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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE  
SUCCEED

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

Vol. LI.

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1876.  
LONDON, ONTARIO, JUNE 29, 1916.

No. 1240

## High-class Telephones Cost Least For Maintenance

When selecting telephones for the rural telephone system, there are other things that deserve more consideration than the price.

First, is how well will the instruments transmit and receive the voice. In this respect, there is more difference between a high-class telephone and an ordinary one than you might think.

Second, there is the maintenance cost. Naturally a high-class telephone will be less likely to get out of order than an ordinary one.

Third, is the durability. The high-class telephone, because it is of the most modern design, built of the highest grade materials and with the most skilled workmanship, will undoubtedly last years longer than the ordinarily constructed instrument.

The rural system that equips its lines with Canadian Independent Telephones, which excel in quality of material, workmanship and design, is bound to give its subscribers better service, at less maintenance cost and for a longer period of time.

To prove the high quality of Canadian Independent Rural Telephones, make a comparison test with others. Examine them part by part. Try them alongside other makes. We have "A FREE TRIAL OFFER" that enables any independent rural telephone system to do this. Particulars on request.

Canadian Independent Telephones are made in Canada and are exactly suited to Canadian climatic conditions and requirements. They are sold by a company that has been a true friend of the independent telephone movement. We have worked hard to insure its success—instead of trying to throttle it. Our telephones and construction materials have always been sold at fair prices all over Canada. Furthermore, everything we sell is guaranteed first quality—the telephones being guaranteed for 10 years against defects in material and workmanship.

### Write for the No. 6 Bulletin

It contains complete information about our modern rural telephones. It is a new bulletin just recently printed. A copy will be mailed promptly on receipt of your name and address.

Also manufacturing agents for William C. Ude, under his Canadian Patent, No. 148637, covering the "Hands Free" Telephone.



Packed in most up-to-date style. Every telephone in separate case, as shown. Note that the transmitter, receiver and shelf are attached ready for service.


## Canadian Independent Telephone Co.

LIMITED

261 Adelaide Street West, Toronto



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**PINE TREE BRAND SEED**  
Produces heavy yields and clean crops

Ask your dealer for  
**PINE TREE BRAND**  
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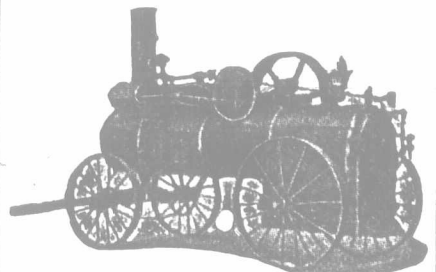
The valuable Inoculating Material  
**NOD-O-GEN** is FREE  
with  
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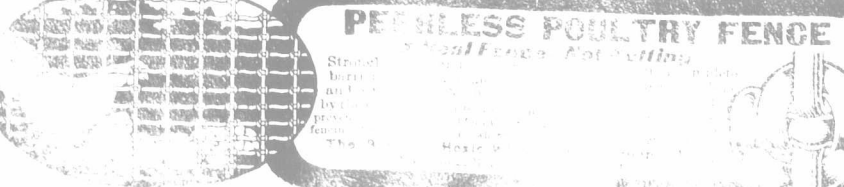
### The King of Ensilage Cutters

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 cutting 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 today for catalogue and proof. Manufactured and guaranteed by

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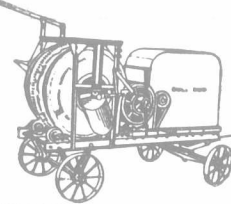
**10 DAY'S TRIAL.** If owner is not entirely satisfied after riding any Hyslop Bicycle 10 days it can be returned and money will be promptly refunded.

**TWO CENTS** all it will cost to write us a postal and we will mail free, postpaid, catalogue and colored art folder showing complete line of bicycles, tires and supplies and particulars of most marvelous offer ever made on a bicycle. You will be astonished at our low prices and remarkable terms. **MAKE MONEY** taking orders for Bicycles, Tires and Sundries. **DO NOT BUY** until you know what we can do for you. Write to-day **HYSLOP BROTHERS, LIMITED** DEPT. 2 TORONTO, ONT.



