made the Melotte the favorite cream separator

The Melotte Cream Separator has no worm gear, no troublesome neck or bottom bearings, and has a bowl which, being suspended, cannot get out of balance. Melotte purchasers, therefore, are spared the trouble, annoyance and loss which users of inferior machines experience from these particular parts.

The Melotte gearing is square cut and accurate. Each working part is gauged to the one-thousandth part of an inch. All spindles are upright, and revolve on ball-bearings. The bowl is self-emptying and self-balancing.

The Melotte is easy to turn, easy to clean, is a perfectly clean skimmer, and will outwear any other cream separator on the market.

Do not put off buying until fall; buy a Melotte now, and in six months it will have half paid for itself. We will make terms to suit you. We accept farmers' notes and carry them ourselves.

Send for catalogue and particulars about free trial offer.

R. A. LISTER & CO., LIMITED  
66 Stewart Street, Toronto, Ont.

**Every Woman**  
is interested and should know about the wonderful **Marvel Whirling Spray Douche**

Ask your druggist for it. If he cannot supply the MARVEL, accept no other, but send stamp for illustrated book—sealed. It gives full particulars and directions invaluable to ladies. WINDSOR SUPPLY CO., Windsor, Ont. General Agents for Canada.

**THE CHATTEL MORTGAGE SALE**  
of Percheron Horses,  
Advertised by us to take place at lot 40, H. R. S., Tuckersmith, on the 26th inst., has been withdrawn. Intending purchasers are notified accordingly.  
MACDONELL & BOLAND.

Messrs. A. Hume & Co., Menie, Ont., write: "Our 1908 importation of Ayrshires is in quarantine at South Quebec. There are three-year-old heifers, due to freshen in early fall, also two-year-olds, yearlings and fall heifer calves, yearling and bull calves. They are a choice lot, and bred from dams with milk records up to 1,100 gallons of milk. Any of them is for sale. Write John Retson, Cattle Quarantine, South Quebec, Que., or take a trip during cheap rates on 24th excursions. The bulls will be out in time for service. We have several calves of our own breeding, from Record of Merit cows, and others; one yearling bull, and females of any desired age. We have seven two-year-old heifers, eight three-year-olds, and five cows all due to freshen in July, August and September. We can furnish all ages for show herds; 75 head to choose from. We keep milk records of all milkers. Inspection of herd is invited, and prices are as low as we can live at. In Yorkshires we have several litters, from early January to April, for which we are booking orders."

Some satisfactory prices were realized at the recent sale of Shorthorns from Mr. T. S. Minton, of Montford, England. The figures ranged up to 300 guineas, paid by Mr. D. MacLennan, for the two-year-old bull, Keir Mandarin, while Mr. Dean Willis gave 190 guineas for Montford Lavender, a four-year-old cow, her bull calf going at 105 guineas to Mr. J. Preece. Lord Powis paid 155 guineas for the two-year-old Lavender 3rd.

GOVENLOCK'S HEREFORD SALE.  
Notwithstanding a wet day, the auction sale, on May 13th, of the Forest View Hereford herd of Mr. John A. Govenlock, of Forest, is reported to have been a fair success, yearling heifers going as high as \$395, and one bull to \$575; while 22 head brought \$3,370.

Mr. Joshua Lawrence, Oxford Centre, Ont., breeder of bacon-type Berkshires, in ordering a change in his advertisement, too late for this issue, writes that he has a large stock of the best type of Berkshires, of both sexes, and all ages, from weaning pigs to sows in farrow, young boars ready for service and sows bred or ready to breed, which he is offering at very reasonable prices.

Messrs. S. J. Pearson, Son & Co., Meadowvale, Ont., ordering a change in their advertisement, write: "Our aged Berkshire sow, Oxford Maid, has just farrowed her eighth litter of pigs, and the number in each litter was: 10, 12, 16, 11, 14, 13, 13, 11; total pigs, 100. A daughter of this sow, scarcely one year old, has just recently farrowed 12 fine pigs, and several other daughters of Oxford Maid that we have sold have farrowed from eight to twelve pigs the first litter. That is why we claim we have a prolific strain of Berkshires. We believe that Berkshires are as prolific as any breed of pigs, but you must always select your breeding stock from large litters."

**POULTRY AND EGGS**

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 50 cents.

**BARREROCK** eggs from elegant matings. Half price now. Circular fr.e. W. W. Dods, Alton.

**BLACH** Orpington prizewinners, \$1.50 per 13; White Rocks, \$1 per 13. W. J. Rebstock, Ridgeway, Ont.

**BARREROCK** eggs safely packed in Morgan baskets. One dollar per fifteen. C. H. Chalmers, Smith's Falls, Ont.

**BUFF** Orpingtons—Splendid cockerels for sale. Also few pullets. Prices right. Eggs \$1 and \$3 per fifteen. Special prices for hundred lots. James McGregor, Caledonia.

**BUFF** ORPINGTONS—Pure-bred—Eggs, \$1 per 15. 9 chicks guaranteed, \$5 per 100. Extra heavy layers. Hugh A. Scott, Caledonia, Ont.

**CLARK'S** Buff Orpingtons 12 pens. Exhibition, egg strain and utility pens. National winners. Eggs from \$1.00 to \$5.00 per 15, 12 fertile eggs guaranteed. Incubator eggs a specialty, \$5.00 per 100. To raise birds for the fall show get my eggs. Free mailing list. J. W. Clark, Cainsville, Ont.

**EGGS** for hatching from "Canada's Best" Black Minorcas. Balance of season, \$1 for 15. F. A. Faulds, 11 Victor St., London.

**EGGS** from pure bred Barred Rocks, White Wyandottes (Martin and Wright strain). One dollar per fifteen. John B. Morgan, Wales, Ont.

**FOR SALE**, or will exchange for pheasants or pure-bred chickens. English setter pups, and one dog four months old. Address: H. I. Mills, Wheatley, Ont.

**BEST** eggs from prize winners. My birds won over 350 firsts at eleven shows. Barred and White Rocks, White and Silver-laced Wyandottes, Brown and White Leghorns, Silver and Black Hamburgs, Single and Rose-combed B. I. Reds, Buff Orpingtons, \$1 per 15 eggs. Special matings. A few eggs to spare from Black and Buff Orpingtons, Black Javas, Blue Andalusians, Barred and White Rocks, Black and Silver-spangled Hamburgs, Brown and White Leghorns, Single and Rose-combed B. I. Reds, White and Silver-pencilled and Silver-laced and Black Wyandottes, at \$2 per 15 eggs. F. W. Krouse, Guelph.

**SINGLE NOOK** Poultry Farm offers eggs from selected pairs of heavy laying strains—Brown and White Leghorns, Buff Orpingtons, B. Minorcas, and Barred Rocks \$1 per 13. White Leghorns only \$5 per hundred. W. H. Smith, 41 Spruce St., Toronto.

**MOTTLED** Ancona eggs, \$1.50 per 15; single-comb White Leghorn eggs, \$1.00 per 15. \$4.50 per 100, winter layers. Money makers both. All eggs now test 96% fertile. Cockerels and yearling hens one dollar each. Circulars free. E. C. Apps, Box 224, Brantford, Ont.

**MY** Single-comb White Leghorns for beauty and egg production are unsurpassed. \$1 per 10; \$2.50 per 10. Enos M. Beer, Bethany, Ont.

**POULTRY** and eggs for sale. Cedarvale White Wyandottes, bred from prize stock for quality, vigor and profit; large, snow-white, handsome, true Wyandotte shape. Persistent all winter layers, the greatest laying strain known. Selected eggs from best matings. One dollar for fifteen. Good hatch, safe and prompt delivery guaranteed. A. J. Milton Bean, Box 365B, Toronto Junction, Ont.

**RHODE** Island Reds, rose-comb. Bred nine years from carefully selected heavy winter layers. Large brown eggs. Dollar-half per fifteen. Good hatch guaranteed. Jno. Luscombe, Merton, Ont.

**WHITE** Wyandottes exclusively. Best general-purpose fowl. Strongly-fertilized eggs from heavy-laying Martin and Dnston strain. One dollar per fifteen. D. T. Green, Brantford.

**WHITE** Plymouth Rock eggs for hatching. Good laying strain. Eggs one dollar per 15. J. R. Dods, Alton, Ont.

**WYCKOFF'S** 280-egg strain S. C. White Leghorn eggs. Fifteen, \$1; thirty, \$1.75. Geo. Easton, Jr., Whitney, Ont.

Mr. A. Rogy, Paris, France, who selects and ships to order French and Belgian stallions, advertises in this paper that he is prepared to accept orders for export in these lines, and will mail, on application, a pamphlet giving the necessary information. See the advertisement for his address. A Plum Coulee, Manitoba, customer, Mr. J. A. Klaskan, to whom Mr. Rogy shipped horses, writes him: "Menosi's colts are all good stock, and I expect lots of work for him again next spring."

The American Jersey Cattle Club held its annual meeting in New York City, May 6th. The financial statement of its treasurer shows that this is one of the most successful and prosperous of the breed societies in America, the fees for registrations for the past year being \$37,237; the receipts from all sources for the year, \$50,970, and expenditures, including grants for prizes, \$45,870, and the cash balance on hand is \$13,256, and the assets, including this, amount to \$92,111; while the liabilities are \$68,524, and the net credit to the Club fund, \$23,587.

**GOSSIP.**

Too late for this issue, Mr. James Begg, St. Thomas, Ont., breeder of Ayrshire cattle, writes, ordering a change in his advertisement running in this paper. Mr. Begg offers for sale two yearling Ayrshire bulls, first and second prizewinners at the county fair at Aylmer; also bull calves of different ages. The milk test of this herd for April, at St. Thomas creamery, with three fresh cows during the month, was 5 per cent. butter-fat, a pretty good record.

**THE GREAT CRUICKSHANK SHORT-HORN SALE OF JOHN DRYDEN & SON.**

It is probably safe to say that in no other herd on this continent to-day will be found more Cruickshank blood than in the Maple Shade herd; while as high-class individuals, the offering to be sold by auction at the farm, at Brooklin, Ont., on Friday, June 5th, will, likewise, bear comparison with any lot ever before sold by auction in Canada. All told there will be sold 45 head—4 bulls and 41 females. The bulls are Golden Prize =63704=, a roan nineteen-months-old, got by their grand old stock bull, Prince Gloster, of the famous Cruickshank Duchess of Gloster tribe; dam a Cruickshank Grizelda, by the grandly-bred bull, Revenue, a half-brother to the great champion Nominee; Golden Prize is a show bull of a high order. Village Hero 3rd is a red-roan seven-months-old, by Chief Ramsden (a son of Imp. Miss Howie 9th); dam a Cruickshank Village cow, by Imp. Chief of Stars. Choice Merchantman =68523= is a roan twenty-months-old, and a thick, sappy, show bull, by the Missie bull, Imp. Merchantman; dam Imp. Choice, by Janissary. Attorney is a red fifteen-months-old, by Champion Beauty =59908=; dam a Cruickshank Adeline, by Prince Gloster. Anyone wanting an extra good young bull will not be disappointed in this lot. The personnel of the female offering is as follows: Cruickshank Bellona, 1 yearling; Duchess of Glosters, 1 three-year-old and 1 five-year-old; Roseberrys, 3 two-year-olds, 1 four-year-old, and 1 six-year-old; Villages, 1 two-year-old, and 1 four-year-old; Lavenders, 2 yearlings, 2 two-year-olds, 1 five-year-old; Grizeldas, 2 two-year-olds, 2 three-year-olds; Nonpareils, 1 three-year-old; Victorias, 1 yearling, 1 two-year-old, 1 seven-year-old; Carmines, 1 two-year-old; Marr Rosebuds, 1 three-year-old, 1 seven-year-old; Scotch Thistle, 1 two-year-old; Miss Ramsdens, 1 two-year-old; Northern Belles, 1 yearling, 1 two-year-old; Lady Edens, 1 yearling, 1 two-year-old, 2 three-year-olds, 2 four-year-olds; Lavinas, 1 yearling, 2 two-year-olds, 1 six-year-old; Louisa, 1 two-year-old. On the sire's side, seventeen of these are the get of the noted old stock bull, Prince Gloster; one is the get of the C. Clipper bull, Clipper Prince, winner of first at Toronto; one is by the Meadow Flower bull, Bolderwood Lad; one by the Clipper bull, Clipper Champion; one by the noted sire of show stuff, Proud Gift (imp.); one by the great show bull, Bertie's Hero; one by the Marr Clara bull, Clarified Prince; one by the C. Cicely bull, Imp. Bapton Chancellor; three by the Rosemary bull, Imp. Scottish Prince; one by the Clipper bull, Clipper Hero, a Toronto first-prize winner; one by the Clipper bull, Imp. Chief of Stars; one by the Mysie bull, Radium; one by the Nonpareil bull, Imp. Nonpareil Archer; one by Champion Beauty; one by the C. Secret bull, Secret's Pride; one by the C. Butterfly bull, Imp. Butterfly King; two that are imported are by the Lady Annie bull, Maxwell, and King Edward's bull, Luxury. The others are by Flower Champion, a Flower Girl, Collynie Archer (imp.), a Missie, and Imp. Gold Mine. From the above it will be seen that very many of the offerings are doubly inbred with Cruickshank blood. Nearly all the females are show animals of more or less excellence; eight of them will have calves at foot. Most of them have been bred, and are safe in calf to the Missie bull, Scottish Minstrel (imp.) (see catalogue). Every animal offered will be sold, and is registered in both the Canadian and American herd-books. To reach the farm, take the Grand Trunk train to Brooklin Station, and the C. P. R. train to Myrtle Station. A special G. T. R. train will leave Toronto on morning of sale, Friday, June 5th, about 9 a. m.

If you want to buy a gun, look up the advertisement of Warren & Ellis, Toronto, in this paper, who are prepared to supply the best of the latest-improved styles in their line.

**SALE DATES CLAIMED.**

June 5th.—John Dryden & Son, Brooklin, Ont., Shorthorns.

June 11th.—Estate of Wm. Hendrie, Hamilton, Ont., Shorthorns.

June 23rd.—Richard Gibson, Delaware, Ont., dispersion sale of Shorthorns.

