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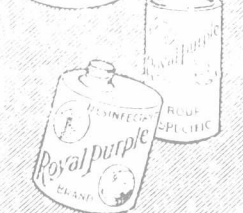
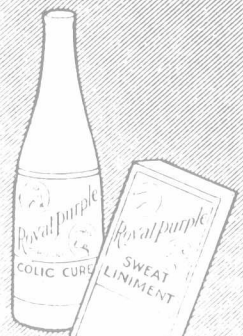


* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

Vol. LII.

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875. LONDON, ONTARIO, JANUARY 11, 1917.

No. 1268



Royal Purple Stock Specific

An Animal Conditioner and Fattener

A 50c. package will last an animal 70 days

Good for horses, cattle and swine. Royal Purple Stock Specific is a digester, tonic and animal conditioner. It is manufactured from pure, clean, medicinal roots, barks, herbs and seeds. No harmful drugs and NO FILLER is used in Royal Purple Stock Specific. It is in a concentrated form, and needs only to be fed once a day instead of three times, as some others of a bulky nature. Royal Purple Stock Specific is always of the same quality, and it will give you similar results to what other feeders are getting. Royal Purple Stock Specific is not a dope, and can be fed at intervals or continuously winter and summer, and only beneficial results will follow. There are no bad after effects.

Royal Purple Stock Specific Does This:

It increases the flow of milk per cow from 3 to 5 pounds per day during the winter. It will enable you to fatten your steers and hogs a month earlier, thereby saving a month's feed and labor. It will put a glossy coat on your horse quickly. Convince yourself by trying a package of Royal Purple Stock Specific on your poorest, worst animal.

Our Guarantee

Feed Royal Purple Stock Specific (according to our directions) to the poorest animal on your farm, if it does not improve the condition of the animal, and the results are not satisfactory to you, write us, and we will promptly return your money.

What Others Say of Royal Purple Stock Specific :

W. A. Jenkins Mfg. Co., London, Can. Tavistock, Ont., Feb. 1.
Dear Sirs:—This is to certify that I have used seven boxes of Royal Purple Stock Specific, and can say as a constitutioner it has no equal. The Specific costs nothing, because it puts the horse in condition, so that he gets nourishment out of every particle of food he eats; therefore he will do better on three quarts with one spoonful of Royal Purple Stock Specific than on four quarts without it. GEO. PATTERSON.

Royal Purple Stock Specific is sold in 50c. packages, or 60c. by mail; also in \$1.50 and \$5.00 air-tight tins.

Royal Purple Cough Cure

Price 50c. By mail 60c.
Will cure any ordinary cough in four days, and break up and cure distemper in ten days.

Royal Purple Sweat Liniment

Will cure all forms of lameness, sprained tendons, etc. Is an excellent remedy, and good for man or beast. Excellent for muscular and inflammatory rheumatism.

Royal Purple Gall Cure

Price 25c. By mail 30c.
Will cure scratches, harness sores and scalds. Not necessary to lay the horse up while under treatment.

Royal Purple Calf Meal You can raise just as good calves on our calf meal as on new milk, on our calf meal as on new milk, for young pigs and lambs which are not thriving well. See report of Government Test at the Experimental Farm in our Free Book. Tear off coupon at bottom, and send for it. Our Calf Meal is put up in 25, 50 and 100 pound bags.

Royal Purple Poultry Specific

An Egg Producer and Poultry Conditioner

A 50c. package will last 25 hens 70 days

The hen cannot make or produce the egg for you unless she gets the right material to make it. In summer, fowl get grains, herbs, grass and insects, which are Nature's assistants for producing eggs. During the winter season, when prices for eggs are highest, they get practically the same grain but do not produce the eggs. Why? Herbs, grasses, insects, etc., are not available in the winter season, so you must use a substitute. Royal Purple Poultry Specific, manufactured from Roots, Herbs, Minerals, etc. (in concentrated form) is a most perfect substitute for you to use. Keeps your fowl healthy, vigorous and active, and causes them to lay as well in the winter months—when fresh eggs are few and costly—as they do in the summer months.

More Eggs When Prices Are High

The W. A. Jenkins Mfg. Co., London, Can. Ayr, Ont., Mar. 4, 1914.
Dear Sirs:—Kindly send me one of your booklets. We didn't have an egg all winter until we started using your Royal Purple Poultry Specific, and it is the best thing I have ever used. We are getting eleven to twelve eggs per day now on account of feeding them the right food. J. BRANDON.

The W. A. Jenkins Mfg. Co., London, Can. Saskatoon, Sask., Dec. 1.
Gentlemen:—I tried feeding your Royal Purple Poultry Specific last winter. I had fresh eggs all the time. Sold eggs from January to the 1st of March, and I

The W. A. Jenkins Mfg. Co., London, Can.

A Canadian Company Serving Canadians

know it was the Specific did it, and the hens looked healthy after using it. I started feeding them again this fall, and got eggs in less than a week. MRS. W. JACKSON.

These are the Results

If you would like similar results from your flock during the winter months when eggs are high in price, start mixing "Royal Purple Poultry Specific" with their regular feed.

Royal Purple Poultry Specific is put up in 25c. and 50c. packages, 10c. extra by mail, and \$1.50 and \$5 air-tight tins.

It's a hen's business to lay, it's our business to make her lay.

FREE

We will give absolutely free to any farmer, stock or poultry raiser one of our new 80-page booklets, which tells how to balance rations for feeding stock, milch cows, horses, etc. This also deals with the common diseases in poultry, the symptoms, treatments, etc. Tells how to build poultry houses; how to avoid all kinds of diseases in both stock and poultry; tells how to raise calves without milk, and describes fully the high-class stock and poultry remedies and foods we manufacture. Send for a copy to-day.

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Address _____

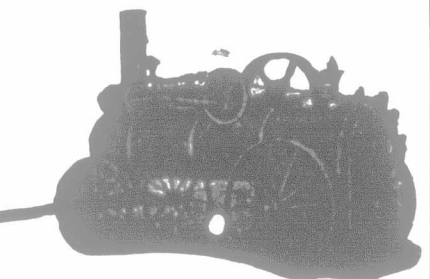
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Sweet Fresh Ensilage down to the last forkful

THE HYLO SILO is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect fitting doors, adjustable without hammer or wrench. Made of Guaranteed Long Leaf Yellow Pine. Built to last a life-time. Stands rigid when empty.

Write for prices and catalogue. AGENTS WANTED.

Gilson Mfg. Co. Ltd. 49 York St. Guelph



Rebuilt Portable, Traction Engines and Threshers.

A number of good, rebuilt Portable and Traction Engines suitable for silo filling and threshing, also a few good separators for sale cheap.

The Robt. Bell Engine & Thresher Company, Limited SEAFORTH ONTARIO



Farmers and Lumbermen

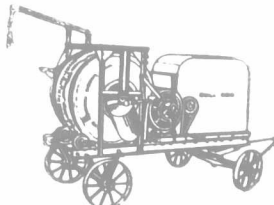
Why throw away your money to middlemen. We will furnish you, freight paid to your nearest station, this beautiful set of strong and easy running sleighs, usual price \$35.00, for \$23.00. Fully guaranteed, made of the best of material, white oak runners six feet long, two inches wide, spring steel shoeing, well painted, made to last a lifetime. Ask your neighbor about them. For 20 years the Hastings sleigh is known to be the best made, strongest, and easiest running sleigh in the market; you run no risk. Send us a P. O. money-order or your check. Address:

HASTINGS SLEIGH COMPANY Watford, Ont.

TRAPPERS

Ship your RAW FURS to a reliable house where you will get highest market prices. SATISFACTION guaranteed or your furs returned prepaid. Write for Price List and shipping tags.

EDWARD POLLAK & CO., 280 St. Paul St. W., Montreal, P.O.



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TODD & COOK, Seed Merchants, Stouffville, Ont.

Louden Barn Equipments

Save Labor—Save Expense. Describes every piece of equipment. Write to:

LOUDEN MACHINERY CO. Dept. 1 Guelph, Ont.

OTTAWA WINTER FAIR

HOWICK HALL OTTAWA

JANUARY 16, 17, 18, 19, 1917

SINGLE FARE PASSENGER RATES ON ALL RAILROADS

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\$13.25 at Catesbys in London Buys a \$25.00 Canadian Suit

Duty and Carriage Paid Right to Your Door

We will prove it to you without a cent of obligation on your part. Just sign and return the coupon below, and we'll send you our Style Book, 72 pattern pieces of cloth, a letter explaining our system of doing business, self-measurement chart, tape measure, and some 100 testimonials from satisfied Canadian customers—just to prove to you that every statement we make is correct.

Mail the coupon now, before you forget it.

If you don't want to cut this paper, mention the "Advocate" when you write.

Mail Coupon Get Patterns Be Convinced

MESSRS. CATESBYS Limited of (London) 119 West Wellington St., Toronto

Send me your New Season's Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit, overcoat.*

Full Name.....

Full Address.....

*If you only want overcoat patterns, cross out the word "suit." If you only want suitings, cross out the word "overcoat."

London Farmer's Advocate



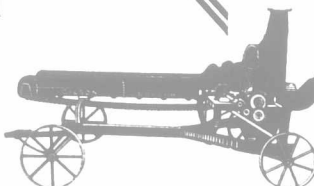
\$13.25 Duty and Carriage Paid

The Light-Running GILSON Silo Filler

Simply Can't Be Clogged

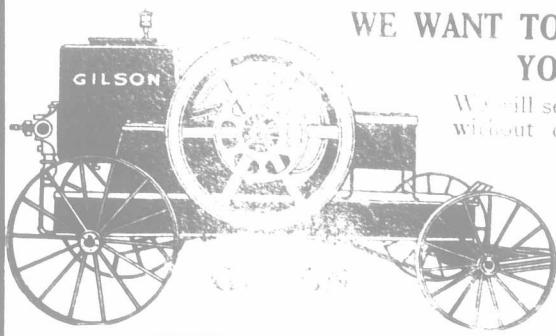
The simple, scientific, carefully-worked-out construction of the Light-Running "Gilson Silo Filler" makes it absolutely impossible to clog throat of blower, no matter how fast the corn is thrown in. The Gilson is rightly called THE KING OF FEED CUTTERS because of its remarkable elevating powers, absolute safety, durability, strength and simplicity—it stands supreme. It has convenient and quick knife adjustment; solid steel-bound frame; wheel patented safety reverse—and is guaranteed to cut and elevate MORE ensilage with the SAME power than ANY other ensilage cutter IN THE WORLD. Write to-day for catalogue and proof. Manufactured and guaranteed by

GILSON MFG. CO., LTD., 199 York St., Guelph, Canada



WE WANT TO DEMONSTRATE ON YOUR FARM

We will send a Gilson Engine, any size, without charge, to any responsible farmer in Canada to try out on his own farm at his own work. Write for further particulars of our free trial offer, catalogue and special introductory prices.

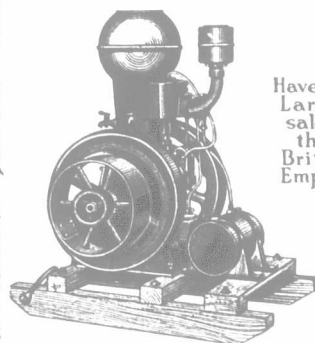


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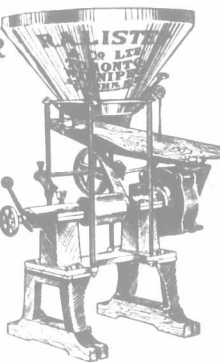


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23.57 & 9 HP. On Skids or Truck. High Tension Magneto Ignition. Automatic Lubrication.

Lister Silos, Ensilage Cutters, Threshers, Sprayers, Milkers, Electric Light Plants, Melotte Cream Separators.

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Write for price of our famous Grinder Outfit comprising 5 H.P. Lister Engine and a 3/4 Lister Grinder.

Write for Catalogue to Dept. "G" R-LISTER & Co. Limited TORONTO

SEED CORN AND SEED POTATOES

1915 kiln-dried Bailey, Golden Glow, Leaming, Huron, White Cap, Compton and Smut Nose, along with Irish Cobblers and Empire State Potatoes for sale. Write early as orders for good seed this year are heavy.

Also write us for particulars regarding the New Visible Seed Germinator and learn how to be assured of good crops.

Essex Growers Limited, Leamington, Ont.

RAW FURS—Trappers are finding out

that the manufacturer is the only place to send their furs. No large newspaper price lists with one dozen sorts for each kind; just a fair deal every time is bringing us greatly increased shipments. Large prices on paper are no good to you, boys. Write for shipping tags and price list free.

C. H. Rogers, Desk 10, Walkerton, Ont.

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Write for our large photo-illustrated Catalogue No. 7—It's free to you.

THE ADAMS FURNITURE CO., Limited Toronto, Ontario

"1900" Gravity Washer

Sent free for one month's trial. Write for particulars.

"1900" WASHER COMPANY

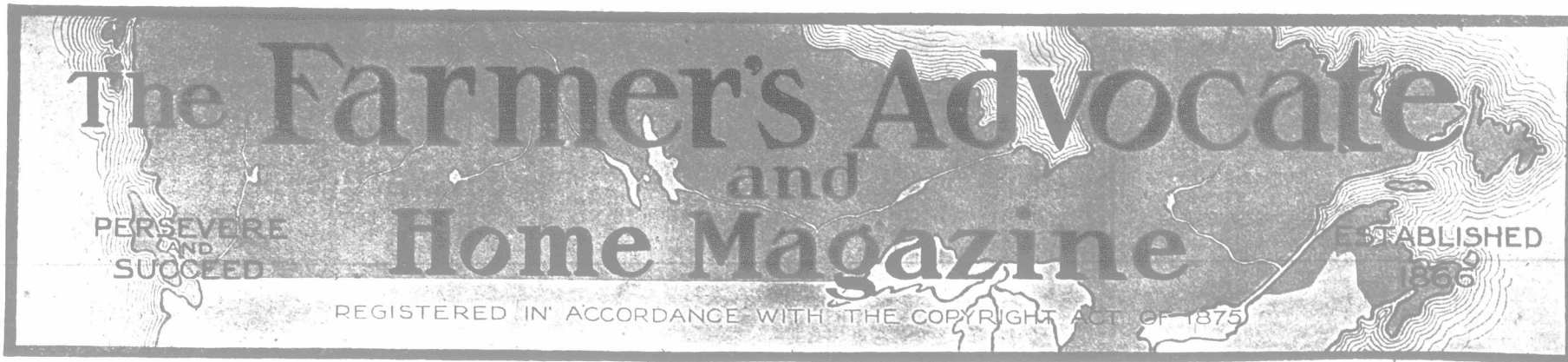
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LONDON, ONTARIO, JANUARY 11, 1917.

1268

EDITORIAL.

Win the war first; then talk of peace.

Harvest some ice. It will be needed next July.

If you have one dog you have all you can afford to keep.

Did you elect a good council? If you didn't whose fault was it?

Talk of peace is rife, but it appears to be a good time to prepare to finish the work on hand.

We want some house and barn plans. Send us a pencil drawing, with dimensions, windows and doors plainly marked.

The city woman who can get 550 gallons of milk from a cow on \$40 worth of feed at present prices, missed her calling.

If a man's work besides being of benefit to himself is of no advantage to the nation, he is at the wrong job in this time of crisis.

Get your neighbor to subscribe for "The Farmer's Advocate." By doing so you'll do yourself a favor, will help your neighbor, and will increase the strength of the paper.

The man who pays wages abnormally high is a factor in the high cost of living. He disturbs labor, increases the cost of production, and steals men from other necessary work.

Many farmers neglect to provide available cash to meet exigencies which would arise were they to die suddenly. Life insurance is not as popular as it should be in rural districts.

It is said that the women who toured the Western States speaking along the route in favor of Hughes, succeeded in turning the election to Wilson. Now, who is the woman suffragist?

A good house means a handy house, and a handy house does not mean a large house. Remember your wife has plenty to do in a small modern structure. Avoid the big, barn-like house.

Read the report of the Eastern Ontario Dairymen's Convention in this issue. It will revive the whole meeting to those who attended, and will give those who did not a good opportunity to benefit from the proceedings.

The Western farmers are accused of being out of touch with popular sentiment and of "lacking in appreciation of the forces that day by day are becoming the determining factors in the winning of the war." Who controls popular sentiment? The strongest organization. Up to the present this has not been a farmers' organization. Things may change. Certainly the farmers' movement will not be popular with those who have amassed fortunes at their expense. It is nonsense to say that farmers generally do not appreciate the three factors necessary in the great war, viz., men, munitions, food. The rural districts have sent of their men. They know the importance of munitions and are ready to pay tribute where tribute is due, but they expect that the importance of their work in food production be recognized. If the farmer gets a good price for his products it is also true that the munitions-maker does not sell his goods at a loss.

Suggestions Re Field-Crop Competitions.

Last week a number of young farmers discussed Field Crop Competitions in their increasingly interesting department of "The Farmer's Advocate". Some very good hints were brought out and it would be well for those in charge to act upon some of them.

The competitions might do more good if those entering could get, in some manner, reasons for the awards as made by the judges. The local secretary of the agricultural society or some one in authority should be told by the judge, so that the information could be passed on to the contestants, the whys of the placing. And to have uniform work done a set of judges must have rather uniform ideas. They should receive at least some special training under one head.

In judging potatoes it would be far better, from the viewpoint of the competitor, if the judge would dig a square rod of potatoes in at least three different parts of the field as a basis for estimating yield and quality, rather than digging a few feet on one row in one place and multiplying the result by 22, assuming that there are 22 rows forty rods long in all acres. All do not plant potatoes the same distance apart and no one can estimate a crop from a single digging of six or twelve feet. Make the estimate of some value.

A graded prize list might help. Where entries are numerous more prizes might be awarded than where entries are fewer. The aim should be to get as many as possible to compete, and to distribute the prizes on the best possible basis. We believe that it would be a good idea to make it a rule of the competition that all winners in the field should have to exhibit the product in sheaves, bushel baskets or bags at the local fall fair before the prize money would be paid. This would stimulate interest. Fair-goers generally would see the results of the effort. They would be induced to sow pure seed. Eventually they might compete. Such a plan would help the local fair and would result in the greatest good to the greatest number.

Labor, Wages and Net Returns.

People are prone to pay too much attention to a great deal of the palaver heaped upon so-called philanthropists who pay their hired help unheard-of wages. The man who pays his help \$5 or \$6 per day when other business can only afford to pay \$2 or \$3 per day is heralded far and wide as a public benefactor, and such he is to a limited extent, but his plan is not without weakness when considered from the larger viewpoint of labor and the country as a whole. He disrupts labor, causes dissatisfaction in other industries, forces higher wages and consequently higher cost of production of necessary things. A better plan would appear to be to cut down the price of the manufactured product to the users, to pay the laborers a reasonable and satisfactory wage (always more than a mere living wage), and so distribute the profits where they belong, to manufacturer, to laborer, and to the user of the product. It is not good that a firm should tax the users of its product to such an extent that it can double the average wage paid by like or other industries. Every laboring man likes to get the highest available pay. Other firms selling their products at smaller profits are forced to pay higher wages, and up goes the cost of their products to the consumer. Did it ever occur to you that every time wages receive a boost through strikes or force or even through such a cause as that which we are discussing the cost of living goes higher—and generally out of all proportion to the wage-earner's income increase.

High wages in factories take men from the farms because men will go where they get most for their labor, and no one can blame them. The greatest scarcity of farm

help is nearly always experienced in close proximity to towns and cities where highest wages are paid. The man who sells his manufactured product at a price so high that he can pay his hired help bigger wages than any other manufacturer can pay, to say nothing of the farmer, is drawing men from other business and from the farms and is a contributing cause toward the high cost of living. High cost of production means that the necessities of life and work come higher to the consumers every time. The man who pays the big labor bonuses and doubles the scale paid takes it out of somebody. Everyone likes to see his fellowman get all he can for his efforts, but all would rather see the man who works with his hands get higher net returns. It is not what he gets in wages that counts so much, but what he gets over and above the necessary amount for himself and family to live on. It would be well for all to think these matters over. Farmer, manufacturer, workingman—all should have a living and a little besides. There should be a fair profit on all goods from the farm and the factory and also on the labor required to produce these, and the laboring man should get more than a mere living every time. With a fair balance between farm and factory he would, but in the long run little is gained through increasing production costs by greatly increased wages. The man who works with his hands is no better off at the end of the year at present wages and present prices of the commodities he must buy than was the same class of man a few years ago at half the wages and less than half the necessary expense. Think it over. How does it affect the price of milk, meat and bread?

Helps in Treating Live-Stock Diseases.

In the Horse Department of this week's issue "Whip" puts up, in entirely new form, an article on the "Common Diseases of Horses." Every farmer has horses and all have troubles of their own. Twenty-six of the commoner diseases are tabulated with their causes, symptoms, treatment and doses. The whole thing is put in a "nut-shell" and in simple language. The weights and measures known to the drug trade are translated, in the introduction, into the commoner farm measures. Keep the table for future reference and watch for future tables dealing in a similar manner with the commoner diseases of cattle, sheep and swine.

There are many little ailments which a man brought up with live stock can treat in a satisfactory manner if he has the necessary drugs and a few instructions. It is wise to commence treatment as soon as any derangement is noticed, but be careful to use judgment and where veterinary assistance is necessary get a qualified practitioner. The table on another page will help you in the simpler treatments. If they do not suffice call in a veterinarian promptly. Do not wait until the animal is dying and then send for professional help. Treat disease promptly and on common-sense principles.

Slaughtered But Not Destroyed.

When the fattened animal goes up the long gangway into the slaughter house most people look upon it as virtually destroyed. Not so. Nothing is destroyed. The meat, of course, is the main consideration, but the profits of slaughter rest largely with the skill in handling the by-products. Everything that goes in comes out in some form and is used. The importance of these by-products is outlined in a special article in this issue. It is interesting to follow a steer through a big packing plant and back to the farm home from which he went. It is the little sidelines that have made some packing houses great. In a sense the law of the indestructibility of matter is illustrated in what happens to the fat

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
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JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"
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Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (Limited),
London, Canada.

steer. The importance of by-products on a farm is, comparatively speaking, just as great as that of the packing plant. Read the article and take a lesson.

Apples or Pictures?

This is the season when the perennial fruit-tree agent with his pretty colored pictures of new fruits makes his annual call and incidentally causes the mouths of the entire family to water to such an extent that "Dad" buys a few trees of the new varieties from which the most showy colored plates have been made, and plans to have something really new in the orchard in a short time. Buyers should remember that there is only about one promising new variety of apples, for instance, in about eight hundred new seedlings. New varieties which will compare with our good old Northern Spy, Rhode Island, Greening, Baldwin, King, Fameuse McIntosh Red, Golden Russet, Duchess, Astrachan and Yellow Transparent do not crop up in every nursery row, but most agents have a few entirely new, and, to them, better than any of the old reliables, because a gullible public will always buy something new. Read an article in the Horticultural Department. The writer pins his faith to the tried and true. Do not listen to agents. Buy what you want and you want the good old standbys.

We recently read an article written by a woman ashamed to sign her name, and unfortunately purporting to be "from a country woman's standpoint", in which the farmer was blamed for everything that was bad. The writer said "the war was not responsible for the rise in staple foodstuffs now," and that "the farmer alone is responsible for non-production." This same woman could feed a heavy producing cow for \$10 per year, a 200-egg hen for \$1 per year, and could clear \$500 per year from 100 hens in the back yard. She would make something of a "crackerjack" as a farmer's wife. She should never waste valuable time writing articles for the official organ of the National Council of Women of Canada. She should be feeding chickens, milking cows, pitching hay, forking manure, and doing several other of the farm jobs which she

thinks are so profitable—and one with so much patriotism should do all these things gratis. But we venture to say she would rather flit in her limousine from one afternoon tea to another, intent upon lowering the high cost of living.

Nature's Diary.

A. B. KLUGH, M. A.

In the whole realm of natural science there is no subject in which more popular interest is evinced than that of the animal mind. Neither is there any subject upon which erroneous views are more generally current. Animal intelligence, the animal mind, animal psychology, comparative psychology,—these being the various names applied to this study,—have aroused the interest of man from early times, but it is only in very recent years that any really critical and scientific work has been done in this subject.

The study of the animal mind is an extremely difficult matter, and if we think for a moment we can see that this must be so. If we consider the study of the human mind we find that we can judge the mind of our neighbors only on the basis of our own thoughts and feelings under similar circumstances. It is a matter of every-day experience that we often form entirely wrong inferences from the actions of others. In the study of the human mind we at least have language to aid us, and while words are often employed to hide thought rather than reveal it, we are usually able to rely on the words of those engaged in a scientific study of the human mind as being genuine expressions of their thoughts. But in the case of animals we have no language to aid us. Further than that the less similar the bodily form, the nervous system and the environment of an organism is to our own the harder it becomes for us to interpret what is taking place in its mind. We infer consciousness in other beings because we are conscious ourselves, and we judge the mental states of others, such as joy, anger, or fear, from certain external manifestations which are like the accompanying manifestations of these mental states in ourselves. With beings much like ourselves our inferences may be fairly accurate, but when thrown among people of other nations, or races, our judgments are likely to be erroneous. How much more is this the case with the lower animals whose senses are so entirely different from our own. In the human race the main sense is the sense of sight, it is decidedly and superlatively dominant over all the other senses, and we are very apt to infer that it is also thus dominant in all other animals. Yet there are very few animals in which sight is the dominant sense, perhaps in only one other group besides the human race is this the case—the birds. Among most mammals the senses of smell and hearing are far more important than that of sight, and in many the sense of sight takes cognizance only of moving objects. The dog's world is largely a world of smells, and his wonderfully developed olfactory sense is able to detect odors, the existence of which we cannot perceive, and to analyze compound odors in a manner which is quite impossible to us. In the bat the sense of touch is developed to an extent in comparison with which our sense of touch is dull in the extreme. In insects there is the antennal sense, the organ of which is the antenna or feeler, a sort of "smell on contact sense" which we do not possess at all. Among the Crustacea (Crayfishes, crabs, lobsters, etc.), the sense of touch is predominant, that of sight is little more than the ability to tell light from darkness and the sense of hearing is absent. These few examples give us some idea of how hard it is to comprehend the psychology of animals so very differently equipped in the matter of senses from ourselves.

In considering the mental attributes of animals there are two views, both of which are current, and which require some discussion. One view is that animals are mere machines, that they are acted upon by external stimuli, and that they respond to these stimuli in a fixed manner, and that all talk of "mind" in their case is futile. This view which is particularly rife among German thinkers, is one which cannot be held by anyone who has an open mind—there are too many easily observed facts against it, and we can lay it aside along with many other things which are "made in Germany". The other view is that animals are, as far as their mental attributes are concerned, little men; that they are activated by the same motives. This view, which is known as the anthropomorphic (from two Greek words "man-form" or "man-like") view is one which has been largely held in the past and is still held pretty generally by the public at large. While this view is decidedly more hopeful than the previous one, since it allows an animal mind for us to investigate and tends towards a humane treatment of animals, is one which is not in accordance with the many facts which are being brought to light by our studies of comparative psychology. We can readily see that this view will hold good in some measure for the higher animals, but as we descend the scale of animal life we find it becoming wider and wider from the truth, until, when we reach the simplest animals it becomes an absurdity. This trend, anthropomorphism, is in fact one of the things which has to be most carefully guarded against in all work on the animal mind; it is the attitude of mind which renders practically valueless all the older treatises on animal intelligence. The correct view is undoubtedly that the very lowest

animals are little more than machines, they receive stimuli and respond in a definite and unvarying manner, but as we rise higher and higher in the scale of animal life we find the mental attributes of the forms under consideration approaching those of man more and more closely.

To be continued.

THE HORSE.

Common Diseases of Horses.

In arranging the following table on the "Common Diseases of Horses," we have endeavored to be as brief and concise as possible and have not gone into minute details, hence we consider it wise to make some general explanations, as there may be those who have practically no experience in the treatment of diseases in stock, hence would have no definite idea of the manner in which medicines are administered or applied. Of course, in order that a man may be able to treat even the most common diseases it is necessary that he have on hand a number of drugs. By carefully reading the article under discussion, he will be able to decide which of the drugs mentioned he will want, and can get a supply. A word of caution in this respect is probably wise. Some of the drugs mentioned are poisonous, many of them will deteriorate if exposed to the air, and all drugs keep better in an even temperature. Hence all drugs should be labelled in plain English, and should be kept in a special receptacle placed where the variation in temperature will be as little as possible, and the receptacle should be kept locked in order that children or careless persons may not be able to reach them. Careful labelling is necessary in order that no mistakes may be made, as the quantity that would make an ordinary dose of one drug may be poisonous of another. All liquids should be kept well corked, and all powders kept either in separate compartments, drawers or boxes or well wrapped in paper. It would be wise if those who contemplate treating these diseases would purchase a graduate for measuring fluids, called "measure of capacity," and a scales to weigh solids or powders, called "measure of weight." In cases where these standard measures are not kept, ordinary domestic utensils are used, with the capacity of which the practitioner should be familiar. In speaking of drams, ounces, etc., of fluids, the "fluid" should be used, as for instance, we prescribe 2 oz. of oil of turpentine it should read: "Oil of turpentine, fluid oz., etc." In our table we omit the word "fluid" in order to save space, but no mistake can be made. Common tumblers contain 8 to 10 fluid ounces, (oz. is used as an abbreviation for ounces); tea cups about 5 oz.; wine glasses about 2 oz.; tablespoons ½ oz.; dessertspoon 2 drams, (dr. is the short for dram); teaspoons 1 dr. or 60 drops. Such measures, however, are merely approximate. The measure of weight is harder to estimate without a scale or considerable experience, as the weight of the different drugs varies so much; a teaspoonful of one drug may weigh a dram while of another not half that much. Hence the practitioner must acquire an intelligent idea of weights or procure scales. Knowing that 1 oz. contains 8 drams, and that 1 dram contains 60 grains, if he gets the drugs made up in 1 oz. packages he should be able to divide it into approximately whatever sized doses he would wish. A pound contains 16 ounces. A pint contains 20 fluid oz.

In drenching horses, or in fact any animal, great care must be taken not to allow the fluid to run into the mouth too quickly, else a portion of it may pass down the windpipe into the bronchial tubes and cause suffocation or mechanical bronchitis, which is often fatal. All medicines, either in fluid, powder or solid form should be freshly prepared, that is, it is not wise to keep the different drenches ready mixed, nor balls made for future use. Drugs deteriorate more quickly when mixed, and especially when mixed with water, and balls soon become hard unless mixed with treacle or glycerine, hence we repeat, "do not mix a dose until needed." After the administration of a purgative a horse should have two or three days' rest, and should be given nothing but bran to eat until purgation commences. In applying a blister the hair should be clipped off the parts to be blistered, the blister well rubbed in (the results depend greatly upon the mode of application, merely placing upon the skin gives little results, smart friction is necessary). The patient's head must be tied so that he cannot bite the parts. In 24 hours it should be well rubbed again, and in 24 hours longer sweet oil or lard should be applied and the patient's head released, or he turned loose in a box stall. The parts should be oiled daily until the scale comes off, when, if necessary, another blister may be applied. When we advise a liniment we mean any of the ordinary stimulant liniments in ordinary use, as one made of 2 oz. each of alcohol, oil of turpentine, and liquor ammonia fortier, with water to make a pint. This liniment is strong or weak in proportion to the proportion of water used. In treating all diseases the removal of the cause, if possible, is essential; the patient should be made as comfortable as possible, preferably in most cases in a box stall. In all respiratory troubles it is essential that he be kept where the air is fresh and pure, even at the expense of heat. Heat can be supplied by clothing, but there is no substitute for fresh air.

a WHIP.

Common Diseases of Horses---Causes, Symptoms, Treatment

WHAT TO DO AND HOW TO DO IT

Disease and Cause.	Symptoms.	Treatment.
SPASMODIC COLIC. Improper food, changes of food, over-feeding, water when over-heated, etc. Weak digestive powers predispose.	Uneasiness, stamping, pawing, throwing himself down, rolling, getting up, etc. The attacks are spasmodic, and during the intervals patient is normal, may appear to want to urinate.	Drench with 1½ oz. each of laudanum, sweet spirits of nitre and tincture of belladonna in a pint of water. Repeat in 2 hours if necessary.
FLATULENT COLIC. Change in food, too much succulent and easily fermented food, as green clover, frosted food, etc.	Much the same as spasmodic colic, but not so violent and the pain is continuous but of varying intensity. Bloating soon occurs, more noticeable on right side.	Drench with 2 to 3 oz. oil of turpentine in a pint of raw linseed oil, and if necessary repeat in 2 hours. Give rectal injections of warm, soapy water. If pain be excessive give drench as for spasmodic colic.
CONSTIPATION. Change from hay to straw, over-ripe hay, absence of succulent feed, a torpidity of the muscular coats of intestines.	Uneasiness, pawing a little, looking around to the flank, irregular appetite, evacuation of small quantities of dry faeces, or little or no motion of the bowels.	Administer a moderate purgative as 7 drams aloes and 2 drams ginger. Feed on bran only until bowels act freely. Give 2 drams nux vomica 3 times daily, and give rectal injections of warm, soapy water every 5 or 6 hours.
INFLAMMATION OF BOWELS. Changes in food, exposure to cold, as a sequel to other diseases.	General depression, rigors, anxious expression, quickened breathing, infection of mucous membranes, mouth dry and hot, pulse frequent and full in early stages, false attempts to lie down, then lying down very carefully, wandering aimlessly around stall, pain is continuous.	Administer 2 drams of powdered opium every 4 or 5 hours, apply cloths rung out of hot water to the abdomen.
DIARRHŒA. Too much succulent food, frozen food, food of poor quality, too many raw roots, water of poor quality, etc.	Frequent evacuation of liquid or semi-liquid faeces, impaired appetite, excessive thirst followed by weakness.	In early stage give laxative of pint raw linseed oil (if animal be weak omit this). If diarrhœa continue for 18 to 24 hours, give 2 oz. laudanum and 4 drams each of chatechu and prepared chalk every 4 hours until diarrhœa ceases, also add to drinking water ¼ of its bulk of lime water.
AZOTURIA. High feeding during a few days' rest.	After going a variable distance, shows pain and lameness, sweats falls or lies down, may or may not be able to rise, urine becomes thick and very dark in color.	Prevention consists in giving daily exercise or materially reducing grain ration. Curative—Give purgative, make comfortable, give 2 drs. iodide of potassium 3 times daily. Draw urine off with catheter.
LYMPHANGITIS OR WEED. Same as azoturia, but may occur after 1 day's rest.	Rigors followed by an increase of temperature, lameness, urine scanty and high colored. Swelling of the glands of the affected leg, inside thigh if hind leg, inside forearm if fore leg, swelling increases rapidly.	Prevention—Same as for azoturia. Curative—Give purgative followed by 3 drams nitrate of potash 3 times daily. Long-continued bathing limb with hot water; exclusion of drafts and application of a liniment; as soon as acute lameness disappears give daily exercise.
CHRONIC INDIGESTION. Imperfect mastication, improper food, debility of the digestive glands.	Unthriftiness, capricious appetite, increased thirst, irregularity of the bowels, dry, staring coat, hide bound, sometimes slight, colicky pains.	If due to imperfect mastication have teeth attended to. Give purgative followed by a dram each ginger, gentian, nux vomica and bicarbonate of soda 3 times daily, and food of first-class quality.
ACUTE INDIGESTION. Change of food, food too greedily swallowed and imperfectly masticated, feeding immediately after severe exercise, or severe exercise immediately after a hearty meal. Sudden changes in either quantity or quality of food.	Uneasiness, lying down and rising, oppressed breathing, eructations of gases or attempts to vomit, pain usually continuous but varying in intensity.	Give 2 to 3 oz. oil of turpentine in a pint of raw linseed oil as a drench. Foment the abdomen. If pain be severe give 2 drams of the solid extract of belladonna. Repeat if necessary in 2 hours. Give rectal injections.
IMPACTION OF THE COLON. Innutritious food, a weakness of the digestive organs, inactivity of the digestive glands, want of exercise, change of food.	May be present for some time without marked symptoms, then slight, colicky pains. Sitting on haunches, pressing croup against any solid object, little or no passages of faeces, a general fullness of the right side of the abdomen.	Give a purgative, follow by 2-dram doses of nux vomica 3 times daily, feed bran only. Give rectal injections. If pain be well marked give 2 drams solid extract of belladonna.
CATARRH OR COMMON COLD. Exposure, ill ventilation, sudden changes of temperature, housing in warm stables after being accustomed to exposure.	Dullness, slight discharge from nostrils, cough, impaired appetite.	Keep comfortable in well-ventilated quarters, exclude drafts, feed a laxative diet, steam nostrils, give nitrate of potash in 2-dram doses 3 times daily.
ACUTE LARYNGITIS. Usually occurs as an epidemic due to a specific virus.	Dry cough, difficulty in swallowing, soreness to pressure on throat, watery nasal discharge soon becoming prevalent, inability to swallow, high temperature, often general stiffness and swelling of legs, difficult respiration.	Keep in well-ventilated, comfortable quarters, excluded from drafts. Give 2 drams chlorate of potassium and 20 grains quinine by placing well back on the tongue out of a spoon 3 times daily, do not drench. Apply hot poultices to the throat or poultice with antiphlogistine. If breathing becomes very labored send for veterinarian.
BRONCHITIS. Exposure to cold, ill-ventilated quarters, drafts, foreign matters as smoke or liquids into the tubes, (it is then called mechanical bronchitis).	Hoarse, loud, dry cough, becoming moist later on, respirations loud and frequent, dullness, ropy saliva falls from mouth, bowels costive and urine high colored, patient stands continuously.	Comfortable, well-ventilated quarters, excluded from draft. Apply mustard to breast and sides. Steam nostrils, holding head over boiling water with a little carbolic acid. Give cold water with 3 or 4 drams nitrate of potassium in it. When inflammation subsides give dram doses each of gentian, ginger and sulphate of iron 3 times daily.
CONGESTION OF LUNGS. Over-exertion in animal not in condition, exposure to cold.	Stands with legs outstretched and apparently fights for breath, flanks heave, body trembles, cold sweats, heart's action tumultuous.	Allow fresh air, clothe body, give 3 to 4 oz. sweet spirits of nitre in pint water as a drench; repeat every 3 hours, bandage legs.