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Batch Mixer  
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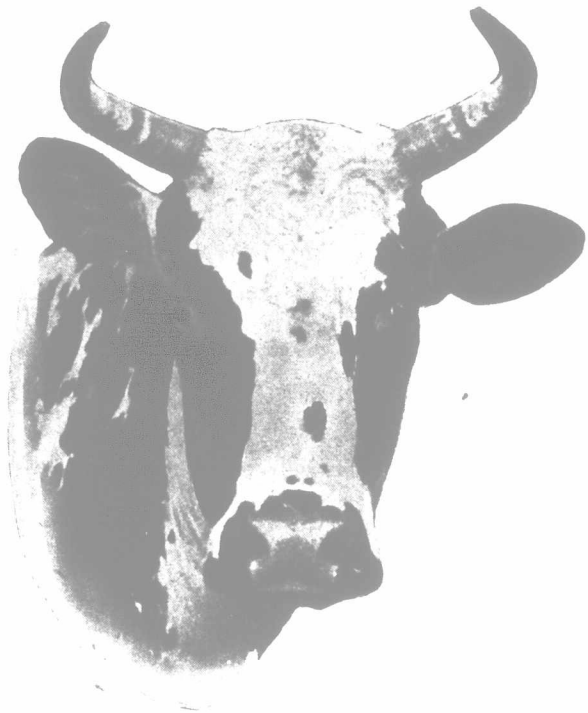
Smooth, Hard, Clean-Cut.  
Write for Booklet.

**MILTON PRESSED BRICK COMPANY**  
Milton, Ontario



# Ayrshires

The Quality Breed



## The Ayrshire Cow Coming into Her Own

IN THE PAST cheese factories in Ontario have been paying for milk by its weight, not according to its quality. This has encouraged farmers to keep cows, either pure-bred, grades or just cows—that gave large quantities of milk, regardless of how it tested. Thus year by year the average test of the milk delivered at our cheese factories has been going down, and the number of pounds of milk required to make a pound of cheese has been going up. In the future this condition will be changed. The Ontario Government has passed a

law which requires that on and after March 31, 1917, all milk delivered at cheese factories in Ontario must be paid for according to its butter-fat test, or, in other words, according to its value for cheese-making purposes.

**That is fair, isn't it? But see what it means.**

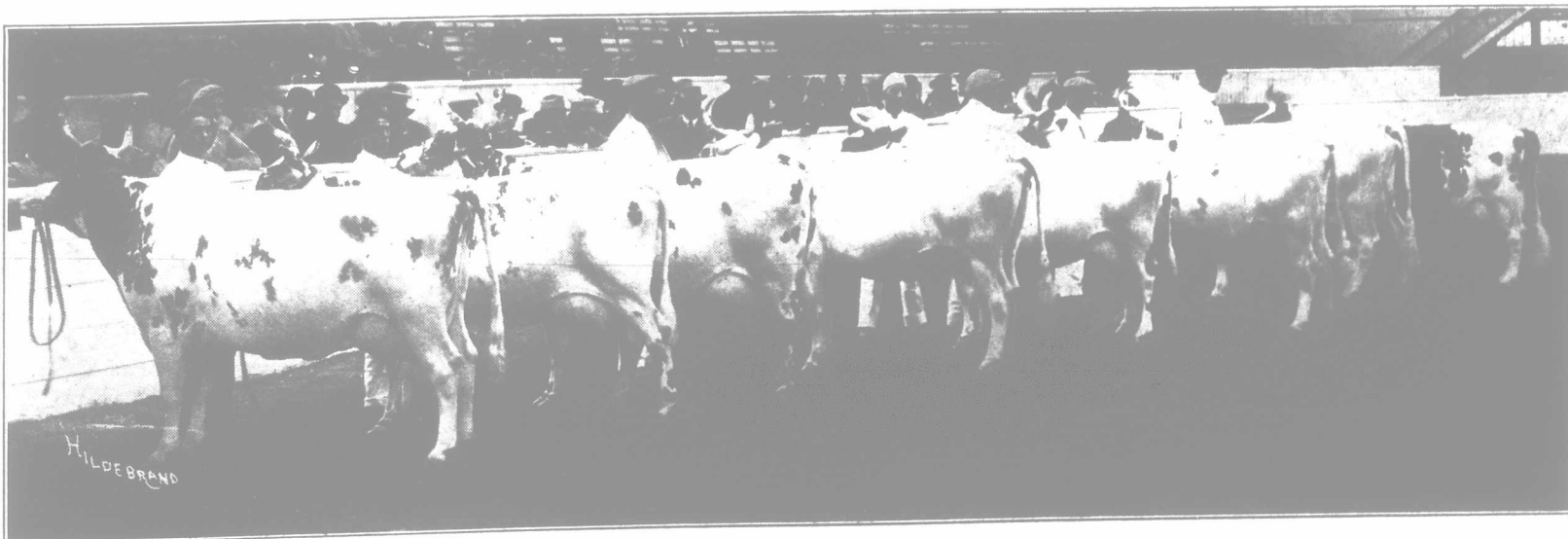
*It means that hereafter patrons of factories, instead of being encouraged to deliver large quantities of milk regardless of its test, will have an inducement to strive to increase the test of their milk as well as its quantity. In other words, they will strive for quality (for cheese-making purposes) as well as for quantity. This means that many of them will want to keep Ayrshire cows or to head*