At the annual auction sale of Shorthorns from the Glenfoyle herd of Mr. A. Chrystal, Marshall, Mich., May 7, in very unfavorable weather, 67 head sold for an average of \$229. The highest price, \$1,000, was realized for the two-year-old bull, Red Sultan, a son of the noted White Hall Sultan (imp.), purchased by J. F. Dodge, Detroit, Mich. The highest price for a female, \$695, was paid by T. J. Wornall, Liberty, Mo., for the eight-year-old cow, Claret 3rd (imp.). Another cow, Rose of Morning (imp.), sold for \$615; another for \$590; two for \$500 each, and half a dozen others at \$400 to \$460 each, a fairly-good result under the circumstances.

Mr. Chas. E. Bonnycastle, Campbellford, Ont., writes: "Have recently sold yearling Shorthorn bulls to the following: Kingsley Farmers' Club, Kingsley, Que., 1; John G. Moore, Sydenham Place, Que., 1; J. G. Connolly, French Village, Que., 1; John Blackburn, Gillies' Hill, Ont., 1; John H. Douglas, Warkworth, Ont., 1. Have a nice lot of young calves coming on for another season, all sired by Pride of Day =55192=. Among the lot may be mentioned a dark red bull calf, from Imp. Twin Counties, also a very dark roan bull calf from Nonpareil Countess, and a nice roan bull calf from Bertie Ramsden. Also have a good lot of early spring lambs coming on for fall trade. The young Berkshires I am offering are a fine, even lot, and should give good satisfaction."

Messrs. B. H. Bull & Son, of Brampton, Ont., write that they are strengthening their great Jersey herd by an importation of twenty-one animals, which left the Island of Jersey on the 5th of May, and which will be brought direct to their farm. Mr. F. S. Peer is authority for the statement that it is one of the most valuable shipments of Jersey cattle that ever left the Island. In the lot are a number of daughters of the celebrated bull Stockwell, that sold at auction in Pennsylvania, in May last, at \$11,200. There are also two sons and a number of daughters of Mabel's Raleigh, last year's champion bull over all in Jersey Island. Messrs. Bull & Son, with their characteristic enterprise, have also arranged to exhibit two carloads of Brampton Jerseys at the Dominion Exhibition, at Calgary, at the end of June. The Brampton herd numbers now about two hundred head, and its owners are constructing new breeding and stock barns of the most approved and scientific construction in order to accommodate the stock now in quarantine and the other additions and increase being made to their herd.

For some time the Zenner Disinfectant Co., of Detroit, Mich., has been studying how to combine the famous liquid, Zenoleum, with other dry insecticides so as to retain its best qualities as a lice-killer in powder form. The company believe that it has successfully solved this problem, and now offer to poultry-raisers Zenoleum Powder Lice Killer, under the same guarantee as Zenoleum has been sold for the past ten years. If with this powder for bodily application, is added a three-per-cent. solution of Zenoleum, applied freely with a hand-sprayer, sprinkler, or an old broom on the roosts, floors, nest boxes, walls, etc., etc., of the poultry house, the treatment will be found very effective. If you will send a postal card to the Zenner Disinfectant Co., 112 Lafayette Ave., Detroit, Mich., for a copy of their very interesting pamphlet called "Chicken Chat," it will be sent free to your address. Among other topics of interest, it gives a full description of the tests made by Prof. W. R. Graham, of the Ontario Agricultural College, with Zenoleum as a preventive of disease in incubator chicks, and the splendid results obtained by the use of this disinfectant and germicide.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock. TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

**ELEVATOR AND FLOUR AND FEED.**—We have for sale in a thriving town on the Grand Trunk east of Toronto, an elevator, having a capacity of 30,000 bushels, fully equipped with gasoline engine, scales, etc., situate on the Grand Trunk property, subject to a lease charge of \$10 per annum, and in connection with this elevator business, having a flour and feed business in the town proper. This has suitable office, and large warehouse accommodation fully equipped with scales, scoops, etc., and is a well established business. We offer the whole for \$3,500. The business is a profitable one, and we can give satisfactory reasons for selling. Waddington & Grundy, 86 King St. East, Toronto.

**POSITION** wanted, in creamery or cheese, by a thoroughly competent, up-to-date dairyman. First class butter and cheese-maker. Have 7 years' experience on all kinds of dairy work. Unexceptionable references. Address: Dairyman, Little Current Post Office, Ont.

**VETERINARY SURGEONS**—We have a most excellent opportunity in hand for a Veterinary Surgeon open to practice, in the Town of North Toronto. The property has a large frontage on Yonge Street and extends back a considerable distance, and on it there is a good eight-roomed roughcast house, with orchard, commodious blacksmith shop doing a large business, and a large building which would be suitable for an infirmary and stables. There is no veterinary surgeon in the district between Toronto and Thornhill. Reasonable terms of payment will be accepted. Waddington & Grundy 86 King St East, Toronto.

**WANTED**—Persons to grow mushrooms for us at home. Waste space in cellar, garden or farm can be made to yield fifteen to twenty-five dollars per week. Send stamp for illustrated booklet and full particulars. Montreal Supply Co., Montreal.

**TRADE TOPIC.**

There is probably no institution doing such a highly commendable land business in the West to-day as the Land Department of the Union Trust Company, Toronto, under the management of Mr. F. W. Hodson, whose advertisement appears in this paper. Holding the exclusive agency for large blocks of Canadian Pacific lands in the Canadian West, they are able to offer the very best selections, close to the railroad, and sell the land on the most moderate terms, either by cash instalments or crop payment. Every two weeks this company takes parties of intending purchasers from Eastern Canada by special car on the C. P. R. at a special low rate to see for themselves the lands they are offered. On May 12th, a large number of prospective purchasers left, in company with the Manager, Mr. F. W. Hodson, to make selections from the large blocks now being offered in Southern Alberta. This party proceeds to Calgary on the main line of the C. P. R., east of Calgary, where they are met by teams and driven over the land free of charge. This is a splendid opportunity for intending purchasers to select their future homes—large acreage to select from, at nominal cost price, the very best of terms and special accommodation for making selections. Their next party will leave Toronto at 1.45 on Tuesday, May 26th, in charge of the company's representative.

**GOSSIP.**

**DOMINION EXHIBITION.**

The Dominion Exhibition, advertised in this issue, to be held in the city of Calgary, Alberta, June 29th to July 9th, 1908, will furnish an exceptionally favorable opportunity for breeders of pure-bred stock in Eastern Canada, as well as in the West, to advertise their stocks and make sales. \$20,000 being offered in cash prizes in the various classes, and \$15,000 in purses for speeding. The delightful climate of "Sunny Alberta" will doubtless tempt thousands of Easterners to take advantage of the reduced railway rates to visit Calgary, a city beautiful in itself, and in its situation in sight of the everlasting hills, known as the Rocky Mountains, or the Switzerland of America. A trip to Calgary and through to the coast is the best of a lifetime.

## Buy Land in Western Canada Now.

We hold the exclusive agency for large blocks of rich, specially-selected Canadian Pacific Railway lands in Western Canada.

Prices from \$8.00 Per Acre Upwards.

### Our Fourth Cheap Excursion

Leaves TORONTO, TUESDAY, MAY 26th. Fare to Calgary, \$40.50 and return. Our own representative is in charge of each car. Ask any C. P. R. agent for particulars.

TERMS Remarkably EASY OR May be Bought on Half CROP PAYMENTS

One year's crop frequently pays for the land.

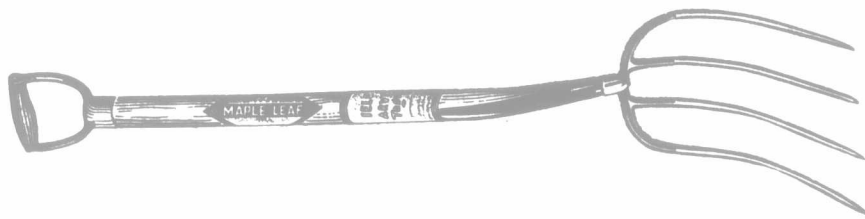
This is an opportunity to secure the best bargains in farm lands obtainable anywhere, on terms not offered by any other company.

We will run additional excursions on the following dates: June 9th and 23rd; July 7th and 21st; August 4th and 18th; September 1st, 15th and 29th.

Write at once for particulars, or call on

**F. W. HODSON,**  
MANAGER LAND DEPARTMENT,  
UNION TRUST COMPANY, LIMITED,  
174 Bay Street, Toronto, Ontario.

## The Maple Leaf Gold Sheaf Harvest Tools.

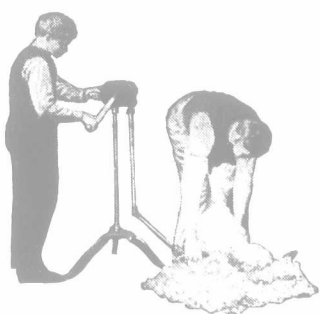


These tools are tempered by the same process used in the tempering of the famous Maple Leaf Saws. They are the best goods of the kind ever offered to the Canadian public. Every tool is warranted. Handles made of best second-growth white ash. It pays to use the best. If your merchant has not got them, send to the

**Maple Leaf Harvest Tool Co., Ltd., Tillsonburg, Ont.**  
who are the manufacturers. None genuine that do not have the Gold Sheaf on the label.  
J. C. DIETRICH, President. F. D. PALMER, Treasurer.  
C. J. SHURLY, Vice-president. C. K. JANSEN, Secretary.

## The Most Complete Line of Iron Stable Fittings in Canada.

ALSO A COMPLETE LINE OF STEWART HORSE-CLIPPING AND SHEEP-SHEARING MACHINES.



Knives Sharpened and Returned Promptly.  
Before fitting up your stable write us for information and prices.  
Our knowledge, gained by years of experience, is at your disposal.

**The Tisdale Iron Stable Fittings Co., Limited,**  
19 Temperance Street, Toronto.  
Send for Stable Fitting Catalogue.

WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

### GOSSIP.

F. ABBOT'S HOLSTEINS.

On the St. Thomas-Ingersoll branch of the C. P. R., Harrietsville Station and Post Office, where visitors will be met on notification, lies the splendid farm of Mr. F. Abbot, breeder of Holstein cattle. The herd just now is some twenty-seven strong, at the head of which is the grandly-bred bull, Sir Axie Posch De Kol, a son of Sir Pietertje Posch De Bouer, whose dam; Kaatje De Bouer 2nd, has an official record of 24.28 lbs. butter in seven days, and his sire, Sir Pietertje Posch, has seven daughters in the Advanced Registry; dam Axie De Kol of Riverside, record at twenty-five months of age, 11.20 lbs. She has nine sisters in the Record of Merit, and her dam, Axie De Kol, has a record of 17.77 lbs., and she has eleven sisters in the Record of Merit. On her sire's side, she is also richly bred. Her sire's dam has a record of 18 lbs. as a three-year-old; her grandsire's dam a record of 25.57 lbs., and her great-grandsire's dam, a record of 31.12 lbs. Preceding him in service was that great bull, Prince Posch Pietertje C., now at the head of the herd of G. W. Clemons & Son, sired by Prince Posch Calamity, a son of that great cow, Calamity Jane, whose record of 25 lbs. 1 oz. of butter in seven days created such a sensation at the time; dam Boutsje Q. Pietertje De Kol, the renowned Guelph-College cow, that in one year gave 20,778 lbs. of milk, testing a fraction over 3.76 per cent. of fat, and containing for the year, 781.91 lbs. of butter-fat, equivalent to 912.22 lbs. butter, an average of 17½ lbs. of butter every week for the whole year. In the herd at present are four yearling heifers, and two yearling bulls, sired by this bull, and out of cows that on ordinary feed have given from 55 to 60 lbs. of milk a day, that tested 4 per cent. Here are a very desirable pair of young bulls, one of which is a high-class show bull, and with such an illustrious sire, makes him doubly desirable as a herd-header. Although the dams of these bulls have never been officially tested, they will be when next fresh, and will certainly show up well in the list. They can be bought very cheap, considering the way they are bred. There are also three other young bulls, by the present stock bull, out of cows that last winter gave 56 lbs. of milk a day on dry feed. The cow, Axie De Kol of Riverside, elsewhere described, has a beautiful bull calf, by Sir Pietertje Posch De Bouer, which, of course, makes him a full brother to the present stock bull. All these young bulls are for sale at easy prices. Write Mr. Abbot, to Harrietsville, Ont. Long-distance telephone.

### QUESTIONS AND ANSWERS. Miscellaneous.

#### LATE CABBAGE.

1. Is there much demand for late cabbages, and at how much per head?
2. How many heads will 1 ounce of seed grow?
3. How would millet land, plowed in the spring, be for cabbages?
4. When should they be sown, and how?

Ans.—1. The demand for late cabbage, and the price received for them, varies from year to year. If wishing to market locally, it would be advisable to make enquiries at the local grocery stores. Cabbage have been selling in the Toronto market this winter for 40c. to 60c. per dozen, or where sold in car lots, for from \$12 to \$15 per ton.

2. One ounce of seed should produce 1,500 plants.
3. It would depend largely on the condition of your soil. Cabbage favor a rich, cool, moist soil. I would apply a good, heavy dressing of manure, as early in the spring as possible, and plow under, harrowing each week to preserve soil moisture, apply another dressing of manure the middle of June, and plow, harrow, and float the land, setting out the plants any time between June 20th and July 4th, in rows three feet apart, and two feet apart in the row.
4. Seed should be sown about May 10th in a well-pulverized seed-bed, half an inch deep, and one ounce will sow about 300 feet of a row. A. McMEANS.

O. A. C., Guelph.

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Lactated Food, a perfect substitute for mother's milk, is the most scientifically-prepared food ever placed before mothers. It is made according to the ideas and suggestions of that world-famed chemist, Baron Liebig.

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Specialists in children's disorders prescribe Lactated Food in preference to all other foods, and intelligent mothers all over Canada recommend it. Lactated Food for the baby in summer will produce happy and cheerful youngsters, with plump faces and bright eyes. Order from your druggist.

## Cheerful Chickens

Nature intended the hen to make her own living, hence she cannot possibly be healthy, happy and prolific in confinement unless bodily functions operate in nature's own way. Therefore "cheerful chickens" and a full egg basket are possible only when the hen is taken back to nature by a common-sense method of feeding.

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gets at the bottom of the poultryman's troubles by creating and maintaining an absolutely healthful condition of fowls in confinement. It contains the bitter tonics to aid digestion, iron to make good blood and nitrates to expel poisonous matter. It is the prescription of Dr. Hess (M.D., D.V.S.) and, by aiding the hen to assimilate the food, it makes abundance of eggs. Poultry Pan-a-ge-a possesses a germicidal principle which makes it specially useful in preventing disease. Endorsed by leading poultry associations and sold on a written guarantee. Costs a penny a day for 30 hens.  
1½ lbs. 25c; 5 lbs. 85c;  
12 lbs. \$1.75; 25 lb. pack \$3.50  
Send 2c. postage for Dr. Hess 48-page Poultry Book, free.  
**DR. HESS & CLARK,**  
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Instant Louse Killer Kills Lice.