Common Diseases of Horses---Continued

Disease and Cause.	Symptoms.	Treatment.
INFLAMMATION OF LUNGS. Exposure to cold, over-exertion.	Rigors followed by increased temperature, deep, dry cough, cold extremities, depression, stands all the time, appetite impaired, respirations frequent.	Make comfortable, apply mustard to breast and sides. Give cold water with nitrate of potassium 2 drams in it. Give injections per rectum. If he will not eat give new milk and raw eggs as a drench; when pulse gets weak give 2 to 3 oz. sweet spirits of nitre every 2 or 3 hours in pint cold water.
PLEURISY. Same as above.	Ushered in by chill, succeeded by colicky pains, shows stiffness and soreness and persists in standing, groans if made to move, sore if pressed between the ribs which are fixed; short, dry, painful cough.	If much pain at first give colic drench, apply mustard to sides, give nitrate of potassium in 2-dram doses in water 3 times daily. If pulse becomes weak give 2 to 3 oz. doses of sweet spirits of nitre in a pint of water every 3 or 4 hours as indicated.
STRANGLES OR DISTEMPER. A specific virus.	Two forms—Regular and irregular strangles—Symptoms of regular form—cough, unthriftiness, fever, difficulty in swallowing, nasal discharge, swellings between jaws or about throat, which form into abscesses. In irregular form the same symptoms, less difficult breathing, and the abscesses may form any place, externally or internally.	Attend to comfort, apply poultices of antiphlogistine to throat, lance abscesses as soon as ready, give 2 to 3 drams hyposulphite of soda out of a spoon 3 times daily, do not drench. If breathing becomes very difficult send for veterinarian.
SPRAINS. Slips, miss-steps, severe muscular tension, etc.	May be of muscle, tendon or ligament. Swelling, heat and tenderness of the part involved, and if in a limb, lameness.	Give rest, place in position to afford as much ease as possible, apply heat and anodyne lotion as 4 drams acetate of lead, 2 oz. laudanum and 6 oz. water until acute soreness ceases, then apply liniment and bandage.
BONE SPAVIN. Concussion and predisposition.	Generally well marked lameness for a few steps or further, then going sound until again allowed to stand, a bony enlargement on the front, inside and lower part of hock.	Rest, blister with 2 drams each of biniodide of mercury and cantharides mixed with 2 oz. vaseline, repeat in about 2 weeks. If this fails to cure have joint fired and blistered.
RING-BONE. Concussion and predisposition.	Generally irregular lameness, followed by constant lameness with a bony enlargement, partially or completely surrounding the coronet or pastern.	Same as bone spavin.
SIDE-BONE. Same as for ring-bone.	In some cases lameness, a hard, unyielding enlargement surrounding the heel on one or both sides of the foot.	If lameness be present, blistering tends to effect a cure, if not lame no treatment is advisable.
SPLINT. Concussion or direct injury.	Often no lameness is present. When it is it will be noticed only when the horse is going faster than a walk, more marked at a jog. The patient stands and walks sound.	If not lame leave alone. If lame apply cold as ice packs or cold water and give a rest for a few days. If this does not cure apply a blister.
NAVICULAR DISEASE. Hard driving on hard roads, irregular exercise, standing in one position for a long time.	Irregular lameness, followed by constant lameness, pointing of the affected foot and general lessening of the size of the diseased foot, stubbing the toe when in motion, and a tendency to stumble.	In well-established cases a perfect cure cannot be effected. In the early stages a long rest and repeatedly blistering of the coronet will effect a cure, and it will ease the symptoms even in chronic cases.
CORNS. Bruises of the heel.	Lameness, tenderness upon pressure of the quarter of the sole, usually the inside. In severe cases where pus is forming there will be tenderness expressed when the heel is pressed.	Remove shoe, pare the sole of the quarter well down to expose the corn and allow escape of pus if there be any, apply hot poultices until soreness disappears, then get shod with a leather sole between shoe and hoof and no pressure upon the quarter of the wall.
FOOT PUNCTURES. Treading upon sharp objects.	Lameness, and, in many cases, the nail or other object is visible when the foot is lifted.	Remove foreign body, pare wall down to the sensitive part, fill the opening with 1 part iodiform to 6 parts boracic acid and keep so until lameness disappears, then get shod with a leather shoe as for corn.
CHRONIC SWELLINGS, PUFFS, ETC. Usually a sequel to some acute disease or injury.	Enlargement, either hard or soft, without pain or heat.	Either repeated blistering or the use of absorbents, as the daily application with smart friction of a little of a liniment made of 4 drams each of iodine and iodide of potassium and 4 oz. each of alcohol and glycerine.

LIVE STOCK.

Our Scottish Letter.

This will be our last contribution for 1916 and it may fittingly be devoted to a resume of the events of the year. The War has overshadowed everything—and its baleful effects have determined the complexion of many phases of agricultural life. For the average farmer the year under normal conditions would have been one of almost unprecedented disaster. What has prevented that is not the bulk of agricultural produce but the abnormal prices which have ruled. Every article produced on the farm has made almost unheard-of figures and the British farmer who enjoys immunity from income tax and assessment for war profits has undoubtedly been making money. A farmer who has no other source of income but his farm only pays in-

come tax on the amount of his rent. Before the War he only paid on one-third of his rent. Whatever excess profits he may have made are all to the good. Unlike the trader or manufacturer he gets it all to himself. The season was throughout an unfortunate one. Rain fell to an abnormal extent and between labor shortage and backward weather the farmer generally, in spite of enhanced profits, had a sorry time of it. Many farmers had made arrangements to crop more extensively than in former years—but intentions and efforts in that direction were ruthlessly defeated by the climatic conditions. Alike in spring and in autumn it seemed as if Providence was mocking the efforts of men to meet an unprecedented crisis in national history. That crisis is not past, and there is every likelihood that the people of these islands may yet realize as they have not hitherto done, that War means scarcity, and scarcity calls for temperance in eating and drinking.

Neither the generation that now is nor the one that preceded them understood what it meant to lack bread.

For twenty years the British public lived very cheaply, while the capital of the rural landowner and farmer was depleted to the tune of £865,000,000. Now that bread and milk and meat and potatoes and eggs and cheese and bacon have reached prices of which the British public has had no previous experience the British public makes a great noise and blames the home-producer. Unhappily the said home-producer has for thirty years had no share in making the prices of his produce. These have been determined by his competitors from beyond the seas. And he has very little say in making the price now. The one thing of which he has attempted to regulate the price has been milk, and promptly the government has stepped in and said "you won't". It has fixed the price beyond which milk may not be sold, and it has done so without considering in the least the cost at which milk can be produced. The result naturally is that men are eager to get out of the milk trade. It was a sufficiently exacting calling without

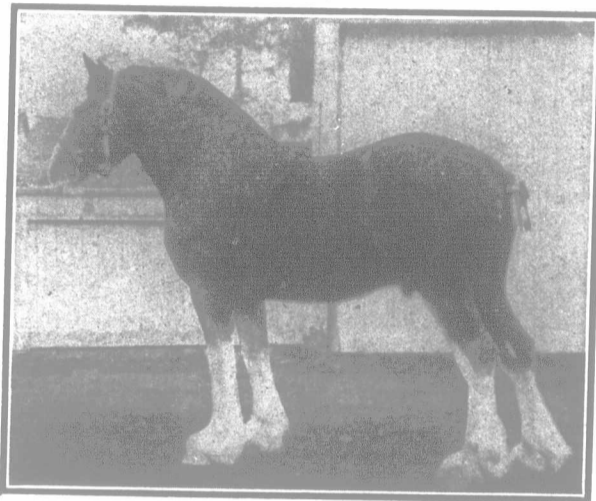
this added terror. Labor was scarce, and wages were high. The milk-trader drives a pretty hard bargain with the milk-producer, and unless something is done to alleviate the situation there is just the possibility that we may experience a milk famine. A food Controller has been appointed, in the person of Lord Devonport, and a shipping Controller has been appointed in the person of a Glasgow shipowner, Sir Joseph P. Maclay, and both of these gentlemen are entrusted with duties which may have an important bearing on dairy farming.

Stockbreeders of all classes have had the time of their lives. At the pedigree sales all breeds made record prices and averages. The average price of 1,576 head of Shorthorns sold was £76 14s. 6d. as against £49 4s. 8d. for 1,465 head in 1915. The highest price of the year was £2,310 paid for a bull calf at William Duthie's sale in October. This is the record price for a Shorthorn bull calf in this country. The average price of 1,409 Aberdeen-Angus cattle was £35 5s. 0d. as compared with £30 14s. 1d. for 1,411 head in 1915. Females of this breed made unusually high prices. The highest price paid for a bull was £462, and for a cow £220 10s. 0d. The average price for Galloways also showed an upward tendency, but the results for this breed are not tabulated with the same care as are the results for other breeds. Highlanders at the Oban bull sales showed an average of £34 4s. for 57 as compared with £31 8s. 8d. for 61 head in 1915. The most striking advances, apart from those reigning in the Shorthorn world, were those in connection with British Holstein cattle and Ayrshires. Both breeds are in high favor among dairy farmers, and at all sales record prices were received. The great attraction in what are called the Dutch cattle is their heavy milk yield and unquestioned value for feeding purposes when service in the dairy is at an end. At the Cradlehall dispersion sale in Inverness-shire in August, 39 cows made an average of £85 16s. 7d. an extraordinary price for dairy cows. Eleven two-year-old heifers made £74 7s. 2d. each, and ten yearling heifers £53 13s. 1d. At one of the English sales 45 head made an average of £112 6s.

The Ayrshire has entered upon an era of extraordinary prosperity. No one could have supposed when the late John Speir got the Highland Society to inaugurate Milk Records that inside a decade prices would have advanced as they have done. If ever a man's public services were posthumously vindicated those of Mr. Speir have been. He toiled in season and out of season to get a public system of recording milk yields established. He was laughed at and derided by the men whose sole idea of what constituted a good Ayrshire was that it should win a prize for fancy points in a show-yard competition. Yet he held on his way, and at long last succeeded in convincing the National Society that he was not a dreamer. During the past few months bull stirks of the Ayrshire breed have been sold by public auction for 380 guineas, 320 guineas and 300 guineas. The herd which made the two highest prices was that of John Logan, Bargenoch, Drougan. He disposed of 17 bull calves on 23rd November, and their average price was £91 10s. 8d. with the two top prices named. The 300 guineas was paid at Thomas Barr's sale at Hobsland, Monkton, on Saturday, 2nd December, when 18 bull calves or stirks made an average of £57 2s. 2d. The Bargenoch herd was always held in good repute, but in these later years it has eclipsed all its past achievements.

Clydesdale-horse business has also been phenomenally brisk. There has been no export trade worth speaking

about, but the home trade has known no restraint, and Clydesdale draft horses were probably never worth higher prices than at the present hour. At the Lanark sales in October a four-year-old gelding made £134 and at Perth a month earlier a six-year-old gelding made £132. Stallion hiring for 1917 has gone on steadily all through the year. Many horses have been hired for 1918, and a month ago, James Kilpatrick hired his young horse, Craigie Excelsior to Central Ayrshire for 1919. Sensational prices cannot be recorded as in 1915, but at the few dispersion sales which took place prices ruled high. In February a sale was held in West Cumberland when six head made an average of £196. At the Uppermill dispersion in May 23 head made £106 16s. 6d., and at Crannaboy the day after—(also in Aberdeenshire) 20 head made £127 5s. 8d. These figures were eclipsed at the Balgreddan dispersion sale in Kirkcudbright, also in May, when 12 head made an average of £146 10s. 9d. As an illustration of the value of ordinary work horses the following average results of the great four days' sale at Lanark in October may be interesting. Two-year-old geldings, numbering 288 made £54 4s. 6d., 228 two-year-old and three-year-old fillies made £66 13s. 4d.



The Count of Hillcrest.

First in his class at Guelph, 1916. Exhibited by T.H. Hassard, Markham, Ont.

Sixty three-year-old geldings made £67 6s. 140 colt foals made £30 8s. 6d., and 96 filly foals £46 4s. 2d. The leading sire of the year as judged by show-yard tests was William Dunlop's Dunure Footprint 15203. He made a clear sweep of almost everything. His progeny exhibited at the seven principal shows numbered 51, and among them they secured no fewer than 97 prizes and 7 champion prizes. In the 97 are included 21 firsts, 19 seconds and 20 thirds. The second best record was made by Dunure Footprint's famous sire, Baron of Buchlyvie 11263. He was represented by 18 animals which secured 45 prizes and 6 champion prizes. In the 45 were 21 firsts, six seconds and an equal number of thirds. Apukwa 14567 had 12 representatives and 27 prizes. Bonnie Buchlyvie 14032—fifteen representatives and 23 prizes. These are by far the most successful sires. Of the first ten sires on the list eight are alive, and Bonnie Buchlyvie has a very large number of his sons hired as premium horses for 1917, 1918 and

1919. Baron's Pride 9122, had by far the largest number of premium horses travelling in 1916.

Smithfield Club Show was held in the first week of this month as usual. There is some doubt as to whether it will be held next year. The shows of the Royal Highland and of the Highland and Agricultural Society of Scotland have been abandoned. The former was to be held at Cardiff and the latter at Edinburgh, but there is every likelihood that men will have more serious matters to think about in July. It has been resolved by a narrow majority to go on with the Ayr show in the end of April. There was something stolidly John Bullish in the holding of the Smithfield Club Show this year. Undaunted by Zeppelin raids and almost within hearing of the big guns in the north of France, the bucolic element thronged London as of yore in the first week of December. The exhibition of live stock was of an unusually high order of merit. His Majesty the King had four breed championships and won both the championship and the reserve for the best animal bred by exhibitor. His Majesty has splendid herds of Herefords, Shorthorns and Devons at Windsor, and his Hereford bullock, which came very near being champion of the show, is one of the best representatives of his breed ever seen at Smithfield. The reserve to him was the white Shorthorn steer, Carol, from Windsor. He was first last year, and to our thinking is a beauty. Undoubtedly he is too light of his flanks and thighs, but he is wonderfully straight above, and a very gay animal on parade. The champion of the show was the Aberdeen-Angus steer, Neraska owned by J. J. Cridlan, Maisiemore Park, Gloucester. A well-known breeder of Aberdeen-Angus and perhaps better known as a London west-end butcher. Neraska was not bred by Mr. Cridlan, but by Francis Gilbert, Whiteside, Alford, Aberdeenshire. In the opinion of the breed judges there was a better representative of the breed in the yard than he—viz. J. F. Cumming's beautiful young heifer Enamour II, which won the junior champion cup both at Edinburgh and London. This heifer was bred at Glenfarelas in Banffshire, and her sire was Black Jacobus of Ballindaloch. Messrs. J. & G. Grant of Glenfarelas, also bred the best crossed at the show, a heifer which was got by the same sire. She is owned by Mr. Cridlan and is a wonderful animal. In the carcass competition Aberdeen-Angus blood also asserted its superiority, taking the championship and the lion's share of the honors. Thomas Biggar & Sons, Dalbeattie, showed a splendid Galloway bullock, named K. O. S. B. He was breed champion both at Edinburgh and at London, and may fairly be claimed as the best butcher's beast at either show. He was worth more per lb. to the butcher than any other of the breed champions. It is rather strange that at shows ostensibly run for the purpose of showing the best and most profitable beef and mutton champion, honors should so frequently go to animals which are not worth nearly so much per lb. to the butcher as others that are passed over. The explanation of course is that the question of early maturity has to be taken into account and the length of time taken to put on a certain weight of flesh. When this phase of things comes into play the Galloway gets left, and many a time the Shorthorn gets a look in. In the finals, however, when quality of flesh as well as rapidity of laying it on have both to be considered, it is very difficult to dethrone the Aberdeen-Angus bullock or heifer.

Here endeth our correspondence for the marvellous year 1916. May 1917 bring prosperity to our readers and peace to a sorely distracted earth.

SCOTLAND YET.

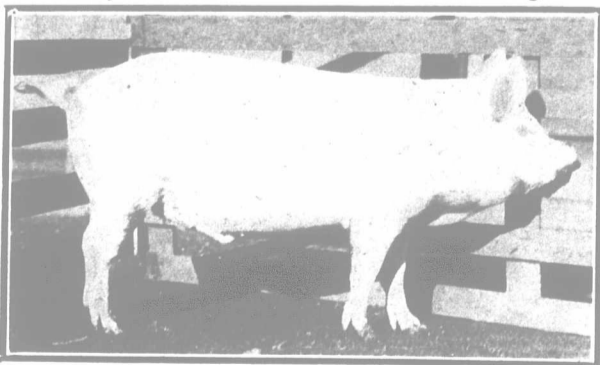
Abattoir By-products and Their Industrial Significance.

The large packing plants have copied one of Nature's laws, known as "the indestructibility of matter," to a marvellous extent. Occasionally the squeal of a pig the bleat of a sheep, or the bellow of an ox, gets away, but seldom does anything else in the anatomical make-up of an animal escape the wonderful utilizing efficiency of the modern abattoir. The carcass of a cattle beast, the sheep or the hog, is only one portion of the animal which the packer looks upon as valuable, for those parts usually discarded, when butchering on the farm, are manufactured into commodities which the world could now hardly do without, and some of these outputs of the up-to-date packing plant, are of inestimable industrial value. The uninitiated are prone to consider an abattoir as an institution where certain classes of live stock are converted into carcasses, quarters, or different cuts of meat for human consumption, and in this conception they are correct, but a visit to one of these establishments will reveal a manufacturing plant where the parts, usually looked upon as valueless, are converted into commodities varying from fertilizer—worth around \$30 per ton—to suprarenalin, valued at more than \$5,000 per pound. Such is the organization and efficiency of a modern packing plant. Science and practice have worked hand in hand to conserve the most insignificant portions of a slaughtered beast, until now the finished by-products of the abattoir are useful without further processing or treatment of any kind in a thousand different ways; while some by-products considered finished articles by the packing plant, constitute the raw material for hundreds of other industries.

How the Farmer's Bullock Comes Back.

A farmer may finish and dispose of a bullock, little thinking that, before many moons, parts of its carcass may be consumed at his own table, or by a foreign people, and its blood converted into "blutwurst" sausages, or dried and made into meal with which to

feed his calves or enrich his land. He little thinks of this bullock's hoofs and horns appearing as buttons on his next new suit of clothes, or being used in his home as combs, hair pins, umbrella handles, napkin rings, tobacco boxes, etc. Perhaps his next new pipe will have a mouth-piece made from the shin bone of his steer; the knives with which he eats and the razor with which he shaves may have a handle of the same material, or perchance the baby may nurse from a bottle covered with a bone ring from this same steer. There is absolutely no cause for alarm, but this farmer may even masticate his own food with an artificial tooth carved from the shin bone of his favorite bullock. His next pair of shoes, possibly, will be soled with leather from this animal's hide, and the hair therefrom will be used in plastering his home, or that of a neighbor. There is no doubt but the automobile he is induced to buy will be upholstered, in part, with the long hair from the



Champion Barrow at Guelph.

Exhibited by J. Lerch, Preston, Ont.

end of the steer's tail, and when he comes home from a pleasant drive in the country, his sleeping hours are spent on a mattress filled with hair from the same or a similar source. The artistic daughter may sit down at her bench and paint beautiful scenes of landscape and animals with a brush made from the hair on the inside of the ear of this now dead and ubiquitous bullock. If the man who is unkind enough to consign a good steer to such relentless distribution should live in the United States or Great Britain (not in Canada), and desired to save in war time by using oleomargarine instead of butter, parts of this forgotten product of his herd might crop up once more. After a busy day engaged in peaceful and productive enterprise he washes his hands and face with one of sixty grades or varieties of soap which this bovine has provided, little realizing that from the same contribution to the packing plant and as a by-product of the manufacture of this soap, glycerine is made and later manufactured into high explosives with which a semi-peaceful Europe is being converted into a veritable hell. The day's work done, he picks up one of the best sellers, but lo! the binding is held in place with glue, either from the hoofs that erstwhile trod his farm, or the hide that at one time, in his herd, was good to look upon. Glue from the same source appears in musical instruments, oil cloth, trunks, matches, carpets, cameras, toys for the children, whips, window shades, etc.; he cannot get away from it. "Glue holds the world together". Then after having filled in his allotted time on earth, and the Angel of Death calls this farmer Home, he is laid away to rest in a coffin fastened securely together with glue, made from the bullock he once sold to the packers.

With a Steer Through the Slaughter House.

What is written in the preceding paragraph, regarding abattoir by-products, only touches the fringe of the subject. There are many others yet unmentioned and their industrial significance has not been approached.

Let us each, in our own mind, follow a steer through a modern plant. Usually the animal is first felled with a blow from a small sledge; it is then shackled by the hind legs and swung into a perpendicular position for sticking. The blood is often caught in buckets and sent to the sausage kitchens for use in blood sausage. For inedible purposes the blood from thousands of steers each day is collected in a large vat, where it is allowed to coagulate and is then cooked with live steam. Subsequently the water is pressed out and the residue is ground into a fine meal suitable for chickens, pigs, or calves. It will carry about 80 per cent. of crude protein and is thus valuable as a fertilizer. The average cattle beast will yield about 32½ pounds of raw blood, which is converted into approximately 7½ pounds of dried material. Incidentally the average hog yields about 7 pounds of raw blood, and the average sheep about 2.4 pounds.

A feature of Armour & Company's plant at Chicago is a moving platform 250 feet long and 10 feet wide. This will accommodate 35 carcasses and 60 workmen at one time. Here the carcass is skinned and the feet, up to the knees, cut off and thrown into chutes which carry them to a lower floor, where hoofs and horns are softened by steam, split open and then pressed into flat plates. From these plates stamping machines cut out combs, buttons, hair pins, umbrella handles, napkin rings, tobacco boxes, buckles, and what not. The residue is ground and used as a fertilizer. Since the exodus of the long-horned Texas steer, and the advent of the polled or dehorned bullock, horn products have diminished in quantity and variety. More young steers are now coming also, which tends to diminish the amount of horn to be converted into useful articles. The shin bone is sawed into flat slabs and then shaped by various instruments into handles for knives and razors, carved and dyed to resemble stag horn, pipe stems, dice, chess men, electrical bushings, crochet needles, flat buttons, washers, artificial teeth, and bone rings for nursing bottles. The head is split open and the brain removed. This is sent to the chilling room, later to be distributed to all parts of the country.

The hide and hair are yet to be disposed of. Almost everyone knows the common destination of the hide, yet few realize the many kinds of leather that are made from it. The hair which the tanner removes is used as a binder in house plaster, or for stuffing horse collars. The long switch at the end of the tail goes into upholstering work and the hair from the inside of the ear is plucked and tied in bunches for the manufacturers of art supplies, who convert them into brushes for oil and water-color painting.

From the clean pink pates of calves, a delicate grade of gelatine is prepared, which goes not only into fancy dishes but is used as a stiffener in ice cream, or by the brewers in clarifying beer.

What the Packer finds on the Inside.

After the hide and extremities of the steer are removed, and often while that work is in progress, the carcass is slit open and the viscera taken out. The internal organs are first inspected by Government inspectors, after which the different parts go scampering hither and thither throughout the building on moving tables or rollers to the various departments, each of which specializes in the care of a certain portion of the animal.

Where a considerable sausage business is done, beef extract is first made from the hearts after which the meat is converted into sausage. Beef hearts will yield about 2.41 per cent. of extract—ordinarily the hearts and livers go to the chilling rooms there to receive further handling and freezing. Later these are distributed to the consuming public who appreciate them as articles of diet.

The bladders as well as the large and small intestines go to the sausage-casings department for cleaning. Some are inflated and dried to the thinness of paper and used as containers for bologna sausage or putty. The tubular linings of the gullets are also stripped out and made into bologna casings. Certain grades of intestines, the fine kinds, are prepared as caps for perfume bottles or to be used by gold beaters as a covering for the metal when it is being pounded to an extreme thinness.

Some gall stones from the slaughtered cattle beasts are shipped to Japan where they are used as a talisman or charm, just as a superstitious person in this country might carry a rabbit's foot about with him. Apart from this singular trade, the galls, gall stones, and certain small glands go direct to the laboratory to be manufactured into drugs. The arts and sciences make use of those parts to a considerable extent. The principal use of ox-galls is in the mixing of water-color paints and inks. They are also used as a substitute for India ink and as an ingredient of varnish. Ox-galls possess a soapy quality which makes them valuable as a cleansing agent for scouring wool and woolen textiles. The many small bones, from which the flesh is removed in the various processes of the packing plant, are made useful in divers ways. Some are made into what is called case-hardening bone, used by manufacturers in hardening ball bearings, bicycle and automobile cones, and for bluing the steel barrels of revolvers and rifles.

Little need be written with regard to the rennet extracted from the stomachs of calves. The shortage last season emphasized its great importance in the manufacture of cheese.

Oleomargarine and Candy filler from Cattle.

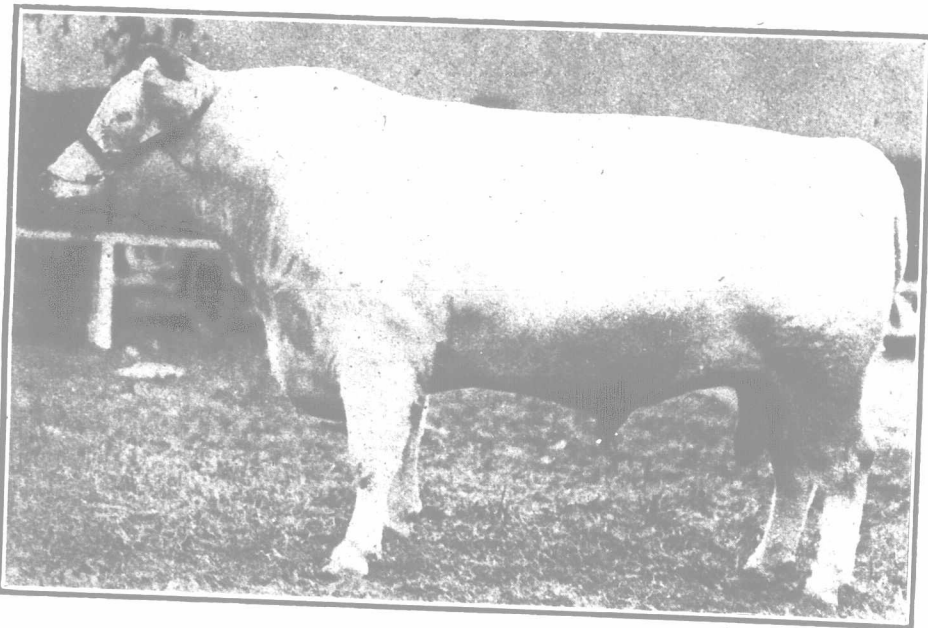
To see the oleomargarine flowing through the chutes in the plant of Libby & Company in Chicago, and to follow it through the various processes of printing and

wrapping is enough to astonish the lay mind or lead one to doubt the adequacy of the demand to consume it all. However there are many other institutions of the same kind producing this butter substitute, the basis of which is oleo oil and neutral lard. This oil is made from the caul or kidney-fat of the steer by a warming and pressing operation which forces out the thin yellow oil, sometimes called butter oil. Several grades of oleo oil are produced from fats taken from various parts of the animal and from portions used for different purposes. The hard mass remaining after the oil is removed goes under the name of stearin. Oleo stearin is used as a filler in the cheaper grades of chocolates, taffies, penny candies and chewing gum.

The best grades of oleomargarine contain, along with oleo oil, some neutral lard which is obtained by rendering the best grades of leaf lard in a cool temperature. The product obtained is neutral as to taste, color and smell. The product remaining after the neutral lard is removed goes as lard-stearin.

Dynamite for the War Lords.

Soap making was formerly an important branch of the packing industry and as a by-product of this process glycerine was produced. The demand of the war lords for explosive material has almost made soap a by-product of glycerine manufacture for the latter is used in the preparation of nitro-glycerine which is the basis of dynamite and other high explosives. One plant in Chicago turns out sixty grades and varieties of soaps, toilet, laundry and industrial. In addition to these are made: cleansers, washing powders, talcum powder, tooth paste, face cream and smelling salts. High-grade tallow, to-day, is the basis of soap making. Glycerine, the by-product, in addition to its use in the manufacture of explosives, is taken largely by the medical profession, where it serves as a vehicle for certain medicines to be applied externally. It is also used in the manufacture of parchment paper and printers' rollers.



Sea Gem's Pride.

First in his class at Toronto and grand champion Shorthorn bull at London, 1916. Exhibited by Kyles Bros., Drumbo, Ont.

Glue and Fertilizer.

It has been said that "glue holds the world together, so generally is it used in the processes of manufacturing. Packers distinguish between "bone glue" and "hide glue". The raw materials for bone glue comprise the feet of cattle, sheep and hogs; their skulls, jaw and rib bones and shoulder blades. Large quantities of glue are required in the manufacture of paper, books, leather goods, oil cloth, musical instruments, trunks, billiard tables, corks, matches, carpets, cameras, pencils, toys, coffins, silks, whips, window shades and sandpaper. After all this processing, which has been enumerated in the previous paragraphs, is complete, the residue is converted into fertilizer for use again on the farm.

In this journey of the steer through the modern abattoir we have enumerated the more important by-products only and we have not taken into consideration the many grades of the same. In the Armour plant alone, fifty or sixty varieties of canned meats are regularly produced from utilization of tongues, kidneys and the various cuts of lean meats. There are more than twenty classes and grades of oils and greases derived from packing-house operations; thirteen varieties of casings for sausage, putty and other containers; thirty-eight varieties of dry or summer sausage; forty-seven varieties of fresh breakfast sausage; six grades of oleomargarine; five grades of oleo oil and ten grades of beef extract. For the medical profession only, forty-eight preparations are made, glands and membranes being utilized while fresh, in the plant laboratories. Among the important medical agents produced are pepsin, pancreatin, thyroids, rennet, benzoated lard, suprarenals and pituitary liquid. These are made from glands and membranes of hog, cow and sheep; among them are some of the most important therapeutic agents.

The Adventure of the Hog.

At one entrance to the Swift & Company's plant in Chicago, one can see hundreds of hogs per hour go shackled up the revolving wheel and on to a track

which carries them into a dark beyond. On their way they tarry the brief part of a second to pay their respects to a man, with knife in hand, and then they start on their long and devious way again, oblivious to the treatment they receive. Space will not permit of a detailed description of the scalding and dressing processes, or of the utilization of all materials, but suffice it to say that nothing is wasted and in the preparation of a swine carcass all machinery is tuned to the work, and the division of manual labor is most complete. The same may also be said of the slaughter of sheep. A few by-products the source of which people generally do not know are mentioned in the following paragraph:

Pepsin is from the lining of the pig's stomach; it is used as an aid to digestion, and in stomach troubles generally. The most popular forms of pepsin are pure pepsin, essence and tablets. Pancreatin comes from the hog's belly sweetbread. It is employed as a medicine, and to peptonize food for infants and invalids. Thyroid glands of sheep are made into powder and tablets. Thyroids is a specific medicine, and is used in diseases that are due to a deficiency of thyroid secretion. A great many cases of idiocy in children can be cured by thyroids. Suprarenal preparations, made from the glands that are located just above the kidneys, are used internally, and from the substance is got a powerful astringent and heart stimulant called suprarenalin, which is worth more than \$5,000 per pound. Pituitary products, from a gland located at the base of the brain, are of great service to the medical profession. The finest of the pituitary preparations is pituitary liquid, a solution of the active principle.

The Economics of Slaughtering.

If anything further is needed to impress upon readers the great economy practiced in the modern packing plant it might be interjected here that in every steer slaughtered is a small gland the size of a pea, called the pineal gland. This is used in the

manufacture of a drug, pineal substance, and 15,000 steers must be handled to get sufficient of these glands to make one pound of the medicine. It is only through the use of adequate refrigeration that this saving can be accomplished and the multitudinous by-products of the plant which were formerly "packers' waste" owe their numbers and their excellence to applied science. It has all been fought out in the laboratory.

The trade in meat animals is one of the biggest things in the country to-day. The daily turnover at the Union Stock Yards Chicago, amounts to approximately one and one quarter million dollars, and it has been estimated that no less than 400,000 people are dependent either directly or indirectly on the operations of the Stock Yards and packing town for

a living. The packers' by-products represent a great amount of wealth in themselves, but many of them constitute the raw material for still other industries. It is impossible to tell where the parts of a finished bullock will stop when the animal once leaves the farm. There is apparently no indestructibility of the steer or his parts.

The statements made in this article are based largely upon conditions in the United States, and the abattoirs there, yet Canada has the resources and the possibilities, which if developed will insure a live-stock and packing business equal to anything we have mentioned in these columns.

The Tuberculin Test.

EDITOR "THE FARMER'S ADVOCATE":

In a recent issue of "The Farmer's Advocate" my attention was drawn to an article written on the tuberculin test in which the writer set forth the argument that the tuberculin test was not as valuable as had been formerly supposed. Personally, I do not agree with his article. Firstly he maintains that by a series of examinations, covering probably a year, a veterinarian may diagnose the disease and not run the risk, (if such there be) of the tuberculin causing a quick breaking down of the system by the disease. Now I have for some time been holding post-mortems in some of our largest abattoirs, being on the civil service, and I have not infrequently found healthy appearing animals in prime condition, which on post-mortem showed advanced stages of the disease, and very often I found other cases where only lesions in the mediastinal lymph glands, (these are glands situated between the lungs) with absolutely no lesions at all in the lung tissue. Now these cases couldn't possibly be detected by making an ante-mortem examination, neither would you be able to find it in the sputum for they were purely localized cases and are not condemned for food. Now the reader may ask if it is localized and no infection in the excretions where is the danger with this animal.

There is probably no danger of it transmitting the disease so far, but the unfortunate part of it is the disease does not run any definite course and consequently we can not tell when lesions will form in other glands and become generalized, and while it is still local the owner may have the animal slaughtered under inspection and it will pass. Is this not much better than keeping it for an indefinite length of time, when it will eventually become generalized and consequently be a complete loss, and probably have infected several others in the herd? Now, by using the tuberculin test, if properly carried out, those animals with only slight lesions, can be detected and even if the test did cause, in rare cases, a quick breaking up of the system by the disease, if the animal is slaughtered immediately after a positive reaction is obtained the owner will at least get beef price; and again it is well to remember that Robert Koch who first isolated the T. B. organism prepared the tuberculin originally as a curative, and later used it as a diagnostic agent and even later he maintained it has some value as a curative agent in the early stages of the disease. Hutra and Marck state: "as a rule the tuberculin test does not perceptibly influence the course of the disease or the health of the animal."

Certainly there is little to be gained in using the test unless the owner intends either slaughtering the positive reactors or having them kept under quarantine. Oxford Co., Ont. G. P. M., V. S.

Results From Feeding Hogs High-Priced Feeds.

EDITOR "THE FARMER'S ADVOCATE":

The tendency at this time seems to be to sell off all the breeding stock in the way of swine, because people are doubtful if it will pay to raise hogs with grain so high. I always raise hogs and have found of late years that I could at poorest times break even, and at best times make a handsome profit over cost of production. So the question with me was not, will it pay to keep my breeding stock, but will it pay me to buy some of the innumerable light hogs being put on the market this fall and feed until better fitted for market? At this time corn direct from field could be bought at \$1 per bushel (70 lbs. of ears). This I consider about equivalent to \$1.15 per bushel of kiln dried, United States corn for sale at elevators. We had bought a car of feed in the summer, so I charged the small amount of shorts and oil cake meal at what they cost me. The elevator men offered me only 75 cents for barley but as it was quoted well over a dollar I reckoned this on the basis of \$1.00 per 48 lbs. barley chop. I kept as near as possible an absolutely accurate account of all feed fed to hogs. The hogs taken to feed were two litters. Six apparently were largely Chester White, while the remainder showed Poland-China breeding. They all had large frames but were very thin. The first six fattened very quickly and were ready for the block in 14 days. The rest grew considerably and it required 6 weeks to fit them properly. Smaller pigs might have made cheaper gains than these.

Below is a record of the experiment as I summed it up for my own information:

		Ex- pense	Re- ceipts
Oct. 21	11 hogs bought to feed, 1,720 lbs. at \$10.35	\$178.02	
	100 lbs. oil cake at \$2.05 per cwt.	2.05	
	30 lbs. shorts at 1 1/2c. per lb.	.45	
	16 1/2 bushels barley chop at \$1.00 per bushel.	16.50	
	89 bus. (of 35 lbs. ears) at 50c. per bus.	44.50	
Nov. 4	6 hogs sold 1,110 lbs. at \$10.60		\$117.66
	5 hogs sold 1,267 lbs. at \$10.25		129.86
	Totals	\$241.52	\$247.52
	Profit	\$6.00	

This shows clearly enough that one could afford to feed hogs even at these prices rather than sell the feed off the land. Essex Co. R. A. JACKSON.

THE FARM.

Elections, Past and Present.

BY PETER MCARTHUR.

I know I should go out and vote to-day—it is the duty of every citizen to vote at every election—but listen a minute. Here is the state of affairs. Our Reeve had been elected by acclamation. A number of excellent men are running for Councillors. I approve of all of them and have nothing against any of them. There is no question of public policy at stake, the roads are bad, it is sleeting and if I went to the polls I would have to drive three miles facing the wind. Besides I am only feeling "middling" and I have this article to write. Moreover I haven't got used to this business of voting. A rolling stone gathers no votes and only once before have I been in a position to cast a vote. It seems to me that voting is a habit that should be formed in youth and I failed to form it. Honestly, now, if you were in my place would you leave a nice,

warm, comfortable room and go slopping to the polls on a day like this when there is so little at stake? I admit that during the past week I accepted several perfectly good handshakes that might be taken to imply that I was going to vote right, but perhaps I'll get a chance to hand them back with congratulations after the elections—that is, if the candidates are still shaking hands. Anyway, I am not going to vote unless someone comes and drags me out, and anyone who tries it will find it about as hard as pulling the cat from under the stove. But I don't want anyone to think that I do not recognize the importance of voting and that I wouldn't be willing to do my part at a roaring general election. There are some things in support of which I would be inclined to vote several times if I got the chance. But this isn't my day for voting and I am going to stay at home where I am comfortable.

* * * * *

Having nothing else on my mind I can't help meditating on the change that has taken place in the method of selecting rulers. In the "brave days of old"—in the days of the cave-dwellers—the prognathus troglodytes—elections were much simpler than they are now. And, come to think of it, they had methods that were far in advance of ours. Though I can find no trace of the referendum, they had the initiative and recall working better than we can hope to have them work for a few centuries to come. Perhaps that was because their method of applying them was different. When one of our low-browed forefathers wanted to initiate something he didn't hire a cave and call a mass meeting of the citizens. Not at all. After deciding on the reform he wanted to initiate he went away to some quiet neck of the woods, lived on raw meat and swung in the tree-tops so as to develop his biceps and increase his chest measurement. When he felt that the psychological moment had arrived he pulled up an oak tree by the roots, shaped it into a war-club by pounding it against a sharp rock and started a campaign of education among the members of his tribe. In the field where he labored the reforms that he initiated went through with a whoop and no one claimed that they interfered with the provisions of the British North America Act or made an appeal to the Privy Council. His prohibitions really prohibited. Reformers of the present day show much of the same autocratic spirit but they lack the muscle to give weight to their proposals. In their hands the initiative is a weak and washed-out affair that does not appeal to red-blooded people, but much as we may admire the old methods on the score of efficiency it would hardly do to go back to them. They might suit the Kaiser, but they would never do for us.

* * * * *

I imagine that the "recall", another bit of supposedly new legislation, was carried out in much the same way. An old time election must have been a knock-down and drag-out affair. When a tribesman decided that the reigning chief should be recalled he took the raw meat diet for a while and filled his system with ozone. He didn't bother with the suffragette vote or ask for a Royal Commission to investigate the arrow-head purchases or the handling of the public revenues by the wampum department. In the simple and direct way that prevailed before politics were invented he hunted up the chief whom he wanted to recall and like Ta Pherson in the song.

"Let out some horrid how-wells,
Then took a skian dhu
And stuck it in his powells."

Then he ordered the muss to be cleared away and announced himself as a candidate for the Reeveship and Township Council of that district. If any other candidates appeared in the field they settled the matter among themselves without calling on the voters to go out on a wet day like this to cast their votes. If the voters cast anything on such occasions it was usually a boulder of old sandstone, and their opinions carried more weight than those of voters in these degenerate days. When the election was over the winning candidate salved his wounds with mammoth grease and dispensed justice in a way that was entirely satisfactory to the survivors. He was not only Reeve, but if anyone asked for the Council he would be likely to reply like the Mayor of a Western mining town who replied to the question by saying proudly, "I am also them." Those were certainly the brave old days but I am afraid that they are gone forever.