**their herds with Ayrshire bulls. This is because Ayrshires are good milkers and high testers as well as economical producers.**

*Forty pounds of milk testing 4.4% from an Ayrshire cow, with cheese selling at 16 cents a pound, is worth more, because of the extra butter-fat it contains, than 54 pounds from another cow whose test is only 3.2%. It won't take dairy farmers long to find this out. It will mean*

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The Aged Ayrshire Cows at the National Dairy Show, Chicago, Ill., U.S.A.

To the extreme right is Auchenbrain Fanny 9th. The first to the left is the winner and champion; Fanny being a close second.

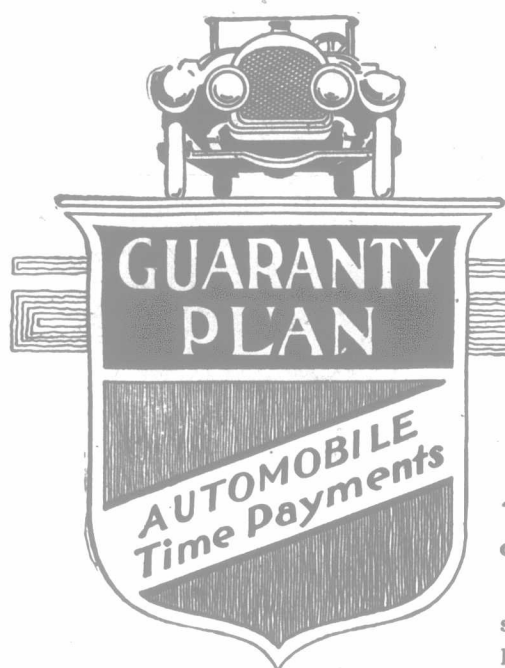
From the sunclad slopes of the Scottish Hills to the fertile dairy farms of Ontario, Ayrshires have a national honor and reputation for beauty and symmetry of form. In the line-up here shown, note the strong, straight lines and the wonderfully uniform udder development—beauty and performance combined.

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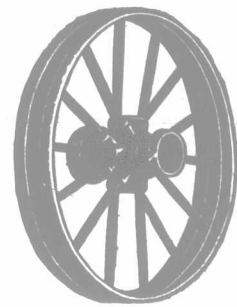
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EASY TO OPERATE  
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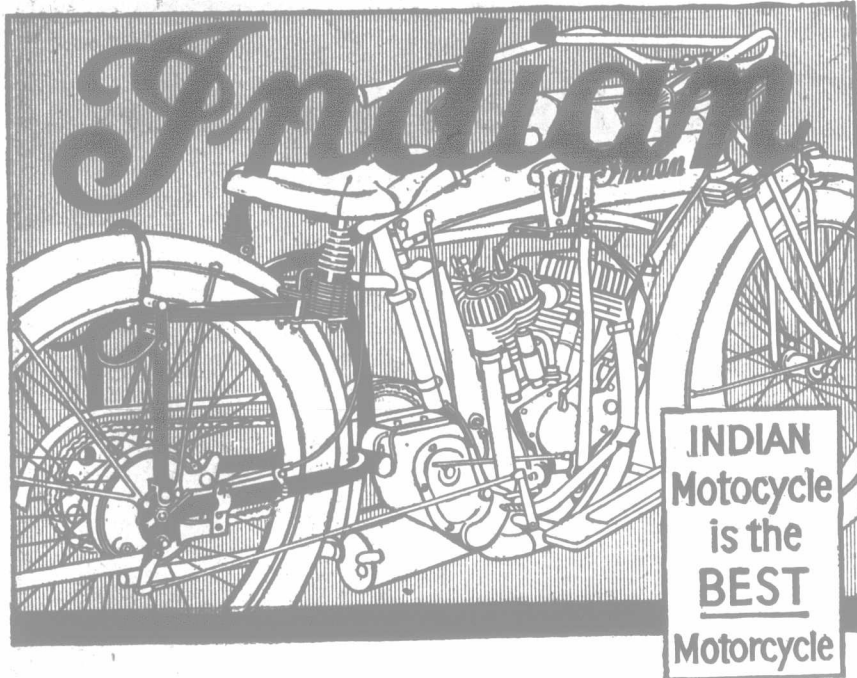
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Sole distributors in Canada of the famous De Laval Cream Separators and Alpha Gas Engines. Manufacturers of Ideal Green Feed Silos. Catalogues of any of our lines mailed upon request.  
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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