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Best, neatest, cheapest stable outfit in existence. They secure or release the full row of cattle (or part of row) instantly; one or more separately, or retain any when releasing. Simple and perfect. Easily erected. Easily operated. Illustrated circulars.

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Send \$1—Receive 5 wool remnants suitable for Boys' Knee Pants up to 11 years. Give age, and we will cut out pants free. Add 25c. for postage.  
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& SON,**  
Brooklin, Ont.



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JUNE 5TH,**  
Next.

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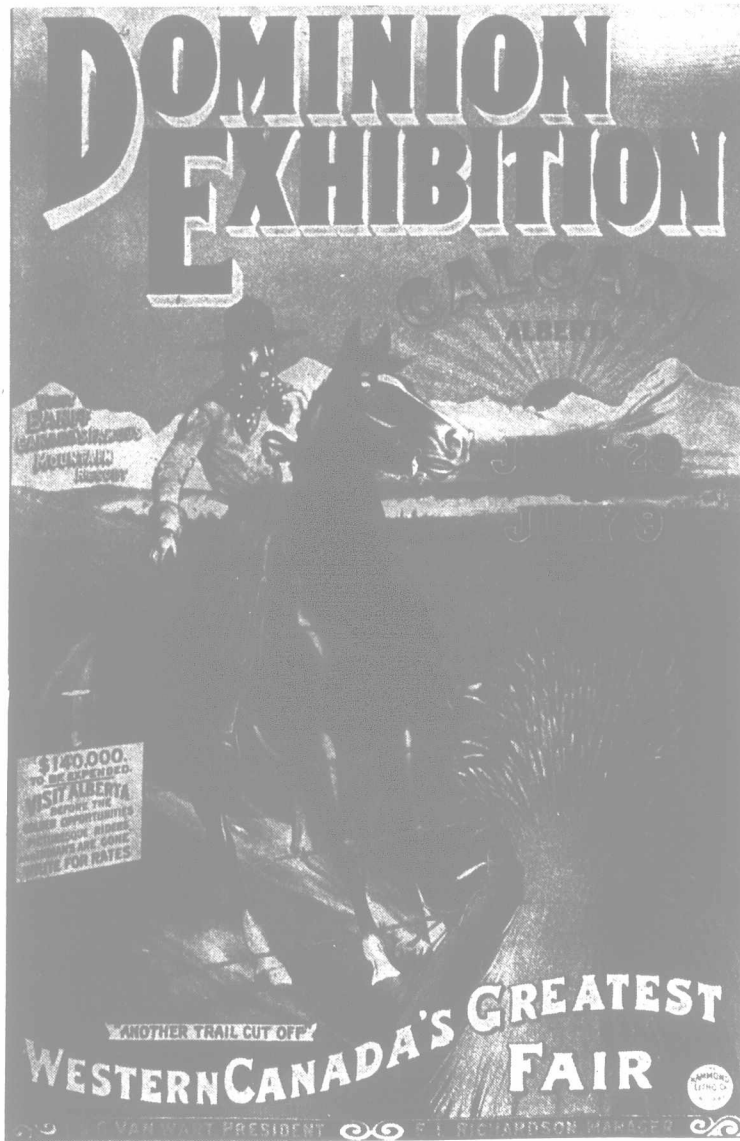
The cattle will be sold, rain or shine, under canvas, at the farm, near Brooklin. A SPECIAL TRAIN will leave the UNION STATION, TORONTO, at 9.15 A. M., FRIDAY, JUNE 5TH, landing passengers at the farm. Returning will leave the farm at 4.15 P. M., reaching Toronto in time for trains west and north.

The catalogues are ready. Send for one.

#### GOSSIP.

##### T. D. ELLIOTT'S CLYDESDALES.

Mr. T. D. Elliott, Bolton, Ont., importer of Clydesdale, Percheron and Hackney horses, was in proper good humor on the occasion of a visit by "The Farmer's Advocate" representative a few days ago, due partly to his natural genial good nature, but probably mainly to the record season he has had in disposing of his last large importation of stallions and fillies. Mr. Elliott is one of the younger Canadian importers, not in years perhaps, but in number of importations made, but the readiness with which he gets rid of his horses speaks volumes for the class of animals he imports. A keen, critical judge, he knows a good horse when he sees it, and buys nothing but what suits himself, which must necessarily suit other good judges, hence his success. Still on hand for sale we found the grand good horse, Pride of Avon, a black, rising four, by Rathillet, by Benedict, by Baron's Pride; dam by Carthusian. Here is one of the right good ones, brought over last year, right royally bred, and has four registered dams; he has size, quality, style and action. Another is a bay, rising two, by Baron's Pride, and another, the same age, by Danure Castle, a pair of colts that will surely develop into big, good horses, as their smooth, well-proportioned bodies and grand good bottoms are just the kind Canadians admire. Mr. Elliott has also for sale the tried and proven sire of dozens of high-class, high-priced carriage horses, Lightning (Imp.), a Hackney; he is now up in years, but as sure and active as ever. Antillo, by Antlo, is a Standard-bred stallion, a sire of sterling merit, and a right good kind. He has also on hand three Percheron stallions: 1 grey, five years old; 1 brown and 1 black, four years old each, weighing 1,800 to 2,000 lbs., big, flashy, sound horses that will be sold right, and on terms to suit. In Clydesdale fillies there are four left, all rising three; one a first-prize winner, another a second-prize winner at Toronto; a quartette of extra good quality fillies, with plenty of size and character. A few of his late sales



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are: To Robert R. Renel, Dromore, the three-year-old stallion, Vital Spark, by Gay Spark, dam by Baron's Pride; this horse is an extra good one, and a first-prize winner. To Cooper Hodgson, Beeton, the three-year-old stallion, His Grace, by Moncrieffe Marquis; he is also a first-prize winner. To J. A. Myles & Co., Heathcote, the big, flashy four-year-old, Scotland's Gift, by Scotland's Stamp; he also is a first-prize winner. The same company also got the Hackney stallion, Brigham Lord, by Lord Derby 2nd, and two Clydesdale fillies, by Up-to-Time, a superior pair. To R. Ormsby, the four-year-old stallion, Riverside, by Fickle Fashion; to Andrew Bowman, Crown Hill, the Shire stallion, Sir Ralph De Willington, winner of first at Toronto and Ottawa. An extra nice pair of fillies went to A. H. Harn, Tisdale, Sask.

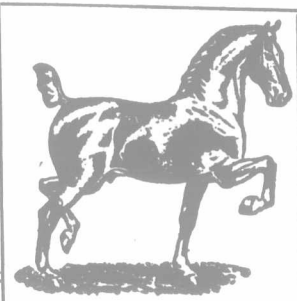
#### TRADE TOPIC.

A BURNING SUCCESS FOR 20 YEARS.—The warming and ventilating of our churches, schools and residences has always been a serious question, hard to solve. The inhabitants of this country are beginning to realize that the Kelsey is a heater that will warm their houses in a healthful, efficient and economical manner. The Kelsey firebox and combustion chamber being formed of long, hollow, corrugated sections, is said to give three times as great an area of heating surface as that of any other furnace with same area grate surface. The Kelsey having this distinctive feature is entirely different from any other furnace. The Kelsey was first made in 1889, when three were sold, while today 32,000 is the record of those in use. Attention is drawn to the advertisement of the Jas. Smart Mfg. Co., Ltd., who are the exclusive makers of the Kelsey in Canada.

If you have built castles in the air, your work need not be lost; that is where they should be; now put foundations under them.—Thoreau.

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**HORSE EXCHANGE**  
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It will interest you, also  
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for showing  
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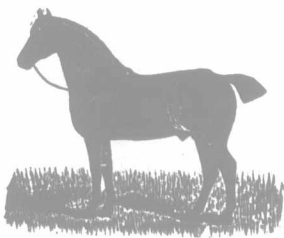
The Directors of the above Company have not spared anything in the building of this new Horse Exchange. The stables, which are built of cement and brick, will stall between 900 and 300 head of horses and are considered by judges, who have seen them, to be the most sanitary they have yet seen.  
We have sold on an average of 100 horses per week since the opening of this great horse market, and now that the success of the horse business is assured, we are in a position to handle Breeders' Stock Sales of all kinds, Cattle, Sheep, and Hogs.  
Breeders will find that advertising from a central place like Toronto will be advantageous in many ways, as this is unquestionably the most complete market of its kind in America for both buyer and seller.  
We have our own railway chutes, which are the finest, and can load any number of cars at once on both G.T.R. and C.P.R. No charge for loading or unloading stock of any kind.  
Correspondence solicited as to terms, etc.

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Stallions and mares,  
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blood of England  
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bining size, quality  
and faultless action.  
Stallions are all  
guaranteed sure foal-  
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by one of equal  
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of the above breeds, write or wire for full particulars and catalogues.



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and Percherons of the Year.**



My latest importation has just arrived home. I have now on hand for sale: 25 Clydesdale stallions from 1 to 5 years of age; 25 Clydesdale fillies from 1 to 4 years of age; 19 Hackney stallions from 2 to 8 years of age; 13 Hackney fillies, all young; and 4 Percheron stallions 3 and 4 years of age. A total of 72 head, with size, quality and action, and bred in the purple. Largest selection in Canada. Will be sold right, and on terms to suit.

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**CLYDESDALES**



At Columbus, Ont., the home of the winners, this year's importation just arrived. The pick of Scotland's best. For size, style, conformation, quality and royal breeding, they eclipse any former importation we ever made. Look them up in our barn on Exhibition Grounds. Over 50 head to select from.

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At present we are offering a very choice consignment of imported stallions, mares and fillies received from the great Shire stud of R. Moore & Sons, Beeston Fields, Nottingham, England. They are a grand lot, and will be sold at right prices.

In Shorthorns we have a number of choice young bulls, three of them show animals; also an excellent lot of females—all ages.

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**IMP. CLYDESDALE STALLIONS AND FILLIES.**—Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-stuff. Come and see them. Will sell on terms to suit. **JOHN A. BOAG & SON,** Queensville, P. O., Ont., Newmarket Stn., G. T. R. Telegraph and telephone one-half mile from farm. Metropolitan Street Ry. from Toronto crosses the farm.



WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**CHIMNEY LEAKAGE—FARM MANAGERS—LUBRICATING WINDMILL.**

1. A chimney built in end of a house gives trouble in winter during a season of mild weather, following a season of sharp frosty weather. During sharp weather, the smoke on entering chimney condenses and freezes on the bricks, and when the weather moderates, this melts and runs down the chimney flue, which extends only half way down to foundation, and soaks through wall, doing considerable damage to plaster and anything it comes in contact with, as well as destroying brickwork in outer wall. The difficulty of condensed smoke in pipes has been overcome by placing a check draft in pipe above stove. In this case, would it be any advantage to place a seven-inch pipe running from basement or cellar upward, and entering the chimney at bottom of flue, the bottom or lower end of pipe to be left open, or would this act as a check draft on stove? Would the current of air passing through this pipe and up the chimney be sufficient to prevent the smoke condensing before leaving the chimney?

2. What are the duties required of a manager on a large farm, where purebred stock are bred and raised, and what wages per year are usually paid to a competent person holding such a position in Ontario?

3. Would a lubricator work successfully on a windmill bearing? If so, could you give me a simple plan for making one, and what kind of oil would it be best to use? **OLD SUBSCRIBER.**

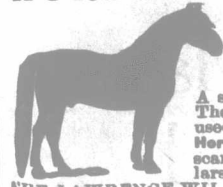
Ans.—1. I have had no experience with bad chimneys, but have consulted a stove and furnace dealer who has seen a great many such as here described, and has tried to remedy the defects. He says the only way he has been able to get satisfaction is to abandon the outside chimney, and build a new one up the center of the house. He thinks that having a pipe run through the basement, up and into the chimney at the bottom of the flue, as you suggest, would not improve matters to any appreciable extent. The trouble with your chimney is that it is too cold, due either to faulty construction or insufficient protection. If the chimney flue is oblong in shape instead of square, that would give more surface to the same volume of smoke, and, hence, tend to produce the condensation that occurs. If there is only one thickness of brick between the chimney and the weather, or if it is unlined, these conditions would also produce the bad effects complained of. If it is out of the question to build a center chimney, then the defects of construction in this one will have to be remedied before you can get relief. If the chimney flue is a thin oblong in shape, I would suggest altering this by removing the outside brick and building a well-protected chimney, with flue eight inches square, lined with seven-inch pipe. It would, of course, necessitate the chimney brick projecting out beyond the others, but this is quite common. If the flue is the proper shape, and properly lined, then I would suggest building up the end of the house a layer of brick to protect the chimney from the weather, with a one- or two-inch air space between this false layer of brick and the present brick.

2. The duties required of a manager would vary according to circumstances. The owner might be in a position to exercise a general supervision over the farm, the manager being practically a working foreman, in which case he would probably command in the neighborhood of \$50 a month. On the other hand, the manager might be placed in full charge and held responsible for everything about the farm, in which case he would probably command \$900 to \$1,000 a year.

3. I presume you do not mean exactly what you say when you use the word "lubricator," as this is a piece of apparatus designed especially for giving a constant supply of oil to the cylinder of a steam engine. I take it you mean a "positive-feed" oil cup. Such an oil cup would work well in summer, if supplied with a very heavy oil or grease, but it is questionable whether there is any oil that would not freeze up in winter weather. I have consulted an en-

(Continued on next page.)

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CAUSTIC  
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A safe, speedy and positive cure. The safest, Best ELLIOTT'S ever used. Removes all bunches from Horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

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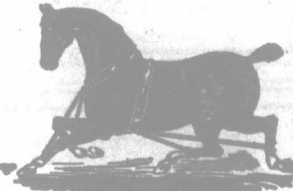
For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.

This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Fredrick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:  
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for sale at \$100 each. Foal getters, or could work. Also a pair of Canadian-bred stallions, rising four years; registered; not large horses, but all quality. Price very reasonable.