* * * * *

Sometimes I am led to wonder if our secret ballot has not gone to the opposite extreme as an instrument of government. It is supposed to protect the timid voter, but why should the voter be timid? He has a right to express his true opinion publicly, and if anyone interfered with him that person should be punished in a way that would discourage such work. In some cases it might be found that the secret ballot hides more corruption than it prevents. If men have been intimidated to voting in a certain way there is no way of proving it by seeing how their votes were cast. Also the man who sells his vote does not have it put on record in such a way as to invite criticism. The trouble is that the secret ballot is not really secret. Most of us talk so much that every one knows just how we are going to vote. If it were wholly secret and people refused to tell how they would vote our candidates would be forced to do their best to win support for they could not count up their sure votes. Then there is another objection. We are gradually finding out that secrecy is the curse of the world. Secret diplomacy ties us up in bargains of which we know nothing and secret deals defeat the will of the people. We are asking for publicity of

campaign funds and everything else that has to do with elections and governments and yet our whole system is based on the secret ballot. There is something illogical in this and I shall not be surprised if the abolition of the secret ballot becomes a necessity of the future. It strikes me that this is a subject that might be discussed profitably by debating societies. "Resolved that the secret ballot is a failure." Some pretty arguments could be advanced in support of the resolution.

The Producers.

EDITOR "THE FARMER'S ADVOCATE":

The article in your issue of December 28th on "The Prod." by Peter McArthur, the Sage of Ekfrid, is somewhat disappointing to the readers of the usual brilliant productions of this gifted writer. What does history reveal in this connection? We had the Grangers who proved a failure. Then we had The Patrons of Industry who went into politics in the interests of the farmers of this province and these also woefully failed. We have had farmers supply companies and other bubbles which soon became trifles light as air. And why? Because you might as well try to make a rope of sand as try to hold farmers together and work for their own benefit. Now we have the "Grain Growers" of the West. So long as they keep out of politics they may accomplish something in the way of procuring better seed grain, better crops, and better transportation and this by agitation and co-operation but not by class legislation.

What could be expected from a new party made out of the old material? If such a party ever came into power all we could look for would be class legislation, for what assurance have we that such a party in power would deal out even-handed justice to the consumer, the laborer, the manufacturer or the artisan? The farmers would then be the "Big Interests" ready to fleece the other fellows, for the tillers of the soil are not adorned with the white pinions of angelic beings, but are very human. Two political parties are sufficient. If a man finds his party is not what it should be, let him do what he can to make it the ideal party. Political leaders are being taught the wholesome lesson that they can no longer sin with impunity in this fair land. This has been demonstrated recently in Manitoba and British Columbia. All honor to the party that is big enough to punish the leaders when they go wrong. "Turn the Rascals out" is a good motto and let both parties unite and punish the leaders as soon as they show themselves to be rascals. It would require a very big man to lead a new party to victory in this Dominion at the present time. Peter says such a party would afford material for splendid cartoons and a chance to produce joyous literature.

This is not a very high motive and besides the boot might be found on the other leg. If Peter painted the red cow some other color and gave her a new name she would still have some evil spirit within her and be ready to trespass on his neighbor's property as soon as she found a weak spot in the line fence. So it would be with a new political party. The spectacle of "The Sage" astride the red cow crossing the Rubicon to fight the beasts in the "Big Interests" would be a cartoon of the highest order. Better let that baby out West that is struggling into existence die in his infancy. Peter can produce abundance of joyous literature along the old lines—literature that is appreciated by readers of "The Farmer's Advocate."

We fail to see how the farmer is the under dog, for he gets good value for everything he can produce. He must depend on his intelligence and diligence for greater production and he should not ask the government to do for him what he can do for himself. There is nothing to prevent farmers from having adequate representation in parliament. If they fail in this particular under existing conditions they would not succeed on a platform in which the main plank is self-interest. The example shown by the statesmen of Britain at the present juncture, where none are for the party but all are for the state, is proof that party government is a success in the hour of the greatest calamity that ever befell the empire. Perth Co., Ont. W. WADDELL.

An instance worthy of note was brought to our attention recently, a farmer who makes a specialty of high-class seed bought 4 bushels of registered O. A. C. No. 72 oats and sowed them in a field beside his own oats of the same variety. Each lot was formalin treated. His own seed was thoroughly and properly cleaned. The registered oats yielded (from appearances no actual measurements were taken) about ten per cent. more straw and fully forty per cent. more grain. The grain is about the same quality in each case. This speaks well for hand selection.

"Industrial Canada," the official organ of the Manufacturer's Association attributes the effective part Canada has been able to play in the war to tariff protection in this country. The argument seems rather far-fetched. We would remind those who agree with such an argument that Canada's food products are of some importance in this war, and the measure of protection certain interests have had in this country has not tended toward improving conditions for the production of food on the farms.

A Tragedy of Boyhood.

By A. E. Roberts.

On the seventh day of May, Billy was five years old. To commemorate that event, and to give Billy some tangible evidence of her love, grandma set a hen for him. In time eight little fluffy black, and two white chickens arrived. As it sometimes happens, even in the best regulated families, the eight little blacks all turned out to be "boy" chickens, leaving as "girls" only the two white ones. One of these gradually changed until she became a decided buff or "blonde," but the other remained pure white.

The eight boys, being of little value on a farm that is far from town, soon became inextricably mixed with the rest of the general flock and thus gradually passed out of Billy's jurisdiction and recollection, and in time met the fate of all superfluous males. It didn't just seem right to Billy, but there were so many other things in the world so much more interesting than the garnering of mere wealth, that in time the incident faded completely from his mind.

Being of more intrinsic and potential value, a different fate awaited the two "young ladies." In them and their future, Billy's imagination, aided by his mother's knowledge, pictured great expectations. About the time they became feathered out and passed into demure young maidenhood, somebody gave Billy a pretty picture. It was of two little girls, Rose Red and Snow White. The picture then settled for once and all, a very serious problem that had bothered Billy for some time. Henceforth, his two chickens were known as Rose Red and Snow White. Some time during the following winter little Rose Red disappeared, taken probably by some sneaking coyote, leaving out of the ten original grandma chickens, only little Snow White. The passing thus of Red Rose threw great responsibilities on Snow White. In her centered all Billy's hopes.

The spring and summer months came and went; during all of which time Snow White laid eggs prolifically but refused to "set." Along in early September she suddenly disappeared and later re-appeared as suddenly with eight little white chicks.

How Billy did love those wee chickens. He fed them, watered them, cared for them, and they grew fast and fine. When they were about a month old the chicken coop caught fire from an unknown cause and was burned to the ground. The season was late; threshing time came round, and daddy had no time to build a new one. Night after night the chickens gathered and "roosted" on the ground squatting around where the coop had once been. For Snow White and her family, Billy had a separate coop made out of a box that once contained canned salmon. This box he buried in the side of the big, new straw stack and every night he covered it over with an armful of straw, and every morning before starting for school he gave them a quart or two of daddy's wheat or oats.

Cold weather came on apace, the chicken coop was still unbuilt, and saving his young charges from the biting cold became more and more of a task for Billy. One morning away on in November it was bitterly cold; Billy had covered the box the night before with several big armfuls of straw until not a sign of anything could be seen. In the morning he hurried out, burrowed a hole into the box and was delighted to find them all safe and sound. He put in a can full of grain, covered them up again and went joyfully to school. He was happy all day because he knew the chickens would be good and warm, and daddy had bought some lumber and was going to build the coop that day. When school was out he hurried home. Already the short November day was drawing to a close. From a distance he spied the new chicken coop. He hurried to the house, threw his books inside, then ran to the stack. The box was there, turned on its side, but there was no Snow White and no little chickens. The cause of the disturbance was only too plain. Daddy had thoughtlessly turned the pigs loose. One of them had sniffed the wheat and oats and had burrowed and dug and rooted and tossed until the wee home was a wreck and a ruin—and where was Snow White? He ran to the new chicken coop but she was not there, he searched the barnyard back and forth but find her he couldn't. In the midst of his search he was called to supper, and supper over must go quickly to bed. He said his prayers and was snugly tucked in. Somehow he couldn't sleep. Outside the wind was howling and he knew it was fearfully cold. He lay quietly for a while then called "Mumma, come here please, I want to ask you something."

His mother came. "What is it, Sunny Jim?" she said, "hurry and tell me now because I have the dishes to wash and bread to set and the churning to do before I can go to bed."

"Mumma," he asked, disregarding these facts, "does God—would God care—can I pray for something—after I've said Amen—when I'm in bed—will He do it Mumma?"

"Why yes, dearie, God will answer your prayer any where, any time; now you go to sleep little man, seven o'clock comes awfully quick you know."

Billy prayed—prayed that God would take care of Snow White and her little ones, then strangely soothed and contented he snuggled down into the covers from the depths of which he called sleepily: "Good night, mumma, I love you, fo-o-sty millyun—"

The mother smiled and went on with her endless work.

The next day and the next passed and no sign of

Snow White nor the little ones. When Saturday came Billy searched diligently and thoroughly. He knew she was somewhere near and he knew she was all right because he had asked God and Mumma said— He went over to the grain bin on the other side of the straw stack and for the third or fourth time got on his knees and peered under. The sun was high now and the light was better and he could see something under there. He scratched the straw away and wriggled and twisted and reached as far as he could. The tip of his fingers touched something, he pinched it and pulled, drew it towards him, then reached for a stronger hold. A disquieting fear crept into his mind. Could it be?—but no—he drew the unresisting thing out, and there it was, it was poor little Snow White, she had died in that awful cold trying to protect those little ones.

He picked her up, smoothed and stroked her feathers, his mind a chaos; how could it be—why was it? He started for the house, he must tell—must show his mother.

Coming around from behind the straw stack he met his father. He held up the chicken. "See daddy, it's poor little—" A lump came in his throat. "What you got, Bub? A dead chicken, eh? The white one that had the bunch of late-hatched chicks, is it? Never mind, they wouldn't have lived anyway, and besides I'm going to kill off everything but the Plymouth Rocks. Throw it into the pigs, they'll fix it," he called over his shoulder as he passed on out to the barn.

With heavy feet and a heart like lead Billy walked slowly up to the house. Didn't daddy know, he wondered, that that was his chicken, the last of all the ones that grandma had given him? Didn't he know how he had been trying to save her and the little ones? And now they were gone, every one—and daddy didn't care.

He stroked and smoothed again the poor little ruffled feathers, then hurried to the house and in his mother's sympathetic lap poured out a world of grief.

Several years passed and the tragedy of Snow White



The fighting isn't all done in Europe.

was apparently forgotten. Since her passing he had no desire to own anything. His mother though, planned otherwise. Time, she knew, would heal Billy's wounded trust, and besides in the years to come he must have an education—if possible he must even go to college. She thought of it by day and planned by night. If she could only somehow start a fund for him—

One day in the summer daddy came home from plowing. He had finished the last of the breaking on the "upper quarter." Down near the barn there was a level place between two hills that he figured would make a good big pasture. The patch was a little over two acres in extent, and he soon ripped the sod up. Along in the winter he changed his mind about it, it would be in the way there, that big pasture, he'd break one out somewhere else, a bigger one too. What would he do with two acres? Oh, seed it to wheat or oats or something.

Mother got to thinking and one day along in early spring she told her plans to Billy.

"Ask your father," she said, "to seed that little piece to wheat and call it yours."

Billy advanced the proposition to his father. "All right," he acquiesced, "we'll do that." All through the summer Billy watched the growing grain. He speculated on the number of bushels there would be in his "crop," and during many school hours figured out his money receipts. He pored over the catalogues and made lists of all kinds of wonderfully impractical things that he would buy. He talked it over with the boys at school, and estimated he would have at least twenty bushels to the acre.

"Pooh!" said Johnny Rover, "my pap gets fifty bushels to the care."

Gee! Fifty bushels, he wished he'd get that, that would be some crop; he appealed to his mother, she'd know.

"Johnny Rover," she said, "is a perfectly wonderful boy and he has a wonderful father; however, son, it is

better, I always think, to figure on getting, say, fifteen bushels to the acre, then you'll feel pretty good if you get twenty or twenty-five, while if you should figure on fifty and then only got fifteen—well you'd be pretty badly disappointed, wouldn't you?"

The threshing outfit came one day while Billy was at school, and he was again at school when they finished up and pulled away. The tally showed some 37 bushels over the even number.

"Better call that Billy's," suggested the mother, and so it was done.

From then on there was one definite side to the problem. He had 37 bushels of wheat and he pestered his dad to sell it. Finally it was sold, it all went in with "that last car." In time the returns came and he possessed—nominally—some twenty odd dollars.

He had a thousand perfectly feasible ways of spending that money; air rifles, railroads with tracks, a Shetland pony, a bicycle—

"Not much," said his father. "You can't spend it that way, we'll put it in the bank for you or I'll keep it and owe it to you or—"

"I'll tell you what," suggested mother. "Why not charge Billy so much for plowing and seeding and rent, and so on; and seed as many acres as his money will pay for." But to this proposition daddy demurred. "Two acres this year; five acres next; twenty acres the next; no sir! Pretty soon he'd have the whole darned farm; no we might buy him some pigs, or a heifer or something, it wouldn't do any harm if we had another cow, anyway."

Accordingly, a pretty little heifer was bought from the Smith boys, and in time she became the mother of a fine young son. For the pasture, care and so forth, daddy was to have the milk, but the cow and calf were Billy's. Far into the future Billy laid his plans. If the next calf now was a steer too he'd break them in and sell them to some homesteader for oxen; while if it were a heifer and the next one after that was a heifer, why he'd have—let's see—

Along in the summer one of dad's horses died. They dragged its body off into a hollow on some unoccupied land. The next morning his dad went away and about noon came home with a fine, big, grey gelding.

"Got him for one-seventy-five," he said. "And I traded the cow and calf in on him."

"What cow and calf?" demanded mother. "Old Betsy?"

"Why no," he said astonished. "Billy's heifer and the steer." "Oh, pshaw!" he added, meeting mother's objection. "Wasn't it mine, didn't I give it to him? What was I to do anyway? I had to have a horse, didn't I?"

There seemed no other way; the farm, of course, had to go on, but what would Billy think. That was his cow and calf, his by all rights of ownership. Surely, too, there could have been some plan evolved, some way made up. She dreaded to see Billy come home. It was with an aching heart she told him of his loss, reassuring him as best she could, though she felt but little assurance herself. It seemed as though all her plans for Billy turned out badly, instead of bringing the happiness she fondly hoped for, they only brought tragedy. She wondered if Billy would be satisfied if daddy would perhaps give him a share in the new horse. After supper she questioned father about it. "Why, yes," he said. "But what difference does it make? He'll have the whole farm some time, won't he?"

Thus reassured, Billy lived down the loss of his heifer and laid other more far-reaching plans. At times he vaguely doubted his father's good intentions, but his doubts never lasted long. That he loved his father he knew from the bottom of his heart. His father was his ideal, and to his mind there was none like him in all the world. Other boys had fathers, of course, but none of them were like his; his father knew more, was smarter, stronger, better, more loving, more lovable than any other dad was or could be; and yet sometimes a disquieting doubt crept in. His crop money was gone; his heifer and calf were gone. Often in bed he thought of them and wondered where they were. He remembered, like yesterday, how he had fed the little calf when it first came, how day after day he had carried milk to it, how it would come running to meet him and with impatient eagerness would sometimes knock the bucket out of his hands, or snuff the milk up into its nose until it almost choked.

Day time it wasn't so bad; he had other things to do and other things to think about. He had lessons to learn at school, scrapes to get into and get out of; but at night for weeks he cried himself to sleep, cried softly so his mother wouldn't know.

More years went by and Billy still went to school, except for an odd day when his father let him stay at home when something special needed extra help. As he grew older, he and his mother had long talks about when he would go to college. Yes, dad had said all along he could go to college, to the agricultural college where he would learn to be a farmer—a real farmer—where he would learn the how and why of many things that even dad didn't know. Yes, he would go to college and when he came back he would pitch in with dad and they'd show them; they'd have the best farm in this old country around. When he was sixteen and had gone about as far as he could in the country school, he broached the subject to dad.

"Wasn't it time, didn't he think—?"

Yes, no doubt it was, his father agreed, but you see he had just made a deal for the Simmons place, picked it up as a bargain and, of course, buying it had taken all the cash he had. He was figuring, he said, on having Billy help him this summer; save him hiring a man; then perhaps, next fall when the crops were in—

Billy went to work and worked all that summer and worked hard. Fall and winter came and went, but it always seemed as though there was never quite money

enough. There were so many things that had to be bought, new implements, a bigger barn, a gasoline engine, a small thresher, and more horses—always more horses.

Year after year went by and it was always the same. He became eighteen, then nineteen, then twenty years old. He was now doing a man's work, but he never got a man's wages and he never got any nearer to college. Always there was something his father had in mind to do or to get, and after the doing or getting of which, he, Billy, would get his turn.

All of this made Billy's life a tragedy, and while tragedy strengthens the strong, it mostly but weakens the weak.

One day a "prospectus" from a far-off business college came his way. For a few dollars and in a few weeks they would fit him as an accountant, a private secretary, or telegrapher. Lucrative positions in the cities with big progressive concerns awaited all their graduates. The big business heads of the cities preferred country to city boys it said, and why drudge all one's life on a farm. And why indeed?

Casting his mind back as far as he liked he could remember no time when his father had played fair with him, no time when his father had done anything except further his own interests at his, Billy's expense. He had promised him, yes but his promises had been all. Always the prize was just a little ahead, a few weeks, six months or a year. To Billy's mind there often came the snatch of rhyme:

"A man of words and not of deeds
Is like a garden full of weeds."

He hated to go away and leave mother; mother who had planned and prayed and hoped and saved for him, but sometime he would come back—Then, too, there was a glamour about the city; he imagined its lights and hurrying crowds, its endless opportunities its endless chances for enjoyment, always some place to go, always something new to see.

That fall he slipped away and went working with a threshing gang. Later with \$50 or \$60 in his pocket he

made his way to the city. Arriving there he found his way to the "college." The sympathetic "president" asked that he tell him "frankly" how much money he had, and on learning of his limited resources suggested that he learn telegraphy, as that course required the least expenditure of time and money.

To-night, perhaps, he sits in a lonely mid-night tower. Through twelve long hours of every night of every day in the year he works and watches, and for this he draws down some five or six hundred dollars a year. He is a misfit, a square peg trying to fill a round hole in the machinery of life.

Back on the farm an old man is working his heart out. Since "the boy" left him he has had no one that can or does do the work quite right, no one that takes an interest, no one that cares. Betimes he straightens his old, bent back and looks far off towards a great city.

"Yes," he mutters for the hundredth time, "you didn't do the right thing by me Billy boy, you didn't do the right thing, goin' off and leavin' me that a-way."

Winter Evenings on the Farm.

A recent issue of the Farmer's Advocate had some very helpful letters in regard to debating clubs in the country. Many boys and girls think they cannot get an education unless at a high school or university. This is a great mistake. A public school education gives any boy or girl the ability to educate themselves, and that is all that a university course does. The usefulness of a debating club, whether held in private home, school, hall or church depends on the people belonging to the club and the subjects discussed. Try to consider subjects of public interest for instance.

Resolved that the Canadian House of Commons should at the next session pass a Conscription Bill.

Resolved that Canada should nationalize all railroad, telegraph and telephone lines.

Resolved that the Initiative and Referendum should be adopted in Provincial and Federal Parliament.

Resolved that single tax, as taught in "Progress and Poverty", is the best mode of taxation.

Resolved that the principles set forth in Bellamy's "Looking Backward" are the ideal ones to run a country on.

Resolved that a one-hundred-acre-farm is a better start to a young man than a salary of \$1200 a year.

Resolved that women should be given the franchise the same as men, also the right to sit in Provincial and Dominion Parliaments.

Any club, however, would only partially fulfil its mission if it did not instill a love of good literature in the hearts of its members. A few meetings should be devoted to the study of the poets. A group of young people in Halton County, a few years ago, spent two or three winters studying Tennyson. Without any formal organization they met in each other's homes, and studied "In Memoriam", "Locksley Hall," "Maud", "The Lotus Eaters," "The Princess" and others. Several members can to-day repeat page after page of Tennyson and scattering out to different localities they have spread the love of the great poet to their new friends.

Take an evening with James Whitcomb Riley; get some member to read "That Old Sweetheart of Mine", "The Raggeddy, Raggeddy Man" and others. A stormy winter night study Whittier's "Snow-bound," or the famine scene from "Hiawatha". "Evangeline" and some of Longfellow's shorter poems make glorious study. I advise that you be sure and study the life and works of Bobby Burns, Byron, Shakespeare, Browning, Hemans, Moore, Omar Kayam, Goldsmith. Start and study the poets and young people are entering into another world. Then classical fiction, Dickens, Scott, Thackeray, Hawthorne.

Carlyle says the best university is a collection of good books. Start a university in every farm home. The very best books are very cheap. Buy some this winter, and thus invite the immortals of the ages to pass the winter evenings in your home.

Halton Co., Ont. ROB ROY.

Canada's Young Farmers and Future Leaders.

Topics for Discussion for Young Farmers.

Each week we shall announce topics for discussion in this department. Three topics will appear each week during the winter season, with the dates upon which manuscript must be in our hands. Readers are invited to discuss one or more topics as they see fit. All articles published will be paid for in cash at a liberal rate. Make this department the best in the paper. This is the boys' and young man's opportunity. Here are the topics:

1. By-products of Production.

Give your experience in feeding skim-milk, whey and buttermilk to young pigs and shoats. What is their comparative feeding value for pigs of different ages? Give weights of milk and grain fed and gains made. Have you ever used whey for raising calves? If so, how much did you feed per day? How did the calves do compared with skim-milk calves? What results have you had in feeding root tops in the field or when hauled to stable? Give results of feeding bean and clover straw, stating amounts fed and class of stock. What value have small, unmarketable potatoes when fed to hogs? Which gives best results, feeding them whole, pulped or cooked? Some years there are many cull apples for which there is no market. Can they be profitably fed to stock? Articles should reach this office by January 13.

2. What are the Gross Returns From Your Farm?

State number of acres in farm, and give gross returns from the different branches of farming. What does it cost to run the business? Have you authentic information as to which departments are the most profitable? Have you thought of a plan whereby the returns can be increased the coming year? If you haven't kept books you, no doubt, have an account of the stock and other material sold. Make a resume of an average season's operations and put it into an article of not more than 800 words, and let us have it by January 20.

3. How Would you Manage a Farm?

Mention size of farm, nature of soil, branches of farming, kinds of crops and classes of stock. To what extent would the community, roads and markets influence you when deciding on the line of farming to follow? Have articles here by Jan. 27.

Stop Grumbling!

EDITOR "THE FARMER'S ADVOCATE":

The other day while riding with a farmer of considerable experience, I asked the question: "What is the matter with our community?" He replied, "All the young fellows flock to the city and then start to cry about the high cost of living."

Perhaps this is the cause of the high cost of living either directly or indirectly, but is this really what is wrong with the community? Many farmers go to town every rainy afternoon leaving plenty of work to keep the boy in employment all the time they are away. Probably the boys stay home and do nearly all the chores during the winter, then, when the buyer comes the father does the selling. To him the cheque is made

and the boys receive no more than an ordinary laborer's wages.

When Sunday evening comes one of the boys asks if he may go to church. Consent is given and off he goes. While the younger boy and the father are milking, father starts the same old music: "Twelve cows are too many for two to milk, and I don't see why Jack had to go to church to-night," etc. As they are working the music drifts from one thing to another, and finally the father starts grumbling about not milking regularly enough. Is it any wonder the young men leave the farm?

I think all farmers know the more regularly chores are done—the greater are the profits, but is that any reason why chores should be done so regularly and at such hours as to render it almost impossible for a person to get any recreation. I know many farmers do not realize how the frequent grumbling makes one feel. If they would only stop at that very moment and say "Why do the young men leave the farm?" I know by my own experience and observation that such men as these are the ones that complain most of the scarcity of farm help.

In the early days of Canada, when Egerton Ryerson was bent on a mission to the Indians, he found that in order to accomplish the greatest results he had to first live socially with them and secondly work with them. It is the same with the farmers of to-day. The older men must live and work socially with the younger men before the growing generation will take up the work of their parents with any great enthusiasm.

Elgin Co., Ont. SUCH AS I AM.

One Stays, One Goes.

EDITOR "THE FARMER'S ADVOCATE":

One reason why so many of our young people leave the country and go to the town is because they become tired of remaining at home, seeing only a few people, and want to get into the busy city with all its bustle and excitement, where they make numerous acquaintances, and are able to have a good time. This ought not to be unless the social intercourse of the community is at a very low ebb. If the young people are gathered together in the winter evenings to a "Reading Circle," a "Singing School," for some other meeting of the kind where they will learn to take their places on the platform, a "skating or hockey match," or a straw-ride, and in the summer evenings to sports such as base-ball, etc., or an "ice-cream social," it is quite probable that more of them would be contented to remain in their own community. The telephone plays a large part in the social life of the community. It brings the young people in touch with their friends, markets, and everything that helps to make their work easier and home life more enjoyable.

In some cases of "teen" age boys leaving the farm and going to the city, I think the father is pretty much to blame. One farmer gives his son some interest in the farm, perhaps some animal to be his own. The boy cares for that animal, takes an interest in his father's stock, and learns how to feed and care for them. Another farmer thinks only of making money, does not give his boy anything to look after, nor any spending money, but expects him to work hard all the time for nothing.

Both of these men expect their boys to stay with them on the farm. The first boy stays, the other doesn't.

If the young people of the community become interested in farming, in Institute meetings, and in country life in general, they will not have any desire to move to the city with its pleasure and excitement.

P. E. I. A FARMER'S SON.

False Ideals the Wrong.

EDITOR "THE FARMER'S ADVOCATE":

The main thing that is wrong with most communities is false ideals among the people. By this I mean that the possession of much land, large houses, and extensive farms and herds, is looked upon as being an indication of a successful life. Everywhere the man who has acquired these things is pointed out as the successful man, while others more worthy of praise, but because of their devotion to duty, and spirit of helpfulness to their neighbors, are pointed to as failures because they have been content to occupy a more humble lot. As the possession of much material wealth is only accessible to a few, this false sense of values tends to discourage many from taking up the strenuous effort necessary to become a successful farmer, and seek in the city an easier, if not more profitable, means of earning a living. Many of our young folk have been driven from their homes to the towns, because of the anxiety and inclination of their parents to labor early and late day in and day out to leave their children rich in worldly goods, when the children would rather see the parents indulge in some recreation and let them work out their own ideals and earn their own reward.

Another thing that is wrong with the community and tends to drive the young people to the cities, is the isolation of rural life; the farms of this country are too large to permit of people living in close proximity to each other. This could be remedied by cutting the large farms up into several smaller farms and getting more people on the land. Some of these days it is going to become a vital question how to keep production up to the demands of the consumers, and many of the consumers will be glad to become producers of food-stuffs if the way is opened for them. It has been advocated that the large farmers build houses and hire married men by the year, but from the standpoint of the future welfare of this country, would this be a wise solution of the problem? I think not, because the country never was nor never will be adapted to support a hieling population. I believe some system could be established whereby small farms could be fitted up and sold on easy terms to the land hungry. Many farmers would be glad to part with their surplus acres at a reasonable price, and many men in the cities raised on the farms would be glad to go back to the land, provided the way was made comparatively easy for them to take up an honorable position thereon.

Farming will never be noted as an easy money proposition, and it is well that it is so. It also will never come into its own as a desirable way of earning a living until people cease to mistake glitter for gold and begin to live for the really great things of life—such as are found in the beauties of nature, the science of plant and animal life, and a free life in the open air instead of the passing pleasures and excitement to be found in the

cities. After all, there is nothing the matter with the community that could not be cured if folks would only pause on their mad rush after the things that do not satisfy, namely, riches and pleasure, and take their enjoyment out of the simple things of life. Let them taste the pleasure of service by extending the helping hand to those less fortunate than themselves, and things will soon improve. When this condition, in the minds and hearts of the people, comes about, the country will come into its own. But will it come; yes, but not until we have all been encouraged with the rod of affection, then in our common woe we will cast aside all false ideals and learn to work together for the common good.

Norfolk Co., Ont.

CANUCK.

Be Friends With the Boys.

EDITOR "THE FARMER'S ADVOCATE":

The season of the year is again at hand when one hears the pioneers of our land telling of the social intercourse which prevailed in those days of long ago. The corn husking, quilting, and wood-cutting bees, which the present generation have never enjoyed except in imagination, and are not likely to, for the developing of the country has unfolded new entertainment, the greater part of which is light, frothy amusement, wasteful of time and destructive to character.

On the long winter evenings and stormy days of

summer and winter, when time is the most abundant product of the country, it is often wastefully used. If we would plan our work so as to save time, many are the hours which could be spent in reading good books and studying some art or science, for I have found these to be the best possible recreations for a young farmer. There has been no end of jokes about book-farming, but it has come to be seen that thought is as good (if not better) on a farm as anywhere else. It is by thought that we develop the mind and we need to store a fund of intellectual and physical strength for the time when we become the leaders of Canada and have to put our shoulders under the world's burdens.

Moses lived his first forty years in a palace, but the next forty had to be spent in the country to fit him to see and do the Divine will, so as to lead the Israelites. Therefore, why is the current of our young people flowing to the cities? Human nature is to blame; it craves for praise and applause, women seek it in dress and men in fame. And in the city the opportunities appear greater for the displaying of dress, which is of all vanities the most foolish, and the winning of fame which is of all follies the most absurd.

We who are interested in the social welfare of the country should take advantage of this human failing by organizing Young People's or Literary Societies, and lead this failing into proper channels so that the young life may get praise and applause for that which deserves it. I knew of a successful Club that met

weekly, and one of the conditions under which members were admitted, was that at every meeting they were required to give a one-minute address. This Club had forty members, so you may imagine the interesting time spent at the meetings and their educational value.

There are also other reasons why so many leave the farm, such as the grudging way some farmers give spending money to their sons and daughters, which in most cases is earned ten times over and then has to be asked for. There is yet another cause. In the life of every boy there comes a period of restlessness and discontent; at this time he often leaves home, for it will take more than the natural love of parents to entice him to stay.

The birds are as anxious for the welfare of their offspring as is mankind, but no sooner can the young soar away and find their own food, than they leave to return no more. So it is with animals, man no exception. Therefore, if parents desire their children to remain at home they must understand their minds. Mere nature will never prompt them to stay or return, for the children feel that they are ready to do as much for their parents as they have done for them. They never think that a return of their kindness is required. This can only be secured by parents making the children their friends. This is an old subject for a young farmer to deal with, but I trust that we will all do our duty and so leave on the sands of time a period of social perfection in rural Canada.

Wellington Co., Ont.

SAM PAGE.

Automobiles, Farm Machinery and Farm Motors.

Cleaning and Grading Grains and Seeds for the Spring Seeding.

It has been clearly demonstrated that it pays to sow only the sound, plump seed. The difference in the crop grown from graded seed and from grain as it comes from the thrasher, less the dirt, is visible in the growing crop. The scales show a difference in yield up to 10 bushels with oats, and 9 bushels per acre with winter wheat in favor of sowing large seed. The small kernels are as good as the large for feed, but are not able to throw out and nourish as strong a plant as their plumper brothers. It must be remembered that a miniature plant lies dormant in the kernel of grain. It is a rule of the universe that we reap as we sow, and the farmer who neglects to properly grade his seed grain suffers financial loss by his neglect.

In early days we read of the grain being tossed into the air in order that the breezes might be able to grasp and carry away the light straws, dust and dirt. The fanning mill or winnowing machine was unknown, and there was some excuse if inferior seed was sown. With the first mills manufactured the construction was such that the cleaning depended principally on a blast of wind. Many such machines are in use to-day. The grain passes down over a sieve or riddle, which separates the chaff from the wheat and gives the wind, generated by a fan revolving in a drum, a chance to blow out light-weight kernels and dirt. The good grain falls on a screen, which, if of the proper mesh, will remove small kernels and weed seeds, leaving only clean, sound, plump grain to be bagged for seed or market. The efficiency of these mills depends to a large degree on the operator. If care is taken to put in the proper screen, the right shake used, the correct amount of wind generated and the grain run through slowly, a fair sample for seed can be produced with these old mills. Too many get in a hurry. They want to get the work done quickly, but, cleaning grain for seed is one job where time should not be considered a factor. The writer well remembers the time when he and the hired man were entrusted with the important task of preparing grain for seed. No attention was paid to selecting sieves or screens. The all-important point was to get through with the work. The sieve was kept loaded all the time, and a small mesh screen was oftentimes used to prevent emptying the chess box too often. The fact was, that we didn't understand the importance of selecting good seed, and it is just possible that there are many to-day who have not observed the increase in yield due solely to grading. It stands to reason that a big kernel should produce a sturdier, healthier plant than a tiny one. Screens can be purchased for the old mill that will give a fair sample and will certainly remove weed seeds. Fanning-mill manufacturers have evolved a mill, equipped with screens, arranged in such a way that one variety of grain can be separated from another, the weed seeds all removed, and a uniform sample secured.

While there is a supply of grain in the bin is the time to commence grading and cleaning. Time is usually not so valuable during January as it is in April. It may be necessary to screen out over half the grain before a satisfactory sample is obtained. What if you do? The stock relish the small grains as well as the large. Financially it pays to thoroughly clean and grade grain for seed. For instance, if you grow 20 acres of oats and graded seed yields 8 bushels more per acre than ungraded seed, you have 160 bushels more grain, worth at 50 cents per bushel, \$80.00. This is almost found money, as the difference in cost of labor between running the grain through the mill and properly grading it only amounts to a few cents. By paying more attention to the cleaning of grain, even with the old mill, the average yield per acre would soon be greatly increased.

The weed problem is a serious one. Usually enough noxious weeds find their way to the farm without sowing them, and yet a lot of bad seeds are being sown with the

grain and grasses every year. One spring, officials of the Seed Branch, Ottawa, secured over 4,000 samples of grain that was prepared for sowing. Out of 978 samples of oats only 12 per cent. were free from weed seeds, and as many as 4,838 noxious seeds were found in one pound of one sample that was actually being sown. Is it any wonder that weeds spread? Yet, by use of a fanning mill and the proper size of screens, these enemies of the crops can be separated out and destroyed. It is more difficult to remove weed seeds from grass and clover seed owing to the similarity in size. However, screens can be secured which will remove a large number of weed seeds.

With each fanning mill is a set of screens and sieves with directions for using. By experimenting, the size mesh or perforation to use for the various grains is determined. On every mill is a means of regulating the amount of wind that will strike the grain. It is important that this be properly gauged. If not, too much of some grains will be blown over and not enough of others. Wind is still a factor in grading, although the system of screening has been greatly improved. Wire mesh and perforated zinc screens are in use. A fanning mill will last a life-time, although it may be necessary to purchase new screens as they rust out in time. The first cost is so small that no farm should be without a good mill. If judiciously used it's price may be made up in one year by sowing only first quality seed.

Operating An Old-style Mill.

By an old-style mill is meant one where grading is done by a single screen, one or two sieves being used to remove chaff and dirt. Set the mill firmly and put in the screens and sieves recommended by the manufacturer; adjust the shake to suit, and open up the wind. Fill the hopper with grain and commence turning. This is all some operators do, but the grain may be smaller or larger than the average, and in order to get the desired grade the screens may not suit, or the wind may be too weak. Re-adjust things by putting in another size screen and note results. There should be several sizes with every mill. The lower screen does the grading and takes out weed seeds. The small grains and seeds drop into what is usually termed the chess-box. To make a good job, the grain must be run through slowly and the screen kept clean. In some mills the small seeds are separated from the grain as it leaves the hopper and are run into a receptacle by themselves. For grading oats some find a screen with a mesh 2 by 12 or 2 wires to the inch one way and 12 the other gives good satisfaction. A 2 by 5-mesh sieve in the upper shoe may also be used. To screen wheat with the old mill, a 2 by 11 or a 9 by 9-mesh, depending on the size of wheat, might prove serviceable if a three-sixteenths-inch perforated sieve is used on top. Cockle can be removed by a 7 by 7-mesh screen. When cleaning barley put 2 by 10-mesh screen in the lower part of the mill and five-sixteenths-mesh screen in the upper. For peas a 2 by 5-mesh screen and a five-sixteenths-inch sieve is used.

W. Ferguson takes pride in having his seed grain of a uniform grade. He purchased a specially constructed mill highly recommended for cleaning all kinds of grain and seeds. While it did good work he was not altogether satisfied, and proceeded to study his mill and size of screens to find out if an improvement could be made. It was difficult to keep the grading screen from getting clogged with small grains, and it was necessary to stop the mill to clean it properly. The wild buckwheat was not taken out clean enough, so he changed the shaker shaft, as he does not like a too vigorous shake, and got a different sized screen. The mill was fixed so a double-length screen would work, consequently there was double chance of removing small grains and weed seeds. By lowering the grading screen, room was made for a triangular, perforated screen for removing wild buckwheat. The grain first passes into a vertical shaft and is graded by a strong blast of wind before

it finds its way to the long, grading screen, which has openings one-half by one-twelfth of an inch in size. The mill is turned to run the fan at about 400 revolutions per minute. This case is cited to show how changes can be made by the operator to make his mill do more efficient work. An assortment of sieves and screens with different-sized openings could be used in most mills. There is always room for the operator to exercise a little initiative.

There are mills on the market which are specially constructed and fitted with a series of screens to grade all kinds of grain, and even to separate one variety from another. This is done by use of different size meshes. Oilcloth or slats rest on the screens to prevent the grain from jumping and going through endwise. For instance, oats will go endwise through an opening that will permit wheat to pass, but if they are kept flat the wheat drops through and the oats are carried to the end of the screen and removed through a spout in the side of the mill. From top to bottom the grain passes through four screens, with the result that if the proper meshes are used a clean sample of one kind of grain will pass on to the bottom screen where the small grains are removed. There are spouts leading off from each screen; dirt comes out one, one kind of grain another, etc. Seeds are saved in a drawer in place of being blown out with the chaff. By use of galvanized-iron pans under each screen the grain is carried to the top of each screen, thus bringing into use the full screening surface. The end shake is generally preferred. Some mills are built with a compound end shake, while others have a side shake for the upper shoe, and end shake on the lower.

Cleaning Clover and Grass Seed.

It is generally conceded that a large portion of new weeds find their way to the farm through the medium of grass seed. Many weed seeds are similar in size to the clovers, hence separation is difficult. However, it is possible to screen out most of the small, shrunken seeds, which are worthless from a crop standpoint, and many weed seeds can be removed. To clean red clover use one-fifteenth-inch perforated sieve in the upper part, and 4 by 24 or 4 by 26-mesh screens in the lower. This will remove shrunken seeds and considerable rib-grass, lamb's quarter and pale plantain; weeds which are detrimental to a clover field. Several instances are known where screens of the mesh mentioned were purchased and tacked on a small frame and the seed cleaned by hand. It was a slow job but good work was done, and a clean sample of clover was secured from seed which looked to be half rib-grass or buckhorn. The mesh may be tacked on the frame of a fanning mill screen and used in the mill.