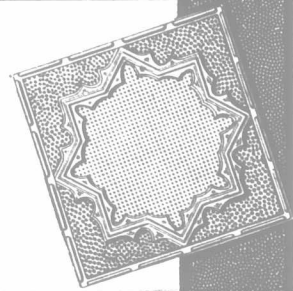
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Every farm perience last ye for our competi special column

Judging from the beef breeds the milk produc classes of catt

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# The Farmer's Advocate and Home Magazine

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LONDON, ONTARIO, JUNE 29, 1916.

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## EDITORIAL.

Keep the corn cultivator going.

It is time to begin final preparations of the stock for the big fairs.

Hoe the turnips before the weeds get too large and save time and trouble.

Candor, confidence and courtesy will win out with most boys on the farm.

The "everlasting kicker"—hay tedder, is a valuable machine in making good hay rapidly.

This is road-work season. Do the work as you would the most important job on your own farm.

The Russian bear was a little late coming out for the summer, but when he emerged he came strong.

It is time to sow buckwheat on that field which was too wet for spring seeding with oats or barley.

All products of Canadian farms should be up to a standard which would do honor to the trade term, "Canadian."

The man who grumbles most about the weather and other things, is generally the one who makes poorest use of ideal conditions.

An up-to-date water system is a boon on any farm. The farmer needs it; his wife deserves it; and the stock do better after it is installed.

Cultivated orchards have made rapid growth this year. Do not forget the cover crop to ripen up the wood ready for next winter's frost.

The late foal will be behind his early-born mate, but with a little extra feed and care, which is necessary, he may be just as good a two-year-old or three-year-old.

Five thousand Americans fighting for human liberty with the boys of the Maple Leaf and ten thousand under the Tricolor of France expresses the best spirit of the Republic.

Every farm boy and young farmer had some experience last year which would make a good letter for our competition announced in the young farmer's special column last week.

Judging from prices obtained at auction sales, the beef breeds of cattle are not yet driven out by the milk producers. There is room for more of both classes of cattle in Canada.

Weeds require plant food just the same as do crops. If they get the start of the crop they rob it. There is a right and wrong time to combat them. An article in this issue suggests ways and means.

We recently talked with a stockman who had been visiting some of the big stock farms in the United States. From observations he was led to remark that in the case of high-record individuals there was as much in the feeding, care and management as in the breeding. Be safe and have both right.

### The World's Meat Scarcity.

It is not necessary, at this time, to compile long lists of figures to show that there is a scarcity of meat-producing animals in the world. Market conditions in America and reports from war-stricken Europe indicate a shortage the world over. Germany has been compelled to stop eating meat, and the scarcity of fats in that country is fast growing critical. Austria-Hungary is reported on short rations, with meat the shortest. Russia is allowing the people meat only on certain days of the week. Great Britain has asked that meat supplies be husbanded. France has a short supply. And even neutral countries like Holland, Switzerland and Denmark are feeling the pinch. While the allied nations may be short of meat, they are in command of the seas and have access to the supplies of North and South America. The Argentine, United States, and Canada are big producers but prices here are indicative of the trend of events. All Europe that can get it is drawing on the meat supply of the Americas. We are told that, owing to the advance of meat, many American families are using less and substituting other things wherever possible. There is a real meat shortage in the world and livestock breeders should endeavor to meet the conditions. It takes months and years to increase greatly the beef supplies. Sheep may be increased more quickly, but for some reason the farmer has not taken to sheep breeding. Pigs may be increased rapidly but there have been such inroads made on the bacon-hog industry of certain countries that the outlook is bright for this type of pig in Canada. The situation is before us. Let us make the most of our opportunities.