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Court Lodge, Egerton, Kent, England, exports pedigree live stock of every description to all parts of the world. Exported during 1907 more Shetland ponies, more Romney Marsh sheep, and more champion Oxford Downs than any other breeder or exporter, besides large numbers of other breeds of horses, ponies, cattle, sheep and pigs. Correspondence invited. Highest references given.

**FOR SALE: CLYDESDALE STALLION** rising 3 years this spring. Grandson of Imp. Bold Boy. His sire full brother to a world-champion show horse at Chicago. A light chestnut. White face. Well feathered. Good mane and tail. Stands 16 hands. Good block and splendid action. Plenty of good flat bone. Was bred to 13 mares last season: 9 or 10 have proved in foal. The property of the late Henry K. Schmidt. Must be sold. For further particulars apply to **GEO. MOORE** or **J. H. ENGLE, Y. S., Waterloo, Ont.**

**CLYDESDALES**

One 1,750-lb. 8-year-old mare in foal. One 5-year-old mare and one 3-year-old mare.

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Two right good yearling bulls left yet, and a lot of heifers cheap. Write, or come and see them.

**JAMES McARTHUR, Gobles, Ontario.**

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cures inflammation of lungs, bowels and kidneys. The 20th-century wonder. Agents wanted in every county. Write for terms.  
**DR. BELL, V. S., KINGSTON, ONT.**

**Clydesdales, Shorthorns and Cotswolds.**—For individuals of above breeds, write me. My new Cotswold and Clydesdale importation will arrive early in the season.  
**J. C. ROSS, Jarvis, Ont., P. O. and Sta.**

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**JOHN CHAMBERS & SONS,**  
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Sixty head have been sold by me in Ontario alone during the past year. The quality of the stock may be judged from the fact that while we have nothing forced for exhibition purposes these horses won in the show-rings at the Ontario Horse Breeders' Association, Toronto; The Western Fair, London; The St. Thomas Horse Show, and other places. A fresh consignment of mares and fillies in foal, and stallions ready for service, among them several handsome two-year-olds, will be ready for inspection and sale at my barns, St. Thomas, Ont., about April 10th. We show the goods, and sell at reasonable prices. Our terms are reasonable. Correspondence solicited.  
**G. K. GEARY, St. Thomas, Ont., Agent for Canada and the United States.**



**IMPORTED CLYDESDALES** Up to over a ton in weight, with the very richest of breeding and the best of quality. I think no better shipment of stallions ever left Scotland. I have also nine fillies, without doubt the best lot in Canada. All will be sold cheap and on terms to suit. Long-distance 'phone.  
**GEO. G. STEWART, HOWICK, QUE.**

### 2 IMPORTED CLYDESDALE FILLIES

Bred by Prince Alexander and Macgregor's champion, recorded in Clydesdale Stud-book of Canada. Terms and prices reasonable.  
**Robt. McEwen, Byron, Ont. London Ry. Station.**



**Imp. Clydesdales (Stallions and Fillies), Hackneys, Welsh Ponies.** I have now on hand Clydesdale stallions and fillies—Scotland prizewinners and champions; Hackney fillies and Hackney pony; also Welsh ponies. There are no better animals, nor no better bred ones, than I can show. Will be sold cheap and on favorable terms. **A. AITCHISON, QUELPH, ONT., P. O. & STATION.**

### SIMCOE LODGE CLYDESDALES

Our stable of imported and Canadian-bred Clydesdale stallions and fillies was never so strong in show stuff as now, although we have had some very strong lots. Call and see what we have before buying elsewhere. **HODGKINSON & TISDALE, BEAVERTON, ONT., G. T. & C. M. R.** Long-distance 'phone.

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Four imported and home-bred stallions for sale. Ten imported and home-bred mares for sale. Among these are prizewinners at Toronto, Chicago and New York. Prices reasonable. Visitors always welcome to inspect stock. **JAS. J. BROWN, Manager BRANTFORD, CAN.**



**Clydesdales** Imported and Canadian-bred. Imp. brood mares a specialty. Celebrated Clydesdale sire, Acme (imp.), at head of stud. Will stand in his own stable for mares at \$20 this season. Long-distance 'phone. **R. M. HOLBY, Station and P. O. Manchester, Ont., G. T. R. Myrtle, Ont., C. P. R.**



**25 Imported Clydesdale Stallions and Fillies 25** Two Clyde stallions, 1 Hackney stallion, over 20 Clyde mares and fillies, from 1 to 5 years of age. Many high class show animals among this lot. Many winners in Scotland among them. They have size, quality, style, action and breeding. Come and see them. **GEO. A. BRODIE, Bethesda, Ont., P. O., Shelville and Gormley Stations.**



**Imported Clydesdales** I have still on hand 1 stallion, black, rising 4, by Carthusian, a Toronto winner; 1 rising 2 yrs., by Baron's Pride; 1 rising 2 yrs., by Danure Castle; 4 fillies, a Toronto first and second prizewinner among them. Every one of these is an extra good animal, and the price and terms are right. **T. D. Elliott, Bolton, Ont.**

WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

### QUESTIONS AND ANSWERS. Miscellaneous.

(Continued from page 917.)

gineer of wide experience, and he knows of no oil that he would guarantee to work in our Canadian winter. He suggests an oil cup supplied with grease, and a nail sticking down the center of the cup just touching the shaft. This, together with the warmth of the bearing, would keep the grease feeding as required. **WM. H. DAY.**

### Veterinary.

#### FATAL PARALYSIS.

Pregnant cow, fed on hay and chop, got run down, and began to fail in flesh. She lost the use of her hind legs, and could not rise, but could stand for a while when lifted. She was drenched with oatmeal and flaxseed gruel, and ate a little, and she chewed her cud, but she died. What was the cause of the trouble? What should have been done, and is it contagious? **A. J. K.**  
Ans.—She died of paralysis, which may be caused by digestive trouble, an injury to the spine, a growth upon the spinal cord, or conjection of the vessels of the cord. It is not contagious. Treatment is not always successful. It consists in purging with 2 lbs. Epsom salts and 1 oz. ginger, and following up with 2 drams nux vomica, three times daily; keeping comfortable, and keeping up her strength by drenching as you did, and feeding on nourishing food when they will eat. **V.**

#### ARTHRITIS.

I have a two-year-old colt that has been bothered most of the winter with stiffness in the joints, mostly in the front legs, knees especially. There is a little swelling on the upper inside part of the knee. When he lies down, he will stretch straight out on the floor. He is in good condition every other way, except his appetite is none too good. He stands nearly sixteen hands high, and has grown fully five inches this winter. I had him to a veterinary, and he said it was growing pains. **R. H. B.**  
Ans.—Your colt has arthritis (inflammation of the joints). Get a blister made of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. Clip the hair off all around the affected joints. Tie so that he cannot bite the parts. Rub well once daily with the blister for two days. On the third day wash off and apply sweet oil. Turn loose in a box stall now, and oil every day until the scale comes off, then tie up and blister again, and after this, blister once monthly as often as necessary. **V.**

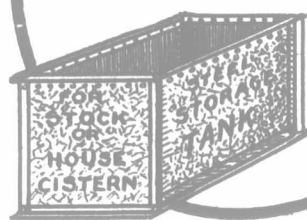
#### FATALITY IN FOAL.

Filly, six weeks old, strong and smart, suddenly stopped nursing, and looked sleepy. She then lost power of her hind legs, and could not get up or stand. She died in forty hours. She did not get hurt, and was kept in a warm box stall during her illness. She shivered as though she were cold, but she was not cold. What was wrong, and what should have been done? **E. S. M.**  
Ans.—This was either joint ill or paralysis. If the former, there was more or less swelling and soreness of some of the joints, probably the hocks. This disease has been fully discussed in the columns of "The Farmer's Advocate" in recent issues. Treatment is seldom successful. Prevention consists in clean surroundings and dressing the colt's navel as soon as possible after birth, and four or five times daily, until the cord dries up, with a strong disinfectant, as corrosive sublimate, 15 grains to 8 ounces of water, or a five-per-cent. solution of carbolic acid. If the colt had paralysis, no swelling or soreness would be present, and treatment should consist in giving 5 grains nux vomica in a little of the dam's milk, three times daily, but would probably be unsuccessful. I am of the opinion she died from joint ill. **V.**

"The people I lived with before, ma'am," said the new cook, "was very plain." "Well," asked her new employer, "are we not plain here?" "Yes, ma'am, but in a different way. They wuz plain in their way o' livin', not in their looks, ma'am."

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Liniment for household use. Ask for Tuttle's American Worm and Condition Powders and Hoof Ointment. "Veterinary Experience," perfect horse-man's guide free. Symptoms and treatment for all common ailments. Write for it. Postage 2c.  
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Montreal: H. A. Tuttle, Mgr., 32 St. Gabriel St.  
Beware of all blisters; only temporary relief, if any.  
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Cures Strained Puffy Ankles, Lymphangitis, Bruises and Swellings, Lameness and Allays Pain Quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. \$2.00 per bottle, delivered with full directions. Bottle 5-C, free.

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**W. F. YOUNG, P.D.F., 73 Monmouth St., Springfield, Mass.**  
Canadian Agents: **LITTLE BROS. & CO., Montreal.**

## RIVER VALLEY CLYDESDALES AND SHORTHORNS.

For Sale—Two stallions, one imp., the other imp. in dam; 3 imp. mares 3 and 4 yrs. of age—a grand pair, with size and quality; 1 filly foal imp. in dam. Shorthorns all ages, of both sexes; straight milking strain. **A. V. Carefoot, Thornbury, Ont., Redwing P. O.**

**Shannonbank Clydesdales, Ayrshires, Yorkshires** One stallion rising three years, by imported Hopewell. Two young bulls ten months, and some heifers from six months to two years. Yorkshires of both sexes. **W. H. TRAN, Cedar Grove Ont., Locust Hill Sta., C.P.R.**

**YOUNG MEN WANTED**—To learn the Veterinary Profession. Catalogue sent free. Address **VETERINARY COLLEGE** Department Y. Grand Rapids, Mich.

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If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma, or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Write at once to the **Yonkerman Consumption Remedy Co., 132 Rose Street, Kalamazoo, Mich.** Don't wait—do it now.

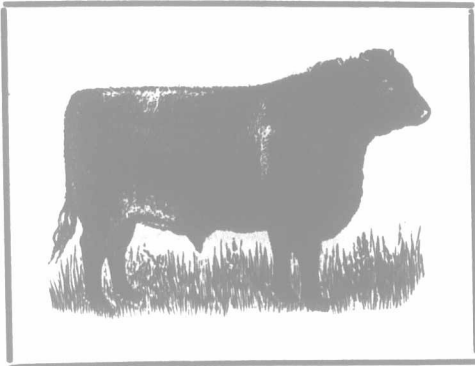
Hold fast upon God with one hand, and open wide the other to your neighbor. That is religion; that is the law and the prophets, and the true way to all better things that are yet to come.—George Macdonald.

**EXECUTOR'S SALE**

OF HIGH-CLASS IMPORTED AND CANADIAN-BRED

**Shorthorns**

At the Sale Pavilion of the Union Stock Yards, Toronto Junction, Toronto, Ont.



**Thursday, June 11th, '08**

AT ONE P. M., WITHOUT RESERVE.

There will be sold the entire herd of **43 head of Imported and Canadian-bred Shorthorns**, the property of the estate of the late **William Hendrie, Valley Farm, Hamilton, Ontario.**

TERMS CASH.

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**CLYDESDALES AND FRENCH COACHERS, IMP.**

Scottish and Canadian winners, stallions, mares and fillies. The Clyde<sup>s</sup> represent the blood of such noted sires as Baron's Pride, Up-to-Time, Royal Favorite, Balthopa and Aemo. They combine size, quality and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephone.

**ROBT. NESS & SON,**

**HOWICK, QUEBEC.**

**GOSSIP.**

**GLENGORE ABERDEEN-ANGUS.**

Three miles from Alton Station, on the Orangeville branch of the C. P. R., lies Glengore Stock Farm, the property of Geo. Davis & Sons, breeders of Aberdeen-Angus cattle. Their herd, now some 40 strong, all belong to the noted Mayflower and Fair Lady strains, two of the most fashionable tribes in Scotland, noted for their thick, even-fleshed, early-maturing and easy-feeding qualities. The stock bull is Hamilton Boy 2049 (C), 63183 (A); sired by Bruno 3rd 1038 (C); dam Questra (imp.), of the well-known Corkie tribe, by Game Cock. As an individual, he ranks among the real good ones, and as a sire he certainly is possessed of the power of transmitting his good qualities. All the animals of this herd are recorded in both the Canadian and American herdbooks. The foundation cows were of the Mayflower tribe: Brunette 808, by Prince of Kinouil Park 806, grandam Mayflower 13th (imp.), of the Fair Lady tribe; Fair Lady of Cold Creek 1372 is by Laurier 271. For sale are a number of choice heifers, from one to three years of age, and seven bulls, from five months to two years of age, among which are show stuff of a high order. For several years, Angus fat steers have won championship honors in England and at the Chicago International. On grade herds, for breeding purposes, no better cross can be found than by using an Angus bull. This lot will be sold well worth the money. Address to Alton P. O., Ont.

Clara.—She puts lots of feeling into her singing, doesn't she?  
Ferd.—Yes; but it must be awful to feel that way.

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**AGRICULTURAL REPORTS — ROAD GRADER FOR DIGGING TILE DRAINS — FERTILIZER FOR ROOT CROPS—STOMACHS OF THE COW.**

1. How could I arrange to have reports of the Canadian Seed-growers' Association, Dairymen's Association, etc., sent to me as soon as published?
2. How can I secure reports of the Macdonald College?
3. Have any readers had experience digging for tile drains with road grader?
4. What is a good commercial fertilizer for mangels and turnips that is immediately available? What have experiments shown to be the yield on fertilized and unfertilized plots?
5. Can anyone describe an implement for turning over manure in a barnyard, to be worked by team?
6. Please describe the stomachs of a cow and function of each?
7. What is a good tonic to give after indigestion?

Ans.—1. For the reports of the Canadian Seed-growers' Association, address the Secretary, L. H. Newman, Canadian Building, Ottawa, Ont. For the annual reports of the Dairymen's Associations, and other Provincial agricultural organizations, communicate with the Ontario Department of Agriculture, Parliament Buildings, Toronto, asking them to place your name upon their permanent mailing list for the publications desired.