Alsike seed is very small, and one-eighteenth-inch perforated, zinc sieve and a 20 by 20 or 22 by 22 woven-wire mesh should be used to clean out black medick. To remove other impurities try a 26 by 26 mesh. Very little timothy of good quality should pass through a 30 by 30 woven-wire mesh. Screens 18 by 30 and 20 by 20 are also used to clean out different weed seeds. Woven-wire mesh 14 by 14 and 18 by 18 are used for screening alfalfa, and 3 by 16 and 14 by 14 for cleaning flax.

Cleaning and properly grading any kind of seed is necessarily slow work. If the sieves or screens are crowded or become clogged good work cannot be done. Many of the size screens mentioned for removing certain seeds are not part of the equipment of every mill. However, they can be secured from fanning-mill manufacturers or makers of wire cloth. The dirt, weed seeds and small kernels can be cleaned out with any make of mill by using the right sized screen in the lower shoe. Try out different screens until you get the size which gives the proper grade. Remember that best work is done by running the grain through slowly and that wind properly applied aids in grading the grain.

It is impossible to give a list of screens that will work

perfectly in every mill, but the following list of fanning mill sieves, manufactured by the B. Greening Wire Co., Hamilton, may serve as a guide to anyone desirous of equipping their mills with new sieves. With woven wire, 4 by 5 means 4 wires one way and 5 the other to the inch. In the perforated zinc, the diameter of the openings is expressed in a fraction of an inch. As a rule, wire cloth is made 24 inches wide, and zinc is in sheets 3 feet wide and in lengths the multiple of 4.

course, correspondingly high, but I believe it will pay to feed bran and shorts even at the present price of \$1.65 and \$1.80 per hundred respectively. What the owners of hens must do is to economize on grain and try and substitute other feeds that are cheaper.

In many homes the potato peelings are thrown out or fed to the pigs, they would make better hen feed. Boil a pot of peelings and add bran, shorts, oats, barley or cornmeal, and you have a mash that the hens will

enterprise, but the buyer should know something about what he wants or what will best suit his needs. It is now general information and a well-known fact, that unprofitable varieties have been foisted on to a credulous public, and even experienced fruit-growers have bit at beautifully colored pictures, only to find after five to ten years that they were "stung." Recently we were handed a page from a booklet describing varieties of apples, and on the page were depicted three kinds pretty well known but not any too popular, namely, Astrachan, Grime's Golden and Stark. We venture to say that no fruit-grower who knew these varieties when seen on the tree or in the barrel would have recognized them on the paper. They were, to some extent, overdone and very badly colored; that is, they were not true to life. Another bad feature of the trade is an attempt to introduce new and unheard-of varieties by showing gaudy and grossly exaggerated pictures of them. Agents from across the line have endeavored to hoodwink Canadian farmers into buying some varieties which they claim have done excellently in the United States, and they ask you to take their word that they will do just as well here. We do not wish to expound any doctrine about the integrity of mankind, but business is business, and the word of a man whom you have never seen before and will probably never see again is mighty poor security. It is better by far to enter into a contract with an established firm which you know; a house with a reputation behind it and a future before. Furthermore, if an apple does well in British Columbia, Washington, Virginia, or elsewhere, that is no guarantee that it will adapt itself to Ontario, Quebec or Nova Scotia. Oranges grow splendidly in Florida or California, but we have yet to hear of anyone making a grand success of them in Canada.

All growers in the same community will not agree as to the most profitable varieties for their district, yet they will agree as to some of the best and admit that others are good. Again, they will mention the kinds that are no good, and these are the kinds to leave alone. Of all the many new varieties that have been exploited, none threaten to challenge the popularity of the Spy, Baldwin, Greening, Snow or Fameuse, King, McIntosh Red or Golden Russet. Strangely, too, the old orchards set out by our fathers run heavily to those varieties, which have stood the test of time and the fancies of a sometimes fickle and fastidious public.

When a fruit-tree agent shows you a beautifully colored picture of some new kind he is boasting, ask to see his illustrations of the Snow, Spy, McIntosh, Greening, King and others which you know. The coloring on them will probably be exaggerated to some extent. Would it not also be exaggerated on the kind he wishes most to sell?

There are all kinds and descriptions of agents. There are those who know something about apples, and there are those who do not. Others are acquainted with such fruit, but their chief ambition is to sell, rather than to please a customer. We have also met agents, happily, who have mastered not only the nursery business but the apple trade, home as well as export, and know the trials and pleasures of growing fruit. Their word, like the houses they represent, can be depended upon. It is a pleasure to deal with such.

Another tip to the prospective purchaser we cannot emphasize too strongly. Buy (through an agent or otherwise) from an established firm with a past and a reputation to maintain. The two parties to your contract should be yourself and the firm with which you are dealing, not yourself in the first part and Tom, Dick or Harry, in the second. Read your contract over, and if it is satisfactory keep a copy; if it is not satisfactory don't sign it.

Some Good Varieties.

We hope we have made it plain that new-fangled varieties are usually a disappointment, and that either for farm use or commercial purposes some of the old stand-bys cannot be surpassed. The twelve varieties illustrated on another page provide sufficient choice for anyone, and it is difficult outside of these to find an apple for any purpose superior to some one of the selection. These have become adapted to Canada and have proved themselves. Don't turn them down for a question mark. If you deem it necessary, write to your nearest experiment station and ask them to advise. For example, the Central Experimental Farm at Ottawa, has by experiment found which varieties are most hardy in the Ottawa Valley. Other experiment stations should be able to do likewise. Get local information, write to the experiment stations, consider the climate of your district, and if you are engaging in a commercial proposition, consider your markets.

The three apples illustrated at the top of the adjoining page are the earliest of the season. Unless one desires to cater to a local market, or perhaps ship short distances in baskets, one or two trees of Astrachan should be sufficient. Often very good returns come from this early fruit, but it must be disposed of when ripe and will not stand storage for any length of time; if it did it would then come on the market with better varieties. The Yellow Transparent is also an early kind, but it, too, is perishable. The Duchess and Wealthy follow in season, and they, too, are basket and box apples. Sometimes they are shipped in barrels, but we believe the greatest remuneration will come from them when shipped in boxes and baskets. They can be planted closer than the standard varieties or used as fillers.

The Snow, McIntosh Red, and King are three dessert apples which are hard to surpass. They can be shipped either in barrels or boxes, but when Snows and McIntoshes are put up in boxes they command a very good price indeed. The quality is excellent. The two last mentioned kinds are subject to scab, and must be sprayed thoroughly and often. However, the high prices they

	Woven Wire.	Perforated Zinc
For Wheat.....	4 x 5, 4 x 4, or 5 x 5	5-32, 3-16, 7-32, 1/4
" screening wheat.....	7 x 7 8 x 8, or 9 x 9	1/8
" peas.....	2 1/2 x 2 1/2, 3 x 3, or 2 x 3	3-16, 13-64, 7-32, 15-64, 1/4
" oats and peas.....	3/4 x 6, or 3/4 x 5	3/4 x 5-32
" oats from wheat.....	5 x 5	3-16, 13-64, 7-32
" oats from barley.....	2 x 10, 2 x 11, or 2 x 9	
" cockle.....	8 x 8 or 7 x 7	7-64, 8-64, 9-64, 17-128, 19-128
" barley.....	2 x 5, or 2 x 4 1/2	
" clover.....	13 x 13 or 14 x 14	1-16, .069
" timothy.....	18 x 18, 20 x 20, or 22 x 22	3-64, .055
" chess.....	2 x 9, 2 x 10, 2 x 11, or 2 x 12	
" flax.....	4 x 13, 4 x 14, or 4 x 16	5-64
" sand screen.....	30 x 30 or 36 x 36	
" alsike clover.....	20 x 18	.055
" alsike clover screen.....	18 x 18 or 20 x 20	
" hulled timothy.....	24 x 24	
" timothy from alsike.....	26 x 26	
" mustard and oat screen.....	16 x 16	
" mustard from barley.....	10 x 10	

Grain for feed or market should also be run through a fanning mill to remove dirt and weed seeds. Why team weed seeds to market? The dealer cannot afford to pay for a lot of trash. It is claimed that as much as 100,000 tons of screenings are cleaned out of grain at the terminal elevators of Fort William and Port Arthur each year. Feeding whole or crushed, uncleaned grain is a means of spreading weeds, as the germination of many noxious weed seeds is not destroyed in the digestive tract of the animal. Weed seeds should be finely ground before feeding. Stock will not eat feed containing such seeds as wormseed mustard. More wholesome feed is secured for the stock by running the grain through a fanning mill before feeding it. There are numerous arguments in favor of cleaning and grading grain, but no logical ones against it.

enjoy. In like manner all apple and vegetable peelings should be utilized for food for the laying hens. Steamed red clover or alfalfa is also relished by the hens. Meat scraps obtained from your butcher will be a treat for the fowls once in a while. Green, ground bone is also good, and I believe it pays to have a bone-grinder and use the green bones for the hens instead of wasting them. Arrange with your butcher for all his scraps of meat and bones. If this isn't convenient or possible buy meat or ground bone from some of the supply dealers and feed it in the mash. Please do not think that I am recommending cutting wheat, etc., off the bill of fare entirely. Far be it from such. You must have some grain, and a certain amount of wheat and corn are necessary. I would rather have oats and barley ground before feeding. Reduce the quantity of whole grains and use more mash, which can be made of the different things I have mentioned. But when increasing the quantity of mash fed, care must be taken that the hens don't become too fat. Feed the whole grain in deep litter and make the hens scratch for every kernel. But remember that economizing does not mean starving the hens.

York Co., Ont.

A. C. HICKEN.

POULTRY.

Winter Feed for Poultry.

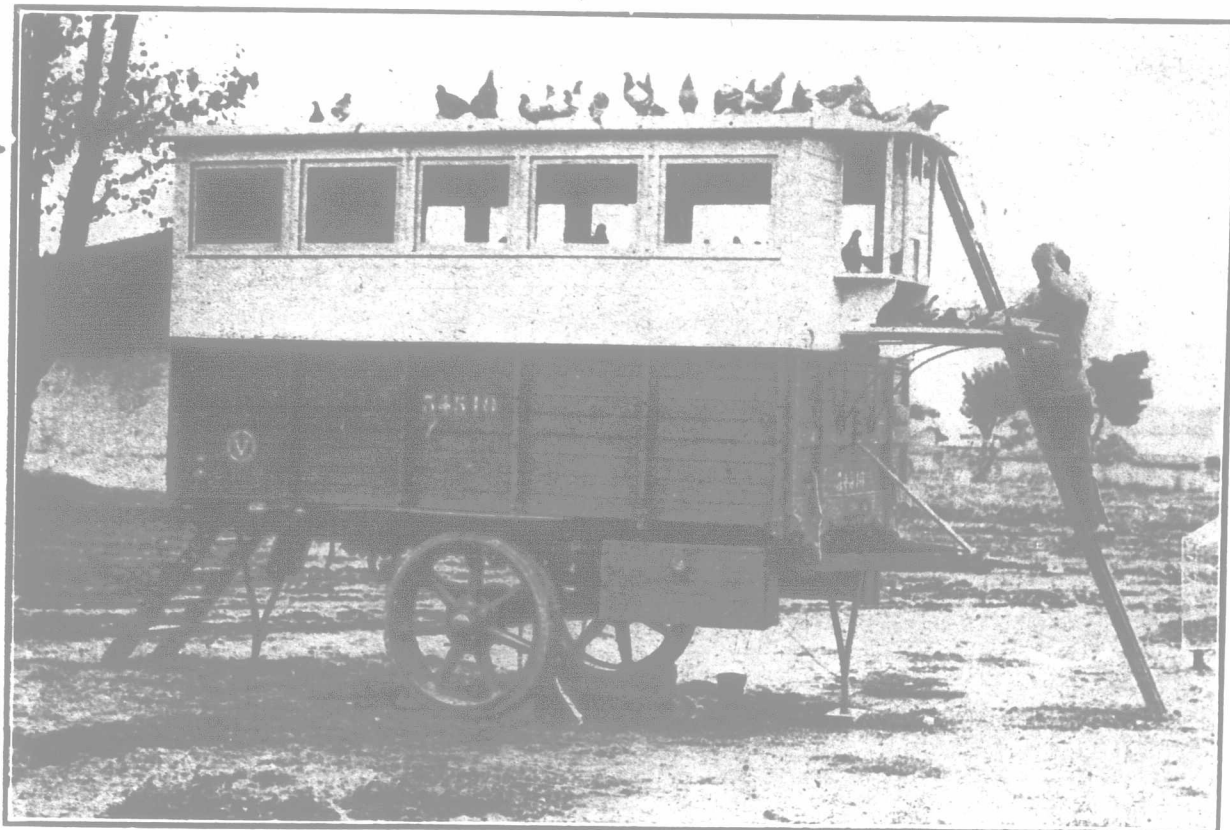
EDITOR "THE FARMER'S ADVOCATE":

All the set rules and regulations regarding the feeding of hens in winter, will, this season, have to be revised and in most cases radically changed. It has been stated time and again by poultry journals, professors of poultry husbandry at colleges, and by poultry-keepers in general that wheat is the cheapest feed for poultry, and especially for laying hens. This statement was, no doubt, correct in past years, but how about it now? Wheat at nearly \$2.00 per bushel is considered by most people to be pretty dear feed for hens even if they are laying, and if they are not, you simply won't feed wheat in very large quantities. Other feeds are nearly as high in proportion. If wheat is 3 cents a pound, oats and barley are 2 cents, and corn, in many districts, cannot be obtained at any price. Millfeeds are, of

HORTICULTURE.

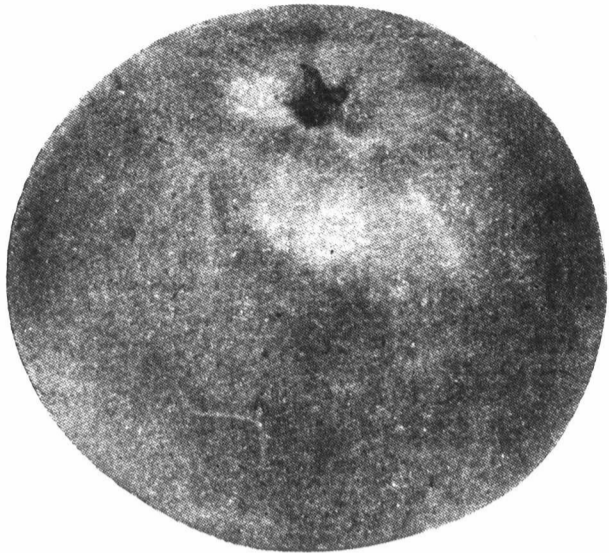
Read This Before You Buy Apple Trees.

It will be some months yet before activities begin on the land and fruit-growers commence to set young trees. However, the fruit-tree agents are busy, and all who may be thinking of purchasing a few trees, or many, for spring planting should have the subject threshed out in their own minds and the varieties chosen. The agent's business is to sell, and that is a legitimate

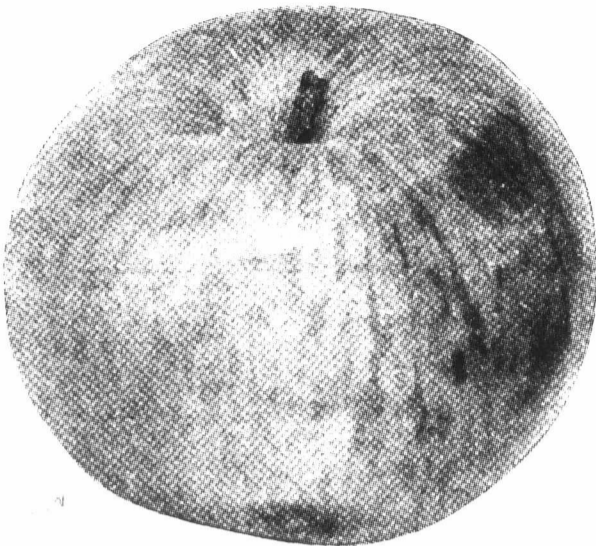


A Pigeon House on Wheels in Northern Macedonia.
Carrier pigeons are still used in delivering war messages. Underwood & Underwood.

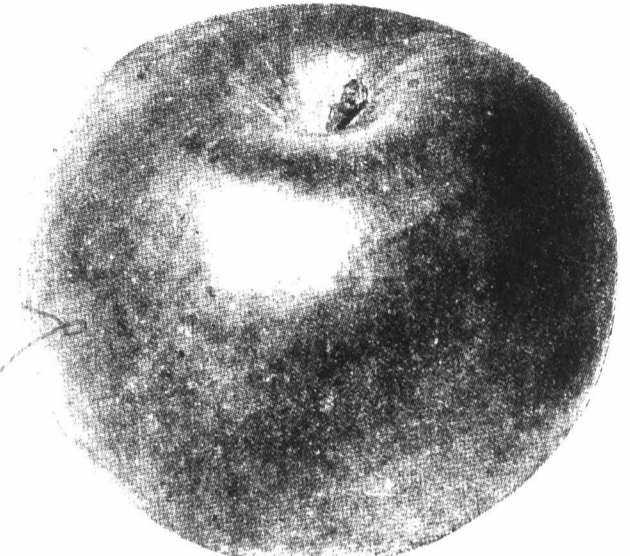
Twelve Apple Varieties to Plant.



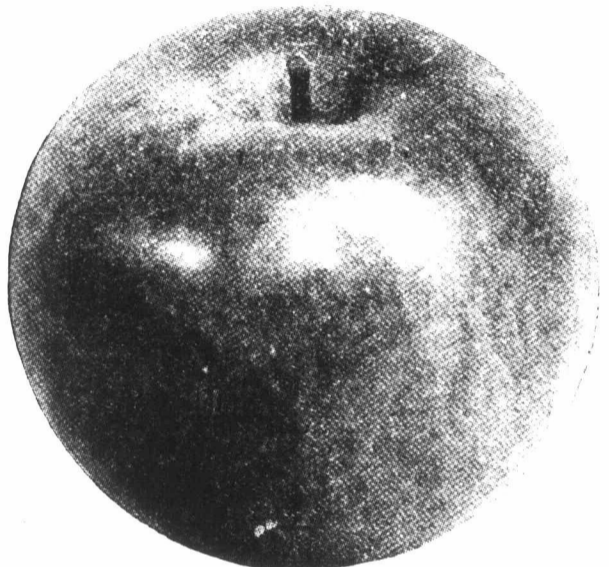
Astrachan.



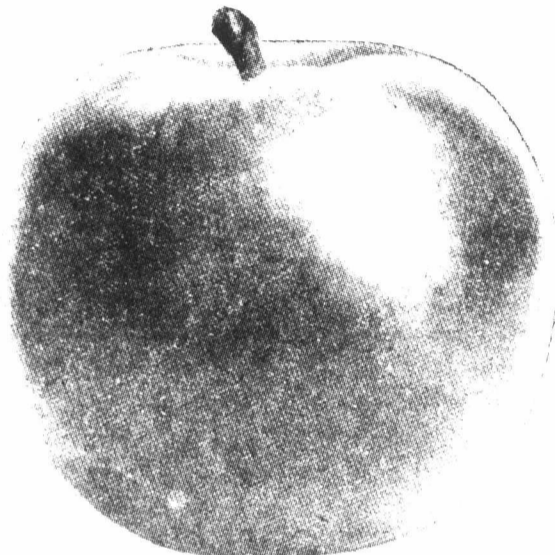
Duchess.



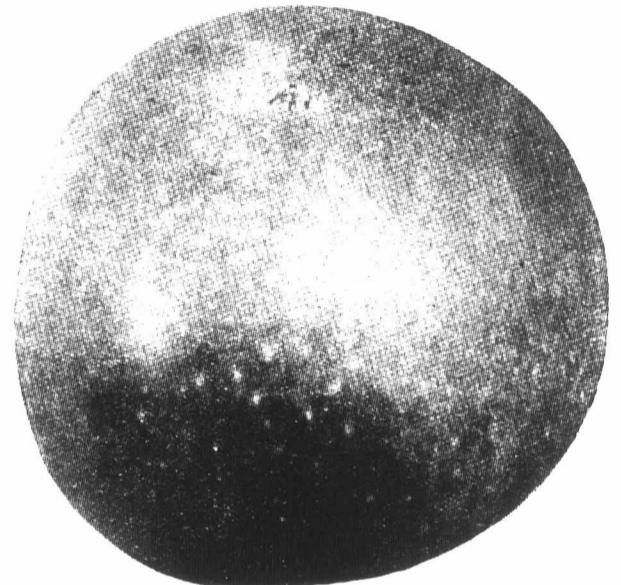
Wealthy.



Fameuse or Snow.



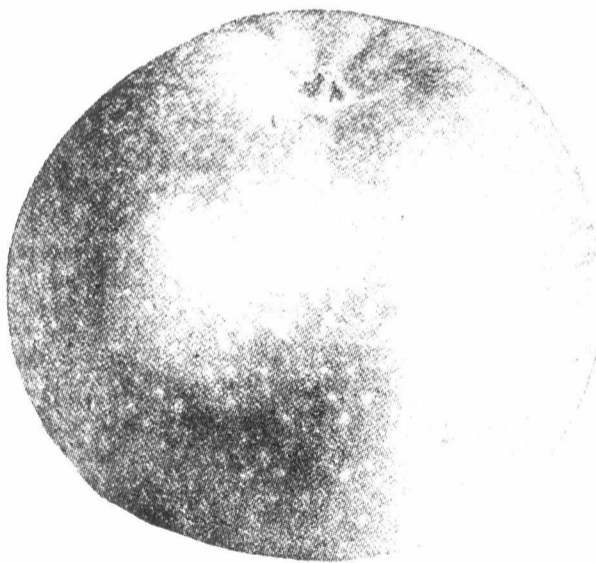
McIntosh Red.



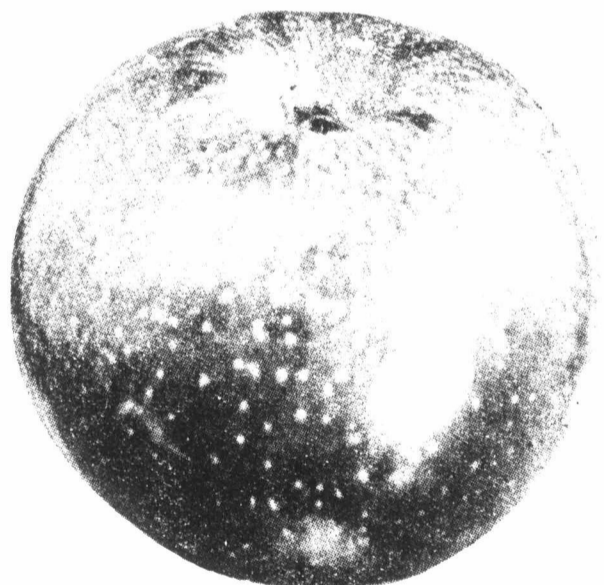
King.



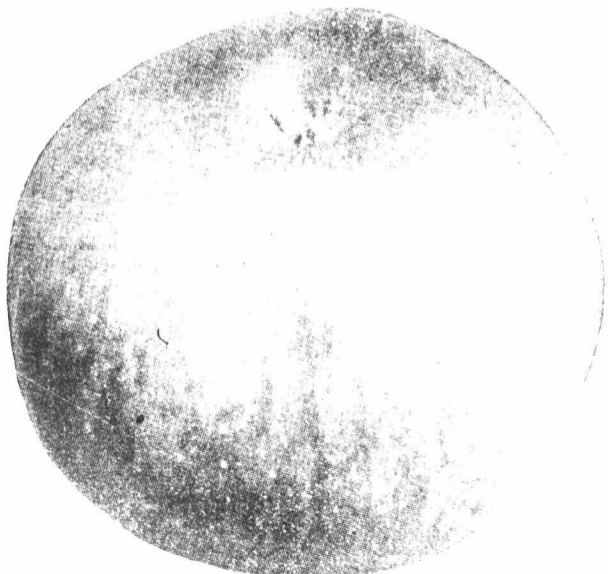
Wagener.



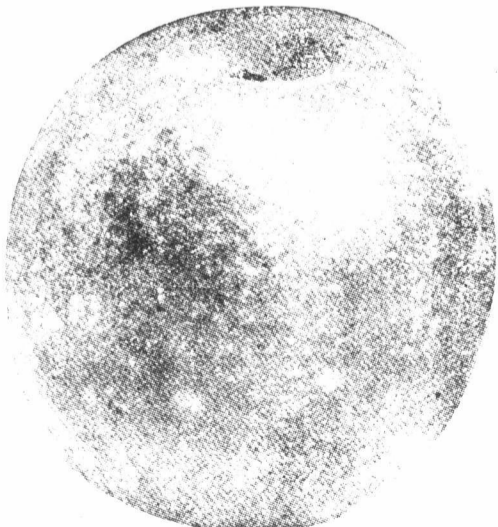
Greening.



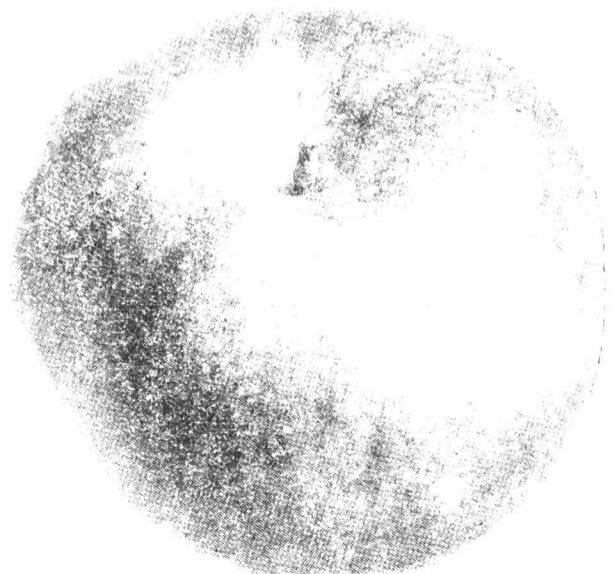
Baldwin.



Spy.



Golden Russet.



Ontario.

command will offset this disadvantage. Some complain of the King being a poor tree, that is, subject to collar rot, and a shy bearer. Nevertheless, one can seldom find all the good qualities combined in one variety.

The Wagener, Greening and Baldwin are next in season. The Wagener usually grows into a poor tree. Nevertheless it produces while very young and will yield considerable before the tree gets very bad. It should be pruned correctly and well sprayed to ensure a good, healthy top and a firm trunk. The quality of the apple is good, and, while it has the one disadvantage, it is being set considerably. This past fall, in Nova Scotia, the writer was in several orchards where blocks of them were set with the trees from a rod to twenty feet apart. The Greening and Baldwin are too well known to require comment.

The Spy is without doubt the king of apples, but do not plant a Spy with the intention of getting fruit at an early age. In a commercial orchard it is almost necessary to have a certain percentage of Spys in order to sell those varieties which class as cooking apples, such as Greenings or Baldwins. The Golden Russet is noted for its quality, but the tree must be well fed in order to get crops. The Old Country market yields handsome returns for this variety. It will keep well on into the spring, but unless properly stored it is liable to lose its moisture and shrivel. The Ontario is a native of this Province, as the name implies, and was originated by crossing the Wagener and Spy. It is an early and abundant bearer of fair quality, and it is a good export variety. The tree cannot be considered long-lived. Very few of the early bearers are. In this regard it resembles the Wagener.

We have mentioned the bad as well as the good

points of these twelve varieties recommended. There are other kinds which under certain conditions may prove profitable, and the prospective buyer must decide for himself after a consideration of his local needs, or the markets to which he intends to cater. However, the home orchard should have the best, and a commercial orchard must be heavy in those kinds which the market demands. The Snow, McIntosh, King and Spy cannot be beaten as dessert varieties. The Greening and Baldwin are among the best cookers we have. The Golden Russet sells well on the Old Country market. The Ontario has a place at home and abroad, and so does the Wagener. The Astrachan, Duchess and Wealthy are the early fall apples which people require. If you make your selection for the coming spring planting from these twelve varieties you will not be disappointed. If you experiment with other kinds, do not do so too heavily.

FARM BULLETIN.

Notes From South Ontario.

EDITOR "THE FARMER'S ADVOCATE":

Winter has again arrived, and though the fall work was belated it was very well finished, thanks to the open weather. When winter finally did set in many seemed as if they could not realize it, and were determined to start stable feeding as late as possible, up to Christmas cattle, sheep and even colts were seen, that had not been

inside a stable since spring. Such treatment of stock is not called for even in such a year as this, and probably if the owners of such stock were obliged to change places with their poor, dumb property they might be more thoughtful in the future. The services of the Humane Society would not be out of place in some cases.

Silage, roots and grain were not up to the mark, but hay was unusually heavy and the straw was fair. Balers are paying about the same price per ton for hay and straw, but little of either is moving, the majority seem to think the high price of grain will effect hay at a later date. Several dairymen have been negotiating with Niagara farmers with a view to buying alfalfa hay, but the price asked is rather prohibitive; apparently dairymen of other parts realize the value of alfalfa as a milk-producing food. Dairy cattle are very high priced, and, as one man expressed it at an auction sale when a fresh cow was announced, "shut your eyes and bid," and really there was much truth in it. Products are very high but dairymen assert there is no money in it, considering the cost of feed, labor and cows, but all the same they flock to every auction sale and buy more, and again we are led to believe "actions speak louder than words."

Beef cattle feeding is rather on the decline; a lot of stock is being "roughed," but few plucked up sufficient courage to attempt beef. The labor problem is again bothering us, good men are undoubtedly scarce and single men are a rarity. It looks as if some of our brave men might be trying to evade the Militia Act and would rather support a wife than the cause, nevertheless our country is willing to carry a full share and has contributed many a fearless soldier that will never return. Ontario Co., Ont. H. W.

Large Crowds Attended Eastern Ontario Dairymen's Convention.

The fortieth annual convention of the Eastern Ontario Dairymen's Association, held in the town of Napanee, January 4 and 5, 1917, will long be remembered as being the best attended convention held for many a year. Over 500 people were out each day session and this number was greatly increased at the night meetings. Lively discussions followed each address, and much valuable information was gleaned. It had been a banner year for prices and production, but new problems had also arisen which taxed the ingenuity of many dairymen. Feed is scarce and high in price, labor is at a premium, and disease frequently makes inroads into the herds. Eastern Ontario milk is largely manufactured into cheese, and since the first factory was built the patrons have largely figured prices at so much per 100 pounds of milk. Nearly all the factories pool the milk, although it has been conclusively shown for years that it is an unfair method. At every convention the question of paying for milk has been discussed, but the patrons and cheese-makers would return home and follow the even tenor of their ways. Last year the Department of Agriculture took definite action and passed the "Dairy Standards Act." This caused a ripple to disturb the placid waters; the old customs were about to be changed and new methods put in practice. Many were afraid to have their herds analyzed by the Babcock test and opposed the new legislation, others were troubled with imaginary misgivings regarding the feasibility of the Act, and still others opposed it on general principles. None could give logical reasons against the adoption of the pay-by-test method. Arguments were all in favor of it, but, there is a lot of human nature in most people and a dread against trying anything new. The anti's were strong enough to carry a resolution asking for a repeal of the Act, but were pacified by an amendment requesting the government to refrain from putting the Act in force for the present. It seems too bad that dairymen will fight against legislation that could not help but be to their good and to the good of the whole dairy industry. Prejudice is hard to down.

The program was arranged to help both makers and patrons. New information was given on cheese-making and feeding. Dairymen who failed to attend were the losers. While the oleomargarine question was not on the program it was freely discussed by the dairymen. In view of the high place which Canadian butter has enjoyed on the British market owing to the prohibition of manufacture, importation or sale of oleo, in this country, it was resolved that members of the Eastern Ontario Dairymen's Association emphatically protest against the removal of restrictions as they now stand in order to preserve the reputation of Canadian butter. There are 21 cheese districts in Eastern Ontario, each having an instructor. Competitions have caused a rivalry between instructors and makers of the various districts with the result that quality of the manufactured product is rapidly improving. The splendid exhibit of cheese was proof of the value of having qualified instructors to help the cheese-makers overcome difficulties in order to make a uniform article.

President's Address.

The convention was opened by J. N. Stone of Norham, President of the Eastern Ontario Dairymen's Association, who, in a short optimistic address showed the part the dairy cow was playing in producing the wealth of the country. She is an economic producer and tends to improve rather than deplete the fertility of the farms. It was only proper that the meeting should be held at Napanee, as the town was located in the centre of the largest producing district of Eastern Ontario. It was hardly expected a year ago that the 1915 records would soon be broken, but in spite of drouth, both yield of milk and price in 1916 exceeded previous years.

Considerably over \$1,000,000 worth of cheese alone was marketed from this one district. The export of butter from Montreal the past year was 177,189 packages as compared with 51,195 in 1915, and export of cheese from May 1 to November 25 showed an increase of 290,968 boxes. The war has caused high prices for dairy products, but economic conditions have made production more costly than in previous years. The demand for cheese and butter is great, and the president expected that every available pound would be required next year. The speaker expressed his appreciation of the work of the Department of Agriculture in aiding dairymen to solve their problems and to arrive at a fair basis of payment for milk and cream. The importation of oleomargarine would be a serious set back to the dairy industry, and an appeal was made for all dairymen to oppose any legislation that would tend to remove the present restrictions. The prosecution of the war is still the dominating issue, and dairymen are doing their "bit" to aid their country by producing food-stuffs for the Allies in as large quantities as possible.

There was also an optimistic ring to Secretary Thompson's report. The past year has been a banner season for dairymen. Prices have been high, production has been good, and the quality of cheese and butter has been superior to that of previous years. A number of district dairy meetings have been held this winter at which timely problems were thoroughly discussed. The Dairy Standards Act evoked considerable comment, but met with the approval of many. The balance on hand was \$1,439.13 which was about four times the balance of 1915. This shows the association to be on a sound basis financially. The desire was expressed that efforts be made to excel in 1917 both in quality and quantity.

The Dairy Instructor's Report.

The report of G. G. Publow, Dairy Instructor for Eastern Ontario, gives an idea of the importance of the dairy cow in that portion of the province, and states the work accomplished during the year. There are 21 instructors engaged in work of instruction and inspection of cheese factories, who made 1,228 full-day visits and 4,688 calls during 1916.

In Eastern Ontario 849 cheese factories were in operation the past year, an increase of 2 over last year. Improvements were made in the plant or buildings of 411 factories or nearly 50 per cent., and sixteen new factories were erected at a total expense of \$87,299. Patrons to the number of 30,623 delivered from May 1 to November 1, a total of 1,097,899,250 pounds of milk, which made 91,042,642 pounds of cheese valued at about \$4,000,000. It averaged 11.07 pounds of milk to make one pound of cheese, which was a trifle more than in 1915. The increase over last year was 5,684,880 pounds of cheese at an average of 3½ cents higher price. Whey butter was made in 195 factories, but only 81 out of 849 pasteurized the whey. In only 86 factories was milk paid for on quality basis, but it is encouraging to note that this is an increase of 13 over the previous year.

It was found necessary to test numerous samples of milk for adulteration. During the season 62 persons were found guilty of tampering with their milk, and fines ranging from \$10 to \$50 each were imposed.

Sediment tests show the condition of the milk regarding cleanliness, and are proving a strong factor in inducing patrons to deliver as clean milk as possible. Eight thousand and forty-seven tests were made the past year.

July and August were trying months on cheese-makers, owing to the extremely dry, hot weather, and it was difficult to make a high-class product. However,

the quality of the spring and fall make was exceptionally fine, and Mr. Publow considered that on the whole the quality would compare favorably with former years. Rennet was scarce and substitutes had to be used in many factories. Some loss was caused at the start by factorymen making the mistake of endeavoring to reduce the amount of coagulating material. This was believed to be responsible for the increase in amount of milk required to make a pound of cheese.

Seventeen instructors conducted experiments to compare the value of cooled and uncooled milk. Results show that it took 11.51 pounds of uncooled milk compared with 11.04 pounds of cooled milk to make one pound of cheese. Mr. Publow strongly advised cooling milk to at least 65 degrees immediately after milking. It also tends to make a better quality cheese.

Methods of paying for milk at cheese factories are live questions at the present time. Tests were made in many factories to determine the variation, and some individual lots varied from 2.5 per cent. to 6 per cent. butter-fat, but the average variation was about one per cent. All experiments conducted to find out the most equitable method showed the "pooling system" as very unfair. "The weakest points in connection with the manufacture of cheese are," said Mr. Publow, "lack of first-class makers to manage factories; lack of facilities for control of temperature in curing-room; lack of sufficient competent help, and the over-ripe condition of some of the milk during warm weather."

A cow census revealed the fact that milk from 276,132 cows was sent to factories in Eastern Ontario in 1916. The average yield from May to November, six months, was 3,650 pounds, or an increase of 375 pounds per cow over 1913. The value placed on silage is indicated by the number of new silos erected each year. In 1916 607 were put up in the district.

L. A. Zufelt, Superintendent of Kingston Dairy School, acted as instructor for all the creameries, and he reported 38 creameries in operation, manufacturing 3,732,254 pounds of butter, which sold for an average of 33 cents per pound. Five thousand eight hundred and thirty-three patrons supplied the cream. This was an increase of 17 per cent. over 1915. Moisture in the butter averaged around 15 per cent. At a few creameries the cream was gathered in tanks, but the majority used the individual cans. The instructor reports the majority of the creameries lacking in equipment, although 12 out of 38 have installed modern pasteurizing and cooling vats. The quality of butter manufactured was fairly good, but an improvement could be made if the cream reached the creamery in a little better condition. Regret was expressed that Ontario butter had not compared favorably with butter from other provinces at the Canadian National. If prizes are any criterion of the general quality of Ontario butter, it is evident that Ontario creamerymen are resting a little too much on their oars or that the other provinces are going ahead very fast.

Cream grading was introduced at the creamery operated in connection with the Eastern Dairy School, and the patrons were well satisfied with the result. No difficulty was experienced. Two grades were established. First-grade cream was defined as sweet and clean in flavor, and second grade as being sour or slightly sour but clean in flavor. A difference of 2 cents per pound butter fat was made between the two grades. About 29 per cent. of the cream was shipped in by train, but for the entire six months all but 6½ per cent. was placed in first grade. Mr. Publow said, "he was more firmly convinced than ever of the value of cream grading, and the experience at the Dairy School emphasizes the fact that farmers generally will take advantage of the opportunity afforded them of obtaining more money by sending in a better quality of cream." In order to make more rapid improvement, some system of grading cream should be introduced as soon as possible. This,

together with the installation of modern pasteurizing, machinery, should, in a few years, place us again in the lead for quality."

Different Views on the Dairy Standards Act.

The Dairy Standards Act passed last winter and supposed to come into effect March 1917, came in for a good deal of discussion by experts, instructors, patrons, cheese-makers, factory-proprietors and dealers. W. Bert Roadhouse opened the discussion and explained the efforts put forth by the officials of the Department in the interests of the dairymen. The pooling system is far from perfect. It places a premium on poor milk and all experiments prove that good milk makes more pounds of cheese per 100 pounds than low-testing milk. A campaign of education has been carried on and the paying for milk on quality basis is believed to be in the best interests of the individual as well as of the industry. Mr. Roadhouse has heard many objections to the Act, but most of them are not well founded. A common one is "the principle is all right, but it won't work out in practice". This is off-set by the fact that 10 per cent. of factories in Ontario are paying for milk, by the test to the satisfaction of the patrons. The complaint that the Act was railroaded through and action wasn't asked for is heard. But the Act has been thoroughly discussed and an opportunity given for discussion. The speed laws were not broken in passing the Act as there has been an agitation for it for 20 years. The speaker explained that we are planning for years to come when there will be a scramble for trade and markets. The fittest will survive and the Act aids Ontario dairymen to be ready. For the present the Department will look after the testing.