### Safety First, and Not Speed.

In the automobile column of this issue appears an article, written by a farmer, who points out the danger to human life and property, brought about through the carelessness of some drivers of cars. Two good roads cross at his gate, one a county road, another a well-maintained concession line. Both are much used by automobiles, and our correspondent says very few drivers sound their horns when approaching the corner. His own little girl came very close to meeting her death on the corner, and two men in a car got a severe fright. We draw attention to this, simply to bring before owners and drivers the necessity for exercising care in the operation of their cars, and to impress upon pedestrians and drivers of horses the importance of being careful in the interests of life and property. Good roads are made good not for speedways for cars to race along at from 45 to 60 miles an hour, but rather that the cars and other vehicles may have a smooth, solid surface over which they may travel at a moderate speed without being shaken to pieces, and without discomfort to their occupants. Because a road is good is no justifiable reason for excessive speed. It is a temptation, but temptations are not often good reasons. Why such speed and thoughtlessness anyway? Our best built railroads are so constructed that trains could travel over them at greater speed than they now do. But they do not go faster, because excessive speed would endanger human life and property. Their roadbeds are made smooth in the interests of safety. So should the public highway be improved to safeguard human life and property. But many careless people seem to think that good country roads are made good that they may tear over them at 50 or 60 miles an hour, and, in dry times, give everybody the dust and dirt. This is not a "knock" at the automobile or at the people who ride in motors. The automobile is universal. More will be used each year. Most drivers exercise

good sense. Some do not. So it is necessary to appeal to the common sense of all to use judgment and care in driving, remembering that safety is the first consideration and not speed. And wherever roads are treacherous sound the horn.

### The Farmer Doesn't Want It.

At first we did not think it worth while to discuss what is popularly known as "daylight saving," but the "new time" is becoming so widespread in cities, and the Manufacturers' Association having gone so far as to ask the Government to make it Dominion wide, it seems necessary that the farmer's interests should be backed up. We do not believe that any government would be foolish enough to thrust such a senseless change upon agricultural Canada, but what the cities ask for they usually get, and so it may not be amiss to say what we think about "daylight saving." In the first place the phrase is a misnomer for no daylight is saved. Those who labor under the delusion that there is an hour more daylight because they get up an hour earlier, though at the same time by their advanced clock, are of the class that likes to be deceived. If city people want to start work an hour earlier and quit an hour earlier at night, why not do so and leave the clock alone and thus avoid confusion. It is a perfectly good idea, this starting earlier and quitting earlier, for it gives the man who works inside more opportunity to garden and take outdoor exercise in the evening. But perhaps this is none of our business, and so let us see how "daylight saving" would affect the farmer? In the first place it would be practically impossible. He is up at daylight anyway in order to be ready for the field at 7 o'clock by standard time. And then at night, suppose he were obliged to quit one hour early through the summer months one of his best hours for work is between 5 and 6 p.m. His hay and grain are wet with dew in the morning, but they are dry between 5 and 6 p.m. One hour in the afternoon is worth two in the morning killing weeds. A binder cannot be operated until the dew is off. In fact, the other way would be the better way to turn the clock, so far as the farmer is concerned. In the summer he could use the hour between 6 and 7 p.m., standard time, to much better advantage than the hour from 7 to 8 a.m., or the one from 6 to 7 a.m., same time. But then the farmer is fairly well satisfied with the daylight Old Sol gives him on his present schedule, and does not care to interfere. He, himself, uses practically all the daylight there is anyway, but would not care in summer for his help to have to wait for the dew to dry off before cutting or hauling could be commenced and then have them quit at night by daylight-saving time, which would mean 5 o'clock standard time. We are inclined to think it wouldn't work.

### Is a Summer-fallow Expensive?

Summer-fallowing, once common practice on nearly every well-regulated farm in Ontario, has died out considerably during recent years. Labor grew scarcer, the corn acreage increased, and farmers were told that it was not always good practice to leave a field in bare fallow because it was expensive to lose the use of the field for a year, and so the summer-fallow acreage grew smaller and smaller. As it dwindled complaints became more numerous of the increasing prevalence of such pests as twitch grass, perennial sow thistle, wild oats, field bindweed, and the common but persistent Canadian blue or June grass. This spring we called upon a farmer who was leaving a large field for summer-fallow. Questioned as to



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the reason he did not say, because of the late spring, or that the field was wet, but rather that it was the only way he could keep down persistent grasses which were crowding out his crops. Some years ago a fair acreage of his farm, probably one-tenth, was summer-fallow each year. His farm was cleaner than than now. We have reason to believe that many others of our readers have had a similar experience. It may be that a summer-fallow is not too expensive when nothing more than its cleaning effects are considered. It depends on conditions and the nature of the land. If it is run down and very weedy, a summer-fallow surely pays, because it permits of killing the weeds by the use of horse-drawn implements quickly and at least possible expense, and weeds must be kept down if good crops are to be produced. In a late and backward season like this has been a good summer-fallow is about the best thing to do with some of the land.