2. Address Dr. Jas. Robertson, Principal Macdonald College, Ste. Anne de Bellevue, Que.

3. Experience of readers is invited.

4. A home-mixed fertilizer that should prove fairly prompt in its action would consist of 50 pounds nitrate of soda, 300 pounds acid phosphate, and 100 pounds muriate of potash. For mangels, the acid phosphate might be reduced to 200 pounds, while for turnips it might prove economical to reduce the potash to 50 or 75 pounds. To correspond with the formulae commonly recommended, the proportion of nitrate of soda should be about double what we have recommended, but as commercial nitrogen is now so very expensive, being worth upwards of twenty cents a pound, whereas potash and phosphoric acid may be purchased for about six cents, economy demands that the proportion of this element be minimized. In this connection, it should be remembered that nitrate of soda is very soluble, and produces most of its effect the first season; indeed, for best results it should be used in two applications, at intervals of two or three weeks. On the other hand, our most available potassic and phosphatic fertilizers yield only part of their benefit the first year, the residuum remaining in the soil to benefit subsequent crops, particularly a following seeding of clover. Therefore, while we would not recommend dispensing with nitrogen altogether, we would make freest use of the mineral elements above named.

5. A pair of handles, a cross bar in which are four or five concavely-curved tines of seven-eighths-inch iron, with a draw-bar at each end of cross-bar, describes in brief the principle of construction. It turns over much as an ordinary scraper.

6. The stomach of ruminants is a very complex organ, consisting of four compartments, which vary in size and form and in the disposition of the mucous coat. The first is the rumen or paunch, occupying about three-quarters of the abdomen and situated on the left side; second, the reticulum or honeycomb; third, the omasum, or manyplies, and fourth, the abomasum or true stomach. The first three are principally concerned in preparing food for the fourth, having little to do with what is called the essential process of digestion. The process of rumination is believed to be effected as follows: The food, when swallowed falls into the rumen, where it is tossed about by muscular action, and saturated with fluid; a portion is thrown through the valvular opening into the reticulum, and receives a further supply of liquid, and the finer particles are separated from the coarser; the former proceed to the omasum, the coarser portions, by the muscular contraction of the reticulum, the relaxation of the

(Continued on next page.)

U S U S

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Come and see them or address  
**M. H. O'NEIL,**  
Southgate, Ontario.

**Glengore Aberdeen Angus**

40 head of the Mayflower and Fair Lady tribes. For sale: 7 bulls, from 5 mos. to 2 years of age; heifers, from 1 to 3 years. A choice lot and sold right. **Geo. Davis & Sons, Alton, Ont.** Station, C. P. R.

**ABERDEEN - ANGUS**

For sale, 50 head to pick from, males or females by imported sires. Drambo station.  
**WALTER HALL, Washington, Ontario.**

**Aberdeen - Angus Bulls!**

Two nice young Aberdeen-Angus bulls for sale at a bargain; also females.  
**J. W. BURT,** Centingby, Ont.  
Erin station, C. P. R.

"That famous railroad man, the late Samuel Sloan," said a New York banker, "loved fast trains, and hated slow ones. They tell a story about a trick he once played on a railroad whose service was notoriously slow.

"Having, several times, to use this railroad's afternoon accommodation, he caused a sign to be painted, which he took from his pocket and hung in front of one of the cars when nobody was looking. The sign said: 'Passengers are requested not to pluck flowers while the train is in motion.'"

**BLACK WATCH**

The Name of  
**Black Watch**  
On a Tag on a Plug of  
Black Chewing Tobacco  
Stands for Quality. 2273

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 WON'T 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. YOUR LAND WILL PAY.

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

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HAMILTON ONTARIO

**Blair's Pills**

Great English Remedy for  
**Gout & Rheumatism**

Safe, Sure, Effective.  
All Druggists, 50c and \$1.00.  
LYMAN, BONS & CO.  
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If the stock-raisers that are making their stock food at home with Barnes' English Compound did not get the very best results, would they keep on buying it, would they send in for from one to six cans more and tell me that it is the best they have ever used? If your friends find my formula right, why won't you keep away from the secret preparations and know that you are using the purest medicine in concentrated form? Make a stock food at home that will fatten and condition your stock as it has never been before.

Thoroughly mix one pound of Barnes' English Compound with six pounds of corn meal and three pounds of linseed meal. I will send postpaid one-pound can of Barnes' English Compound for 50c., or 6 cans for \$2.50, with full directions.

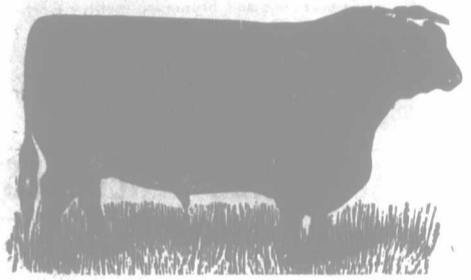
S. G. AMSDEN, Box 668, Windsor, Ont.

**The HOOVER POTATO DIGGER**  
Light running, well built, low in price—the most satisfactory machine to use.



Made in two sizes. Send for catalogue and ask about trial offer. THE HOOVER MFG. CO., Avery, O. THOS. A. ALPHEON, General Agent for Ontario, Box 22, Carlisle, Ont.

**Shorthorn Bulls**



I have for sale four as good young bulls as I ever offered to my customers at my best times. For type, quality and breeding these are up to the standard of first class. Write me for particulars, or come and see.

**ARTHUR JOHNSTON,**  
Greenwood, Ont.

Claremont Stn., C.P.R.; Pickering, G.T.R.

**J. Watt & Son**  
SALEM ONT.,

Offer 12 or 15 high-class young cows and heifers in calf, or calves at foot, to (imp.) Pride of Scotland. Show stuff of different ages always on hand.

**ELORA STA., G.T.R. and C.P.R.**

**Choice Shorthorns for Sale!**

Some fine young stock, either sex, including some extra heifers from imp. dams, and all got by the Cruickshank (Duthie-bred) bull, Sittytton Victor, Imp., =50093= (87397). Also young Yorkshires, either sex. Address **JOHN BRYDONE, Milverton, Ont., C. P. R. & G. T. R.**

**Shorthorns, Cotswolds, Berkshires**

For sale: 2 bulls 18 months, 1 bull 12 months, and 4 from 7 to 9 months; and females all ages. In Cotswolds a few good ewe lambs. Nothing to offer in Berkshires. **CHAS. B. BONNYCASTLE, P. O. and Station, Campbellford, Ont.**

**Willow Bank Stock Farm**  
Herd Established 1855

The great Duthie-bred bull, Imported Joy of Morning =32070=, and Scottish Banner =61023=, at head of herd. Young cows bred to the above sires; also bulls and younger heifers for sale. Very choice.

**James Douglas, Caledonia, Ont.**

**Do you want a SHORTHORN bull cheap?** 12 months old. Weight 950 pounds. Dam, good milker. Also choice cows and heifers. Write: **A. M. SHAVER, ANCASTER, ONTARIO.**

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

(Continued from page 919.)

oesophageal pillars and the anti-peristaltic action of the oesophageal walls, are returned to the mouth to be re-masticated and again swallowed. Any coarse portions again fall into the rumen to be reacted on, the remainder passes down the oesophageal canal to the omasum, whence liquids flow into the true stomach, while solids are drawn between the leaves of the omasum to be further prepared.

7. It is usually well to purge after an attack of acute indigestion, using 1½ to 2 pounds Epsom salts. Follow up with 2 drams each sulphate of iron and gentian twice daily in a feed of bran, with a handful or two of oil meal added.

**SCROTAL HERNIA.**

Colt foaled April 24th has rupture in the scrotum. What would you advise doing with it? The colt is strong and all right otherwise. H. G.

Ans.—Colts generally outgrow this trouble without treatment, but some never get all right. Indeed, treatment is of little avail until castration is performed, which is generally most safely done at one year old. In the operation, which should be performed by a qualified practitioner, the covering or tunics cut through in letting out the testicles are included in the clamps, and the swelling will fill the opening, and the contraction will close it.

**DRYING EWES—GARGET.**

1. What will help to dry the milk off ewes after selling or taking the lambs off?

2. Two of my sheep took caked bags and lost their lambs. What is cause and cure? If bred again, would they be liable to go the same way? I have been told it is caused by not milking out after lambs are taken off. G. J.

Ans.—1. Keeping the ewe on dry feed for a few days, and milking her out once a day. Rubbing her udder with spirits of turpentine will help.

2. There is nothing better for caked udder than spirits of turpentine and lard, or goose grease well rubbed in after bathing with hot water. The cause is generally too much milk, or not being milked out. When lambs are weaned in summer, they should be left on the same pasture for a few days, then given the freshest pasture on the farm, and the ewes kept on short or dry pasture for a week or two, and, if need be, milked out a couple of times. Lambs should be weaned at about four months old.

**GOSSIP.**

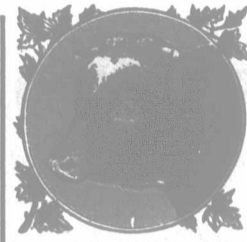
Mr. A. A. Colwill, Newcastle, Ont., writes: "I have recently sold the two Shorthorn bulls advertised. Mr. Frank Henry, Jr., of Calderwood, was the purchaser of the roan Lavender bull. Mr. Henry, who never saw this bull until he took him out of the car, writes us that he arrived in good shape, and is highly satisfactory. The other bull went to Mr. John Gordon, of Elizabethville. He got the red Syme, sixteen-months-old bull, sired by the same bull as Mr. Henry's calf, namely, Donald of Hillhurst, son of Imp. Joy of Morning; this is also a good, thick bull of the right kind, and should be well patronized in the neighborhood. I have a few choice heifers for sale at reasonable prices.

"In Tamworths, I have been selling quite a number all through the winter, and as spring opens out, and the price of hogs improved, my inquiries and sales have increased, but I still have a lot of choice stock to offer, including a dozen boars, from 4 to 6 months old, and a similar number of sows, same age; several sows due to farrow in May, others recently bred, and about 50 pigs, both sexes, from two weeks to two months old. In fact, I never had such a good lot of young stock to offer as at present, and they are nearly all sired by my imported boar, Cholderton Golden Secret, and out of sons sired by Colwill's Choice and Newcastle Warrior, both Toronto sweepstakes boars."

**You Want** rich milk and plenty of it. More milk means more money. Better quality means a good reputation.

**Molassine Meal**

Keeps milch cows healthy, in splendid condition, and makes them yield maximum quantity of milk of finest quality. Equally good for bullocks, horses, and is the best food for lambs and sheep. Pamphlets and prices from Andrew Watson, 91 Youville Square, Montreal



Am offering at the present time

**3 Very Fine Imp. Young Bulls.**

Good colors, and of the best breeding; also some extra good Canadian-bred bulls ready for service. Also cows and heifers. Prices reasonable.

Imported and Canadian-bred. **H. J. DAVIS, Importer and Breeder, Woodstock, Ont.**

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Our present offering is 8 bulls, from 6 to 14 months of age, sired by Imp. Ben Loman and Imp. Joy of Morning, and out of Imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance phone.

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For sale: One extra good young bull, 11 months old, from imp. sire and dam; also a few good young Leicester ewes in lamb. At easy prices for quick sale.

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OLD PROCESS

Nothing is better for fattening steers quickly and putting them on the market in prime condition than Oil Cake Meal. Thousands of Canadian and English stockmen use Livingston's, and would have no other. It is equally good for milk cows. They give more and better milk when fed Livingston's Oil Cake Meal. Also used for horses, sheep and hogs. Write for information regarding prices, etc., etc., to

**DOMINION LINSEED OIL CO., LIMITED**  
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**SPRING VALLEY SHORTHORNS**

We still have three choice young bulls that will be sold very reasonable, as we do not care to run them over; also a choice lot of cows and heifers, bred to the champion, Clipper Chief, imp.

**KYLE BROS., AYR, ONTARIO.**

**R. H. REID,**

**Glover Lea Stock Farm, PINE RIVER, ONT., BREEDER OF SHORTHORN CATTLE**  
Golden Cross (imp.) at head of herd.

**5 IMPORTED Shorthorn Bulls 10 HOME-BRED**

Herd headed by the grand champion, Prime Favorite, imp. You cannot afford to buy without seeing these bulls. We will appreciate a visit. Females of all ages and most popular lines of breeding. Bell telephone on each farm. Burlington Jct. Stn., G. T. R. **W. G. Pettit & Sons, Freeman, Ont.**

**SHORTHORN BULLS For Sale.**

At the dispersion of the "Thistle Ha" herd in Jan., 1906, I purchased a few of the best breeding cows. From these cows I now have 6 extra good young bulls for sale. For pedigrees and other particulars apply to

**JOHN MILLER, Brougham, Ont. Claremont Sta., C. P. R.**

**The Salem Stock Farm**

**SHORTHORNS A SPECIALTY. WRITE FOR ANY INFORMATION.**  
**J. A. Watt, Elora, Ont.**  
G. T. R. AND C. P. R.

We are offering a very superior lot of **SHORTHORN Home-bred Bulls** of the best breeding and quality at attractive prices for the buyer. To see them is all that is necessary. Try to do so if you are in the market. It will pay you.

**JNO. CLANCY, Manager. H. CARGILL & SON, Cargill, Ont.**

**High-class Shorthorns** Royal Chief, a son of Mildred's Royal, at head of herd. We are offering a few choice heifers of show-ring form. Pure Scotch. Terms reasonable. **A. DUNCAN & SONS, Carlisle, Ont.**

**Shorthorn Bulls—Ready for service.** One will make a show bull. Also young things from Matchless, Crimson Flower, Miss Ramadan, Rosemary, Diamond and Lady Fanny dams, the get of Chancellor's Model. Prices to suit times. Come and see. **ISRAEL GROFF, Elmira, Ont.**

**Shorthorns For Sale**

One red, 18 months' old bull, sire Golden Abel (imp.) and from a Lavinia dam. One roan, 17 months' old bull, sire Butterfly King (imp.), and from an imported Nonpareil dam. Also several younger bulls of good breeding. The above are strictly first-class, and will be priced right. **R. J. DOYLE, Owen Sound, Ont.**

WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

# How Is Your Cold?

Every place you go you hear the same question asked. Do you know that there is nothing so dangerous as a neglected cold? Do you know that a neglected cold will turn into Chronic Bronchitis, Pneumonia, Disrupting Catarrh and the most deadly of all, the "White Plague," Consumption. Many a life history would read differently, on the first appearance of a cough, if had been remedied with

## Dr. Wood's Norway Pine Syrup

This wonderful cough and cold medicine contains all those very pine principles which make the pine woods so valuable in the treatment of lung affections. Combined with this are Wild Cherry Bark and the soothing, healing and expectorant properties of other pectoral herbs and barks. For Coughs, Colds, Bronchitis, Pain in the Chest, Asthma, Croup, Whooping Cough, Hoarseness or any affection of the Throat or Lungs. You will find a sure cure in Dr. Wood's Norway Pine Syrup. Mrs. C. N. Loomer, Berwick, N.S., writes: "I have used Dr. Wood's Norway Pine Syrup for coughs and colds, and have always found it to give instant relief. I also recommended it to one of my neighbors and she was more than pleased with the results." Dr. Wood's Norway Pine Syrup 25 cts. per bottle at all dealers. Put up in yellow wrapper, and three pine trees the trade mark. Refuse substitutes. There is only one Norway Pine Syrup and that one is Dr. Wood's.