L. A. Zufelt of the dairy school, Kingston, has conducted numerous experiments with milk of various tests, and results show that cheese made from 100 pounds of 4 per cent. milk is worth considerably more than from the same weight of 3 per cent. milk. It is the solids in the milk which determine its value for cheese making. One hundred pounds 4.2 per cent. milk made 11½ pounds cheese worth, at 20 cents per pound, \$2.20, while the same weight of 3.2 per cent. milk made only 8¾ pounds worth \$1.75. A difference of 55 cents with a variation of only one per cent. in test. "Is there any reason why both parties should receive same money?" was asked by the speaker. The accompanying table shows the actual amount of cheese made from 100 pounds of different qualities of milk, and the value of same according to different methods of payment in vogue:

% Fat	Wt. of Cheese	Value 20c. lb.	Values as Determined by			
			Fat + C	Fat	Fat 2	Pooling
4.2	11½	2.30	2.17	2.25	2.14	1.94
4.0	10¾	2.12	2.14	2.14	2.07	1.94
3.5	9¾	1.87	1.85	1.87	1.89	1.94
3.4	9	1.80	1.85	1.82	1.86	1.94
3.2	8¾	1.75	1.75	1.71	1.79	1.94

The figures are an argument in favor of paying by test if justice is to be meted out. Few dairymen wish to profit at expense of their neighbor, but it is hard to abandon an old custom for something new, even though it be a step in advance. It was believed that the enforcement of the Act will do much to encourage dairymen to improve their herds, but it should be done by selection not by mixing breeds.

Jas. McCormick, a dairyman of Richmond, accused the Government of moving too fast in the matter and was strongly of the opinion that farmers will be better off if things are left as they are. There is bound to be some expense and the accuracy of the Babcock under all conditions was doubted.

W. J. Paul, M. P., owner of four factories, represented 300 patrons who unanimously opposed the Act on the grounds that it did not represent public sentiment. The time had not yet arrived for such advanced legislation, and fear was expressed that it would disrupt the present co-operation existing in factories. It would cost something to enforce the Act and this was a time of saving. There appeared to be an organized effort on the part of those opposed to the Act to prevent it being put into force, and a motion was made to ask the Government to repeal the Act. However, this was withdrawn when T. A. Thompson and R. G. Leggett introduced an amendment as follows: That this meeting while not condemning the principle of paying for milk delivered at cheese factories by butter-fat test or the pasteurizing of whey, yet think it in the interests of the dairy business to ask the Government to postpone the carrying into effect of the Act, as at the present time it is in advance of public opinion until such time as further educational work is carried on, and that a copy be presented to the Minister of Agriculture. This met with the approval of the meeting. Dairymen in favor of the Act going into effect this spring did not press their case so strongly as those opposed to it. However, they had sound, logical arguments justifying the enforcing of the New Dairy Act.

Solving the Summer-Feed Problem.

A. Leitch of the Ontario Agricultural College, Guelph, gave a very practical and educative address. The dairy cow was claimed to be an economical producer of wealth and owing to her ability to profitably convert the roughages and concentrates grown on the farm into a product which is always in demand at a fair price, she had aided in improving the fertility of the farms, and helped to raise the standard of living. Prices are

higher than they were a few years ago, but the increase has not kept pace with rise in price of feed. Labor is scarce and the average yield of milk and butter-fat per cow does not increase very fast. The stage has been reached where it costs almost as much, on the average farm, to produce dairy products as they bring on the market. Two solutions were discussed. Either the price of the marketable product must be increased or the cost of production must be lowered. Consumers consider that prices of milk, butter and cheese are at high-water mark, so some plan should be evolved whereby the cow can be fed more cheaply. There are several ways of accomplishing this latter. Better cows might be kept to consume the crops, or labor might be reduced by using such implements as the milking machine. But, as the mechanism of the latter is not as yet fool-proof, the greatest saving may be made in the management of the farm. The speaker claimed that, owing to drying of the pastures in the average summer, a great loss was occasioned which might easily be avoided, by a little planning ahead and providing for feed to supplement ordinary pastures, or else growing special pasture crops. Every dairyman knows that if the milk flow drops during July, August and September owing to parched pastures, it is impossible to bring the cow back to normal yield even with the best care. There is a direct loss, as the decrease is made at the time the cow which freshens in the spring should be at her best. There is usually plenty of feed in the fall. It is only for a couple of months that it is necessary to tide the herd over.

Some make a practice of setting aside a small acreage to supply green feed as corn, millet or peas and oats. The summer silo is also gaining in favor. Mr. Leitch recommended sowing a special crop in the spring for summer pasture, and to give it the same attention given to any spring crop. A plan must be followed that will reduce extra labor to a minimum during haying and harvest. The speaker keeps account of time required to do the work on the College farm, and men were found to be worth a high figure when harvesting crops. In order to compare cost of stable feeding and pasturing, 9 cows were fed inside during the summer months of 1915. They averaged 15,000 pounds of milk and it cost 86 cents per hundred-weight to produce it and 22 cents per pound butter-fat, or every dollar's worth of feed returned \$1.72. In 1916 nine cows averaging about 12,000 pounds of milk, but freshening about the same time of year as the former 9, and testing the same were pastured, and for each dollar's worth of feed \$2.10 was returned. According to these figures it is cheaper to pasture cows, provided they get all the feed they require.

The speaker believed that 90 per cent. of land used for pasture produced practically nothing during July and August of the average season, and it was advisable to plow up some of these pastures and sow them to something that will produce feed during the period of drouth. The annual pasture mixture recommended by Dr. Zavitz gives good results in some districts. It is composed of 1½ bushels oats, 30 pounds sugar-cane and 6 pounds red clover per acre. Sown after the spring crop it will furnish pasture from July to time snow flies. Red clover generally catches in a spring pasture mixture. Mr. Leitch secured excellent returns from the following mixture: One bushel of wheat, oats and barley and 6 pounds of red clover per acre which, if sown just after finishing the regular spring seeding on well prepared land, will be ready for pasture in July. The success depends on having a thick mat and never letting it come out in head. If it doesn't head out it will continue growing up as it is picked off. On 36 acres of such pasture plus about 28 acres of timothy and clover, 72 head of cattle were pastured for 3 months, and 42 head for 4½ months in 1915. That was a wet season so naturally growth should be good. The summer of 1916 was the driest on record, but 36 acres of permanent pasture plus 34 acres spring-sown pasture carried 77 head, none under one year old, all summer, and tons of feed were left on the field. A little grain was fed in August, but the pasture furnished the roughage. Thus the common grains grown for pasture have proven to be valuable in seasons that were extreme. What other pasture crop would have carried so large a stock? A crop of this kind yields more revenue than a grain crop that has to be harvested.

Mr. Leitch grew a 2-ton crop of hay for \$7.00 per ton in 1915. This hay would have cost \$13.00 on the market. Oats were grown for 35 cents per bushel the same year, but they could have been purchased for 38 cents per bushel. These figures emphasize the importance of growing what hay is required. If any feed has to be purchased let it be the concentrates. The speaker advised the growing of one-half to three-quarters of an acre of the spring-sown pasture for each cow. It will aid in keeping up the milk yield and thus reduce cost of producing milk. Each farm must be studied and the crops that will grow best specialized in. Up to a certain point good hay will take the place of grain. "What does it cost to grow corn?" was asked. The speaker said, "in 1915 a 9-ton crop cost \$3.90 per ton to grow and place in silo. This was for 51 acres. In 1916 the yield was lighter but the cost was about \$4.00 per ton." There is plenty of opportunity for using thought and business ability in farm operations, and doubtless by changing the tactics a little many farms could be made to produce bigger and better crops at a reduction in cost.

Pepsin in Cheese Making.

When the cheese-making season opened in 1916 there was every evidence of scarcity of coagulating material. Rennet was scarce, consequently high in price. In fact it was difficult to secure it at any price. Some factories were about to close down, but experiments

carried on by the Dairy Branch proved that pepsin, a coagulant made from pig's stomach, could be used in place of rennet. Geo. H. Barr, Chief of Dairy Department, Ottawa, who supervised the experimental work, could see no difference in quality or texture of cheese made with pepsin and rennet on the same dates. Cheese made by different coagulants and held at about 60 degrees F. throughout the summer were on exhibit at the convention, and an opportunity was given patrons and makers to sample the product and express their opinion. In June last, experts could see little difference in quality, and there was no marked difference noticed after the cheese had been held, thus showing that the keeping quality was not affected by pepsin. At the Finch Station, pepsin has been used almost entirely as a coagulant and no complaints have been heard from consumers of the product. There are many brands of coagulant on the market which vary somewhat in strength and price. Canadian-made rennets are not so reliable as they might be. In Quebec, 244 factories used pepsin the past season, 142 used pepsin and rennet mixed, and 620 used rennet alone. One hundred and ninety-five factories in Eastern Ontario used pepsin, and 294 mixed the coagulants. Mr. Barr is confident that the cheese industry is in no danger of being injured by shortage of rennet extract.

Feed, Weed and Guard Against Disease.

To be a successful dairyman a man must be a wide-awake farmer, was the opinion expressed by Geo. Rothwell of the Dominion Experimental Farm, Ottawa. The two are inseparable. The average cow is a voracious animal which soon devours the bank roll of any dairyman who has to purchase much feed at the present prices. "Feeding the dairy cow is a problem, as there is no cheap dairy ration to-day", said Mr. Rothwell, "and the solution lies in eliminating all cows from the herd that are not paying for their feed, and fostering the best." Fewer cows but better cows should be the aim of every farmer. Statistics show that the price of milk has not risen in proportion with the cost of feed, and the speaker claimed that sufficient good silage and legume hay should be grown to supply the roughage for the herd. They can be grown cheaper than they can be purchased and their use reduces the amount of concentrates needed.

To be a successful dairyman the speaker claimed that a man must be a specialist in feeding cows and in growing corn and clover hay, or, in short, he must be a good farmer. Dairymen who count on the greatest flow of milk during summer months were advised to supplement the pasture with green feed, hay or silage, in order to keep up the milk flow during time of drouth.

At the Experimental Farm six milking machines are being tried and most of them are considered to be feasible, and practical pieces of mechanism which help out the labor problem. True, they are more complicated than a cream separator and must receive proper attention. Their success depends on the operator, and the manufacturers were criticized for not schooling the purchasers more thoroughly regarding the handling and running of the machines. Improvements are being made in the mechanism each year, and Mr. Rothwell believes they will be in general use in time.

Tuberculosis and abortion were mentioned as two of the most serious handicaps of dairying. They are two diseases which are prevalent and hard to treat. As yet no sure cure has been found for abortion. Serums which have been tried prove ineffective. Methylene blue was given a thorough test at the Experimental Farm, but it did not control the disease. To the question "How many times will a cow abort?", the reply was, "generally three times, then she will be immune but may continue to spread contamination." Isolation and disinfection were the only practical methods recommended in view of the experimental work done.

Evening Session.

The two evening sessions were presided over by W. Bert Roadhouse, Deputy Minister of Agriculture for Ontario, and J. A. Dargavel M. L. A., respectively. Interesting addresses were interspersed with excellent music which added to the enjoyment of the evening sessions. A. A. Ayer an export dairy-produce merchant of Montreal, quoted numerous figures to show the status of the dairy industry at the present time. He emphasized the necessity for increased production and went out of his way to inform farmers that "the shedding of blood was bringing wealth to them with but little extra expense." The speaker was positive "every class was taxed severely to meet war expenses except day laborers and farmers". "Where one farmer was doing all he could there were 99 who were not. The tillers of the soil were advised to be public spirited supposing they don't make a cent. It was clearly a city man talking of what he knew little about and the wonder was the audience stood for some of his remarks.

Dr. J. W. Robertson of Ottawa, who has been closely connected with the dairy industry for over 40 years gave a very interesting account of a trip to the seat of war. The trip across the water on a troop ship, the visit to trenches and hospitals were clearly described and the audience was given a glimpse of the courage and spirit of the men who are fighting the battles of liberty. Dr. Creelman captivated his audience as he described what was being done and what could be done towards rural improvement.

An illustrated trip to Europe was given by C.F. Bailey, Assistant Deputy Minister of Agriculture for Ontario. The scenes showed conditions as they existed just previous to the outbreak of war. The mode of living and customs appeared to be vastly different from those of Canada. Local speakers gave short, pithy addresses.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards, West Toronto, Monday, Jan. 8, were 125 cars, 2,426 cattle, 165 calves, 816 hogs, 480 sheep. Very strong, active market. All classes of cattle fifteen to twenty-five cents higher. Sheep and calves strong. Lambs fifteen to twenty-five cents higher. Hogs, fed and watered, \$12.60.

The total receipts of live stock at the City and Union Stock Yards for the past week were:

	City	Union	Total
Cars.....	58	408	466
Cattle.....	595	2,842	3,437
Calves.....	152	698	850
Hogs.....	828	7,502	8,330
Sheep.....	723	1,608	2,331
Horses.....	74	2,851	2,925

The total receipts of live stock at the City and Union Stock Yards for the corresponding week of 1916 were:

	City	Union	Total
Cars.....	36	339	375
Cattle.....	451	3,667	4,118
Calves.....	118	430	548
Hogs.....	630	6,385	7,015
Sheep.....	341	1,524	1,865
Horses.....	—	1,235	1,235

The combined receipts of live stock at the two markets for the past week show an increase of 91 carloads, 302 calves, 1,315 hogs, 466 sheep and lambs, 1,690 horses, but a decrease of 681 cattle when compared with the corresponding week 1916.

The first live-stock market of the year opened on Monday, Jan. 1st, with 1,246 cattle, 143 calves, 515 hogs and 377 sheep and lambs on sale. The demand for all classes was strong, and, as the receipts were light, prices advanced all down the line. Throughout the week prices were steady with those of Monday, being 75c. to \$1.00 higher than the previous week's close for choice heavy steers and choice butcher steers and heifers. For example, 25 steers, average weight 1,250 lbs., sold at \$10 per cwt.; 15 steers, 1,200 lbs. at \$10 per cwt.; 1 carload of heifers, 1,050 lbs., brought \$10 per cwt., while there were any number of small lots that sold at the same figures. Good butcher steers and heifers sold at \$8.50 to \$8.75 per cwt., while common to medium quality brought from \$6.50 to \$8. Cows were also active and strong at prices 50c. higher for choice, and 25c. higher for common animals. Choice cows sold at from \$7.50 to \$8, and common to medium brought \$5.25 to \$6.75. Canners and cutters were also in demand at from \$4.90 to \$5.10 per cwt. Bulls, firm and in strong demand, at \$8 to \$8.50 for choice; a few extra choice selling at \$8.75; common to medium bulls sold at \$5.50 to \$6.50; stockers and feeders were strong at from \$5.50 to \$7.50, according to weights and quality. Light steers and heifers, 500 to 600 lbs., sold at from \$5.50 to \$6. Choice yearlings, 700 to 750 lbs., sold at \$6.50 to \$7. Choice steers, 800 to 900 lbs. brought \$7 to \$7.50; a few extra choice sold at \$7.75 and \$8 per cwt. Milkers and springers were somewhat slow at prices a shade lower than the previous week. Supplies of sheep and lambs have not been heavy, the demand strong, and prices a good 25c. higher. Choice lambs sold at 13c. to 13½c. per lb.; a few lots of extra choice Blackfaces brought 14c. per lb. Light handy sheep sold at 9c. to 10c. per lb., while heavy fat brought 8c. to 9c. per lb. Choice veal calves were in strong demand at 12c. to 13c. per lb.; medium quality brought 9½c. to 11c. per lb., while grassers, common and heavy fat calves sold at from 5½c. to 9c. per lb. One exceptionally fine calf, weight 200 lbs., sold at 14c. per lb. The hog market opened on Monday at prices steady with the close of the previous week. Packers once more made an attempt to lower the price, but without success. They advanced during the week, and closed at the following prices: \$12.50 to \$12.60 for fed and watered, and \$12.75 to \$12.85 for weighed off cars.

Live Stock Quotations.—Choice heavy steers, \$9.50 to \$10; butcher steers and heifers, choice, \$9 to \$9.50; good, \$8.50 to \$8.75; medium, \$7.50 to \$8; common, \$6.50 to \$7. Cows, choice, \$7.50 to \$8; good, \$7 to \$7.25; medium, \$6.25 to \$6.75; common, \$5.25 to \$5.75. Canners and cutters, \$4.75 to \$5.25. Bulls, choice, \$8 to \$8.50; good, \$7.25 to \$7.75; medium,

\$6 to \$6.50; common, \$5 to \$5.50. Stockers and feeders, \$5 to \$7.75. Milkers and springers, best, \$85 to \$110; medium, \$60 to \$70. Lambs, choice, 13c. to 13½c. per lb.; culls, 8½c. to 10½c. per lb. Sheep, light, 9c. to 10c. per lb.; heavy, 8c. to 9c. Calves, choice, 12c. to 13c. per lb.; medium, 9½c. to 11c. per lb.; heavy fat, 8c. to 9½c. per lb. Grasser and common, 5½c. to 8c. per lb. Hogs, fed and watered, \$12.50 to \$12.60; weighed off cars, \$12.75 to \$12.85. Less \$2.50 to \$3.50 per cwt. off sows; \$4 to \$5 per cwt. off stags; \$1 to \$2 per cwt. off light hogs, and \$2 to \$3 per cwt. off thin feeder pigs, and one-half of one per cent. government condemnation loss.

Breadstuffs.

Wheat.—Ontario, according to freights outside, No. 2 winter, new, in car lots, \$1.74 to \$1.76; No. 3 winter, new, \$1.70 to \$1.72. Manitoba wheat (track, bay ports)—No. 1 northern, new, \$2.10½; No. 2 northern, \$2.07½; No. 3 northern, \$2.03½; old crop trading 4c. above new crop.

Oats.—Manitoba, track, bay ports, No. 2, C. W., 73c. Ontario oats, according to freights outside, No. 2, white, 64c. to 66c. nominal; No. 3, 63c. to 65c., nominal.

Peas, according to freights outside, No. 2, \$2.30.

Barley, according to freights outside, malting, \$1.16 to \$1.18.

Buckwheat, according to freights outside, \$1.25, nominal.

Rye, according to freights outside, No. 2, \$1.33 to \$1.35.

American corn (track, Toronto), No. 3, yellow, \$1.11, subject to embargo.

Flour.—Ontario winter wheat, \$7.30 to \$7.50, in bags, track, Toronto. Manitoba flour, first patents, in jute bags, \$9.70; second patents, \$9.20; strong bakers', \$8.80.

Hay and Millfeed.

Hay, No. 1, per ton, car lots, \$13 to \$13.50; No. 2, per ton, car lots, \$9 to \$11.

Straw.—Car lots, per ton, \$9.50 to \$10.

Bran.—Per ton, \$32; shorts, \$37; feed flour, per bag, \$2.70 to \$2.80.

Country Produce.

Butter.—Butter remained stationary on the wholesale during the past week. Creamery, fresh-made pound squares, selling at 48c. to 49c. per lb.; creamery solids, 44c. to 45c. per lb.; dairy, 40c. to 41c. per lb.; separator dairy, 43c. to 44c. per lb.

Eggs.—Eggs also sold at unchanged prices, new-laid in cartons bringing 65c. per dozen; cold-storage, selects, 43c. per dozen; fresh, case lots, 40c. per dozen.

Beans.—Hand-picked, \$6 per bushel; prime white, \$5.40 per bushel; Lima, 10c. per lb.

Cheese, June, per lb., 26c.; twins, 26½c.

Honey.—Sixty-lb. tins selling at 12c. per lb.; glass jars, \$1 to \$2 per dozen; combs, \$2.50 to \$3 per dozen.

Poultry.—Live-weight prices—chickens, 15c. per lb.; ducks, 15c. per lb.; turkeys, 22c. per lb.; fowl, 4 lbs. and over, 16c. per lb.; fowl, under 4 lbs., 12c. per lb.; geese, 12c. per lb.; squabs, dressed, \$3.50 to \$4 per dozen.

Hides and Skins.

City hides, flat, 22c.; country hides, cured, 21c.; country hides, part cured, 19c.; country hides, green, 18c.; calf skins, 35c.; kip skins, 22c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1.50 to \$2; horse hair, per lb., 38c.; horse hides, No. 1, \$7 to \$9; No. 2, \$7 to \$8; wool, rejections, 35c. to 38c. per lb.; unwashed, 34c. to 37c. per lb.; tallow, No. 1, 9c. to 10c.; solids, 8c. to 9c.

Montreal.

The cattle market was on the dull side again last week, there being but little demand following the New Year's holiday. Some choice steers were offered and prices ranged all the way from 9c. to 9½c. while good stock sold at 8½c. to 9c., with fair steers at 7½c. to 8c., and common around 7c. per lb. Butchers' cows ranged from 6¼c. to 7½c. for good to choice and down to 5¼c. per lb. Butchers' bulls sold all the way from 6½ cents to 8¼ cents per lb. Sheep were in good demand and best quality sold at 8¼c. to 9c., while bulls and culls brought as low as 8¼c. Ontario lambs were in good request and the price continued very high, being 13c. to 13½c.

per lb. Quebec stock changed hands at 12½c. to 12¾c. Hogs sold as high as 13½c. per lb. for choice and down to 13c. and 13¼c. for good stock. Stages sold as low as 6¾c. Calves were firm with milk-fed stock ranging from 9c. to 11c., according to quality, and grass-fed stock all the way down to 5c. per lb. Canners' cattle sold at 4¼c. to 5½c. per lb., according to quality.

Horses.—The market for horses was neglected and quotations showed no change, being as follows: heavy draft horses, weighing 1,500 lbs. to 1,700 lbs., \$200 to \$250 each; light draft horses, weighing 1,400 lbs. to 1,500 lbs., \$150 to \$200 each; small horses, \$100 to \$125 each; culls \$50 to \$75 each; choice saddle and carriage horses, \$200 to \$250 each.

Poultry.—Now that the Christmas and New Year's holidays are over, the tendency of prices is generally lower, although poultry of all kinds is very firmly held. Turkeys ranged from 25c. to 31c. or even 32c. per lb., according to quality, while chickens were 22c. to 24c. for the best and down to 18c. for ordinary. Fowl were 15c. to 22c. per lb. Geese and ducks were very scarce at New Year and every retail store was cleaned out of ducks. Geese were 19c. to 21c. and ducks 20c. to 23c. per lb.

Dressed Hogs.—The market for live hogs continued very firm. Abattoir, fresh-killed hogs sold as high as 19c. to 19½c. per lb., while country dressed were 18½c. to 18¾c. for light and 17½c. to 17¾c. for heavy weights.

Potatoes.—Demand for potatoes has been quite active of late, but the greatest uncertainty still exists regarding price, and quotations showed a wide range. Green Mountains were quoted at \$1.75 up to \$2 and Quebec stock \$1.65 to \$1.90 for white and down to \$1.30 for red. Alberta stock was quoted at \$1.70 per 80 lbs., ex-store.

Honey and Maple Syrup.—There has been a fair demand for these lines, of late, but there was no change in price. The market for maple syrup in 10-lb tins was 95c., 10-lb. tins being \$1.10 and 13-lb. tins \$1.25 to \$1.50. Sugar was quoted at 15c. per lb. Honey was steady at 15c. for white clover comb, per lb., 13c. for brown clover comb and white extracted, while brown extracted was 11c. Buckwheat honey was 10c. per lb.

Eggs.—There has been some demand for cold storage stock from outside points and the market was firm all the way round. Strictly new laid eggs were 70c. per doz., while fresh were quoted about 60c. No. 1 selects were quoted at 42c.; No. 1 candled at 40c. and No. 2 candled at 34c. to 36c.

Butter.—Winter made creamery sold here at the auction at 38c. per lb., f.o.b., country points. Finest fall creamery was steady at 43c. to 43½c., with fine at a range of ½c. down. Winter creamery was quoted at 42c. to 42½c. and under-grades down to about 41c. or 40½c. Dairy butter ranged from 37½c. to 39c. per lb.

Cheese.—Western colored cheese was steady at 25¼c. to 25½c. White was 25c. to 25¼c. Finest Eastern colored cheese sold at 24¼c. to 24½c. per lb., while white was 24c. to 24¼c.

Grain.—The market has shown many fluctuations. No. 2 Canadian Western oats were now quoted at 71c. and No. 3 Canadian Western were 69c. Extra No. 1 were quoted at 69c. and No. 2 feed at 66c. per bushel, ex-store. Manitoba barley was very firm, with feed and rejected grades quoted at \$1; Manitoba feed wheat sold here at \$1.10 per bushel, ex-store.

Flour.—Owing to the strength in the market for wheat, the flour market continued very strong and the price advanced materially. First patents sold at \$9.80 per barrel, with seconds at \$9.30 and strong bakers' at \$9.10 per barrel, in bags, while some millers were said to be quoting 20 cents higher. Winter wheat flour was firm and 90 per cents. were quoted at \$8.50 to \$8.80 per barrel, in wood, and at \$4.10 to \$4.25 per bag.

Mill Feed.—The market was steady, with bran selling at \$32 per ton, in bags; shorts at \$35; middlings \$38 to \$40; pure grain mouille \$45 to \$48 and mixed mouille \$43 per ton.

Baled Hay.—No. 2 hay sold at \$13 per ton, car loads, ex-track; No. 3 hay

was \$11.50 and clover mixture \$10.50 per ton.

Hides.—Lamb skins were 20c. up, at \$3.70 each; beef hides were steady at 26c., 25c. and 24c. per lb., and calf skins at 38c. and 36c. per lb. Horse hides were \$8.50 each; tallow sold at 3c. to 5c. per lb. for rough and 8c. to 9c. per lb. for rendered.

Buffalo.

Shipping Steers.—Choice to prime natives, \$10 to \$11; fair to good, \$8.50 to \$9; plain, \$7.75 to \$8.25; very coarse and common, \$7.25 to \$7.75; best heavy Canadians, \$9.75 to \$10.35; fair to good, \$8.25 to \$8.60; common and plain, \$7.75 to \$8.

Butchering Steers.—Choice heavy, \$9 to \$9.75; fair to good, \$8.50 to \$8.75; best handy, \$8.75 to \$9.30; fair to good, \$7.75 to \$8.50; light and common, \$6.75 to \$7.25; yearlings, prime, \$9.50 to \$10.25; fair to good, \$8.50 to \$9.

Cows and Heifers.—Best heavy heifers, \$8.25 to \$8.75; best butchering heifers, \$7.50 to \$7.75; fair butchering heifers, \$6.50 to \$7.25; light and common, \$5.25 to \$6.25; best heavy fat cows, \$6.75 to \$7.25; good butchering cows, \$6 to \$6.50; medium to fair, \$5 to \$5.50; cutters, \$4.35 to \$4.50; canners, \$3.50 to \$4.25.

Bulls.—Best heavy, \$6.75 to \$7; good butchering, \$6.25 to \$6.50.

Stockers and Feeders.—Best feeders, \$7 to \$7.25; common to fair, \$5.25 to \$5.60; best stockers, \$6.50 to \$7; common to good, \$5 to \$5.50.

Milchers and Springers.—Good to best, in small lots, \$80 to \$100; in carloads, \$70 to \$75.

Gossip.

The Misses Splatt of Dunnville, R. R. 7, are advertising in this issue for a tenant to lease a stock farm in the township of Dunn. For particulars see ad.

Attention is directed to the advertisement in this issue of ear tags and labels made by the Ketchum Mfg. Co., Ottawa, Ont. If in need of stock labels see the ad.

Look up the advertisement in this issue made by Gordon Smith, breeder of Shorthorn cattle, Lincoln sheep, Berkshire and Chester White swine, Woodslee, Ont. Watch for fuller particulars next week.

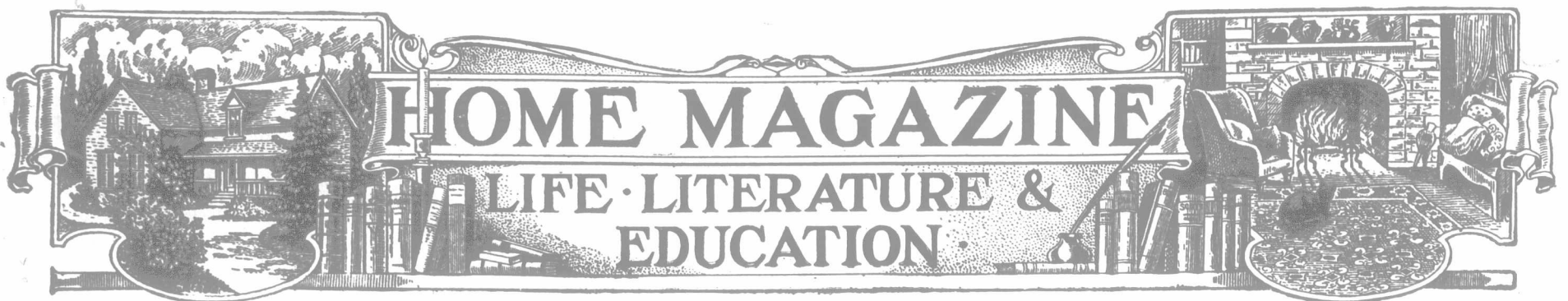
L. K. Weber of Waterloo County, Ont., writes that his Shorthorns will stand inspection as to size, breeding and quality. They have behind them the best of imported Scotch breeding on both sides. Correspondence is solicited and visitors are welcome.

Sale Dates.

Jan. 31, Brant District Holstein Designers' Sale.
Feb. 1-2, Canadian Breeders, Union Stock Yards, Toronto, Ont. R. Miller, Stouffville, Manager.
Jan. 30, Victoria County Pure-bred Stock Association sale at Lindsay, Ont.; Shorthorns and Herefords.

Coming Events.

Jan. 16 to 19.—Ottawa Winter Fair, Short Courses at Ontario Agricultural College, Guelph. In stock and seed judging, Jan. 9 to 20; poultry raising, Jan. 9 to Feb. 3; bee-keeping, Jan. 9 to 27; dairying, Jan. 2 to March 23; horticulture, Jan. 9 to Feb. 16; business and marketing, Jan. 9 to 20.
Feb. 5 to 9.—Live Stock Meetings, Toronto.
Feb. 6 to 7.—Fairs and Exhibitions Convention, Toronto, 2 p.m. at Forrester's Hall.
Feb. 8.—Annual Meeting of the Ontario Vegetable Growers' Association, Parliament Bldgs., Toronto, 9 a.m.
Feb. 8.—Annual Meeting of the Ontario Plowman's Association, Forrester's Hall, Toronto, 2.30 p.m.
Feb. 13 to 16.—Corn Show and Convention, Kingsville.
Annual Meetings of United Farmers of Ontario and the Dominion Grange—the week of Live Stock Meetings, Toronto.



Nocturne.

BY ELIAS LIEBERMAN, IN THE "OUTLOOK,"
NEW YORK.

"Watcher in the trenches,
How wears the night?"
"Nothing is seen in the midnight sky
But the trail of the death rockets flash-
ing by;
So wears the night."

"Watcher in the trenches,
How wears the night?"
"A form in the starlight gasping its last,
The tail of a meteor shimmering past:
So wears the night."

"Watcher in the trenches,
How wears the night?"
"Darkness, darkness, then afar
The sudden glare of a man-made star:
So wears the night."

"Watcher in the trenches,
How wears the night?"
"Dawn flares up in the bloody east,
The vultures swoop to a carrion feast:
So wears the night."

"Dreamer in the tower,
How will it end?"
"The mists are shrouding a red, red sun,
Humans are blind and only One
May know the end."

Among the Books

"The Dark Forest."

BY HUGH WALPOLE.

Occasionally the question comes to "The Farmer's Advocate and Home Magazine," from Women's Institutes and other organizations which are trying to form a library—"Give us the name of a good book—fiction preferred."

In our "Among the Books" department we always try to arouse interest in books that would be advisable for any library—home or circulating—but we must confess that, so far, fiction reviews have been in the minority, not because good fiction is any less important, but because the books undertaken have not chanced for some time to be of that class of literature.

To-day, however, a novel that has appeared as especially worthy of recommendation has fallen into the list, "The Dark Forest," by Hugh Walpole (Mussell Book Co., Toronto; price, \$1.35.)

To begin, it may be said that "The Dark Forest" is a story of Russia, written during the past year. It is essentially a war-book, compiled at first hand from actual war material, too, since Mr. Walpole has been almost continuously engaged in Red Cross work in the Russian fighting lines.

His book, indeed, seems a running commentary, a sort of diary, rather than an orthodox novel. There is little plot in it, and yet by that very fact it establishes its place as a mirror of real life. There is little "plot" in ordinary human life, least of all in the war-zone of today; as a writer in a London paper, in telling of recent scenes in Picardy, said: "There is no coherence. Recalling them in tranquillity they seem like the tumbled fragments of a jig-saw puzzle cut out of living towns and rivers and armies."

And yet "The Dark Forest," is artistic, picturesque, psychological. Indeed its chief interest is psychological; in reading it one is fascinated by the mind-action in the leading characters—Trenchard, the rather dull and heavy yet lovable Englishman; Marie Ivanovna, the Russian nurse, who in other than war-time might have been a Titania in the Dark Forest; Dr. Nikitin, the silent, capable Russian surgeon with his fussy little Andrei Vassilievitch, each of whom loved the same woman, now dead, and thought that

the first to die would have her; last of all, Semyonov, the fair-haired, huge-bodied, cynical, over-mastering rival of Trenchard and of Nikitin, although in different ways; who either fascinated or repelled, who won the nurse from poor Trenchard and yet missed her through death.

It would not be fair to the reader to tell all the details of the story. Let it be enough to assure him that he will find abundant interest in following the fortunes of these strange, opposing characters, forced by the fortunes of war to live and work for so long time together. Incidentally there is ever the background of the war, with all the little pictures of it silhouetted as upon a screen—no, described with such masterfulness, such broad strokes, such exactly adequate intermingling of detail, that the reader feels as though he has lived through the experiences; that they are coming back to him as a dream from a past reality of his life.

One hesitates in choosing which word-picture to quote, in trying to give an idea of this quite remarkable book. Perhaps the one that follows will do as well as any. There are many others that tell more of the active war, of the great forest itself with its endless greenery, its singing birds, its hidden horrors, its air of strange unreality. But there is something about the passage chosen that makes it stand forth among many more important. Here are gathered together, in a little room near the Forest, not of choice, held by strange bonds both of repulsion and fascination, Nikitin and Andrei Vassilievitch; Trenchard and Ivan Andreievitch who love each other, and who both loved the nurse; and, then comes Semyonov. In adjoining rooms the wounded are quiet in their beds. The narrative runs:

We sat there and talked of Marie Ivanovna. I was aware of the buzzing of flies, of the dull, yellow light beyond the windows, of the Forest crouching a little as it seemed to me like a creature who expects a blow. We were all half asleep perhaps, the room dark behind us, and we talked of her as we might talk of a picture, a book, an experience ended and dismissed—something outside our present affairs. And yet I knew that for me at any rate she was not outside them. I felt as though at any moment she might enter the room. We discussed her aloofness, her sudden happiness and her sudden distress, her intimacies and withdrawals, Nikitin and Andrei Vassilievitch slowly elaborating her into a high, romantic figure. Behind her, behind all our thoughts of her, there was the presence of Semyonov. Nothing was stranger during our time here than the way that Semyonov had always kept us company.

Our consciousness of relief from him had begun it. We had been more under his influence than any of us had cared to confess and, in his presence, had checked our natural impulses. I also was strongly aware of him through Trenchard. Trenchard seemed now to have a horror of him that could be explained only by the fact that he held him responsible for Marie Ivanovna's death. "It's a good thing," I thought to myself, "that Semyonov's not here."

These hours of waiting, when there was nothing to do, were bad for our nerves. Upon this afternoon I remember that after a time silence fell between us. We were all staring in front of us, seeing pictures of other places and other people. I was aware, as I always was, of the Forest, seeing it shine with its sinister green haze, seeing the white bleached town, the huddled villagers waiting for their food, but seeing yet more vividly the deep silences, the dark hollows, the silent avenues of silver birch. Against this were the figures of the people who were dear to me. It is strange how war selects and brings forward as one's eternal company the one or two souls who have been of importance in one's life. One knows then,

in the long, long threatening pauses, when the battle seems to gather itself together before it thunders its next smashing blow, those who are one's true companions. Certain English figures were now with me, outlined against the Forest—and joined together with them Marie Ivanovna as I had last seen her, turning round to me by the door and smiling upon me. I did truthfully feel, as Trenchard had said to me, that she was not dead; I sat, staring before me, conjuring her to appear. The others also sat there, staring in front of them. Were they also summoning some figure. I knew, as though Andrei Vassilievitch had told me, that he was thinking of his wife. And Nikitin? . . .

He sat there, lying back on the old sofa that Marie had used, his black beard, his long limbs, his dark eyes giving him the color of some Eastern magician. He did indeed, with his intense, absorbed gaze, seem to be casting a spell. As I looked Andrei Vassilievitch caught his glance—they exchanged the strangest flash—something that was intimate and yet foreign, something appealing and yet hostile. It was as though Andrei Vassilievitch had said: "I know you are thinking of her. Leave her to me," and Nikitin had replied: "My poor friend. What can you do? . . . I do as I please."

I know at least that I saw Andrei Vassilievitch frown, make as though he would get up and leave the room, then think better of it, and sink back into his chair.

I remember that just at that moment Trenchard entered. He joined us and sat on the sofa near Nikitin without speaking, staring in front of him like the rest of us. His face was tired and old, his cheeks hollow.

I waited and the silence began to get on my nerves. Then there came an interruption. The door opened quite silently: we all turned our eyes towards it without moving our heads. In the doorway stood Semyonov.

We were startled as though by a ghost. I remember that Andrei Vassilievitch jumped to his feet, crying. Trenchard never moved. Semyonov with his usual stolid self-possession came toward us, greeted us, then turning to me said: "I've come to take your place, Ivan Andreievitch."

"My place?" I stammered.

"Yes. You're wanted there. You're to return at once in the *britchka*. In half an hour, if you don't mind."

"And you'll stay?"

"And I'll stay."

No one else said anything. I remember that I had some half-intention of protesting, of begging to be allowed to remain. But I was no match for Semyonov. I could fancy the futility of my saying: "But really, Alexei Petrovitch, we don't want you here. It is much better to leave me. You'll upset them all. It's a nervous place, this." I said nothing, except: "All right. I'll go." He watched me. He watched us all. I fancy that he smiled.

Outside I had a desperate, absurd thought that I would return and ask him to be kind to Trenchard. As I turned away some one seemed to whisper in my ear:

"He's come, you know, to find Marie Ivanovna."

The Attractive Farm.

[We trust Mr. Sinclair will pardon us for publishing the following letter which, though sent to us as a private letter, is of general interest, and shows what can be done even by one or two enthusiasts in a district.—Ed.]