And where fall wheat does well, besides killing the weeds, a fallow, provided there is a fair dressing of farmyard manure applied, may double the yield next year. Forty bushels of winter wheat per acre is a common yield where sown on summer-fallow. Twenty is nearer the average of the same crop sown on stubble land not specially prepared, so two crops are really had in one after all. The extra twenty bushels of wheat, at present prices, would be worth as much as an average crop of oats or barley. True, it is manured land, but the manure must go on some land anyway. There may be a little more loss of plant food in the summer-fallow method, but if properly handled very little. So there are arguments in favor of the summer-fallow. A good fallow should be cultivated, if possible once per week throughout the early part of the summer. Keep down weeds. Retain soil moisture. Do not cultivate too deeply. A really good summer-fallow is not too expensive, a poor one is always costly.

This should be a great summer for dairymen. Plenty of grass means an abundance of milk, and milk and its products are commanding a good price. The Canadian farmer has no time to fool away on poor cows.

## Get and Give Real Value in Live Stock.

These are good times in Canada's live-stock history. At least they should be, and will prove out if everyone, buyer, seller and breeder plays a straightforward, honest game. There is a tendency, when demand is keen, to sell for breeding purposes, stock that would go to the butcher in ordinary times. The race for more stock in such times leads many to buy animals to add to their herds or to use as foundation stock which they would, in times of slower sale, hesitate to purchase. The seller is often just a little louder in his praise of stock offered in boom times than he would be if demand were not so keen. It requires just as much good judgment to buy and to sell, when anyone is looking for a certain class of stock as it does when stock is plentiful and the outlook not so promising. In buying the foundation of a herd or flock the buyer must be reasonably sure that the apparent value is actual value. Because a particularly well-bred heifer, with individuality par excellence, sells for \$1,000 or more, is no reason why \$500 or \$800 should be paid for a plain individual with only ordinary breeding behind it. It is generally in boom times that someone gets loaded up with a class of stock which does him little good. Then there comes the "down" period in the ups and downs of the business, and the man who bought without exercising care and knowledge becomes a "knocker." No breed can afford to have "knockers" among the men interested. To avoid the consequences the greatest care should be taken now, when the outlook is so bright, that no animal is described as anything more than it really is in breeding or in type and general conformation. Avoid the animal, if buying for general breeding, that is over-loaded with fat, and in milking cattle insist upon records as well as fine appearance. Because Jones pays \$1,500 for a bull which may be worth in reality \$5,000 is no reason why Smith, who may be a beginner, should pay \$1,000 for a chance buy, the animal being only an ordinary individual. Inflated prices, over-drawn descriptions and over-fitted stock do not tend toward stability and confidence. Everyone is entitled to good prices for good stock, and if care is taken to build up the market on a sound basis prices promise to be fairly high for some time to come in Canada. Fortunately the Canadian live-stock business has been placed upon a sound basis by years of persistent effort and fair-play dealing. Canadian breeders do not lose their heads and become panicky over changed market conditions. Stability is one of the mainstays of the business in this country. Let us keep it so. Good stock, fair prices, fair dealing, and ever-improving knowledge of live stock, and the business of breeding, feeding and marketing will do the trick. Let the motto be—apparent value—actual value.

## Nature's Diary.

A. B. KLUGH, M. A.

The first and most vitally important step which must be taken to conserve the wild life of Ontario is the arousing of strong public sentiment in favor of conservation. Without this all measures, laws, acts and treaties avail little or nothing.

This creating of a favorable public sentiment is important and essential for two reasons. First: No laws regarding the conservation of wild life will be passed without it. Laws are made by the government, and are supposed to be made in the interest of the country. So they are made in the interest of the country if the majority of the voters have the interest of the country at heart. But no government is going to commit suicide by passing laws to which it believes the majority of the voters may be opposed, no matter how good such laws may be. Therefore, if we wish the government to act, the first thing to do is to show plainly and clearly that the "free and independent electors" are in favor of conservation and that they will stand squarely behind that government which adopts and carries out a strong conservation policy. The voice of public sentiment must speak to the government in no uncertain tones, for special interests which are hit, or which think they may be hit, by conservation laws will not speak in low tones, nor will they talk only with the voice, but with money—and money talks.