**T. DOUGLAS & SONS, Strathroy, Ont.**  
**SHORTHORNS & CLYDESDALES.**  
 FOR SALE: Several choice young bulls out of big milk-producing dams; females all ages; 85 head to select from. Four imported Clydesdale fillies, all in foal; the imp. stallion, Royal Viscount. A visit to the farm will pay intending purchasers.

**NOTED IMP. BULL, DERBY, FOR SALE.**  
 Having several of Derby's heifers now ready to breed, we have decided to sell him. He is as active as ever, and has kept his conformation well. His breeding and ability need no comment. **W. J. SHEAN & SON, Box 856, Owen Sound, Ont.**

**A. EDWARD MEYER, Box 378, Guelph, Ont.,**

Offers for sale two young Scotch-bred bulls of good colors, both from imported sire; one from imported dam and the other from a Clementine cow; one is 11 months old, the other 8 months. They will be sold well worth the money. Write, or come and see them. Long-distance phone.

**TWO IMPORTED BULLS**  
 Direct from Aberdeenshire, Scotland, of excellent quality, color and breeding, two from imp. sire and dam, and others sired by Joy of Morning (imp.) = 32070 =. Prices in Shorthorns and Yorkshires will interest intending purchasers.  
**GEO. D. FLEICHER, Binkham P.O., Ont. Erin Sta., C. P. R.**

**For Sale: 10 Shorthorn Bulls**  
 from 10 to 12 months old, sired by Imp. Lord Roseberry, and most of them out of imp. cows. Prices right.  
**R. Mitchell & Sons, Burlington Jct. Sta. Nelson P. O., Ont.**

**MAPLE GROVE SHORTHORNS**  
 Scotch and dairy bred; up to date in type; prize-winners at the local shows. A number of 1 and 2 year old heifers, 1 year old bull, and one 5 mos. old—the last will make a show bull. Flora bred—will be sold easy. **L. B. POWELL, Wallenstein, Ont., P.O. and Stn., C.P.R.**

**SCOTCH SHORTHORNS!**  
 We now offer four heifer calves 10 and 11 months old. All reds. Bred from imp. sire and dams. Will be sold right. **G. RANKIN & SONS, Wyebridge P.O., Ont., Wyevale Sta.**

**FOR SALE: 4 Shorthorn Bulls** fit for service. Dairy type. Some of them from imp. cows, and all got by Broadhocks Prince (imp.) 55002. Prices the lowest. Also cows or heifers. 60 head to select from.  
**DAVID MILNE, ETHEL, ONT.**

### QUESTIONS AND ANSWERS. Miscellaneous.

**NAILS FOR SHINGLING.**  
 About nine years ago we built a barn, and used wire shingle nails in shingling. The nails have nearly all rusted off, and the shingles are coming loose. What would you advise me to do? Would it be wise to re-nail it with cut nails?  
 M. A. C.

Ans.—Renail with steel cut nails is the advice given by an experienced hardwage man, who quotes the testimony of many builders.

**WATER-TIGHT CELLAR WALLS AND FLOORS—VARIETY OF TURNIPS FOR SHIPPING.**

Will a cement floor keep water out of cellar? This spring I had eighteen inches of water. Cellar is four feet below surface of ground. What thickness would you make floor? Any information in regard to keeping water out will be gladly received.

2. Have a piece of ground, been in meadow for years, being low ground. On the one side there is a high knoll. Would turnips grow on low side, and potatoes on the knoll? What kinds would do best? Turnips are for shipping.

**NEW SUBSCRIBER.**  
 Ans.—To insure a really dry cellar, drainage should be provided to carry water away from the foundation; but a good cement wall, made with a pretty rich mortar, say, one part Portland cement to five or six of clean gravel, and well rammed, will prevent anything more than a certain amount of dampness from seeping through. The floor should be laid on a grouting of one part cement to ten of gravel, and finished with a two-inch coat, mixed one of cement to three of gravel or coarse sand. In building a wall in a place where trouble from moisture is anticipated, see that the outside face is smooth and hard-finished, else water settling into the wall is much more liable to percolate through it. Plastering the inside of a leaky wall helps, but does not always overcome the trouble.

2. The plan proposed should answer well. Rennie's Queen is a variety of turnip which has given excellent yields in the Experimental Department at Guelph, and which Prof. Zavitz describes as "a very nice, smooth turnip, well suited for the shipping trade."

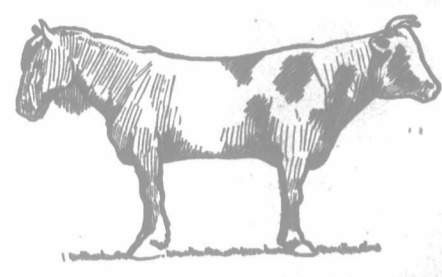
**GARGET IN EWE—LAMENESS IN SOW.**

1. Ewe with twin lambs lost one before going out to grass. After a while she got lame, and could hardly get up. Her udder being very hard, we put crude oil on to take the caking out, but she would not eat, and died in a few days. What is the cause, and what the treatment of this ailment?

2. We have two Tamworth sows running in the yard, with a shelter to go into, being fed on corn, peas and oats. One of them got very lame in one hind leg, so lame that she does not step on it. When standing, this leg quivers. She is falling away in flesh, and seems a little lame in one fore leg now. What is wrong with her; cause; treatment?  
 W. J. H.

Ans.—1. This is garget, which generally attacks ewes that are heavy milkers, and is brought on by colds or chills, due to the ewes being compelled to lie on the cold, wet ground. In this case, the loss of one lamb left more milk than the other could take, which would tend to cause the trouble. The treatment should be promptly attended to on the first appearance of illness. A quarter of a pound of Epsom salts should be given, and the udder bathed for half an hour, twice or three times a day, with hot water. After rubbing dry, rub well with a mixture of lard and spirits turpentine. Should an abscess form, it should be carefully cut open and well washed out with a weak solution of carbolic acid.

2. This lameness is due to too liberal feeding with grain and want of exercise. Feed lightly, and give a dose of salts and a dessertspoonful of sulphur in food twice a day to relax the bowels and purify the blood. Get her out on the ground for an hour or two on warm days in a sheltered, sunny place.



## THE STOCK-OWNERS' MEDICINE

### CHEST

What You Have Been Wanting for Years!

---

**THIS CHEST CONTAINS:**

- 1 Colic Draught.
- 6 Cough Powders.
- 6 Diuretic Powders.
- 1 Wound Lotion.
- 6 Diarrhoea Draughts.
- 12 Condition Powders.

PRICE:

# \$3.00

Full instructions and veterinary advice enclosed. For \$3 you get drugs that would cost you \$10 in the ordinary way. No horse or cattle owner should be without this medicine chest. When a horse has an attack of colic, and you have to drive ten or twenty miles for a veterinary surgeon, your horse may be dead when you return. In buying a medicine chest you do not want a collection of drugs that will cure half the diseases of horses and cattle, because most of them you will never require. What you do want is a medicine chest with a few of the best remedies for the common ailments of horses and cattle, every one of which you are certain to use within the next twelve months. Send for a list of our specialties, it includes cures for:—Lumpjaw, thrush, spavin, splint, curb, ringbone, sidebone, sprains, injuries, wounds, tapeworm, pinworm, ringworm, thoroughpin, enlarged glands, rheumatism, distemper (dog), antidote for strychnine poisoning (dog), etc. If you have a sick horse or other animal and do not know what is the matter with him, send us a minute description of his symptoms and a dollar bill, and we will send the remedy by return mail. If we do not consider we can treat with- out a personal examination we will return your dollar at once, so that it will cost you nothing to consult us. Some of the prescriptions from which we compound our various remedies have been obtained by us from world-renowned veterinary surgeons on both sides of the Atlantic. Send for our medicine chest at once you may have a sick horse tomorrow, and by sending \$3 now you may save \$300 in a week.

The Stock-owners' Veterinary Dispensary,  
249 Jarvis Street, Toronto.

**SCOTCH SHORTHORNS**  
 My herd is represented by such noted Scotch families as Victoria, Orange Blossom, Duchess of Gloster, Strathallan, Stamford and Lovely. Mostly from imported sire and dams. Write me for prices on what you want.  
**J. F. MITCHELL, Burlington Jct. Sta. Burlington, Ont., P.O. & Telegraph.**

**TWO RED BULLS**  
 12 Months' Old.  
 A Clipper and a Martha. Priced low for quick sale. One of them out of an extra milker. Females of all ages for sale. Inspection solicited. Always have on hand some good Lincoln sheep for sale. Long-distance phone.  
**J. T. Gibson, Denfield, Ont.**

**Shorthorns!**  
**BELMAR PARC.**  
**John Douglas, Peter White, Manager, Pembroke, Ont.**

Calves for sale by our grand quartette of breeding and show bulls:  
 Nonpareil Archer, Imp. Fred G.M., Imp. Marigold Sailer, Nonpareil Eclipse.  
 Females, imported and from imported stock in calf to these bulls.  
 An unsurpassed lot of yearling heifers.

**Pleasant Valley Shorthorns**  
 Herd headed by Imp. Ben. Lomond = 45160 = (80468) and consisting of females of the leading Scotch families. High-class young stock a specialty. Correspondence solicited. Inspection invited.  
**GEO. AMOS & SON, Moffatt, Ont., Stn. & P.O. Farm is 11 miles east of Guelph on C.P.R., half mile from station.**

**Queenston Heights Shorthorns**  
 Young bulls from imported and home-bred Scotch cows, and got by such noted bulls as Derby (imp.), Spicy Broadhocks (imp.) and Whitehall Ramsden. Priced for quick sale.  
**HUDSON USHER, Queenston, Ont. Farm three miles north of Niagara Falls.**

**Farmers and Cattlemen Read This**  
 When you cannot sell your export cattle at satisfactory prices at home, and wish to ship them to the Old Country markets, write or wire for steamer space, market and shipping information to **Donald Munro, Live-stock Forwarding Agent and Commission Salesman, 43 St. Sacramento St., Montreal.**  
 Load your cattle carefully, and bill them to me. I provide the necessary feed, insurance, etc., pay freight and all other expenses from shipping point, and give liberal cash advances on all consignments. Cattle are loaded on steamer under my personal supervision, and placed in charge of capable attendants for the ocean voyage. I represent the most reliable salesmen at all the different British markets.  
 BUSINESS ESTABLISHED 1890. REFERENCES: THE MOLSONS BANK, MONTREAL.

**1854 Maple Lodge Stock Farm 1908**  
 Four handsome young Shorthorn bulls for sale. Heifers also.  
**A. W. SMITH, MAPLE LODGE, ONTARIO.**  
 Lucan Crossing Station, G. T. R.

**Valley Home Shorthorns AND BERKSHIRES.**  
 Our herd numbers sixty-five head. We are prepared to give bargains to suit all who wish to buy from one animal up to a carload of females, and 19 bulls from 9 to 18 months old. Also 88 Berkshires of prolific strains.  
**S. J. PEARSON, SON & CO., Meadewale, Ont. Stations: Meadewale, C.P.R.; Brampton, G.T.R.**

# Ring-Bone

There is no case so old or bad that we will not guarantee

**Fleming's Spavin and Ringbone Paste** to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebones and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

**Fleming's Vest-Pocket Veterinary Adviser**

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists,  
75 Church Street, Toronto, Ontario

## Cattle and Sheep Labels

Size	Price, doz.	50 tags
Cattle	75c.	\$2.00
Light Cattle	60c.	\$1.50
Sheep or Hog	40c.	\$1.00

Cattle size with owner's name and address, and numbers; sheep or hog size with name and numbers. Sample and circular mailed free. Get your neighbors to order with you and get lower price. **F. G. JAMES, Bowmanville, Ont.**

## Brampton Jerseys

Unbroken record of several years success at all leading Canadian exhibitions is unequalled by any other herd of any kind or breed of live stock on the American continent. When buying a family cow, a stock bull or a dairy herd, buy only the best. Our public record proves that we have them. **B. H. BULL & SON, Brampton, Ont.**

**Jerseys 2 Extra Choice Young Bulls For Sale, 8 and 9 months old, grandsons of the great Financial King, out of large, heavy-milking dams. Inquiries solicited. ARTHUR H. TUFTS, Box 111, Tweed, Ont.**

**FAIRVIEW HERD** is the place to buy your next bull. I can furnish you with a bull sired by our great herd bull, PONTIAC KORNDYKE, who has 19 daughters in the last year's report that made official records from 15 pounds at less than two years old to over 111 pounds at four years, and the whole number averaged over 4.1% fat. No other bull in the world has ever made such a showing in one year. I have just tested another of his daughters that made 26.40 pounds butter in seven days with second calf. I have over 50 cows and heifers in calf to him. Come and look my herd over before making your selections elsewhere. **E. H. Bellar, Hazelton, St. Law. Co., N. Y., near Prescott**

**FAIRVIEW HOLSTEINS!** For sale: Just now we have about a dozen cows and heifers, some of them in the B. of M., and all with official backing on both sides, in calf to the Toronto 3-times champion. Also a number of bull calves with official backing. **THOS. HARTLEY, DOWNSVIEW, ONT.** Weston and Downsview stations.

## Maple Hill Holstein-Friesians

Bull calves from No. 1 dams, sired by bulls with great official backing. Write for prices.

**G. W. Clemons, St. George, Ont.**

## Queen City Holsteins

Big smooth cows. The sort that fill big pails the year through. They are officially tested in both seven-day and twelve-month tests. Farm seven miles north of Toronto, near Metropolitan Electric Ry. Long-distance telephone. **R. F. HICKS, Newton Brook P. O., Ont.**

## The Maples Holstein Herd!

RECORD OF MERIT COWS. Headed by Lord Wayne Mechtild Calamity, also in the Record of Merit. Nothing for sale but choice bull calves.