Tillsonburg, Dec. 18, 1916.
EDITOR "THE FARMER'S ADVOCATE":

Dear Sir:

I was pleased to receive your issue of Dec. 9th with an account of the Ontario

Horticultural Society meeting, and to see that what I said about encouraging the growth and planting of flowers and shrubs by the farmers throughout the country was approved of by you. It is something that I have been working at in my riding here for the last year or two trying to get things started, and I do not think that my labors have been altogether wasted.

You might be interested in knowing somewhat of the way that I have been taking it up. As I have been attending different garden parties throughout the country, acting as chairman, I have always taken this opportunity of bringing this matter before them and urging the advantages of fixing up and making the home surroundings attractive, pointing out that it was not only beautifying the place but a good investment, because, if at any time they may desire to sell their farms, a person desiring to buy will first take the chance of an attractive looking, home-like place instead of a desolate, barren-looking spot, however good the good the soil would be. Of course, the soil would have to be there in the end to attract the shrewd farmer, but at the same time, as between two premises, he would give the preference to the attractive looking place with equal fertility.

Again, I have urged them strongly that this is one means of keeping the young men at home, that if they add to the other advantages of farm life the attractiveness of homes which they get in towns, with such advantages as a motor and other things to make their life attractive, they will have no trouble in holding the young men at home, because this is the farmer's age and he need not be jealous of any other occupation or calling.

I have also been urging the matter at school fairs, where we get at the young people, and the school fairs in this riding are largely attended, there being from 1,000 to 1,500 people present.

I also had the idea that probably the easiest way to get things started was to get at the young people, and I had the Agricultural Representative bring the agricultural class for this season down to my garden and have a garden party there, and I spent a very pleasant evening with them and endeavored to interest them on the ground as it were. I also got Mr. Green to make enquiries at the different school sections and find out which school sections would be willing to take hold of the work and to plant out a perennial border and look after it, with the result that he gave me the names of eight school sections that he thought would take hold of the work, and I purchased an assortment of perennials, including Peonies, Perennial Phlox, Fox Gloves, Hollyhocks, Larkspur, Heleniums, German Iris and others, and also a collection of spring bulbs, including Crocus, Scillas, Spanish Iris, and early Darwin and late Tulips, so that they might have something showing for the first year or two until the perennials got a chance to develop. These were all set out this fall and in addition, I gave prizes at the School Fairs in bulbs to the school sections winning different events, so that next spring I will probably get them fairly well started if they will only look after the gardens a bit.

I have had some encouraging results inasmuch as one school section came in voluntarily to order bulbs for next season, and one farmer, whom I advised very strongly, when he bought his farm, to fix up a bit, brought me his first bouquet this summer. Another man wrote down to me that he had been fixing up his house and he wanted a list of suitable shrubs to set out, and he put in about twenty varieties of shrubs on his ground.

I think that if the Horticultural Society paid a little attention to developing outside their borders, or better still, if a scheme could be got for formation and encouragement of rural Horticultural Societies, covering half township or township, we could probably get the work ex-

tended further, as to my mind nothing will go further to settle the question of scarcity of farm labor, then making the farms and homes attractive, and something like the Old Country homes.

I am sorry to inflict this on you, but judging by your paper, you are interested.

I might say that in the work, I have had the utmost co-operation from our Agricultural District Representative, Mr. G. R. Green, who is an enthusiast and a splendid representative.

Yours truly,
V. A. SINCLAIR.

Travelling Art Exhibits.

BY W. T.

The admirable illustrated article, "Some Famous Pictures, and their Painters", in the Christmas "Farmer's Advocate" deserves re-reading many times because of its informing and suggestive charm and for the further reason that it reminds us of the important collections of paintings being made in the national museum at Ottawa and a few other large centres. One of the effects of the war will be an awakened interest of Canadian art which ought to keep pace with the quickened appreciation of late of Canadian books and writers.

It is encouraging to know that so many important pictures by Canadian artists have been acquired for the collection at the capital, but, unfortunately, few of the people can enjoy the privilege of seeing them. Most of those whose business takes them to the capital are upon other missions bent and probably never dream of spending a few hours with the national collection of paintings which has been located in a rather out-of-the-way place for transient visitors. Pictures, like good books, are an expression of truth and are educational. On this theory public collections of books have been established even in most small towns, and the travelling library idea has been developed to extend further this benefit of books into outlying communities. With a little more effort the principle is applicable to the collections in art galleries which should not be cloistered in Ottawa or Montreal for the few when, as in the case of the farmer, they belong to the whole people. Many of the very finest works of art in what are called the permanent collections in American cities are periodically interchanged, to the advantage of thousands of people who otherwise could never have seen them. To art students, who are everywhere to be found, this is a privilege of incalculable benefit. Some of these pictures have also been loaned from time to time for the National Exhibition at Toronto and other large annual Canadian exhibitions. The trouble and outlay of carrying out the idea are fully warranted. It is a consideration which the people should enjoy. The capable and public spirited Trustees of the Canadian National Gallery might possibly be glad to co-operate in thus extending the advantages of their efforts now limited to comparatively few. Representative collections in charge of a competent officer could be sent over a circuit of places where they could be advantageously shown, and if properly announced ahead in the local press, the people, including those of adjacent rural communities, could avail themselves of the privileges so provided. Appropriate lectures or talks could be arranged at the same time. The government at Ottawa and those acting for them will undoubtedly give encouragement to the proposition which, it is understood, has already received favorable consideration and approval.

Rural Community Conference.

A Rural Community Conference, to deal chiefly with the church in its relation to rural life, is to be held in Guelph, Jan. 26th and 27th. Anyone will be welcome to attend, but there will be no billeting. The following organizations are co-operating.—Trinity, Wycliffe, McMaster, Victoria and Knox Theological Colleges, with the Y. M. C. A. of the Ontario Agricultural College.

Hope's Quiet Hour

The Vision of God.

I have heard of Thee by the hearing of the ear; but now mine eye seeth Thee.—Job 42: 5.

I have been tried,
Tried in the fire,
And I say this,
As the result of dire distress,
And tribulation sore—
That a man's happiness doth not consist
Of that he hath, but of the faith
And trust in God's great love
These bring him to.
Nought else is worth consideration.
For the peace a man may find
In perfect trust in God
Outweighs all else, and is
The only possible foundation
For true happiness.

—JOHN OXENHAM.

I have lately been reading the Book of Job, and the text given above seems to me to sum up the teaching of that grand poetical narrative. The writer introduces us to Job in the days of his easy and pleasant prosperity. He was rich and respected, happy in his family life and righteous in the sight of God. His godliness was rewarded by showers of earthly blessings, so that Satan ventured to ask scornfully: "Doth Job fear God for naught? Hast not Thou made an hedge about him, and about his house, and about all that he hath?" Then the sincerity of the patriarch's godliness was put to the proof. His wealth was swept away, his sons and daughters killed, and a terrible disease made life a misery to him. Still faith in God was his comfort and hope, and he trustfully accepted sorrow and pain as he had thankfully accepted prosperity. Then he was still further tested, for his wife tempted him to turn against the God who seemed to have treated him harshly and unjustly, and his "friends" (forgetting that it is cruel to "hit a man when he is down") told the patient sufferer that he must have been very wicked, in secret, or the just God would never have afflicted him so terribly—in fact they called him a hypocrite.

If you visit a friend in trouble, and try to cheer him by telling him the affliction is a judgment on him for his great wickedness, he will probably feel like echoing the indignant saying of Job: "I have heard many such things: miserable comforters are ye all. . . . I also could speak as ye do: if your soul were in my soul's stead, I could heap up words against you."

Job knew that he was not more wicked than other men, and he boldly asserted his purity of heart and righteousness of life. He was troubled and puzzled; even as The Holy One of God cried out in His amazement—when the storm broke over His innocent head—"My God, my God, why hast Thou forsaken me?"

Then God answered Job—but the answer was not an explanation of the mystery of pain. God proclaimed His infinite power, His wisdom and the awfulness of His eternal Being. Is it imaginable that He Who "hath the earth upon nothing," Who provideth for the needs of the numberless creatures upon the earth, and controls the mighty sweep of the stars in their courses can fail to understand the needs of one man? Is it necessary to explain why He does this or that? Shall a man instruct the Almighty? (XL:2).

Suppose that a soldier approached his General and asked an explanation of the reason why one man was sent into a position of danger, while another was placed far from the firing line! Would he get any explanation, do you think? Would it be a wise thing—even if it could be done—to explain to each soldier the reasons for every movement of his regiment?

The captain of a ship does not explain his actions to each frightened passenger. He is in command, and the passenger's confidence must come from trust in his wisdom, not from understanding his actions. So it was with Job. God assured him that the world—and every individual in the world—could safely be trusted in His hands; and the patriarch knew that the Judge of all the earth

would do right. He felt as safe as a child whose hand is clasped close in the hand of his father. He had learned to trust God in the dark, to know that all must be well with the world when God was on the throne of the universe. In the days of prosperity Job had heard of God by the hearing of the ear, but in the fiery furnace of trouble he found that God was walking beside him and he cried out: "Now mine eye seeth Thee."

After the fierce testing of Job's faith his earthly prosperity was greater than at first. His wealth was doubled, and he was again visibly and openly blessed by God. But earthly riches were a very small part of his gains. The service of duty had become the service of love, and the faithful servant was lifted up into wonderful fellowship with his Master. The Vision of God flooded his pathway with glorious light. Feeling sure of his Divine Friend's wisdom and love, he no longer pleaded: "Give me what I want!" but said—and meant what he said—"Thy Will be done!"

So, about 35 years ago, a brave man accepted God's Will, seeing the glory of His Face when called to endure the cross of blindness, and saying: "Whether Thou comest insunshine or in rain, I would take Thee into my heart joyfully. Thou art Thyself more than the sunshine; Thou art Thyself compensation for the rain. It is Thee and not Thy gifts I crave."

Religion is a personal matter. We talk of a "Christian nation," but it is not "Christian" in reality unless the men and women of the nation have individually owned Christ as their King. A nation cannot be made Christian by an Act of Parliament. So it is with a "Christian family". The father and mother may bring up their children in a christian atmosphere; and then, perhaps, they may be distressed to discover that a son or daughter has no real consciousness of God's Presence. Prayers and church-going may be mere forms and matters of habit. The son or daughter has heard of God by the "hearing of the ear," and this secondhand knowledge may have resulted in an upright and righteous life; but God is not known as a Living Friend. Prayer is a duty but not considered a privilege.

Don't lose heart about these young souls. They are in great need of God, and one day they will discover that they can't be satisfied with any love and sympathy except the understanding and perfect fellowship of One Who is both human and Divine. God loves your child far more than you do, and He will not rest until the child looks up in wondering joy and says: "Now mine eye seeth Thee." It was in the horror of great darkness that the upright and righteous Job first saw the great light—the Vision of His Face—which transformed everything, as the sunlight transforms a landscape. God has not lost control of the world He made. Many loved sons of His have looked up through the smoke of thundering guns and have made the Great Discovery—have discovered GOD!

"Is the light for ever failing?
God's in His heaven!
Is the faint heart ever quailing?
God's in His heaven!
God's strong arms are still around you,
In the dark He sought and found you.
All's well! All's well!
All's . . . well!"

Yesterday another donation of \$5.00 "for the needy" reached me from a good friend among our readers. During 1916 I have received 76 contributions for the "Advocate purse," amounting to \$223.50—more than \$100 in advance of last year. This has gone out in the form of food, clothing, etc., (and occasionally in gifts of money) to a number of sick people and needy families—188 separate gifts, not including presents for a children's Christmas-tree. As for the warm clothing, and books for distribution among my "shut-in" friends,—I have kept no account. Your left hand is ignorant of the good your right hand has been doing.

Many donations—which have arrived since Christmas—are still in the "Advocate purse," waiting until a special case of need presents itself. One of our readers asked me to write on "Giving." It seems to me that while I do the writing you are doing the giving. One thing I will ask you to give me—the power of your prayers during 1917. This Quiet Hour is for you; and your prayers

can make it bear fruit. A few days ago a letter reached me saying: "I sent the Advocate to one of 'our boys', and he sent back word: 'so glad to get Hope's Quiet Hour once more.'" I knew I was writing much about the men at the Front, but it never entered my head that I was writing to them. Will you speed my Vision of God with your prayers, so that it may carry a message of good cheer even into the trenches? As in past ages, so it is now—"More things are wrought by prayer than this world dreams of!" The service is a secret one—a secret between God and each of His praying friends.

"Then give to the world the best you have,
And the best will come back to you."
DORA FARNCOMB.

The Beaver Circle

After Christmas.

'Twas the night after Christmas,
And all through the house
Not a creature was stirring,
Not even a mouse:—
The mechanical mouse,
The marvellous mouse,
Who had travelled and travelled
All over the house.
His spring was demolished
And, powerless to run
From the little tin soldier
With his little tin gun,
He lay on the hearthrug
And trembled with fear
Of the cotton-wool cat,
Who was frightfully near—
The mechanical cat,
So gaunt and so grey,
Who had chased him about
Upon Christmas Day.
And the little toy dog,
Whose bark was controlled
By a spring in his side,
Looked fierce and bold
To the poor little mouse,
The mechanical mouse,
Who had travelled and travelled
All over the house;
In terror he shrank
From the whole toy zoo—

But he need not have feared,
For their springs were smashed, too!

Little Bits of Fun.

Where Beth lived pets were not allowed and clothes were much discussed. When she visited her grandmother she was delighted with the big yellow and white cat, and on returning home she described him to her little neighbors. "Their cat is beautiful," she declared enthusiastically. "He is brown, trimmed with white."

The man who had made a large fortune was speaking a few words to a class of students at a business college. Of course, the main theme of his address was himself.

"All my success in life, all my tremendous financial prestige," he said proudly, "I owe to one thing alone, pluck. Just take that for your motto—pluck, pluck, pluck!"

He made an impressive pause here, but the effect was ruined by one student, who asked impressively:

"Yes, sir; but please tell us how and whom did you pluck?"

A New Competition.

The subject for our next competition will be: "Who would you like to be if you were not yourself, and why?" You may choose anyone in past or present. Now Beavers, get to work and see what you can do with this very interesting subject.

All letters must be received at this office not later than February 15th. Address—"The Beaver Circle," Farmer's Advocate and Home Magazine, London, Ont.

Junior Beavers' Letter Box.

Dear Puck and Beavers.—It was a long time ago that I wrote to your Circle.

I go to school every day. We have a new teacher since the summer holidays and we all like her very much. I am in the third book; there are three besides myself in my class. I hope the w. p. b. has just been fed.

I will close with a riddle: A farmer's riddle, a farmer's riddle, alive at both ends and death in the middle.

Ans.—A plough.

LILA BURGESS, age 11 years.
Norwood, Ont.

Dear Puck.—It is quite a while since I wrote to you last. For pets I have two dogs which I call Sport and Jyp. Sport is my own dog. I live about twelve miles from Guelph. It is our nearest city. I have read quite a few books. These are the names of some of the ones: Anne of Green Gables, "Seven Little Sisters", "Robinson Crusoe", "Stories from Anderson's Fairy Tales." I like "Anne of Green Gables" best of all the books I have read. I am in the second book at school. I was in the fan drill at our Christmas entertainment. We had two drills. I think I will close I would like some of the beavers to write to me of my own age.

ANNIE McLEAN, age 10.
Puslinch, Ontario.

Dear Puck and Beavers.—This is my first letter to your Circle. I like reading your letters very much. We came from Toronto three years ago and started farming. Father was an electrical engineer in the city. We all like farming very much. We have our house and stables all fixed with water taps inside. I have a dog and two cats. Father says no farmer should be without the Farmer's Advocate. Here are some riddles: A man rode up the hill and yet walked.

Ans.—The little dog's name was "yet".

When is a man not a man?
Ans.—When he is a-shaving.

T. RALPH ROBINSON, age 10, Sr. II.
Cookstown, Ont.

Dear Puck and Beavers.—My father has taken the Farmer's Advocate for six years and would not like to be without it. I am going to tell you about my pets. I have a dog. He will pull you on a sleigh. He doesn't bark at rigs much. He will not bite any person. I took two prizes at our school fair, one on a hammer-handle and another on a milk stool. The year before I took third prize on my colt. I have a pet kitten, it is a red and black spotted one. It is a good mouser. I guess I will close with a riddle: What has four eyes and cannot see?

I wish some of the Beavers would write to me.

W. A. GALBRAITH.
R. R. 4, Milton west, Ont.

Junior Beavers' Honor Roll: Daisy Miller, Windsor, N. S.; Audrey Owen, Lynedoch, Ont.; Ruth Hopkins, Hanover, Ont.; Florence Scott, Belgrave, Ont.

Beaver Circle Notes.

Florence Scott (age 8), Belgrave, Ont., would like some Beavers of her own age to write to her.

The French War Council Under Premier Briand



Alexandre Ribot.

Albert Thomas.

Gen. Lyantey.

Rear Admiral Lacaze.

The Windrow

Mrs. R. R. Jamieson has been appointed a police magistrate in Calgary.

As a result of last summer's visitation of infantile paralysis there are 15,000 crippled children in the United States.

Roumania is one of the richest oil countries in the world. Before the war it produced nearly 2,000,000 tons of crude petroleum yearly.

General Townshend, the defender of Kut-el-Amara during its long siege by the Turks, is a prisoner on one of the islands on the Sea of Marmora. His wife has been permitted to join him.

Miss Clara Ruth Mozzer, twenty-four years old and of Russian-Jewish descent, has been appointed assistant attorney-general for Colorado, and is the first woman in the United States to hold that office. She made her own way through college, and has worked on a newspaper and practised law.

It is proposed to cut a railway tunnel 30 miles long under the main range of the Cascade Mountains. It will be the longest in the world and will enable railway traffic between the Puget Sound ports and the interior to be carried on by a much safer and more direct route than at present. The undertaking is estimated at \$50,000,000.

Recently the Government has ordered the millers of England to grind the wheat "whole" without separating, thus increasing the flour volume over 8 per cent. At an early date parks, commons and public grounds will be plowed up and planted in food-stuffs.

The most outspoken paper in Germany, *Forwards*, has been practically suppressed by the appointment to the staff of a member armed with full power to decide upon the nature of the articles published.

The socialists of Berlin are said to be greatly incensed over the proceeding.

Dr. Alfred Zimmerman, the new German Foreign Minister, has expressed the opinion that the result of the war will be the beginning of a democratic form of Government in Germany.

Speculations are rife regarding the acquisitions the Allied Powers will be awarded at the close of the war. Roughly speaking, the following dispositions are possible: Great Britain will receive Southern Persia, the lower Tigris Valley and Mesopotamia, also Arabia with its holy cities Mecca and Medina (its suzerainty, if not direct rule), but may give back the conquered provinces in Africa; France will have Alsace and Lorraine, and Upper Syria; to Russia will fall upper and eastern Asia Minor, free access through the Bosphorus and Dardanelles, with Constantinople; to Italy, part of Anatolia and certain islands and shores of the Aegean. Great Britain will hold the islands of Mitylene and Lemnos, and probably Salonika. To Belgium reparation, as full as possible, must be made before any peace can be concluded.

War is not history. It is an interruption of history. Old Time with the scythe comes to the front of the stage and announces "an intermission of a few years while the scenes are being shifted." Then all is darkness and we hear the rumble and crash of falling buildings. Finally the dread wait is over, the lights are turned up and we breathe freely once more. What scene we will find set when we see again, and what act will be rehearsed we cannot tell. But scraps of paper show which way the windblows. —EDWIN E. SLOSSON in *The Independent*.

Madeline Doty, writing in the N. Y. Tribune after a recent sojourn in Germany says that the lack of food in Germany is extreme. There are practically no meat-shops, and butter is sold by ticket

in the very smallest quantities. Sugar and meal are scarcely to be found. "The tragedy in Germany", she says, "is not quick starvation; it is the underfeeding of a whole race." The Socialists, who are calling ever louder for a cessation of the war, estimate that upwards of three million men in Prussia alone have been killed, wounded, or are missing.

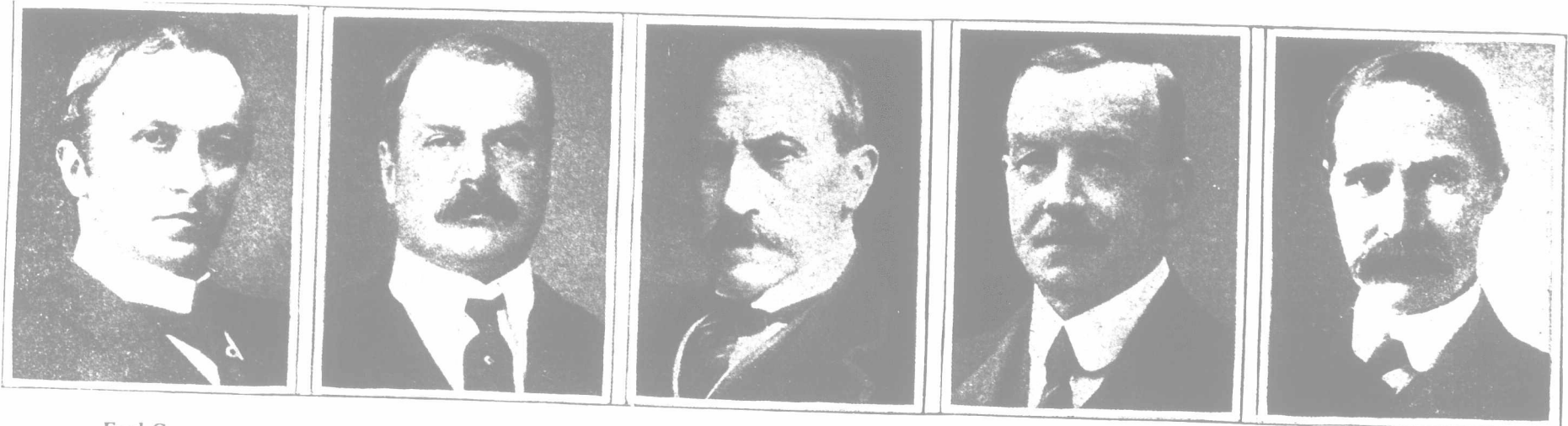
Sir Paolo Tosti, who is best known as the writer of the famous song "Good-Bye", died recently in Italy at the age of seventy. He was once a great favorite with Queen Victoria.

Speaking recently of the deportation of Belgians to work for the Germans, Lord Bryce said: "I know of no case in European history to surpass it. Not even in the thirty years' war were there such things as the German Government has done, first and last, in Belgium. This last case is virtual slavery. . . . They defend it as being 'war' as they justify everything, however inhuman, done because the military needs of Germany are alleged to call for it. It shows how hard pressed the military power is beginning to find itself at this latest stage of the war."

From out the ghastliness of war many splendid inventions for healing have appeared. Among these is the new French cure for burns called "amberin." Under its use instant relief is given and flesh and tissues resume their natural healthy conditions in a very short time. It was invented by Dr. Bart de Sanfort for the treatment of soldiers burned by liquid fire.

Two years ago Lloyd George was in favor of State purchase of the liquor interests, but was forced by the opposition within the Cabinet to drop his proposals. It is now believed that, as Premier, he will press the liquor question to an issue, and so at last a "dry" Britain may be in sight, the opinion having grown steadily that

The War Council of Great Britain Under Premier Lloyd-George



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Lord Derby.

Lord Milner.

Arthur Henderson.

Bonar Law.

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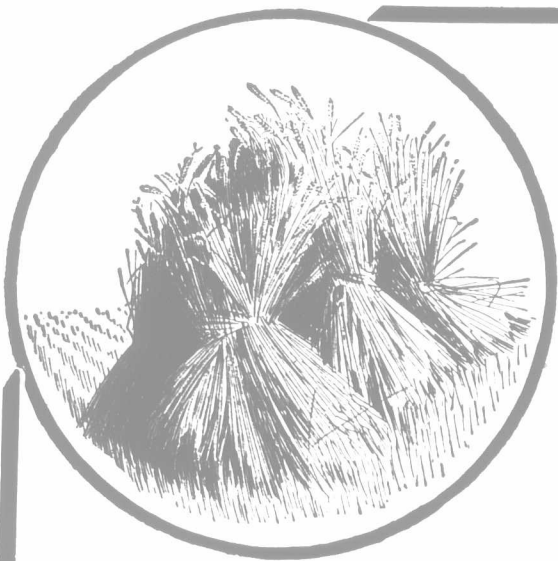
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factories, sorely need all of the air and sunshine elsewhere that they can get. It is safe to say that if Mrs. Green had erected factories they would have been on the very best of modern plans. . . . In many other ways, too, evidences of her keen sense of justice and common-sense, and not a little of real heart besides, are leaking out, and so when she has left her country forever it is beginning to know her. It had judged from the surface, and pronounced judgment. It had not paused to dig down nor to wait for developments.

But is not that what we all do, more or less? We judge people by what they seem to us at first or second sight, seldom pausing to consider that but one face has been presented to us, and that, perhaps, we *compelled* that face. As a matter of fact most people, probably all, have two or three faces representing so many selves. We are all "Dr. Jekyll and Mr. Hyde," in some degree. Sometimes oneself pops up, sometimes another, willy-nilly, puzzling ourselves as well as other people. Sometimes circumstances cause the resurrection-act, and sometimes—folks. You know as well as I that some people draw you out, make you radiate, thaw out your every icicle; when with them you are quite likely to "forget yourself," so that you can chat away on absolutely level ground; in short the very sight of them brings your *best* self uppermost. You also know as well as I that occasionally you meet others who throw you back upon yourself. You may not dislike these people particularly, you may even admire them, or love them so strenuously as to induce an anxiety that only constrains. The effect is the same; you have the constant sensation of being frozen in their presence; your ideas leave you; you appear indifferent, or "a stick", or a nonentity, and need not be at all surprised if it comes to your ears some day that you have been set down as such.

And now we have come to the point:—If some folk affect us so, against our will and reason, judging us by the face or self that we so helplessly present, is it not possible that we may affect others similarly, and judge them by the face they present?—At least it may be wise to suspend setting anyone down as this or that, and to hold oneself open to a possible friendship until time and opportunity have demonstrated an incompatibility too great to build much upon.

It's all very strange and confused, this question of people. Of course I think it is possible to like almost everyone enough to realize pleasant passing acquaintanceship with them, and to love humanity in general so much as to devote one's whole life to helping it, so far as one's powers go. But the question of deep friendship seems to occupy a place of its own. Sometimes I think Pierre de Coulevain was right when she said (in "On the Branch") that we go in "circles", that, as a rule, when we meet another person of our very own circle, even though it be for the first time, even though he or she be of an entirely different stratum in the social fabric, we are at once conscious of it,—there is a something that draws us, makes us feel entirely at ease, gives us a feeling of immediately understanding and being understood; whereas (so she argues) in touching a person of another circle there is a consciousness of distance,—the meeting may be pleasant enough superficially but neither will ever be able to sound the depths of the other.

And yet, as the first part of this ramble has attempted to show, first impressions cannot *invariably* be trusted. There is always the exception. It is quite possible, for instance, to be immediately attracted by some grace or prettiness in a person whom one may find, on closer touching, to be foreign as foreign can be. On the other hand, too, it is just as possible, to fail to be drawn to someone who may prove later to be one's very soul's mate. I remember very well my own feeling in regard to a girl whom, not knowing her name, I used to designate, in my school-days, as "the sour girl." When we met I liked her, and as the years passed on knew her for one of the finest women who have crossed my path; there was not an ounce of "sourness" in her disposition; she was intellectual, witty and generous.

In just such a way do we often jump at a conclusion because of a single manifestation or occurrence, failing to

drink is standing in the way of victory, and prolonging the war. The cost of purchase will be from £250,000,000 to £300,000,000.

The victorious Shereef of Mecca has proclaimed himself King of Arabia, which, should his claims hold, will henceforth be absolutely independent of Turkey.

The Ingle Nook.

[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this Department for answers to questions to appear.]

Dear Ingle Nook Folk.—When prowling about in my topic drawer this morning, seeking for a subject upon which to write, I came upon a small clipping about Mrs. Hetty Green. You all know who she was,—the wife of a multimillionaire; after his death, probably the wealthiest woman in the United States. Her fame, however, hinged more, perhaps, upon her reputed stinginess than upon her great possessions. She was eccentric; she wore the same old black dress year in, year out, and the same old bonnet for ten solid years "on end"; she systematically refused to issue passes on her railways, and, when one was applied for, invariably sent to the unlucky applicant a list of quotations from the Bible, beginning with "Thou shalt not pass," and so on through six or seven very irrelevant "verses" containing similar injunctions against "passing". It is to be hoped that the recipient had a strong sense of humor. Indeed it is not hard to imagine that the old lady herself sent all such epistles off with her tongue in her cheek, and a twinkle in her shrewd little eyes.

All this was widely known of Hetty Green while she lived. It now comes to light that the very best houses for work-people that Chicago can boast were built by her. To be sure she charged rent for them, but it is nowhere stated that the rates were exorbitant. It is poor charity that gives where giving is unnecessary, and it is something to have supplied the very highest value for the money—good, honest, bright, sanitary dwelling-places for hard-working folk who, employed indoors, often in insufficiently ventilated and poorly lighted



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H. A. MACDONELL, Director of Colonization, Parliament Buildings, TORONTO, ONT.
HON. G. HOWARD FERGUSON, Minister of Lands, Forests and Mines

think of the thousand good things that may be behind.—To be very concrete: Have you never been "caught" with the house all in a muddle, perhaps after it and you have been immaculate for months? And have you not feared that you would be instantly classified as a bad housekeeper?—So you would be unless the "catcher" happened to be a person wise enough to make allowance, understanding that accidents will happen. At such times, too, were you not nervous and flustered, likely to give an utterly erroneous impression of yourself?—Oh these accidents!

"All the same" I do feel that, given time for real knowing, there are some with whom we can form close and permanent friendships, and others with whom only surface friendships are possible. These others can, no doubt, form bosom friendships with one another, and so the world is, after all, a satisfactory enough place for everybody. I suppose the great basis—the center of each "circle"—is principles. If we have dipped up with others from the same wells of principle, with them we are likely to have formed already the bonds of friendship. We have eaten and supped with them; together we have taken sacrament.

But one thing is certain: Real friendship is worth any effort. A real friend is a bit of heaven. Folk make a great mistake who keep too much to themselves, were it only for the loss to their own nature; in time they get warped views of the world,—no one else seems right, there is danger of self-conceit, warmth fails. Thus it is that such excuses for meetings as are afforded by Literary Societies, Women's Institutes and Farmers' Clubs, are of such inestimable value to the rural districts. Yes, truly it is necessary to mingle considerably with "the crowd", reserving time, of course, for the silences in which things are thought out. Only so can one stumble against the others of one's own "circle." Only so can one achieve the out-going of self that means even more than the in-coming from another soul. . . . One can make friends for eternity even while withholding the too-much confidence in regard to personal matters that is seldom wise and always useless. So will roses drop along the way shedding their thorns before they fall.—

JUNIA.

The Farmer and Nature.

Dear Junia.—I have been selfishly enjoying the Ingle Nook for some time without once writing a letter myself for publication, either because I was too busy or because I'd think of some of my long suffering correspondents who had been kept waiting for an answer to their last letter. To-night, although perhaps I never was so pressed with work and with a list of unanswered letters on my conscience, I am making a start. I was rather amused a short time ago by the letter written by a farmer's wife in answer to one written by someone from the city. My husband read the letter to me and I believe he was suspicious that I had written the letter myself, there was so much in it that I might have said, especially about it being a fact that farmers have a love of the beautiful in nature. I think though, that it would be easy for people living away from us, in towns and cities to doubt it. I'm inclined to doubt it of my neighbors, and I can readily believe they would not expect it of us. I think that the habit of repression grows on country people. We do not see one another often, and hence there is much left unsaid.

I could not help thinking to-day what a chance we have to study character here where we are not too crowded, provided we have the necessary sympathetic insight, a keen sense of humor, and the education to express ourselves. As I sat in church to-day (it was only a small country church, and the congregation too, was small) I could not help thinking as I noticed the heads of the families sitting in their pews, what a variety of character there was among them,—food enough and to spare for just such books as we love best to read, if only there was one gifted enough among us who could weave our varied experiences and characteristics together into some readable form. There was the man stolid and selfish-looking but successful nevertheless, and the man with the big heart and a love of pleasure but rather empty of pocket, the widower with his

troop of little ones, the careless loose-looking man with the dainty wife and children, the man who looks quiet and insignificant by his well-dressed wife and family, but who reverses the appearance of things when home, sometimes, by the help of the cup that cheers and also inebriates. There also was the mother with the irrepressible tots whom nothing less than a well-trained conscience could have brought, then the bride and the mourner. I might keep on until my letter becomes monotonous if it has not already done so. But who shall speak of farmers as a class as if they have no individuality? In fact I believe one develops more independently where there is more room to do so. But if I ever write a letter it is with one hand on the cradle or with a vision of little rogues making hay while the sun shines, so I will not often tire my fellow Ingle-ites with such a long letter. Wishing you all as Happy a New Year as can be expected in this time of world-wide grief, I will now close and enclose a beautiful poem by Katherine Tynan which some who have not read may like.

Lest Heaven be thronged with grey-beards hoary,
God, Who made boys for His delight,
Stoops, in a day of grief and glory,
And calls them in—in from the night,
When they come trooping from the war,
Our skies have many a new, gold star.

Heaven's thronged with gay and careless faces,
New waked from dreams of dreadful things,
They walk in green and pleasant places
And by the crystal water springs,
Who dream of dying and the slain
And the fierce thirst and the strong pain.

Dear boys! they shall be young forever!
The Son of God was once a boy.
They run and leap by the clear river,
And of their youth they have great joy.
God who made boys so clean and good,
Smiles with the eyes of fatherhood.

Now Heaven is by the young invaded,
Their laughter's in the House of God,
Stainless and simple as He made it,
God keeps the heart of the boy unflawed.
The old wise saints look on and smile,
They are so young and without guile,

Ah, if the sonless mothers weeping,
And widowed girls could see inside,
The glory that hath them in keeping,
Who went to the great war and died,
They would rise and put their mourning off,

And say: Thank God he has enough.
A LOVER OF THE FARM LIFE.

I quite agree with you that very many farm-folk get even the finest flavors of nature, although they may not talk much about it. Indeed I go further, and believe that one has to spend one's early years on a farm to love Nature as she may be loved. The hills which are companions all the way as one grows up; the sunsets seen from the highest eminence on one's own land, where every landmark is loved because of associations; the very stones of the field, hallowed because loved ones have rested on them; the tall grasses, the bloodroot and cardinal flowers which one has sought, year after year, in familiar spots, never yet disappointed,—What all these mean to real farm folk! City people may admire—although usually it takes great natural beauty to draw forth their admiration—a few of them, who are poets or botanists, may even see beauty in a common little woods nook or a wayside weed—but for downright heart-love, every time, give me a country-lover who has grown up in the country.

I am thinking just now of a quiet little valley, nothing startling about it, just a still creek with water-lilies, and a rose-lined shore and a wooded hill at one side. "It's pretty here, in a quiet way", I said to an equally quiet farmer who never gushes. "Yes," he said, "I often stand here when I'm cutting just to look around. There are lots of birds, too. I wish the wild roses would last longer."

The stanzas by Katharine Tynan, the gifted Irish poet (why should one say "poetess"?—There is no sex in art) are very poetical. How many ideas there are about the future life nowadays! Oh yes—about individuality—don't you think we need to mix much with the

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crowd, withdrawing at times for our thinking "wrestles"? Only so, it seems, can folk get balance. And so it is that "Women's Institutes" and "Farmers' Clubs", as I said before, are good for farm folk, even outside of the work they do. One could scarcely accuse Lloyd-George of lack of individuality—could one? Or Asquith, or the best and cleverest of our own statesmen? The

world-movers of all time have alternated between the crowd and the silences.

Rice Flour Recipes.

"Biddy", Grey Co., Ont., wishes some tested recipes for rice flour. Can anyone oblige her?

To Keep Cistern pipes from Freezing.

Melt equal parts of vaseline and paraffin wax together, and after wiping the pipes perfectly dry, apply with an old brush a thick coat of this mixture while it is hot.

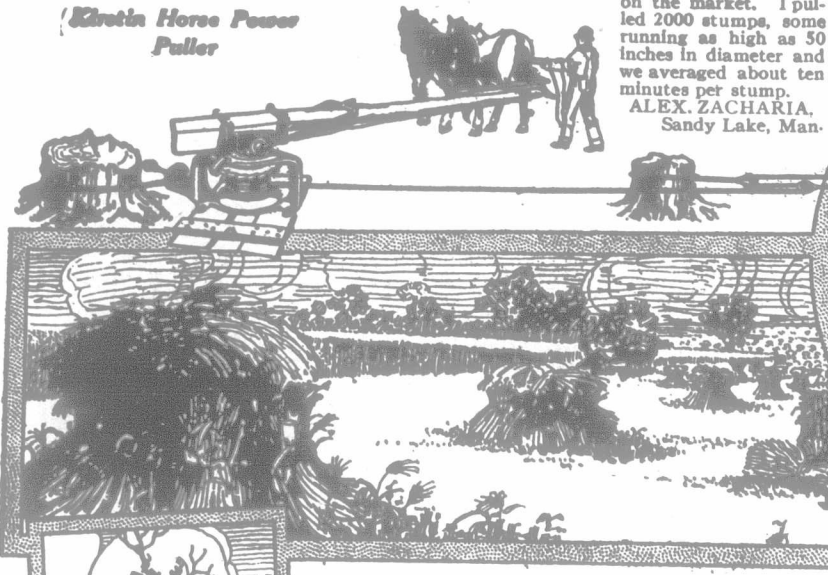
The above, sent by Mrs. S., Lambton Co., Ont., may be worth a trial.

Some Good Supper Dishes.

Scalloped Potatoes.—Butter a baking-dish, and put into it raw potatoes sliced thin with enough salt, pepper and bits of butter to flavor nicely. Fill the dish with milk, and sprinkle over the top cracker or buttered breadcrumbs and a little grated cheese if you like it.

Stuffed Baked Potatoes.—Choose nice

Kirstin Horse Power Puller



The Kirstin is the best on the market. I pulled 2000 stumps, some running as high as 50 inches in diameter and we averaged about ten minutes per stump. ALEX. ZACHARIA, Sandy Lake, Man.



60 stumps in 100 minutes. Record made by Kirstin Horse Power Puller under official test at the Land Clearing Demonstration of the University of Wisconsin.

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No deeply imbedded tap-root is too big for the Kirstin Horse Power Puller. Its mighty strength is irresistible because of its triple power and other exclusive Kirstin features. It will clear more than two acres at one setting without strain to man, horse or machine. For 21 years it has proved its invincibility on Southern stump fields.

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Send for Free Book "The Gold in Your Stump Land." Write today. You are the judge, read the letters from farmers who have bought Kirstins and are glad they did. Look at the photographs of the immense stumps and trees they have pulled; of the houses, barns and bridges they have moved. Learn how, after clearing your land, you can make money by renting your Kirstin to your neighbors. Learn about Kirstin Service, forever free to all Kirstin Owners. Read the interesting information on all kinds of land clearing. Don't buy a puller until you read this book.

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smooth, rather large potatoes, and scrub them well with a little brush, then bake them and set away to cool slightly so they can be handled. Cut off a small piece and scoop out the inside. Mash fine with butter, salt and a little cream or good milk, also some chopped parsley if liked. Refill the potato shells with this mixture and put back in the oven until the part in the open space is baked brown. Serve at once.