Secondly: A strong public sentiment in favor of conservation is absolutely necessary in order that any laws passed may be properly enforced. We have to-day plenty of good laws which are absolutely dead letters because the public is apathetic regarding their enforcement. In respect to laws dealing with the conservation of wild life this is particularly the case. Our Ontario game laws are good as far as they go, but in many localities, perhaps one might safely say in most localities, they might just as well not exist for all the attention that is paid to

them. In some cases this state of affairs is undoubtedly the fault of the officials entrusted with the enforcement of the laws. But not in all cases by any means, for however zealous in his duty a game warden may be he cannot be everywhere at once, and in the present state of general apathy he cannot get evidence to convict law-breakers unless he personally catches them red-handed. No one will come forward with evidence against any game-hog or market hunter in his locality and the only cases in which evidence is thus volunteered are where personal spite enters into the matter. How absolutely different is this to what should be the case! Neither spite nor friendship should have anything at all to do with it. Every decent man should regard it as his bounden duty to see not only that he does not break the game laws but that nobody else does. He should regard the game and game fishes as the property of the public, and should regard himself, as a member of the public, as a game warden in charge of it. He should regard the game-hog, the market hunter and the "out of season" shooter as a malefactor who is robbing him, and treat him accordingly. This attitude on the part of the majority of the public is the only thing which will ever make laws effective, since it will not only aid very materially the official who is earnestly striving to do his duty, but it will eliminate the officer who is not doing his work in a thorough and impartial manner. The game warden who can be bribed or threatened into overlooking a breach of the law will go. The lazy and inefficient one likewise. It will not avail him that he "stands in" well with a certain political clique. While it will thus weed out the dishonest and the inefficient it will greatly strengthen the position of the good man. He will know that as long as he does his duty in an energetic and fearless manner his "job" is safe.

Realizing then the absolute necessity for a strong public sentiment in favor of conservation how is such a sentiment to be aroused? It is up to every man who is broad-minded and far-seeing enough to recognize the great importance of this matter to use all his influence, by talking and by writing, to bring home to the people of his locality the need of immediate action. It is not as though there was any strong and definite opposition to conservation. I am convinced that it is not prejudice against the principles of conservation which has rendered progress in this direction so slow, but apathy and thoughtlessness. I believe that a great many, perhaps the majority, of the people regard conservation, when they think of the matter at all, as something which is entirely the business of the government, that they regard the government as something set entirely apart from their sphere of action, and therefore that their attitude towards conservation is entirely immaterial. As soon as it is made evident to them that their hearty co-operation is necessary for the success of conservation I believe that co-operation will be given. Further, it is not only by talking and writing that every man can aid the conservation movement. There are pieces of conservation work to be done, small pieces of work looked at individually, but gigantic in the aggregate, which nearly every farmer can do. What these are and how they may be done we shall point out in a future article.

## THE HORSE.

### Lameness in Horses.—XXVIII.

#### Hip Lameness.

Hip-joint lameness in horses is not of common occurrence. The hip joint is deep-seated under bulky muscles, and also well protected from external injuries by a large, bony projection of bone (called "the trochanter major") of the bone of the haunch. This trochanter is a very large eminence which projects outwards and upwards, and presents, posteriorly, a prominent part, termed the summit, which stands a little higher than the joint, and gives attachment to a large and powerful muscle. The anterior surface forms a convexity, which is covered by cartilage, which forms a bursa, over which plays the tendon of another important muscle. The summit of this trochanter can be located by manipulation, and, by those not conversant with the anatomy of the part, is often mistaken for the joint. Sprain of the hip joint is very rare, but it is sometimes seen; and when inflammation of the joint occurs from this cause, there is an irritation of the synovial membrane, an exudation into the joint, and, if not arrested, ulceration of the articular cartilage and external layers of the bones.

Lameness in the hip, however, is not an infrequent condition; still its seat is not often the joint; but the head of the trochanter already mentioned. Sprain of the tendons of the muscles mentioned gives rise to inflammation of the synovial bursa on the summit of the trochanter, as well as to the tendons. The summit is liable to injuries from blows, falls, etc., and the inflammation so produced usually extends to the bursa. From whatever cause the inflammation arises, and whatever part of the trochanter be its seat, the exudate that is produced is likely to be converted into bony material, and the cartilage of incrustation on the summit, to be removed by ulceration.

Well-marked inflammation of the hip joint is accompanied by very severe symptoms; and the patient will stand almost immovable, with the foot raised from the ground, in which position it will be steadily maintained, unless he is forced to move; all movements increase pain to an agonizing extent. There will

be increase of temperature, rapid wasting of the body, and should the cases, be unable to stand on a sling.