**WALBURN RIVERS, FOLDEN'S, ONT.**

## Holsteins & Yorkshires

R. Honey, Brickley, Ont. All surplus stock in Holsteins sold except this crop of calves. Ready to book orders for them. Best bacon type Yorkshires, one to six months, both sexes, at moderate prices.

**SPRING BROOK HOLSTEINS AND TAMWORTHS.** - Holsteins of richest breeding and highest production. Tamworths of best British blood and ideal bacon type. Herd headed by prizewinning Imp. Knowie King David Stock of all ages and both sexes for sale. Young sows bred to imp. boar. Write, or come and see: **A. C. HALLMAN, Breslau, Waterloo Co., Ont.**

**MAPLE-LINE HOLSTEINS.** - For immediate sale, is 1 yearling bull and several bull calves from 3 weeks to 2 1/2 months of age, out of producing cows of a high order. Also some choice young Yorkshire boar pigs from 8 to 8 weeks. **W. A. Bryant, Cairngorm, Ont.** Strathroy station.

**Homestead Holsteins** Bull calves for sale 2 months old, out of cows with large A. R. O. records, and sired by Count Mercens Posch, whose dam and sire's dam average 255 pounds butter in seven days. **G. & F. Griffin, Box 43, Burgessville, Ont.**

## QUESTIONS AND ANSWERS. Miscellaneous.

### FORMALDEHYDE TREATMENT NOT NECESSARY FOR CLEAN POTATOES.

Would you advise treating potatoes intended for seed, whether they show scab or not, with formaldehyde, and would you do it before or after cutting the potatoes? **G. W. A.**

Ans.—If the crop was perfectly clean, and the potatoes have not since been infected with the scab spores by contact with scabby tubers or vessels which have contained such, there can be no object in treating with formaldehyde, but if the least sign of scab is present, it would be well to treat by way of precaution. The treatment is performed before cutting.

### WILD SEEDS—LINE FENCING.

1. A and B are farmers in York County. A buys alsike clover seed from B to sow, and pays B for it. After buying and paying for it, A finds wild seeds in it. Can A compel B to take it back and refund money?  
2. What constitutes a line fence for pigs, and what size pigs can run?  
**Ontario. FARMER.**

Ans.—1. We think so.  
2. It would be necessary to see the local township municipal by-laws in order to answer this question. Ask your township clerk to show them to you.

### POULTRY BUSINESS IN COUNTRY VILLAGE.

I am living in a country village, and have an acre or so of land, and think that I would like to start in the poultry business. I would build a henhouse, and have a large yard surrounded with poultry fencing so fowls could not get out, but would have the freedom of the yard. I might keep 50 to 100 laying hens of the best laying strain. What breed would that be? I would like you to tell me how to start up a business of this kind, and would it be profitable, being aware of the fact that I would have to buy all my feed grain, etc.? I would like this business very much as a side line, if I could make it pay.  
**J. J. Mc.**

Ans.—As an avocation, this business may prove interesting; as a vocation, it would not insure a very fat living, though if well managed it may earn a modest profit over fixed charges and current expenses. We advise commencing in a small way, with not over fifty fowls, and let the business develop naturally along the most advantageous lines. As to the best laying breed, there may be such a one, but nobody knows what it is, or if he does know it, he cannot prove that he knows it. Any of the popular varieties of Minorcas and Leghorns are good egg-producers, though for winter eggs there are probably none superior to the Rocks, Wyandottes, Orpingtons, and Rhode Island Reds.

### MANAGEMENT OF FARM.

Have just commenced on a farm of 150 acres. Twenty-five acres at the back has a creek running across, which is an excellent run for cattle. My family like farming. We have ten cows, ten calves, and twenty head yearlings, some near two years old, seven head of horses (five working). Our expenses are heavy, having to pay \$500 rent and \$150 for help, as the boys are quite young yet, oldest only sixteen. How can I run this farm of pretty heavy clay soil to the best advantage, so as to make honest money, and all I can? **A. P.**

Ans.—The subject of farm management is far too broad for treatment in this column. Besides, we can scarcely presume to advise without more thorough knowledge of the farm; its location, the buildings, and the special tastes and aptitude of the farmer. It would appear, however, that our inquirer would do well to go in quite strongly for dairying, with hog-raising as a side line. The back 25 acres should be seeded down to permanent pasture, although it is a little late to do it this season. Next spring, part of it might be seeded, and the balance (which is presumably already in grass) kept as a grazing ground during the summer of 1909. On the arable portion of the farm, practice a short rotation, raising ten to fifteen or twenty acres of corn for the silo, and some mangels and turnips besides. For fuller instruction follow "The Farmer's Advocate" carefully from week to week.

## FOR 5 YEARS EACH SPRING FACE AND SCALP ERUPTIONS



**TROUBLED THIS LADY TILL ZAM-BUK CURED.**  
Miss Mary Levesque, 313 St. Adolphe St., Hochelaga, Montreal writes:—"I have found Zam-Buk an excellent remedy for almost skin eruptions. Up to this Spring I was bothered for almost five years with a red rash, small pimples and sores on my face and on the scalp thro' the hair. Nothing I used would clear this rash from the skin until I began using Zam-Buk. This salve has effectually and I believe permanently taken off those unsightly pimples and sores from both scalp and face. I shall recommend Zam-Buk to all my friends."

For healing eczema and all skin disease Zam-Buk is without equal. It is good for rheumatism when well rubbed in. Files also yield to Zam-Buk. All stores and druggists, sec. or Zam-Buk Co., Toronto.



### MAPLE GLEN HOLSTEINS

Herd of 35 head with A. R. O. breeding, backed up by better tests of over 16 lbs. as a two-year-old to over 26 lbs. as a cow. A good herd to select from. Two spring bull calves on hand. A. R. O. test of one is over 26 lbs. for dam and t. dam. Come and inspect the herd. Any animal will be offered for sale.

**G. A. GILROY, GLEN BUELL, ONT.**

**HILTON STOCK FARM—Holsteins, Gotswolds and Tamworths—Present offering: Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig. R. O. MORROW & SON, Hilton, Ont. Brighton Tel. and Stn.**

### LYNDALE HOLSTEINS!

Bull calves for sale out of cows with records of from 18 to 20 lbs., also 8 heifers coming 2, and a number of young cows in Record of Merit, bred to a grandson of Pieterje Hengerveld's Count De Kol.

**BROWN BROS., LYN. ONTARIO**

**HOLSTEINS** Two choice bulls, 10 months. Also calves for April and May delivery, sired by imported Ykema Sir Posch (nd Johanna Rue Sarsatie). O. I. C. swine. Largest strain bred in Canada. All eggs. Express prepaid. **E. D. GEORGE, Putnam, Ont.**

## HOLSTEINS

We must sell at least 25 cows and heifers at once in order to make room for the increase of our large herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way: arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls, 100 head to select from. Imported Pontiac Marmes, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. **H. E. GEORGE, Grafton, Ont. Putnam station, near Ingersoll.**

## To Head Your Herd

Why not buy Korndyke Lily De Kol. Born January, 1904. Sire Korndyke Queen's Butter Boy. Dam Miss Lily. This is a handsome young bull, and has proved himself a getter of good stock. Write for particulars. We also have a few cows and calves for sale.

## Centre and Hillview Holsteins!

125 head to select from. 35 in the R. O. M. Stock bulls. Bonheur Statesman, high official backing, and is closely related to Colantha 4th's Johanna; Brookbank Butter Boy. All nearest dams over 20 lbs. From these sires, out of R. O. M. dams, are several young bulls and a few heifers. Prices right. **P. D. EDE, Oxford Centre, Ont. Woodstock Station.**

**Two-year-old HOLSTEIN BULL For Sale!**

**PRINCE POSCH CALAMITY 3RD.** His dam has a 19-lb. butter-a-week record. 3 nearest female relatives average 24 lbs. a week. Quiet and sure. Half black and half white. First check for \$70 takes him. **GEO. RICE, Annandale Farm, Tillsonburg, Ont.**

**Evergreen Stock Farm** For sale: Choice Holstein bull calves from 4 to 5 months old. A. R. O. backing on both sides; also a few females. Write for prices and terms.  
**F. C. PETTIT, Burgessville, Ont.**

**SPRINGBURN STOCK FARM.** - Ayrshire Cattle, Oxford Down Sheep, Berkshire Pigs. Young stock for sale. Buff Orpington poultry, eggs \$1 per 13, \$4 per hundred; orders now being booked. **H. J. WHITTEKER & SONS, Williamsburg P. O.**

**D. M. Watt, St. Louis Station, Quebec,** breeder of **HIGH-CLASS AYRSHIRES** Canadian and Scotch-bred. All of deep milking qualities.

**Ayrshires** Bull 4 years old, two yearling bulls, bull calves from \$12 up. Everything in this herd is bred right up to date.  
**JAMES BEGG, Box 88, St. Thomas.**

## Stoneycroft Ayrshires



Choice young bulls and heifers of the very best breeding, combining show and dairy quality. Large improved Yorkshire Pigs from imported sires and dams, now ready to ship.  
**STONEYCROFT STOCK FARM, Ste. Anne de Bellevue, Que.**

## Howglen Ayrshires!

For sale: 75 pure-bred registered Ayrshires, all ages; prizewinners; many imported. Apply to **ALLAN P. BLUE, EUSTIS, QUEBEC.**  
**AYRSHIRES** Young bulls from producing dams and same sire, from 7 months up to 2 years. Rare good ones and will speak for themselves. **H. DYMENT, Hickory Hill Stock Farm, Clappison, Ont. Dundas Station and Telegraph.**

## Hillview Herd of Prizewinning AYRSHIRE CATTLE.

All animals bred and carefully selected for size, constitution, long teats and deep-milking qualities. Select animals of both sexes for sale at reasonable prices. For further information and prices write  
**A. KENNEDY & SON, Hillview Stock Farm, Vernon, Ont. Winchester Station, C. P. R.**

## Ayrshires A N D Yorkshires



Special offering: Young calves from dams that have qualified for Record of Merit, and others that have made good records. Any ages desired; either imp. or home-bred. If you want an imported bull or heifer write **J. Nelson, Fenwick, Scotland.** Orders taken for young pigs or young sows in farrow. Long-distance 'phone.  
**Alex. Hume & Co., Menie, Ont.**

**Ayrshires from a Prizewinning Herd** Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON, Campbellford Stn. o Menie P.O., Ont.**

**Ayrshire Cattle for Quick Sale** Choice bulls, heifers and cows, imported or Canadian-bred, for immediate sale. Prices very low considering quality. Good teats. Heavy milkers. For particulars write: **William Thorn, Trout Run Stock Farm, Lynedoch, Ont., Norfolk Co.**

### THREE Trying Times in A WOMAN'S LIFE WHEN MILBURN'S HEART AND NERVE PILLS

are almost an absolute necessity towards her future health.

The first when she is just budding from girlhood into the full bloom of womanhood.

The second period that constitutes a special drain on the system is during pregnancy.

The third and the one most liable to leave heart and nerve troubles is during "change of life."

In all three periods Milburn's Heart and Nerve Pills will prove of wonderful value to tide over the time. Mrs. James King, Cornwall, Ont., writes: "I was troubled very much with heart trouble—the cause being to a great extent due to "change of life." I have been taking your Heart and Nerve Pills for some time, and mean to continue doing so, as I can truthfully say they are the best remedy I have ever used for building up the system. You are at liberty to use this statement for the benefit of other sufferers."

Price 50 cents per box or three boxes for \$1.25, all dealers or The T. Milburn Co., Limited, Toronto, Ont.

#### FAIRVIEW SHROPSHIRE

We are now ready to book orders for Show rams and ram lambs, Show ewes and ewe lambs. Also field sheep of each sex. Our flock is in fine shape and we are sure they will suit customers. Come to see them or write for quotations. J. & D. J. Campbell, Fairview Farm, Woodville, Ont.

#### Sheep Breeders' Associations.

American Shropshire Registry Association, the largest live-stock organization in the world. Richard Gibson, President, Delaware, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette Indiana.

#### SHROPSHIRE SHEARLING EWES

for sale, bred to high-class imported Butiar ram. GEO. HINDMARSH, AILSA CRAIG, ONTARIO.

#### PINE GROVE BERKSHIRES

Bred from imp. and Canadian-bred sires and dams, which are of choicest breeding. Stock, all ages, for sale. Some imp. in dam. Guaranteed as represented. W. W. BROWNIDGE, Milton, C.P.R. Ashgrove, Ont. Georgetown, G.T.R.

"The traveller in Ireland will do well," recently remarked an attaché to our embassy at London, "when he engages a jaunting-car to make sure of the step to which, in mounting, he must trust his weight. The carman does not help him to mount."

"I am afraid that step is loose," an American once said to the driver he had engaged.

"The man took hold of the step and shook it. 'Ah, shure,' said he, 'it's too strong, it is. What are ye afraid of?'"

"As he was talking, the thing came off in his hand."

"This mishap did not, however, embarrass the Irishman, for, with the sunniest of smiles, he turned to his fare, saying:

"Shure, now, I've saved yer honor from a broken leg!"

#### QUESTIONS AND ANSWERS. Miscellaneous.

##### SEED CORNS.

Please name the two best varieties of corn to grow for the silo in this locality, also the best way to secure good seed. SUBSCRIBER.

Ans.—Our subscriber writes from the southern part of Lennox and Addington. We cannot say positively what would be the largest-growing varieties that could be relied upon to mature in this particular section, but would suggest Compton's Early, Longfellow and White Cap Yellow Dent as trustworthy kinds, which should produce a moderate yield of well-eared and fairly well-ripened ensilage corn. To procure seed, write to some of the men and firms who have been advertising in "The Farmer's Advocate" the past winter, asking for a sample of seed corn on ear of the particular varieties desired. If ear corn cannot be had, purchase shelled corn by sample, and be sure to make a test for germination before sowing.

##### A HORSE TRADE.

A has a nice driving mare, rising six years old. B has a general-purpose horse, rising nine years. A wants a larger horse, and B says a smaller one would suit him better, so a trade was proposed. B asked A if his mare was sound, and A said he would guarantee her perfectly sound in every sense of the word. A then asked B if his horse was sound, and B said he was so far as he knew. So, on these grounds, they traded, taking each other's word; but before A had walked his horse a quarter of a mile, he was almost smothered with the leaves, compelling him to stop. A drove back to B's place and demanded his mare, on the ground that B had misrepresented his horse.