Bean Porridge.—Pick over and wash 2/3 cup of white beans. Boil slowly in clear water until dry then add the liquor in which meat has been boiled and cook an hour longer. Thicken slightly with flour blended in a little water, season to taste, add a little milk if you like, and serve very hot with buttered toast or hot biscuits.

Bannocks.—One cup thick, sour milk, 1/2 cup sugar, 1 egg, 2 cups flour, 1/2 cup cornmeal, 1 teaspoon soda, a pinch of salt. The mixture should be stiff enough to drop from a spoon. Drop it, size of a walnut, into deep, boiling fat, and serve hot with syrup. The bannocks may be baked, but are not quite so good. If baked add a very little shortening.

Fried Bread.—Fry slices of stale bread,

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not too thin, in bacon fat. As it fries pour over each slice a little milk and salt to taste, then turn and brown the other side. Serve by itself or with jam or apple-sauce.

Hot Chicken or Ham Salad.—Mix together 1 cup cold minced chicken, 1 tablespoon olive oil or 2 of melted butter, a little grated onion, salt and pepper, also celery salt if you have it, 1/2 tablespoon lemon juice, 1 cup milk or chicken stock. Mix the chicken with the butter, lemon juice and seasonings and let stand while you make a white sauce with a little more butter, the flour and milk or stock. When the sauce is hot add the chicken, let heat, and serve on slices of buttered toast. Last of all sprinkle over it finely chopped celery or parsley if you have it. Boiled ham may be used instead of the chicken.

Ham and Potato Croquettes.—One cup hot mashed potato mixed with half of a beaten egg. Take up a tablespoonful and after patting it out lay in the center a teaspoonful of chopped ham. Turn the potato over and roll into a ball. Dip the balls in flour, egg and crumbs, and fry them in deep fat, or brush them with melted butter and bake until slightly browned.

Duchesse Potatoes.—Two cups cold mashed potatoes, 1 egg, 2 tablespoons cream. Beat the yolk of the egg thick and add the cream to it, then mix it well with the potatoes. Shape in small cones, place on a buttered pan. Beat the white of the egg slightly, add to it a teaspoon of milk and brush each cone with the mixture. Bake till golden brown, and serve on a hot platter. Garnish with parsley if you have it.

Spider Corn Cake.—Three-quarters cup corn meal, 1/4 cup flour, 1 tablespoon sugar, 1/2 teaspoon salt, 1/2 teaspoon soda, 1 egg, 1/2 cup sour milk, 1/2 cup sweet milk, 2 tablespoons butter. Sift the dry ingredients and mix them with the well-beaten egg and milk. Beat thoroughly. Melt the 2 tablespoons butter in an iron spider and pour the mixture into it. Pour the 1/2 cup sweet milk over the top of the batter and set carefully into a hot oven. Bake for 20 minutes and serve hot with jam or syrup.

Mother Johnson's Pancakes.—Two cups sour milk, 2 cups flour, 1/2 teaspoon salt, 2 eggs, 1 teaspoon soda. Make a batter of the flour and milk and let it stand all day. Add the beaten yolks of the eggs, the salt and soda dissolved in a tablespoon of hot water, and last the whites of the eggs beaten to a stiff froth. Bake on a hot, well-greased griddle.

THE FASHIONS.

See inside of back cover for fashions.

Current Events.

Sir Frederick Borden, once Minister of Militia for Canada, died at Canning, N.S.

The Ontario Government will appropriate \$1,000,000 to assist returned soldiers to go on the land. The money will be advanced so that it can be paid back in easy installments.

Total prohibition, covering the importation, manufacture and sale of intoxicating liquors of every kind, has been put into force in Newfoundland.

An order to dilute whisky still further will go into effect in Great Britain on February 1st. The object of the measure is to save alcohol for war purposes, and provide for the increased efficiency of munitions workers, to whom drink has been a great drawback.

Great Britain has built a new airplane that can travel at the rate of 128 miles an hour.

Much excitement prevails in Russia over the evident murder, by men of high rank, of a monk named Rasputin, known as "the Mad Monk." Rasputin, who exercised great influence over the Czar and Czarina, was known to be strongly pro-German.

Great Britain, because of dissatisfaction with Norway's methods of exporting ore and fish, according to certain agreements, is prohibiting the exportation of coal to that country.

The American Senate has voted approval of President Wilson's request that

the European belligerents state the terms upon which they will consider peace.

Premier Lloyd-George and Viscount Milner, of the British War Council, have arrived in Rome to confer in regard to the present situation with representatives of the Italian Government, Premier Briand and M. Thomas, of the French War Council, and Gen. Palitzer representing the Russian staff.

The Greek Government still plays with the Entente by agreeing to submit to the blockade while refusing to accept certain clauses of the recent note sent by the Allies, especially those which demand reparation for the recent fighting in Athens, liberation of Venizelist prisoners, and those which, it is claimed, would be an admission that Greece contemplated attacking the Allied army at Salonika.

Great Britain now has 2,000,000 men in the field. During 1916 the Allies took 582,723 prisoners. Of these over 400,000 were taken by Russia, 78,500 by France, 40,800 by Britain, 52,250 by Italy, and 11,173 by the various troops in Serbia.

From the British transport, Ivernia, carrying troops, torpedoed and sunk in the Mediterranean on New Year's Day, 4 officers and 146 men are missing.

The Eastern battle line now stretches unbroken from the Gulf of Riga on the Baltic to the mouth of the Danube on the Black Sea. Braila, the chief commercial center of Roumania has fallen before von Mackensen's troops, and Galatz is likely to follow within a few days. Meantime, in the valley of the Sereth, Russian and Roumanian forces are fighting furiously against von Falkenhayn.

From the West front nothing very definite is reported. The artillery duel continues without abatement, and on Jan. 5th a German raid south of Loos was speedily driven back, chiefly by Canadian troops. Peace is scarcely thought of, and the Entente Allies, in a collective note, have declared, in reply to Germany's proposals, that they refuse to consider a note which is, on the face of it, empty and insincere.

The note, signed by Great Britain, France, Russia, Belgium, Italy, Japan, Montenegro, Portugal, Roumania and Serbia, points out that at the Hague Conference it was a German delegate who refused all proposals for disarmament; that in July, 1914, it was Austria-Hungary that declared war on Serbia; that the neutrality of Belgium was violated by the advance of German troops across her borders, and the declaration that the treaty guaranteeing her nationality was "only a scrap of paper." No peace is possible, it states, until reparation for violated rights and liberties has been made, with recognition of the principle of nationalities and free existence of small states.

In the meantime Holland fears the possibility of being drawn into the war, and it is believed that the Germans contemplate a dash across Switzerland, similar to that made across Belgium, to reach the French borders. This possibility means that Great Britain is taking over a greater length of the line in order that French troops may be withdrawn to guard this new territory. While all these preparations are being made reports are filtering out from Germany in increasing numbers that she is now suffering acutely for want of food, and that rioting of hungry people occurs in her markets every day. The Teuton successes in Roumania, however, are being exploited to keep up the morale of the people and to prevent internal rebellion against the continuation of the war.

The Dollar Chain

A fund maintained by readers of "The Farmer's Advocate and Home Magazine" for the Soldiers and Sufferers in Europe.

Contributions from Dec. 29 to Jan. 5: "Scotia," London, Ont., \$1; Albert Hawkins, Markham, Ont., \$1.50; D. C. F. Melbourne, Ont., \$5; Mrs. Jno. Craig, St. Augustine, Ont., \$1; Mr. and Mrs. T. J. Bamford, Auburn, Ont., \$5; M. G. McC., St. Mary's, Ont., \$20; "Wayback," Bellingham, Ont., \$1.50; Mrs. D. E. Hodgins, Denfield, Ont., \$2.50; Evergreen, York Co., Ont., \$1.50; "A Friend," Langton, Ont., \$2; W. J. Dolson, R. 5, Chatham, Ont., \$3.50; Josiah R. Thomas, New Lowell, Ont., \$1; E. A. Galt, Ont., \$1.

Previously acknowledged.....\$3,401.75

Total to Jan. 5th\$3,448.25
Kindly address contributions to "The Farmer's Advocate and Home Magazine," London, Ont.

Letter of Thanks to Contributors.

The following letter has been received from Mrs. H. A. Boomer, who is in charge of one department of the Belgian Relief work in this city:

January 4th, 1917.

Dear Sir:
Once again we beg to acknowledge, and we do so with sincere gratitude, a further contribution from your Dollar Chain subscribers, this time as large a one as \$50. You have so continuously remembered our special branch of the Belgian Relief work that a large measure of its success is surely due to the readers of "The Farmer's Advocate." Would you ask "Junia" to tell them so in her pages, for somehow I have a personal feeling that a good many of the patriotic gifts from the Dollar Chain have had their inspiration through her corner of our dear old paper. With our thanks, perhaps, she may like to add that this special donation begins our ninth £50 (fifty pounds) remittance; the last having just been as usual despatched through the National Committee, under pledges and guarantee of the highest official authorities of England and Belgium, to insure safe delivery to the sufferers who have such a claim upon our sympathies. For our Social Council of Women and for myself, its President, I remain, very gratefully yours,

H. A. BOOMER.

Parcels for Northern Ontario Fire Sufferers.

In reply to those who are asking where to send parcels of clothing and other things for those in need in Northern Ontario, we may say that we have been given the names of two gentlemen who will be pleased to distribute help wherever most needed:

Rev. D. L. Gordon, Cobalt, Ont.
Rev. J. McLaughlin, Milberta, Ont.
Kindly keep these addresses, and, when sending parcels be sure to prepay express or freight charges.

The annual meeting of the Menie District Ayrshire Breeders' Club will be held in the Board Room of the Department of Agriculture, Stirling, Ont., on Thursday, January 18th, 1917, at 10 a.m. A full attendance is desired.

Our Serial Story

Serial rights secured from the Bobbs-Merrill Publishing Company.

The Brown Mouse.

CHAPTER XIV.

THE COLONEL TAKES THE FIELD.

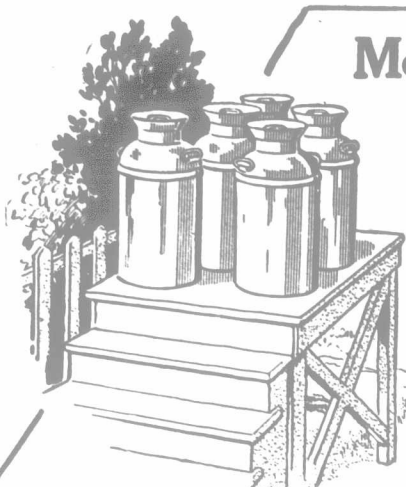
Every Iowa county has its Farmers' Institute. Usually it is held in the county seat, and is a gathering of farmers for the ostensible purpose of listening to improving discussions and addresses both instructive and entertaining. Really, in most cases, the farmers' institutes have been occasions for the cultivation of relations between a few of the exceptional farmers and their city friends and with one another. Seldom is anything done which leads to any better selling methods for the farmers, any organization looking to co-operative effort, or anything else that an agricultural economist from Ireland, Germany or Denmark would suggest as the sort of action which the American farmer must take if he is to make the most of his life and labor.

The Woodruff District was interested in the institute however, because of the fact that a rural-school exhibit was one of its features that year, and that Colonel Woodruff had secured an urgent invitation to the school to take part in it.

"We've got something new out in our district school," said he to the president of the institute.

"So I hear," said the president— "mostly a fight, isn't it?"

"Something more," said the colonel. "If you'll persuade our school to make an exhibit of real rural work in a real



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Those who use Royal Purple Stock Specific secure from 3 to 5 pounds more milk from each cow per day. Figure the increase on even a small herd. It will pay you to feed Royal Purple to your cows, and steers can be fattened a month earlier by its use.

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is a digester, tonic, an animal conditioner. It aids digestion and assimilation and enables

stock to get the maximum amount of good from the food eaten. Greater gains are secured from less grain, and the cost of the Royal Purple fed is very trifling. It will improve the condition of the worst, most run-down animal on your farm. If you have a poor, miserable, run-down, hide-bound horse in your possession, try it on him first and be convinced.

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FREE BOOK

Write for FREE 80-page booklet on the common diseases of stock and poultry and our other products. It tells how to raise calves without milk, also how to build hen-houses.



Cases of Eggs Winter and Summer

Keep your fowl healthy, active and vigorous by feeding Royal Purple Poultry Specific in their mash, once daily, and you will certainly get eggs, winter and summer.

Mrs. W. Jackson, Saskatoon, writes: "Gentlemen,—I tried feeding your Royal Purple Poultry Specific last winter. I had fresh eggs all the time. Sold eggs from January to the 1st of March, and I know it was the Specific did it, and the hens looked healthy after using it. I started feeding them again this fall, and got eggs in less than a week."

Royal Purple Poultry Specific

Manufactured from roots, herbs, minerals, etc., is a complete substitute for the grasses, seeds, herbs and insects the hen picks up during the summer, necessary in making hens lay. Royal Purple Poultry Specific tones up the whole system, keeps the stomach and bowels right—prevents diseases, such as Cholera, Roup, Rheumatism, Typhoid and kindred diseases.

Mr. J. Brandon, Ayr, writes as follows: "Dear Sirs,—Kindly send me one of your booklets. We didn't have an egg all winter until we started using your Royal Purple Poultry Specific, and it is the best thing I have ever used. We are getting eleven to twelve eggs per day now on account of feeding them the right food."

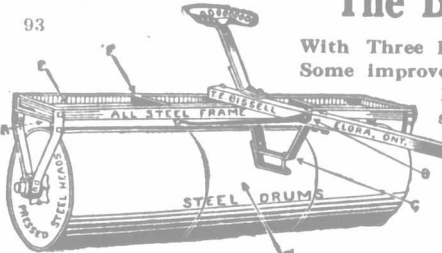
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T. E. Bissell Co., Limited, Elora, Ont.

The Uncertainty

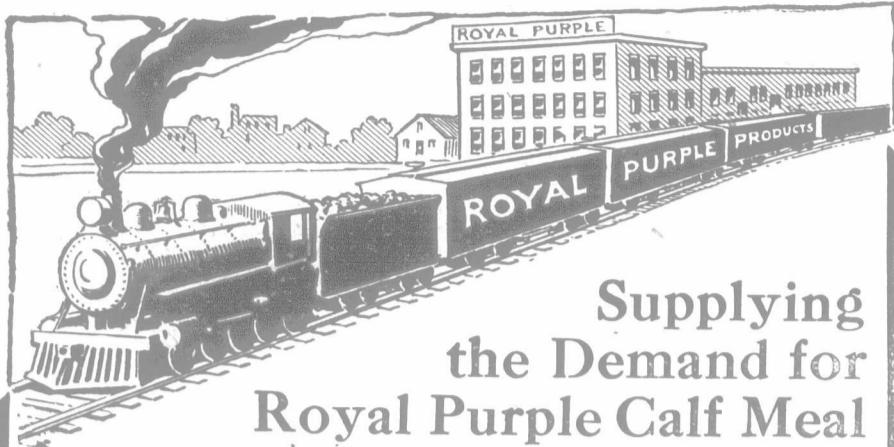
of Life makes Insurance an imperative duty.

Everyone agrees—but many go no further. Take the first step towards securing suitable and sufficient protection by requesting information concerning the Great-West Policies. These policies cost least and return the highest profits. They are clearly worded and sufficiently diverse to meet all needs.

Your enquiry for rates will be given prompt and courteous attention. Do not delay any longer, write at once, giving date of birth, to

THE GREAT-WEST LIFE ASSURANCE COMPANY
Dept. "Z" Head Office; WINNIPEG

In requesting information ask for a Desk Calendar for 1917



Supplying the Demand for Royal Purple Calf Meal

This baby food for young animals is partially pre-digested, and can be fed to the youngest animals with perfect safety. It WILL NOT cause stomach or bowel trouble, which are serious ailments in young animals. Royal Purple is a sure preventive for scouring.

Calves Gain Rapidly Without Milk

When the calves are 3 or 4 days old they can be fed Royal Purple Calf Meal and raised just as well without one drop of milk. What prominent breeders remark: Mr. Geo. W. Collins, Plainfield, Ont., writes: "Gentlemen,—In regard to your Calf Meal, I think you have the best on the market, as people who have bought it give it great praise. Some have taken their calves off sweet milk, and feed them nothing but your Calf Meal and water, and say they are doing as well on it as they did on the whole milk."

To Whom It May Concern:

This is to certify that I have secured your "Royal Purple" Calf Meal from our druggist, Mr. T. C. Nicholls, of Uxbridge, and can speak of this meal in the highest terms. I have used other calf meals, but this one is the best I ever tried. I never saw a calf gain more rapidly and thrive better than mine did while using your "Royal Purple" Calf Meal. I can cheerfully recommend it to all our stockmen who wish to raise large, healthy calves.—Stanley W. Croxall.

Note—The above Mr. Croxall keeps a large herd of pure-bred Holstein cattle, and is an excellent authority on Calf Foods.

Royal Purple Calf Meal is equally good for young colts, lambs and young pigs. Put up in 25-lb., 50-lb. and 100-lb. bags. Secure it from our dealer in your town.

W. A. Jenkins Mfg. Co., Ltd., London, Can.

Uxbridge, Aug. 5th

our druggist, Mr. T. C. Nicholls, of Uxbridge, and can speak of this meal in the highest terms. I have used other calf meals, but this one is the best I ever tried. I never saw a calf gain more rapidly and thrive better than mine did while using your "Royal Purple" Calf Meal. I can cheerfully recommend it to all our stockmen who wish to raise large, healthy calves.—Stanley W. Croxall.

FREE BOOK

Send for our 80-page book which describes the common diseases of stock and poultry; also methods of feeding and our many products. Get a copy to-day.



Condensed advertisements will be inserted under this heading at 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 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 advertisements inserted for less than 50 cents.

BREEDER OF HIGH-CLASS BARRED ROCKS and Pekin Ducks. Stock for sale at right prices. Leslie Kerns, Freeman, Ont.

BRONZE TURKEYS—EXTRA LARGE, WITH heavy bone. Runner ducks, Brahmas, Spanish, Barred Rocks, Partridge, Wyandottes, White Leghorns, Rabbit, Hound and Bull Terrier puppies. Breed right. Priced right. John Annesser, Tilbury, Ont.

BRONZE TURKEYS—THE LEADING prize-winners at the Western Fair, also at the Guelph Winter Fair. Won eleven prizes on eleven entries. Also best collection. W. H. Beattie, Wilton Grove, Ont.

CHOICE WHITE LEGHORN COCKERELS—Canada's best laying strain. Robt. Kemp, 39 Elmwood, London.

FOR SALE—MAMMOTH BRONZE TURKEYS heavyweights, bred from imported stock. Angus Beattie, R.R. 1, Wilton Grove, Ont.

FOR SALE—CHOICE WHITE WYANDOTTE cockerels, \$3 each. Laying strain. W. T. Fritz, Brighton, Ont.

PLYMOUTH ROCKS—BARRED ROCKS best laying strain. We need room, and can sell at bargain prices. Central Ontario Poultry Yards, Colborne, Ont.

WHITE WYANDOTTES, LARGE, VIGOROUS stock, and good layers; males \$2.00, female \$1.50. Write A. Leckie, Sarnia, Ont.

Social Service Congresses

TORONTO: Convocation Hall, The University, Jan. 31-Feb. 2.
MONTREAL: Y.M.C.A., Jan. 29-Jan. 30.

Under the auspices of
The Social Service Council of Canada
In the interests of

The Social Awakening in Canada

Among the many distinguished speakers are: Mr. Raymond Robins, of Chicago, former Minister, Millionaire, Social Reformer and Prince of Orators; Dr. Hastings H. Hart, of New York, greatest Child Welfare Expert on the continent.

A whole session's conference given to Rural Life. The speakers: Dr. W. A. Riddell, Alex. McLaren, B.S.A., Dr. J. B. Dandeno, Rev. W. K. Shearer, Dr. T. Albert Moore.

Subjects at Rural Life Conference: "Recreational Life," "Educational Ideals," "The Church and Rural Life," "The Social Organization of the Rural Community."

Some other subjects are: "The Returned Soldier and the Land," "Women in Politics and Industry," "The Patronage System," "Graft," "Social Reconstruction After the War," "Race Track Gambling," "Prohibition," etc.

Other speakers are: Hon. W. H. Hearst, N. W. Rowell, Sir Geo. Foster, E. C. Drury, Dr. J. A. Macdonald.



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.

FARMER WANTED, MARRIED, ENERGETIC, capable of operating fruit, dairy, poultry. Hundred acres. McFadden, Excelsior Life Bldg., Toronto.

MANAGER—ENGLISH FARMER WANTS situation on mixed farm; aged 33; married; one child. Box "E," Farmer's Advocate, London, Ont.

WE REQUIRE PARTIES TO KNIT MEN'S wool socks for us at home, either with machine or by hand. Send stamp for information. The Canadian Wholesale Dis. Co., Dept. S., Orillia, Ont.

WANTED—ELDERLY, SINGLE, FARM hand, by year. Must furnish good references. Chas. C. Atkinson, Amherstburg, Ont.

PATENTS AND LEGAL FETHERSTONHAUGH & CO., Patents Solicitors—The Old Established Firm, Head Office, Royal Bank Building, Toronto, and 4 Elgin Street, Ottawa, and other principal cities.

Tenant Wanted for an Ideal Stock Farm

Containing two hundred and thirty acres (230) of the best clay loam, and beautifully situated on the north shore of Lake Erie, in the township of Dunn, a half mile west of Port Maitland, known as the Splatt Farm. Good buildings. No other than the most practical and capable need apply. For further particulars address:

The Misses Splatt, Dunnville, R.R. 7
or Bradford & Bradford, Solicitors,
Dunnville, Ont.

Tamworths

FOR SALE

Large number of choice males and females, all ages.

Herold's Farms, Beamsville, Ont.

rural school, I'll promise you something worth seeing and discussing."

Such exhibits are now so common that it is not worth while for us to describe it; but then, the sight of a class of children testing and weighing milk, examining grains for viability and foul seeds, planning crop rotations, judging grains and live stock was so new in that county as to be the real sensation of the institute.

Two persons were a good deal embarrassed by the success of the exhibit. One was the county superintendent, who was constantly in receipt of undesired compliments upon her wisdom in fostering really "practical work in

the schools." The other was Jim Irwin, who was becoming famous, and who felt he had done nothing to deserve fame. Professor Withers, an extension lecturer from Ames, took Jim to dinner at the best hotel in the town, for the purpose of talking over with him the needs of the rural schools. Jim was in agony. The colored waiter fussed about trying to keep Jim in the beaten track of hotel manners, restored to him the napkin which Jim failed to use, and juggled back into place the silverware which Jim misappropriated to alien and unusual uses. But, when the meal had progressed to the stage of conversation, the waiter noticed that gradually the uncouth farmer became master of the situation, and the well-groomed college professor the interested listener.

"You've got to come down to our farmers' week next year, and tell us about these things," said he to Jim. "Can't you?"

Jim's brain reeled. He got to a gathering of real educators and tell his crude notions! How could he get the money for his expenses? But he had that gameness which goes with supreme confidence in the thing dealt with.

"I'll come," said he. "Thank you," said the Ames man. "There's a small honorarium attached, you know."

Jim was staggered. What was an honorarium? He tried to remember what an honorarium is, and could get no further than the thought that it is in some way connected with the Latin root of "honor". Was he obliged to pay an honorarium for the chance to speak before the college gathering? Well, he'd save money and pay it. The professor must be able to understand that it couldn't be expected that a country school-teacher would be able to pay much.

"I—I'll try to take care of the honorarium," said he. "I'll come."

The professor laughed. It was the first joke the gangling innovator had perpetrated.

"It won't bother you to take care of it," said he, "but if you're not too extravagant it will pay you your expenses and give you a few dollars over."

Jim breathed more freely. An honorarium was paid to the person receiving the honor then. What a relief!

"All right," he exclaimed. "I'll be glad to come!"

"Let's consider that settled," said the professor. "And now I must be going back to the opera-house. My talk on soil sickness comes next. I tell you, the winter wheat crop has been—"

But Jim was not able to think much of the winter wheat problem as they went back to the auditorium. He was worth putting on the program at a state meeting! He was worth the appreciation of a college professor, trained to think on the very matters Jim had been so long mulling over in isolation and blindness. He was actually worth paying for his thoughts.

Calista Simms thought she saw something shining and saint-like about the homely face of her teacher as he came to her at her post in the room in which the school exhibit was held. Calista was in charge of the little children whose work was to be demonstrated that day, and was in a state of exaltation to which her starved being had hitherto been a stranger. Perhaps there was something similar in her condition of fervent happiness to that of Jim. She, too, was doing something outside the sordid life of the Simms cabin. She yearned over the children in her care, and would have been glad to die for them—and besides was not Newton Bronson in charge of the corn exhibit, and a member of the corn-judging team? To the eyes of the town girls who passed about among the exhibits, she was poorly dressed; but if they could have seen the clothes she had worn on that evening when Jim Irwin first called at their cabin and failed to give a whoop from the big road, they could perhaps have understood the sense of wellbeing and happiness in Calista's soul at the feeling of her whole clean underclothes, her neat, if cheap, dress, and the "boughten" cloak she wore—and any of them, even without knowledge of this, might have understood Calista's joy at the knowledge that Newton Bronson's eyes were on her from his station by the big pillar, no matter how many town girls filed by. For therein they would have been

Registered Draught Mares and Stallions

Great annual auction sale of Pure Bred Clydesdale, Shire and Percheron Stallions, Mares and Fillies will be held at the

Union Stock Yards
TORONTO

March 15th

Entries will be received up to February 15th.

Write for Catalogue now. It will be mailed to you as soon as published.

Walter Harland Smith

Manager, Horse Department

Union Stock Yards of Toronto
LIMITED



Buy Early

Present Seed Prices. Sacks Free.

	Bush.
O.A.C. No. 72 Oats, Unregistered	\$1.10
Banner Oats, Registered	1.50
Banner Oats, Unregistered	1.10
O.A.C. No. 21 Barley, Registered	1.85
O.A.C. No. 21 Barley, Unregistered	1.55

Wisconsin No. 7, Golden Glow, Leaning, Bailey, White Cap, Long-fellow, Compton's, North Dakota, Rack Cured Corn in crates at \$3.15 bus.; Rack Cured in bags, \$3.00, Crib Cured, in bags, at \$2.50, bus.

Send us your name and address, and we will mail you free one of our 1917 catalogues just as soon as they are off the press. This is not only a catalogue, but is full of information which every progressive farmer wants to know. No exaggeration, just plain facts—our prices are right. Bear in mind, also, we pay railway freight in Ontario and Quebec if your order amounts to \$25 or more. Mail us a post-card with your name and address without delay.

We are buyers of Alsike, Alfalfa, Red Clover, Timothy and Seed Grain. Send samples. We are specially in need of Rye Backwheat, Spring Rye, Emmer, Daubeney Oats, Black Oats, Black Hulless Barley, Two-rowed Barley, Pearce's Tree Beans, Sweet Garden Corn, Hairy Vetch, Siberian and Hungarian Millet.

GEO. KEITH & SONS SEEDS 124 KING ST. E. TORONTO

in a realm of the passions quite universal in its appeal to the feminine soul.

"Hello, Calista!" said Jim. "How are you enjoying it?"

"Oh!" said Calista, and drew a long, long breath. "Ah'm enjoying myself right much, Mr. Jim.

To be continued.

IF YOU HAVE A
Steel Truss Barn
 you won't be afraid of
Lightning
 It is fire-proof, durable and roomy.
 ASK FOR CATALOGUE
**The Metal Shingle & Siding
 Company, Limited**
 Preston, Ont. Montreal, Que.

Every Dairy
 equipped with milking machinery and
 utensils likely to harbour germs
Should Use
 every precaution to insure absolute
 cleanliness. Rubber tubes and teat
 cups should be immersed in chloride
 of lime solution after thorough wash-
 ing. The active disinfectant princi-
 ple of
Chloride of Lime
 is the available chlorine. That made
 and specially packed by the Canadian
 Salt Co. is full strength, yielding 33
 per cent. chlorine—the only kind that
 will serve the purpose. Buy from your
 dairy supply house or from
THE CANADIAN SALT CO., Limited
 Windsor, Ont. 212

GRAND TRUNK RAILWAY SYSTEM
WINTER TOURS

SPECIAL Fares now in effect to
 resorts in Florida, Georgia,
 North and South Carolina, Louisi-
 ana and other Southern States, and
 to Bermuda and the West Indies.

Return Limit, May 31, 1917
Liberal Stop-Overs Allowed

For full information write to
 C. E. HORNING,
 D.P.A., Union Station,
 Toronto, Ont.

\$200,000
 To lend on farms, first and
 second mortgages. Old
 mortgages paid off.
 Low interest.
E. R. REYNOLDS
 171 Yonge St. Toronto

*"I earn \$2 a
 day at home"*

You may say that, too—if you want more
 income. Easy to learn. Steady work at home the
 year round. Write Auto-Knitter Hosiery (Canada)
 Co., Ltd. Dept. 302 F 257 College St., Toronto.

Save \$100 and get tone, durability and all-round
 excellence equal to the world's best pianos. The
SHERLOCK-MANNING
 20th CENTURY PIANO is undoubtedly
 "Canada's Biggest Piano Value"
 Write Dept 18 for catalogue "T".
THE SHERLOCK-MANNING PIANO CO.
 London, Canada
 (No street address necessary)

Gossip.

A Chance for a Good Calf.

R. W. E. Burnaby, proprietor of
 Highland Lake Farms, at Jefferson, Ont.,
 where Holstein-Friesian cattle are bred,
 has leased for the season, February 1
 to June 20, 1917, the young bull, Avon-
 dale Pontiac Echo. This bull is a son
 of May Echo Sylvia and King Pontiac
 Artis Canada. Outside cows with records
 up to 30 lbs. will be accepted at a fee
 of \$100 each which insures a living calf
 and includes board of cow while at the
 farm. Write for particulars or visit the
 farm.

Choice Offering in Berkshires.

Few breeders of Berkshire swine are
 more widely known throughout Canada
 than Adam Thomson, of Shakespeare,
 Ont. At both Toronto and London shows
 for the past two years the large end of the
 major awards in the Berkshire division
 have gone to the Thomson herd. Also,
 throughout the 1916 Western Canada
 show circuit an entry of Thomson breed-
 ing often pulled a championship ribbon.
 At present the herd comprises twenty
 breeding sows, with the noted Sallie-bred
 boar, Oliver Hero 22247, the chief sire in
 service. Many of the Toronto and
 London winners this year were got by
 this sire, and there are at present about
 18 four-months sows and a half dozen
 young boars ready for service got by him,
 and all are offered for sale. The sows
 will be bred if desired. Breeders wishing
 to purchase something choice and of the
 right breeding should look up Mr. Thom-
 son's advertisement elsewhere in these
 columns and write at once. The P. O.
 address is Stratford, Ont., R. R. No. 1.

Holsteins at Willowlea Farm.

A. E. Might, of Willowlea Farm, near
 Brampton, Ont., breeder of pure-bred
 Holstein cattle, is now advertising else-
 where in these columns some choice
 things for quick sale. Although the herd
 comprises only some thirty odd head,
 there are some really good individuals as
 well as choice breeding throughout. The
 herd sire in use at present is the good, five-
 year-old bull, Siepkje of Lakeview 2nd, son
 of the 17.84-lb. cow Helena Siepkje, and
 the well-known sire Count Hengerveld
 Fayne De Kol. Helena Siepkje also has
 in the R. O. P. a record of 13,543 lbs. of
 milk made in 10 months. As nearly all
 the young stuff in the herd at present are
 by this sire, Mr. Might would consider a
 change with some breeder who has a bull
 of equally good breeding and which has
 already proven his worth. There are
 several young bulls by this sire for sale at
 present, as well as one 20-months bull
 by Sir Natoye Oakland, and all are, we
 understand, priced exceptionally reason-
 ably. Any of our readers who are look-
 ing for some new blood should visit the
 farm, which in itself is well worth a call,
 being one of the largest winners in the
 Field-Crop Competitions during the past
 ten years.

A Double header Shorthorn Sale.

The Canadian Shorthorn sale, is an-
 nounced as usual, and it apparently has
 become a fixed annual event. It is always
 interesting for it uncovers a collection of
 nice young breeding bulls and heifers, in
 thrifty, smooth condition, that invariably
 grow into valuable members of the herds
 of the United States and Canada. Many
 of the best herds in both countries have
 been strengthened by additions from this
 sale, and this year, the added attraction
 of eight young, imported bulls and a
 number of cows and heifers, bred in good
 Aberdeenshire herds, makes another in-
 teresting feature that must not be over-
 looked. Regarding the breeding of the
 lots offered, Robert Miller, of Stouff-
 ville, and Manager of the sale, writes:
 "The blood that predominates in all the
 cattle is of the kind that we are all look-
 ing for, and it is easier to buy in Canada
 than in any other country that we know of.
 It is no use trying to describe 120 good
 Shorthorns going in one sale, for it would
 tire any man to read it. Suffice to it say
 then that this lot is bred full of the best
 Scotch blood from the leading Cruick-
 shank, Marr, Duthie, Willis, Campbell
 and Bruce families, they have been bred
 here in the best herds owned by the lead-
 ing men in the business, and they are
 offering to you the best that there is in
 their herds. Heaps of money has been
 made by buying at this sale and selling
 again soon, but far more has been made
 by buying and keeping in the herds."



FAIRY SOAP

is most refreshing and agreeable for toilet
 and bath use.

Fairy Soap is made of choicest materials;
 it lathers freely and cleanses easily in any
 kind of water.

Fairy Soap—the oval, floating cake—
 cannot be excelled at any price. No
 better soap is made.

THE N.K. FAIRBANK COMPANY
 LIMITED
 MONTREAL

The floating oval
 cake fits the
 hand

"Have you a little
 Fairy in your
 home?"



Breed for Health and Vigor



GUARD your laying hens and breeders
 against breakdown under the constant
 strain of producing. Nature's own perfect tonic
 and conditioner is

**Pratts POULTRY
 REGULATOR**

12-lb. pails, \$1.25; 25-lb. pails, \$2.50; 100-lb. bags, \$9.00.
 Also in pkgs., at 25c, 50c and \$1.00, at your Dealer's.

It regulates the blood, bowels and digestive
 organs, keeps the fowls robust, produces bone
 and muscle, red combs and wattles, fertile
 eggs and sturdy chicks.

Your Money Back if Not Satisfied.

PRATTS Poultry Disinfectant is the safest and most
 economical liquid disinfectant and germicide on the
 market. Keeps down bad odors. Use it for spraying
 roosts, nests and dropping boards. 50c qt.; \$1.50 gal.

Write TO-DAY for Pratts New Book, "Poultry
 Wrinkles." It's FREE.

Pratt Food Co. of Canada, Limited
 68 J. Claremont St., TORONTO. P-8

When Writing Please Mention Advocate

NOTICE!

TO OUR CUSTOMERS:

The price of wire continues to steadily advance, and that upward trend is likely to continue for some time to come. We believe that wire is going to be much higher. Still we are selling PAGE FENCE direct to the customer, for cash, at the old low prices. We will have to sharply advance prices just as soon as we have to buy material on a basis of its present cost. It may be years before the present comparatively low prices again prevail.

THE PAGE WIRE FENCE COMPANY LIMITED.

Walkerville, Toronto

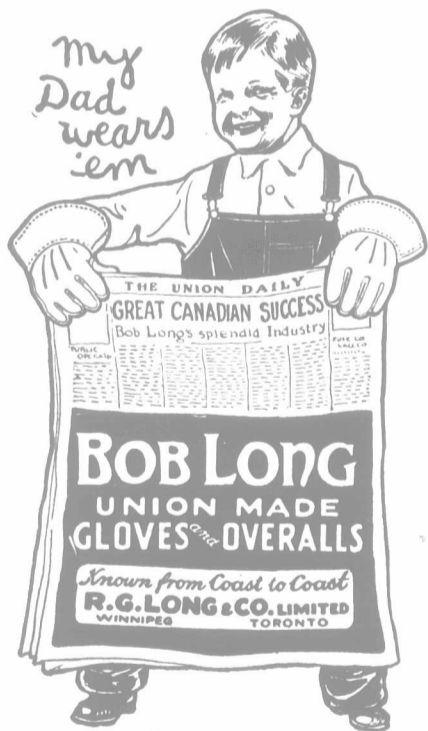
Montreal, St. John

What's in a name?
Ask the cooks who use

PURITY FLOUR



MORE BREAD and BETTER BREAD



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Piano, Organ, Violin, Mandolin, Guitar, Banjo, Etc.



Beginners or advanced players. One lesson weekly. Illustrations make everything plain. Only expense about 2c. per day to cover cost of postage and music used. Write for Free booklet which explains everything in full.
American School of Music, 73 Lakeside Bldg., Chicago

GASOLINE ENGINES! TANKS!! GRINDERS!!

NEW AND USED

To be Cleared at
Startling Prices

Hereafter, we confine our efforts solely to the Toronto engine. Having made the decision, we will take no half measures, but dispose of the Chapman and other gasoline engines on hand, new and used, at prices that will insure quick action.

Every item listed here is in A1 condition, thoroughly overhauled and a splendid investment.

Write to-day for the prices you are interested in.

ENGINES:

4	5 h.p. Stickney Engines	.....	New
2	5 h.p. Stickney Engines	.....	Re-built
7	7 h.p. Stickney Engines	.....	Re-built
4	2 h.p. Chapman Engines	.....	Re-built
1	5 h.p. Chapman, Magneto Type	.....	Re-built
4	7 h.p. Chapman, Magneto Type	.....	New
1	7 h.p. Chapman, Battery Type	.....	New
2	7 h.p. Chapman, Battery Type	.....	Re-built
1	8 h.p. Chapman, Battery Type	.....	New
1	10 h.p. Chapman, Battery Type	.....	Re-built
3	13 1/2 h.p. Chapman, Battery Type	.....	Re-built
2	Cylinders only for 7 h.p. Stickney	.....	New
2	Cylinders only for 5 h.p. Stickney	.....	New

GRINDERS:

1	10-in. Martin Grinder	.....	Slightly Used
2	No. 2 L.X.L. Grinders	.....	Slightly Used
1	Martin Junior Grinder	.....	Never Used

TANKS:

1	2x2x5 Steel Tank	.....	Good Condition
1	2x3x8 Steel Tank	.....	Good Condition
1	6x6-2 Wood Tank	.....	Good Condition, D.H.
1	4x6-2 Wood Tank	.....	Good Condition, D.H.

ONTARIO WIND ENGINE & PUMP CO. LIMITED

96 Atlantic Ave., TORONTO

When writing please mention Advocate

Questions and Answers.

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

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

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

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Tuberculosis.

When fattening pigs a few months ago one got stiff and went off its feed. I gave it sulphur and turned it out and it got all right. We slaughtered it the other day and found yellowish spots filled with thick pus on its liver. Is flesh fit for food?
W. G. W.

Ans.—The pig had tuberculosis, for which nothing could have been done. If no organs other than the liver were diseased, and especially if there was but one nodule there, the meat is considered fit for food, but if other organs were diseased it is not. The disease did not cause the crippling. It was due to high feeding and want of exercise.
V.

Sheath and Legs Swell.

Three-year-old gelding is somewhat swollen on his sheath, and his legs also swell.
J. S. & Sons.