- 1. Was A justified in demanding his mare?
2. Had B refused to give up the mare, could A, by law, compel him to do so? Ontario. A NEW SUBSCRIBER.

Ans.—1 and 2. We think so.

##### TENANT BREAKING COVENANTS.

A leased farm to B for a term of five years. It reads in lease that B is to leave at least seventy acres in grass. The term is expired, and A finds that there is not thirty acres in grass. B's excuse is that he sowed, but the seed did not catch. The lease also reads that he was to pile manure so as to rot and heat, so as to kill foul weeds. Instead, he drew out manure in winter time. It also reads that he is not to assign or sublet without leave. He left some two weeks before the 1st of March, the time the lease expired. He gave permission to some of the neighbors to bring in cattle, stock of all kinds, which they did; fed and wasted some valuable feed.

- 1. Is there any way to come at him for damages?
2. If so, how? SUBSCRIBER.

Ontario.

Ans.—1. Yes.

2. Have a solicitor write him a letter, and, if necessary, follow it up by suit.

##### WHITE SCOURS IN CALVES.

I have a valuable herd of Holsteins, and am losing my calves. Have lost three inside of a month. They are large and strong at birth, but in a day or two become very badly physicked; then mope and die. They suck the cow for a time or two, then seem to be dull and stupid, and pine away, and die in a day or two. T. H.

Ans.—This is a contagious disease of the same nature as navel ill, or joint-ill in foals. The infection is believed to be by germs through the navel opening, and the treatment for prevention is the use of a fifteen-per-cent. solution of formalin, or a five-per-cent. solution of carbolic acid, repeatedly applied to the navel string till it dries up. Formalin is also recommended as a medicine for internal treatment. Take half an ounce of formalin and dilute with 15 1/2 ounces water. Add a tablespoonful of the solution to a pint of new milk, and feed warm from a bottle with a rubber nipple, or as a drench, given slowly, three or four times a day. This treatment was advised in "The Farmer's Advocate" two years ago, and several subscribers reported very satisfactory results.

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#### I CAN FURNISH JUST NOW A LARGE NUMBER OF EXTRA GOOD Shropshire & Cotswold Rams

A large number of extra good Shropshire and Cotswold ewes, twelve months old, and a few very high-class Shorthorn bulls and heifers. Any of which will be sold at moderate prices. ROBERT MILLER, STOUFFVILLE, ONT.



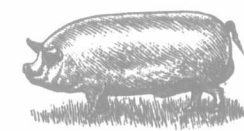
English Berkshires. January pigs ready to ship. Orders booked for March pigs. Boars ready for use. Two-year-old Shorthorn bull and noxville, Que. JOHN RACEY, Lennoxville, Que.

#### LARGE ENGLISH YORKSHIRES.

Pigs of the most approved type of both sexes, all ages, for sale at all times. We have more imported animals in our herd than all other breeders in Canada combined. We won more first prizes at the large shows this year than all other breeders combined. We won every first but one and all silver medals and Bacon prizes at Toronto and London, and at St. Louis we furnished all the first prize hogs in the breeding classes except two; also supplied both champions and grand champions. Prices reasonable. D. C. FLATT & SON, Millgrove, Ont.

Yorkshires and Tamworths Either sex. Any age. Sows bred and ready to breed. Yorkshires from imp. stock. Tamworths from Toronto winners. Pairs not akin. Chas. Currie, Morriston, Ont. Schawston, C. P. R.

Duroc-Jerseys Boars fit for service. Sows ready to breed. Several sows in pig, also younger ones. Imported Canadian Boy 1907 heads our herd. MAC CAMPBELL & SONS, Harwich, Ont.



#### YORKSHIRES Of the Choicest Type of Breeding!

Our herd stands second to none in Canada to-day. We invite inspection. Any stock shipped can be returned at our expense if not satisfactory on receipt. Prices not the lowest, but for value received we guarantee them as good as the best. Good stock on hand now. J. W. BOYLE, P. O. Box 563, Woodstock, Ont.

Maple Grove Yorkshires. Animals of choicest breeding and individual excellence, both imported and Canadian-bred. Young sows due to farrow in April and May. Boars fit for service. A fine lot of boars and sows from 3 to 6 month old. Pigs of both sexes and any age. Everything guaranteed as represented. Price reasonable. H. S. McDIARMID, FINGAL, ONT., SHEDDEN STATION.

SUNNYMOUNT BERKSHIRES Boars fit for service, sows safely in pig, young sows 4 months old, young sows and boars 8 months old, imported in dam. JOHN McLEOD, Milton, Ont., P. O. and Sta., C. P. R. & G. T. R.

MONKLAND YORKSHIRES are the easily fed, quick maturing kind. The sort the farmers want. All ages for sale. 100 sows bred now. JAMES WILSON & SONS, FERGUS, ONTARIO.

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Glenburn Herd of Yorkshires Winner of gold medal three years in succession. 6 young boars from 6 to 9 months; also 75 young sows, from 6 to 13 weeks old. David Barr, Jr., Box 3, Renfrew, Ont.

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Yorkshires A choice lot of boars and sows just farrowed and weaned. Boars ready for service, and sows ready to breed and bred. Bred from imp. and prizewinning stock. GEO. M. SMITH, Haysville, Ont.

Meadowbrook Yorkshires. Young stock of both sexes. A number of sows old enough to breed, all sired by imp. Dalmazy Topman. Everything guaranteed as represented. J. H. SNELL, Hagersville, Ont., P. O. & Station.

LARGE ENGLISH YORKSHIRES.—We have a limited number of choice young pigs for sale, bred from our choicest sows and got by the imported boars, Dalmazy Joe 13577 and Broomhouse Beau 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses, and sweepstakes over all breeds or grades. We guarantee satisfaction in all mail orders. JOSEPH FEATHERSTON & SON, STREETSVILLE, ONT.

Large English Berkshires for sale from imported stock. Sows with pig and pigs for sale. All ages. At reasonable prices. Guarantee satisfaction. Boars and sows delivered at Woodstock station, C. P. R. or G. T. R. JOSHUA LAWRENCE, OXFORD CENTER, ONT.

Willowdale Berkshires are unsurpassed for quality and breeding. Young stock, all ages, for sale reasonable. Satisfaction guaranteed. Long distance telephone in residence. J. J. WILSON, Importer and Breeder, Milton, Ont., P. O. & Sta., G. T. R. and C. P. R.

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DODD'S KIDNEY PILLS FOR ALL KIDNEY DISEASES CURES RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

QUESTIONS AND ANSWERS.  
Miscellaneous.

KICKING MARE.

I have a mare that is somewhat of a kicker, not very bad, but at times worse than others; but she is unpleasant to work with. What can you suggest to make her safe to work with? Would breeding her have a tendency to cure this vice?  
SUBSCRIBER.

Ans.—In driving singly in shafts kicking can be prevented by a strap buckled to the shaft on each side and passing over the rump, through a loop on the crupper strap. Working in double harness, prevention is not so easily managed. It would appear that by using breeching with straps snapped into a ring in a martingale at the belly-band, kicking could be to some extent prevented. To make this more effective in a bad case, a strap around each hind pastern, running through the ring on the breeching on each side, and to the ring on the martingale, or through a small pulley fastened there, might work well. We would not advise breeding her, as if worked, her kicking might cause abortion. And the vice might be inherited by her foal.

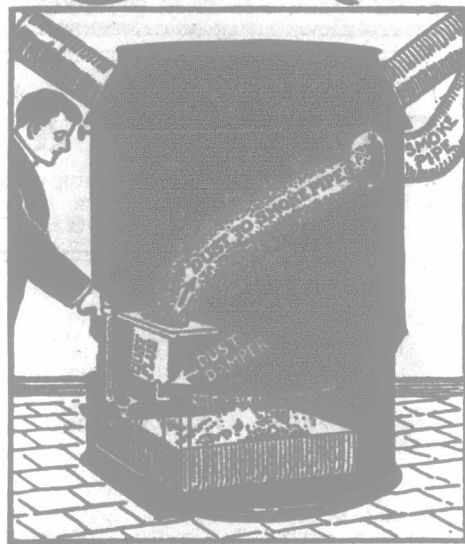
LIGHTNING-ROD WIRE.

Some time ago you gave a plan in "The Farmer's Advocate," describing how a farmer might put lightning rods on his own buildings. What would you think of using No. 9 copper wire (one strand)? Would it answer better than steel wire? I can get No. 9 copper wire for 33c. per pound, which would make it very cheap. I have a good many buildings to rod, and it would be very expensive to have it done by the agents.  
J. G. L.

Ans.—No. 9 copper wire, one strand, would certainly make a lightning rod that would be useful and cheap, but nine strands of No. 9 iron or steel galvanized wire, twisted together, would be better and cheaper. Sir Oliver Lodge, the eminent electrician of England, the best authority on lightning rods in the world, while not discouraging the use of copper rods altogether, says that iron is to be preferred. He gives, as his reason, the fact that when lightning is discharged by means of a copper conductor, the discharge is of so violent a nature as almost to amount to an explosion, while with iron it is withdrawn as efficiently and more quietly, and, therefore, with less danger of a fire being started. T.

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**THE BURR SELF-LOCKING TACKLE BLOCK.**  
Can be used in any position and lock securely. The heavier the load, the tighter it locks. Never destroys the rope in locking. For butchering, stretching wire fences, lifting wagon-boxes, sick or injured animals, etc., it is indispensable to farmers. Saves labor of two or three men. 600 to 5000 pounds capacity. Ask dealers or write  
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A Draft off furnace dome, with no other assistance, is powerful to overcome the dust nuisance in shaking time. Only surplus dust rises in itself above the fire. Great bulk descends into ash-pit, and unless legitimate outlet is therein provided, dust will escape through ash-door slots and into operator's face.

In "Sunshine" Furnace the legitimate dust outlet is provided. It's a great big dust-pipe running straight from ash-pit to dome, thence to chimney. When big pipe damper is opened, all dust in ash-pit ascends to dome; then, when direct drafts are opened, all dust passes up chimney.

Always the clean and quick dust route in "Sunshine" Furnace—via grate, to pan, to dust-pipe, to dome, to chimney, to open air.

Write to us for "Sunshine" testimonials received from your own townspeople.

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ST. JOHN, N. B.  
HAMILTON  
1 CALGARY

WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

DIVISION OF ESTATE.

The father married some thirty-five years ago. Wife died, leaving an only son, who is now thirty-three years old, and has always stayed at home. Then, about eighteen years ago, he married again. Wife died again, leaving an only son, who has always stayed with his mother's people. Supposing father died without a will, how would the property be divided, there being a hundred-acre farm? Can first son claim more property than second son, or what would be reasonable proportion for second son under circumstances?  
READER.

Ontario.  
Ans.—The estate would be divided equally between the two sons.

QUALIFICATIONS OF ENGINEER.

1. What experience and qualifications does it require to run a steam threshing engine in Manitoba or Saskatchewan?  
2. If a certificate is necessary, where and how would one secure it?

FARMER'S SON.

Ans.—In Manitoba, anyone who has had some experience with a traction engine stands a chance of getting work during the threshing season, as experience is the only qualification; but in Saskatchewan, in addition to a general knowledge of traction engines, one must secure a license from the Provincial Government. These may be had for a nominal fee by applying to the Provincial Secretary at Regina.

CASTRATION OF COLTS AND PIGS.

1. Do you think there is any more danger in castrating a one-year-old colt, providing it is done the same as in the case of a bull or a boar, by well scraping back the cords, and having everything clean and using a little weak carbolic solution in the cut afterwards, than in using the ecraseur—I mean the chain? I might say I had a yearling castrated last year, and both clams came off the cords before the colt got up, but I believe it was the carbolic acid that saved the colt.

2. To castrate a six-months-old pig, and then put it up to fatten after running on grass for a while, would it affect the meat if killed in two or three months?  
J. W. F.

Ans.—1. It is possible, but we would not care to take responsibility of so advising. There appears to be more danger of loss from amateurs undertaking the operation in the case of colts than of other animals, though even professionals too often bungle the job.

2. If the animal at that age has not been used for breeding purposes, and has run on grass for three months after, we should say there would be little danger of the meat being affected.

JUNIPER AS FENCE POSTS—ARRANGEMENT OF FIGGERY.

Are juniper posts as good as cedar? What is the average life of either? I have a building, 18 x 36 feet, which I am going to use as a hog-house. How shall I lay it off? I want to have room in it for a boiler.  
E. McF.

Ans.—1. From the opinions of forestry writers, we should infer that the red juniper (red cedar), which we understand, occurs in the Maritime Provinces, makes a durable, but not very strong, fence-post material; probably not quite as lasting as the white cedar; also found along the Atlantic coast region. The experience of readers would be of service in arriving at a conclusion.

2. The building, 18 x 36, is too narrow for two rows of pens with a passage between. Shallow pens are cramped and difficult to keep clean. We would suggest laying the pen off with a blind passage, four feet wide, along north or west side, as the case may be, placing the boiler at the far end of the passage, if it runs east and west. If it extends north and south, endeavor to have the entrance at the south end and boiler at the north. This arrangement will allow five pens each 7 feet wide. Four of them will be fourteen feet deep. The other may have to be a couple of feet shorter to accommodate the boiler. We would not recommend any fixtures in the pens, except a raised plank sleeping place (if the floor be of cement) in one corner, and an outside door in the other wall corner of each apartment. The floor of each pen should slope towards the outside door.

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Lead pipe will withstand drugs and chemicals better than your stomach, liver and bowels.

If you have become a victim of dissipation, exhaustive diseases; if you have broken down your vital stamina with hard work and worry, don't delude yourself with the idea that you will get back your strength and vigor by following the drug route.

Drugs are only stimulants and narcotics. Give me a person with a Weak Back, full of Rheumatic, of Neuralgic pains and aches, suffering from Weakness of Stomach, Kidneys, Liver or Bowels, Headaches, Nervousness, Sleeplessness, Exhausted Vitality, Premature Old Age; give me a person who is broken down, worn out; give me a person with a "grouch," and if they use my Belt as I direct, and let its invigorating current of Galvanic Electricity pour into their body every night for a few weeks, I will fill their nervous system with new energy, promote a healthy action of every organ of their body, overcome their weaknesses, pains and aches, restore their strength and make them strong and healthy, for "Electricity is Life!"

If you are skeptical, all I ask is reasonable security for the price of the Belt, and

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