Ans.—Feed nothing but bran for 24 hours. Then give him a purgative of 7 drams aloes and 2 drams ginger. Feed dry bran until purgation ceases. As soon as his bowels regain their normal condition give him 1 oz. Fowler's solution of arsenic in a pint of cold water as a drench or sprinkled on rolled oats or bran twice daily for a week. Give him daily exercise or light work, and feed lightly on grain until the tendency to swelling disappears.
V.

Miscellaneous.

Itchy Skin.

I have a 2-year-old gelding which has an itch which I cannot get healed. I diluted creolin and washed him twice, but he is still rubbing his tail and side of his neck and shoulders.
A. H. T.


Ans.—If the itchiness was due to vermin the treatment given should prove effective. The trouble may be due to a form of mange. Clip the hair and wash thoroughly with soap and water. It may be necessary to use a scrubbing brush. A sulphur ointment consisting of one part sulphur to 3 parts lard sometimes proves effective. One part creosote, 20 parts linseed oil and 30 parts soap solution is another remedy. Two parts kerosene, one part linseed oil and 2 parts soap solution is sometimes used. Washing the affected parts with some of the prepared dips may destroy the parasite and thus effect a cure.

Gossip.

Some Good Bulls at Ridgedale.

Another visit to the Ridgedale Farm, two miles from Manchester Station and owned by R. W. Walker & Son, found their splendid herd of pure-bred Holsteins in their usual prime condition. King Segis Pontiac Duplicate, the noted son of the great King Segis Pontiac, is still at the head of the herd, and the several young bulls that are now on hand as well as the dozen or more young daughters of this sire are an exceptionally promising lot. As yet none of the daughters are of testing age, but the individuality of all his get places King Segis Pontiac Duplicate in a class with Canada's greatest Holstein sires. There is also one bull of serviceable age by the well-bred, young sire, Pontiac Hengerveld Pietertje, which is a son of Pontiac Hermes and Burkeyje Hengerveld, a 16,000-lb. 3-year-old grand-daughter of Pietertje Hengerveld De Kol, which has over 125 A. K. O. daughters. Among the breeding females are a number of daughters of the famous old sire Imperial Pauline De Kol, whose nine nearest dams on his sire's side average 26 lbs. of butter in 7 days, and six nearest dams on his dam's side average 23 lbs. Several other matrons are daughters of Velstra Triumph, whose dam and sire's dam both gave over 100 lbs. of milk in one day. If any of our readers are in need of a young bull from 3 to 18 months of age they would do well to write Messrs. Walker regarding this breeding. Full particulars will gladly be furnished by return mail. Address R. W. Walker & Son, Port Perry, P. O., Ont.

THE MODEL T FORD CAR
PAGE



A New Complete Book
for every Ford Owner, Dealer, Salesman and Repairman
300 (5x7) pages.
Over 100 Specially-made Engravings
and Two Large Folding Plates. Price \$1.00.

The Model T Ford Car
Its Construction, Operation and Repair.
"Young Engineer's Guide" and other self-educational books—electrical, mechanical and agricultural. Also high-grade, copyrighted fiction. Send for catalogue.
Farm, Thresher and Auto Supplies

Windsor Supply Co.
57 Sandwich St. West, Windsor, Ont.

What is Your Best Horse Worth to You?

Yet your best horse is just as liable to develop a Spavin, Ringbone, Splint, Curb or lameness as your poorest!

KENDALL'S SPAVIN CURE

has saved many thousands of dollars in horse flesh by entirely curing these ailments.

Ed. Elstone, Jr., Haliburton, Ont., writes:
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Use it on any case—No matter what else has been tried—and if three boxes fail to relieve, we will refund full amount paid. Further details in

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Males and females, all ages, for sale. Prices right.
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ABERDEEN-ANGUS. For Sale—Several choice young bulls, one from imported sire. Present head of herd, "Middlebrook Abbot 2nd, first prize in class, Toronto and Ottawa, 1915. Apply A. Dinsmore, Manager, "Grape Grange" Farm, Clarksburg, Ont., 1 1/4 miles from Thornbury, G. T. R.

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T. B. BROADFOOT, FERGUS, ONT.

Questions and Answers.
Miscellaneous.

Pea-weevil Remedy.
Let me know how to kill the pea bug in seed for next year. J.H.S.

Ans.—Carbon bisulphide is the most effective remedy. The grain is put in airtight boxes, and the carbon bisulphide is placed in shallow pans on top of the grain at the rate of 1 to 3 lbs. to 100 bushels. The liquid volatilizes rapidly and the fumes sink down through the peas killing the bugs. The material is very inflammable, and the work should be done at a distance from the barns. The peas may be put in barrels, and it figures out that about 3 ounces of the poison is sufficient to treat 5 bushels.

Re silvering Mirror.
Can you or any of your readers tell me, through the "Advocate," how to re-silver a mirror that has become scratched? What is the preparation, and how applied? C. B.

Ans.—There are several methods, but the following is as easily applied as any. Place the mirror face downwards on a table and clean thoroughly the place to be repaired. Spread over the spot a piece of tinfoil a little larger than that to be fixed. After spreading out smoothly let fall on the centre of it a drop of metallic mercury, and with a bit of chamois rub the foil until it becomes brilliant. Place over it a sheet of plain paper and weight it over night.

Capacity of Silo.
1. What is the capacity in tons of a silo 10 by 30 feet? How many cattle could be fed from it for six months?
2. Has a municipal council the right to let a contract for a ditch to exceed the engineer's estimates by one-third without saying anything to those who have to pay for it? E. P.

Ans.—1. A silo 10 by 30 feet will hold about 47 tons of silage. This should feed 16 head of cattle for six months, provided around 30 pounds were fed daily.

2. There are certain cases wherein a council is justified in exceeding the estimates, if it is necessary to do so in order to carry the ditch or drain to its proper outlet. But it is generally advisable to get the views of the men responsible for paying for the work before greatly exceeding the award estimates.

Judge's Duties—Milk Yield Per Cow.

1. Has the judge at a fall fair the right to give a prize to a cow that is not registered when she is shown as a pure-bred?
2. How much milk should a cow give to be called (a) a fair milker, (b) a good milker, (c) a heavy milker?
4. Which have the highest record for butter-fat, Holsteins or Shorthorns? I have been told that a Shorthorn cow that is a heavy milker is usually not a very high tester. Is this so?

Ans.—1. The judge's duty is to place the animals that are brought before him. It is the director's place to rule out animals that are not eligible to be shown. The judge cannot always tell by looking at an animal whether it is pure-bred or grade.

2. We think not. The judge must be governed by the rules and regulations laid down by the fair board.
3. The amount of milk would depend somewhat on the breed of animal. Jerseys and Shorthorns are not expected to give as large a flow of milk as Holsteins and Ayrshires. Five thousand pounds of 3.5 per cent. milk is a fair yield, and considerably above the average for the province. A cow giving 8,000 pounds might be termed a good milker, and if selling milk by the hundred is a very profitable cow. If a dairyman had a herd averaging 10,000 pounds of milk, it would be termed an exceptionally profitable herd. However, there are individual cows of the strictly dairy strain giving well over 20,000 pounds in a lactation period, and there are individuals of all the dairy breeds that have given over 15,000 pounds.

4. It is generally conceded that on the average Shorthorns test slightly higher than Holsteins. It often follows that a cow giving an exceptionally heavy flow of milk does not test particularly high. However, the test depends largely on the individuality of the cow.

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Pedigreed Clydesdale Mares, Fillies and Stallions. Must have good quality, and up to a fair size. Mares 3 to 6 years old, Fillies rising 1 year up, Stallions 2 to 6 years old. All stallions over 2 years old must have proven themselves reasonably sure. When writing state County, nearest railway station, G.T.R. or C.P.R., and telephone exchange. Also quote prices. Any one with good pedigreed Clydesdales for sale should communicate at once.

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Bulls and heifers. Must be well mated—good colors. Ages—bulls 8 months to two years. Heifers, 6 months to three years.

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of the best quality, also young bulls from the same herd. Also from imp. stock at special price.

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Questions and Answers.
Miscellaneous.

Switching.

I have a driving mare which is continually switching when driven. I have tried several ways of stopping her, but of no avail. She is a good roadster, and I would like to know of some way to stop the switching.

A READER.

Ans.—Take a few strands of hair on the under side of the tail and braid them in such a way that they cannot come undone. Run a shoestring through this braid and tie securely to the breeching. This device should be kept in use for some time to make sure of permanent results. A thick crupper has been recommended. An iron crupper with a small iron extending down under the tail for a foot or more to which the tail is strapped, also proves effective. The piece under the tail is covered with leather, and buckles on the place for the regular crupper. This being firm and the tail strapped to it prevents switching.

Raising Turkeys.

Will you kindly give me an outline regarding turkeys? How should the old ones be fed during the winter? What should the young ones be fed during the first couple of months? Should the grit be mixed with the feed? What would you give them to drink? Is it advisable to use poultry food, and if so, what kind? The young ones are very hard to raise.

A SUBSCRIBER.

Ans.—Young turkeys are very difficult to raise, especially for the first two months of their existence, but they are subject to more or less disorders all through the summer. They are not so hardy as other domesticated fowl. The greatest care is necessary until the poults are about eight weeks old, or the time when the quill feathers are started. The production of these feathers evidently weakens the constitution, and special attention and feed is required to counteract the effect. Poults must be kept warm and in a place which is free from drafts and dampness. Cold and wet are detrimental to young turkeys. There are several rations which poultrymen are accustomed to feeding. For the first three weeks hard-boiled eggs, breadcrumbs, and chopped onion tops fed dry, give very satisfactory results. Clean, fresh water should be before the birds all the time. Some prefer feeding wheat bread that has been soaked in milk and then squeezed dry. Cornmeal bread is also a satisfactory feed. A loaf made of 2 quarts of shorts, 1 quart flour, 1/2 quart bran, and a teaspoonful of soda, mixed with sour milk and baked, is also recommended. Any of these feeds is good, but care should be taken not to jump from one to the other. Decide on one feed and feed it continuously. Do not feed young turkeys on the ground. The safest method is to feed from the hand. Grit is essential, but it is preferable to feed it by itself rather than mixed with the feed. If milk is available, it might be given as a drink. At the end of four weeks the hen may be released from the coop and permitted to lead her flock to the pastures, care being taken to have them under shelter before the dew falls at night and to keep them in until the grass is dry in the morning. At six or eight weeks of age they may be allowed full range and require little attention until fall. A close watch should always be kept for lice, as vermin is an enemy of the young turkey. Drooping wings and dullness are indications of the presence of these minute insects. A little lard rubbed on the head and under the wings is a very good treatment. During the winter the old birds can be fed similar to the hens. They do not require a winter diet; very often they prefer to roost in the trees, even in very cold weather. However, a roost should be provided for them, and the birds can be provided with a supply of food in cold weather. Blackhead is the most dreaded disease, and prevention depends on good diet and keeping the breeding stock healthy. As the cause of the disease lies in the ground, keep the young birds off old feeding grounds, and do not allow them to feed off the ground when young. Some poultrymen give their fully prepared flocks with good results.

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It Helps Nature to Heal and Cure. Penetrates, acts quickly, yet is perfectly harmless. Kills all Germs and prevents Blood Poison. Nothing so good known as an application for Sores, Wounds, Felons, Exterior Cancers, Burns, Carbuncles and Swellings.

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Mail orders a specialty. Satisfaction guaranteed.

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Herd headed by the two great breeding bulls, Newton Ringlander (imp.) 74783, and Nonpareil Ramsden 83422. Can supply a few of either sex.

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Shorthorns, Shrops., Clydes. If you want a good young bull, a promising Stallion colt, or a young cow or heifer of Scotch breeding and best type, having dams eligible or good enough for R.O.P. Come, see, and satisfy yourself and please the owner. Prices reasonable, that they may be sold. Visitors welcome.

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Several Choice Shorthorn Bulls—Two are of breeding age, while the others are May and June calves. All are sired by the noted Lavender-bred bull, Senator Lavender. We never had a better lot, and would like you to see them. Visitors welcome.

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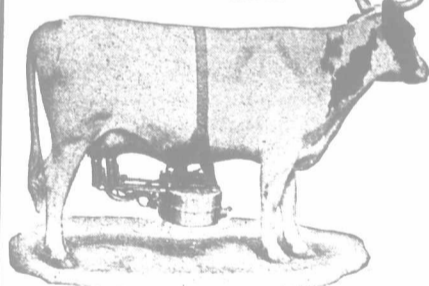
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C. RICHARDSON & CO., St. Mary's, Ont.

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RIDGEDALE HOLSTEINS offers three young bulls (one ready for service) at special prices. One is by Pontiac Hengerveld Pietertje and the others are by King Segis Pontiac Duplicate. Can also supply a few females. R. W. Walker & Son, Port Perry, R.R.4. Manchester, G.T.R., Myrtle, C.P.R.

Willowlea Holsteins Offers a 20-months son of Sir Natoye Oakland. Others younger by Siepke of Lakeview 2nd. Ask us also about our females.

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Five stock labels for cattle, sheep and hogs, manufactured by the Ketchum Manufacturing Co.

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Questions and Answers.

Miscellaneous.

Sheep Barn.

Give me some idea regarding the size and arrangement of a building suitable for wintering a flock of 100 sheep.

E. MACM.

Ans.—The desirable features of a sheep stable are: shelter from rain, dryness under foot, a generous amount of sunlight and good ventilation. Single-ply lumber with cracks battened makes serviceable walls. For the smaller breeds at least 10 square feet of floor space should be allowed per head, and 15 square feet for the larger breeds. It is recommended that 2 square feet of glass windows be put in for each 100 square feet of floor space. If the windows are hinged at the bottom and made to swing in at the top, ventilation can be secured. A building 30 by 50 feet would accommodate the flock of 100 sheep. The frame work could be set on a cement foundation, and space could be left in the loft for storing hay or other feed. Racks and troughs could be placed along the walls or down the centre of the pen, and a feed alley could be arranged. Space could be left at one end for the sheep getting from side to side.

Lien Note—Abortion—Grass Seed Per Acre.

1. Last spring I bought a cream separator at an auction sale. Nothing being said about it not being paid for, the man having run it two years. The other day the agent came along and told me he had a lien note against it. Can he take the separator from me? Shouldn't the agent sue the party he sold it to? He claims there was nothing ever paid on it. Could he make me pay the full amount? The price, I believe, was seventy-five dollars. What should I do?

2. Two years ago I bought a cow. Had her home about a month when she slipped her calf. Ever since then have had trouble with the cows losing their calves. The heifers appear to be the worst. Nearly all my heifers, and several of my cows, have lost their calves this fall. Most of them between the sixth and seventh months. Several of my neighbors are having the same trouble. Would the bull be to blame in any way? What can I do to prevent it?

3. Would it pay to sell wheat at \$1.50 per bushel and buy corn which is \$1.10 per bushel to feed shoats about 80 or 90 lbs.? I intend mixing it with middlings.

4. What is the proper amount of grass seed to sow per acre—timothy and red clover?

N. S.

Ans.—1. A lien note will follow an article, and the agent can claim the separator. You in turn should endeavor to have the man you purchased the machine from refund the money. This may be difficult to do, but it is the only way to clear yourself.

2. Evidently you have contagious abortion in your herd, which will require patience and great vigilance to stamp out. No doubt but that the germs were brought to the farm by the cow purchased. It is easily spread from cow to cow or by the bull. If the bull became infected he would be a medium through which every cow he was bred to would be in danger of infection. Under the most careful treatment it requires two or three years to stamp out the scourge. Burn all aborted foetuses and afterbirths. Isolate the diseased cows from the main herd. Flush the womb daily with a gallon of a solution of corrosive sublimate, about 30 grains to a gallon of water, until all discharge ceases. Wash the tail and hind quarters of all pregnant and aborted cows daily with the same solution. If a bull has been bred to a diseased cow he should not be used again for six months, and in the meantime his sheath should be flushed out daily with the above-mentioned solution. The premises and all utensils should be thoroughly disinfected. Non-infected cows should be kept from coming in contact with diseased animals. Feeding of methylene blue in one-half ounce doses twice daily for 10 days at intervals of 3 weeks is recommended. Great care should be exercised when introducing new stock to the herd.

3. We would favor selling wheat and purchasing corn when middlings are available to mix with the feed.

4. A mixture of 7 to 10 lbs. clover and 5 lbs. timothy makes a very good seeding. Ten or 12 lbs. of either sown alone should give a good stand.

Mr. Farmer!

Get your bricks in now during slighing. We have a large stock of the famous Milton Red Pressed Brick on hand and can give you immediate delivery.

Owing to the coal situation, later deliveries will doubtless be advanced in price, so secure yours at once.

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WEDNESDAY, JANUARY 31, 1917

5 Bulls 55 Head 50 Females

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As our stables are full, and expect several more calves shortly, offer for quick sale 3 yearling daughters of Dutchland Colantha Sir Mona; also 2 beautiful daughters of Pontiac Korndyke Het Loo. The 35-lb. bull is sold. We also have a 17-months' bull by King Pontiac Artis Canada, and out of a 25-lb. sister of the great May Echo. Another, same age, by Dutchland Colantha Sir Mona, and from the noted 25-lb. show cow, Cherry Vale Winner. Come and see these, you will like them.

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Offer for sale at attractive prices a few choicely bred Holsteins. No. 1—A yearling son of a 34-lb. bull, and a 20-lb. 3-year-old prizewinning cow. No. 2—An 8-months' son of a 34-lb. bull and a 16.21-lb. 2-year-old granddaughter of King Segis. The dams of these bulls are in our foundation herd, and will be tested again at next freshening. Write for printed pedigrees. We also have for sale a few females bred to our herd sire, KING SEGIS PONTIAC CANADA.

R. W. E. BURNABY (Farm at Stop 55, Yonge St. Radial) Jefferson, Ont.

Two Holstein Bulls—Born April, 1916

Either will make show animal. No. 1: Two nearest dams average 100 lbs. milk a day, and over 30 lbs. butter a week. No. 2: Dam and granddam average 24,000 lbs. milk in the year. Three nearest dams average 100 lbs. milk a day and over 30 lbs. butter a week. Can spare a few females.

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Holstein bulls only, for sale. One fit for service from a R. of P. dam, testing 4.08 per cent. butter-fat; also four ranging from three to nine months, all from our Korndyke bull. Apply to Superintendent.

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(Electric car stops at the gate.) JAS. G. CURRIE & SON, Ingersoll, Ont.

Riverside Holsteins Herd headed by "King Johanna Pontiac Korndyke," a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in 7 days, 156.92 in 30 days—world's record when made. His ten nearest relatives have official records that average 34.94 lbs. butter in 7 days. His daughters have made good in official test. The present R. of P. cow of Canada was bred here. Choice young bulls for sale.

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ready for service, from R. O. M. dams. Write for price and extended pedigrees.

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Dumfries Farm Holsteins

175 head to choose from. We have on hand at present about 20 young bulls. Visitors always welcome.

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King Segis Walker,

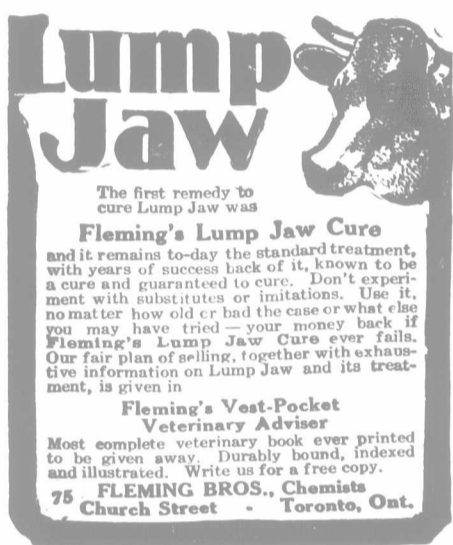
through his daughters, is proving to be a worthy son of his illustrious ancestors. All of his daughters over two years have now been tested, at an average age of two years and six months, making 400 lbs. milk and 20 lbs. butter. Youngsters for sale.

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Locust Hill, C. P. R. Home 'phone. Bell connection at Markham.

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A few young bulls for sale, from Record of Performance dams, imported and Canadian-bred, sired by Auchinbrain Sea Foam (imp.) 35758, grand-champion at both Quebec and Sherbrooke. Write for catalogue.

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Glencairn Ayrshires Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. **Thos. J. McCormick, Rockton, Ont. Copetown Sta., G.T.R.**

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JERSEY BULLS, For sale—Knoolwood's Raleigh, sire Fairy Glen's Raleigh (imp.), 22 daughters R. O. P., dam Eminent Honey-moon (imp.) R. O. P., 596 lbs. butter; reserve champion on island. Capt. Raleigh ready for service, sire Knoolwood's Raleigh, dam Mabel's Post Snowdrop; first as calf, 1914, first Junior Champion, 1915, 2nd 1916, Toronto. Milked 38 lbs. day, 6 per cent. milk, first calf. **Ira Nichols, Burgessville, Ont. R.R. No. 2**

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Our present offering, while not large, includes some extra good yearling and ram lambs. All imported sires. **Jas. Robertson & Sons, Hornby, Ont.**

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C. A. POWELL, R. R. No. 1, Ettrick, Ontario

Questions and Answers.
Miscellaneous.

Stolen Horse Blanket.

A man puts his horse in a shed of a hotel and pays 10 cents to the man. He goes to the horse and finds that the blanket has been stolen off his horse. Can he make the hotelkeeper pay for the blanket?
J. A. W.

Ans.—It is probable that he can.

Moratorium.

1. Is there a law prohibiting the holder of a mortgage from closing and selling the property, on which he holds the mortgage, during the war?

2. Can a mortgage holder raise the interest from 5 1/4 to 6 1/2 during war time?
Ontario. F. L. M.

Ans.—1. Yes—as to principal money—where the mortgage was executed prior to August 4th, 1914, except by leave of a judge. (See The Mortgagees' and Purchasers' Relief Act, 1915, Ontario Statutes, Chap. 22, amended in 1916.)

2. He can only enforce payment of such interest as has been agreed upon.

Company Bonds and Coupons.

1. Can the coupon from any bonds be collected after three years passing, or, in other words not being collected, providing the company is trying to get rid of paying the coupons and to issue new bonds?

2. Can the old coupons be collected before the new bonds are issued?

3. Can a company issue new bonds before the old ones are turned in?
Quebec. OLD SUBSCRIBER.

Ans.—1 and 2. We should think so.

3. We are not sufficiently informed of the facts to enable us to judge whether the company is in a position, legally, to make such bond issue.

Abortion.

Two cows have slipped their calves after going 4 1/2 months. I am feeding silage rather heavily, mixed with bran, shorts and oil-cake meal, two feeds a day. Mangels at noon and hay twice a day. I had no trouble before last winter. I fed silage even heavier than this winter and my cows were all right. What do you think about it? I have heard some farmers say that silage will do it. R. H.

Ans.—We do not think the silage should be blamed for the trouble. You are feeding a splendid variety of feeds for dairy cows. It is a case of abortion either accidental or contagious. In any case, isolate the cows which have lost their calves, from the main herd. Thoroughly disinfect the premises and flush out the cows and wash their hind quarters with a solution of corrosive sublimate, about 30 grains to one gallon of water. Heat to 100 degrees F. before using. Disinfect the bull and guard carefully all pregnant cows. Contagious abortion is a difficult disease to combat.

Tuberculin Test—Feeding Flaxseed.

1. Which is the most profitable way to feed flax? I raised about 6 bags of flaxseed and got it ground, and I am feeding it to my horses and calves. Some folk advise me to boil the flax before feeding it. How much should be fed to a calf and horse per day?

2. Where and how is the best way to have a tuberculin test made on my stock?

3. Is one witness, along with the notary public, sufficient to make donation legal in the Province of Quebec? The donors were unable to sign their names but made their mark. J. B.

Ans.—1. Ground flaxseed is a valuable feed for horses. It puts the system in condition. About one handful per day is plenty. There is nothing gained by boiling it unless by way of variation. Using it as a substitute for milk for young calves, it should be made into a gruel if best results would be obtained. The amount depends on the size of calf and partially on other feeds being fed. Start with a tablespoonful a day and gradually increase. For older calves a handful can be fed each day on the other grain.

2. Your veterinarian should be able to conduct the test. By means of a hypodermic syringe the tuberculin is injected under the skin, and temperatures must be carefully noted both before and after the injection. A rise of two degrees in temperature, above the average before the injection indicates the disease.

3. As we understand the question, the document would be legal.



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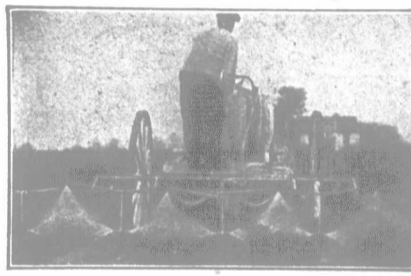
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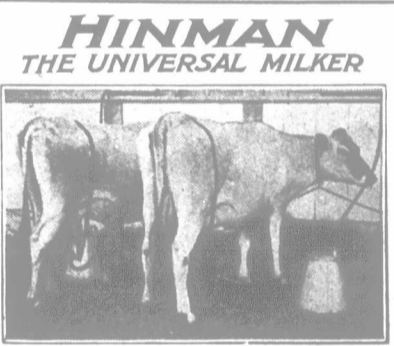
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Laurie Bros., Agincourt, Ont.

City View Ayrshires—Record of Performance blood in everything. Our females run from 4.15 to 5.02% fat, with a herd average of 4.55. Bull calves and bulls fit for service. Stock for sale of either sex. Prices according to merits.
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For the next fortnight we are making a special offering on young bulls, bred from the highest producing families ever introduced into Canada. Brampton Jerseys and their descendants hold all Jersey R.O.P. records since one. Females, all ages, also for sale. **B. H. BULL & SON, Brampton, Ont.**

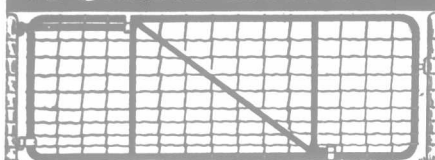
THE WOODVIEW FARM JERSEYS Canada's Most Beautiful Jersey Herd
Present Offering—Some high-class bull calves ready for service, from Record of Performance dams, including grand champion bull at last Western Fair and his full brother, also cows and heifers. State distinctly what is wanted, if writing. **Jno. Pringle, Prop. We work our show cows and show our work cows**

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Champion Berkshires—When buying, buy the best; our present offering are sons and daughters of the two great champions, Lucky Lad and Baron Compton, and out of winners, including champions. Both sexes. W. W. Browbridge, Georgetown, Ont. R. R. 3

Springbank Herd OF CHESTER WHITES. Ancestors bred from the best herd in Canada. Pigs of both sexes. WM. STEVENSON & SON, R. R. No. 1, Science Hill, Ont.

Berkshire Pigs Registered stock, choicely bred, young boars, and sows in pig, all ages. Can supply pairs not akin. CREDIT GRANGE FARM, J. B. Pearson, Mgr. Meadowdale, Ont.

Swine for Sale An offering choice stock in Poland-China and Chester White swine of either sex; most any age. First-prize Poland-China herd, London and Toronto, 1915. Prices easy. GEO. G. GOULD, R. R. 4, ESSEX, ONT.

Meadow Brook Yorkshires—An offering sows ready for service; also several litters ready to wean Dec. 1st. All bred from prize-winning stock. Prices reasonable. G. W. MINERS, R. R. 3, EXETER, ONT.

Yorkshires Sows bred and younger; boars 2 and 3 months, sire Our Champion, winner of 12 firsts and 5 championships in 2 years' showing at Toronto and Ottawa. Bronze turkeys, from prize-winning stock. Wm. Manning & Sons, Woodville, Ont.

Morrison Tamworths and Shorthorns. Bred from the prize-winning herds of England. Tamworths, both sexes, 140 to choose from; Shorthorns, 5 bulls, from 5 to 10 months old, reds and roans, dandies. Females of the best milking strains. Chas. Currie, Morrison, Ont.

Cloverdale Berkshires and Shropshires—In Berkshires I can furnish boars or sows, all ages, pairs not akin. All breeding stock imp. or from imp. stock. In Shropshires can furnish rams, or ewes, any age, from imp. stock. Prices reasonable. C. J. LANG, R. R. NO. 3, BURKETON, ONT.

Duroc Jersey Swine. I have been importing and breeding Duroc Jerseys for twenty-five years. Present offering some choice sows, bred; a few sows six months old and a number of pigs two months old. Charles Farough R. R. 1, Maidstone, Ont.

FOR SALE Some choice Chester Whites nearly four months of age. Writer, Proprietor, Elmfield Stock Farm for very reasonable prices. Apply John Pollard, R. 4, Norwich, Ont.

TAMWORTHS

Young sows, bred and younger, and a number of pigs, from 5 to 10 months old, reds and roans, dandies. Females of the best milking strains. JOHN W. TODD, R. R. No. 1, Corinth, Ont.

Please mention "The Advocate"

Questions and Answers.

Miscellaneous.

Swelling on Side of Bull.

I have a pure-bred bull about two years old. He seems to be bloated on one side nearly all the time. He eats well and doesn't appear sick, but is hard on one side. He was like this when I got him a year ago. He is in good condition and isn't bound up, but his one side is so hard and much larger than the other.

A READER.

Ans.—Evidently the enlargement is due to a swelling of some nature rather than to bloating. If the swelling was caused by bloating the animal would not continue in good health. Complications would have set in before this. Try bathing with hot water, or apply some absorbent material to reduce the swelling.

Dead Horse in Well.

I own a lot in town with a good well on it. On the 29th of July a forest fire burnt the top off well, and next day a government horse fell in it, and the Government Road Inspector of this place ordered the horse shot in the well and covered up. It was there for three weeks, when they took it out and filled in the well as the stench was terrible, and the well was unfit for use. Can I go after the man who ordered it shot, or the government for the cost of well?

A. and B.

Ans.—We think so. Your best course would probably be to first write the government stating your claim. You might address your letter to the Provincial Secretary. He would forward it to the proper department for attention. If it should eventually be found necessary to place the claim in suit against the government, you would require permission from the Attorney-General of the Province to proceed in that way.

Discharging a Mortgage.

1. I have a farm on which there is a mortgage that came due last June, and I was obliged to renew. It is held by a Trust Company, and they demand, through their agents, 6 1/2 per cent. interest. The agent informed me that there would be no expense in connection with the renewal, so I signed it, but now the company has written me twice demanding expenses for the renewal. Can they collect from me?

2. Can I force a Trust Company to accept their money and give me a discharge of mortgage which is held by them. If I pay interest up to date the mortgage will not be due until 1921. The conditions are that I pay from \$100 to \$500 per year with interest. F. L. M.

Ans.—1. Evidently you merely had a verbal agreement with the agent of the Company. The Company can collect the expenses, and you would have to deal with the agent for any redress. If you have not the agreement in writing, you may have difficulty in recovering the same.

2. No.

Artesian Well.

I would like to get a supply of good water for a pasteurizing plant. At 26 feet deep water is rusty and, therefore, unfit for use. The farmers settled in our vicinity all complain of rusty water. At 45 feet soil consists of blue clay without stones. Plant is not more than 50 feet above sea level. Tell me if I could get good water by sinking an artesian well. What would be the cost of installation of belt-driven pump? T. L. C.

Ans.—Water is usually struck at some depth. Sometimes it is several hundred feet down, while in other localities a supply of good water is secured near the surface. It depends on the formation of the lower strata. There are supposed to be underground streams which furnish good water. The difficulty is to drill at the right point. However, artesian wells usually furnish a supply of good water. Of course, it will depend on the source. Contractors drill wells at so much per foot, including the casing. As we do not know the length of pump rod necessary, the size of cylinder or capacity of pump, we cannot give an estimate of the price. Prices fluctuate considerably, and today's quotations might not be good in a week's time. It is advisable to consult your local dealer in pump and pumping appliances, or to write manufacturers of pump supplies who advertise in these columns.

Before Investing

You should see that your judgment regarding the security is backed by facts. According to Canadian Government Statistics, never a Dollar has been lost in Canadian

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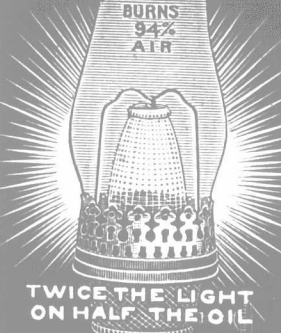


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We have a large number of choice males and females, all ages.

Weldwood Farm, Farmer's Advocate, London, Ont.

Young Bulls

of serviceable age. Young cows with calves by their side and rebred. Heifers well on in calf. A few good Shropshire ewes bred to good rams. A nice bunch of ewe lambs.

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John Miller, Ashburn, Ontario

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FOR SALE—Young stock of both sexes, bred from imported animals, high-class in type and quality. Also we are now offering for sale highly bred imported stock boar and sows. Write for particulars F. WALLACE COCKSHUTT, Lynnore Stock Farm—English Dairy Shorthorns & Berkshire Pigs, BRANTFORD, ONT.

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We are in a position to supply boars and sows of different ages. We have an established type of Yorkshires that have been produced through many years of careful breeding and selection.

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Young sow due to farrow within a month. Young pigs, both sexes, all descendants of Imp. and Silver Medal Stock. Ten young heifers and cows, grand milking strain, in calf to Broadlands No. 87903. A. A. COLWILL, R.M.D. No. 2, NEWCASTLE, ONT.

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In Duroc Jerseys we have either sex of any desired age, bred from winners and champions for generations back. In Jerseys we have young cows in calf and young bulls, high in quality and high in producing blood. MAC CAMPBELL & SONS, NORTHWOOD, ONT.



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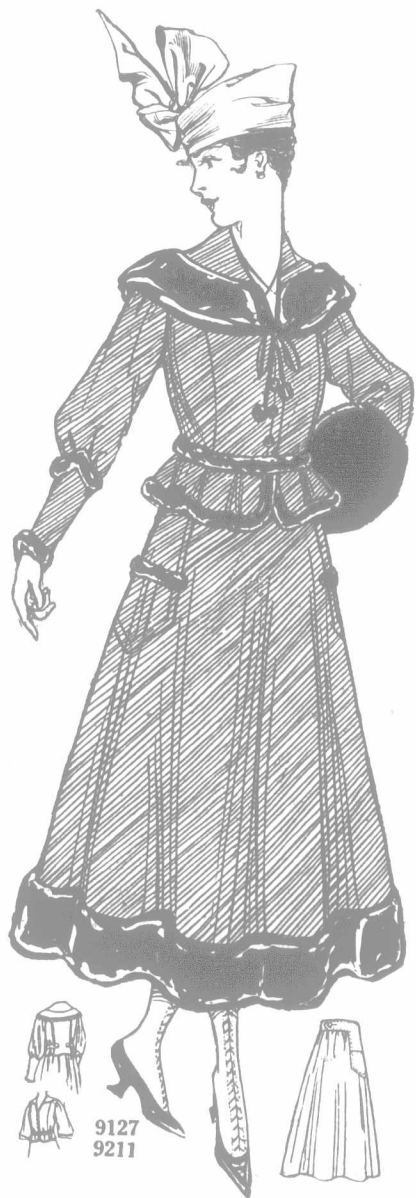
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Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Price fifteen cents PER PATTERN. If two numbers appear for the one suit, one for coat, the other for skirt, thirty cents must be sent. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

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9127.—Bodice with full sleeve, 34 to 42 bust.
9211.—Skirt, 24 to 34 waist.



9110.—One-piece night-gown, 34 or 36, 38 or 40, 42 or 44.



9209.—Gathered Blouse, 34 to 44.
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9226.—Envelope Chemise. Small 34 and 36, medium 38 and 40, large 42 and 44.



9189.—Child's Coat, 4 to 10 years.



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9155.—Girl's Dress, 4 to 8 years.

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The home of the late HON. J. S. DUFF, Minister of Agriculture—200 acres, 1½ miles from the village of Cookstown, 50 miles North of Toronto. Good house and bank barns; about 12 acres of an orchard, mostly winter fruit; 8 acres of this orchard was planted 4 years ago and is very promising. There are about 20 acres of bush which has never been culled, on which there is valuable timber. Everything is in good repair. The soil is clay loam, in a high state of cultivation. This farm is in a most desirable and convenient location on a county road. It is high, dry and healthy, and one of the most delightful homes in the banner County of Simcoe. Intending purchasers should move quickly, as this property will not remain long on the market. No fancy price asked, and terms easy. For further particulars, apply to

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Cookstown, Ont.



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster-General, will be received at Ottawa until noon, on Friday, the 9th day of February, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Belmont No. 2 Rural Route, from the 1st of April, next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Belmont, Glanworth and Harrietsville, and at the office of the Post Office Inspector, London.

G. C. ANDERSON,
Superintendent.

Post Office Department, Canada, Mail Service Branch, Ottawa, 29th Dec., 1916.



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 9th day of February, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week over Dorchester Station No. 2 Rural Route, from the 1st of April, 1917, next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Dorchester Station, Nilestown, Mossley and Thamesford, and at the office of the Post Office Inspector, London.

G. C. ANDERSON,
Superintendent.

Post Office Department, Canada, Mail Service Branch, Ottawa, 29th Dec., 1916.



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 9th day of February, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week over Hyde Park Corner No. 1 Rural Route, from the 1st of April, 1917, next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Hyde Park Corner, London and Ettrick, and at the office of the Post Office Inspector, London.

G. C. ANDERSON,
Superintendent.

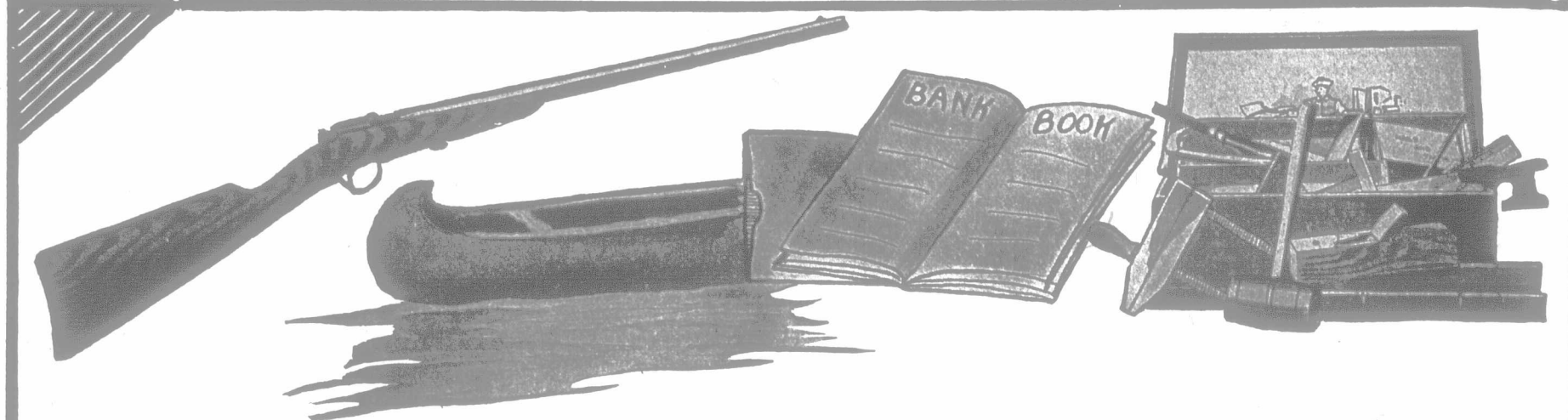
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