Cases of this kind, and a dissection reveals ulceration of the head of the trochanter, articulates, or the portion of bony material do not soon abate that the above place, and that the animal will be a

The symptoms which arises from nearly so severe moves there will lame limb, and the whole of the with as little as other articulation standing he will diseased limb, to being held tense and allow the of relaxation. heat may be for per rectum. In well-marked swell and sight, upon of the muscles tends to cause with fracture. of the quarter a for some time immediately after

The swelling irregular, rounded is often erroneous touch, and pain tinctly it is often both at the sides shades of light

In the treatment a high-heeled shoe in keeping the If the symptoms sling. Long-corn with hot water and the application allay the inflammation of the joint it or liniments has tion of heat requires a long to recur. Unless alteration of the recovery cannot of lameness has taken to not w most subject to heavy loads, h are not forced recovery. It is high-toe calks o to the action of to cause this as

He was loafing and that is how talking. A clear in and been tur kept, muddy-l muddy fellows, up quickly. At the familiar "Nellie," he called so," she said, if it wasn't for now," said Fr one called Nell three or four out to clean us pains to point so's he wouldn boy just natur which, and her don't know wh 80 bushels of w after this I mis now—" "You Nellie," said o at our place. as grease, and day for more' some horseman said old Fritz, nothing about fixes everything now, we ain't off the ground clean stables n you none?" ask "Oh, yes sure not enough to comb, scrapes over and lets we come to t



be increase of temperature, loss of appetite and flesh, rapid wasting of the quarter and inability to lie down. Should the animal fall down, he will, in most cases, be unable to rise, hence he must be placed in a sling.

Cases of this violent nature usually cause death, and a dissection of the parts after death usually reveals ulceration of the articular cartilage, both on the head of the bone and the cavity in which it articulates, or partial destruction of it by a deposition of bony matter. When the severe symptoms do not soon abate, the practitioner will understand that the above alterations of structure are taking place, and that even if life can be maintained the animal will be an incurable cripple.

The symptoms of a milder form of hip lameness, which arises from disease of the trochanter, are not nearly so severe as the above. When the animal moves there will be noticed a hop and a catch in the lame limb, and a want of movement in the quarter. The whole of the quarter of the lame side is elevated with as little movement of the hip as possible, the other articulations being used with ease. While standing he will probably elevate the foot of the diseased limb, the muscles below the seat of disease being held tense in an endeavor to steady the parts and allow the diseased tendons to remain in a state of relaxation. In some cases of hip-joint lameness heat may be felt and pain caused by manipulation per rectum. In trochanteric lameness a more or less well-marked swelling can be detected, both by touch and sight, upon the quarter. In both forms a wasting of the muscles of the quarter is soon noticed, which tends to cause the observer to confound the disease with fracture. In disease the wasting and inequality of the quarter appear after the animal has been lame for some time, while in fracture they are noticed immediately after displacement of the bones.

The swelling of trochanteric lameness is of an irregular, roundish shape, on the very front of what is often erroneously called the hip joint, hot to the touch, and painful upon pressure. To see it distinctly it is often necessary for the observer to stand both at the side of and behind the patient, as the shades of light sometimes make it hard to observe.

In the treatment of either form it is well to apply a high-heeled shoe to the foot, to assist the patient in keeping the diseased parts in a state of repose. If the symptoms be severe he should be placed in a sling. Long-continued and often-repeated bathing with hot water, or the application of hot poultices, and the application of anodyne liniments tend to allay the inflammation and soreness. In disease of the joint it is doubtful whether the use of lotions or liniments has any effect, but the continued application of heat usually gives results. The patient requires a long rest, as the lameness is very likely to recur. Unless treatment is resorted to before alteration of structure has taken place a perfect recovery cannot be expected. Even after all symptoms of lameness have disappeared, great care must be taken to not work the patient too soon. The horses most subject to this lameness are those which draw heavy loads, hence care must be taken that they are not forced to this too soon after an apparent recovery. It is also well to remember the fact that high-toe calks on the shoe, by increasing the resistance to the action of the muscles of the limb, may tend to cause this as well as other forms of lameness.

WHIP.

### Fool Humans.

He was loafing around the livery barn the other day and that is how he came to hear those two old horses talking. A clean, fat, well-kept team had just come in and been turned into a stall alongside a rather ill-kept, muddy-looking pair of horses. One of the muddy fellows, recognizing the step perhaps, looked up quickly. "Hello, Fritz," he said, "how goes it?" At the familiar voice old Fritz looked up. "Hullo, Nellie," he called, "how's things?" "Oh, about so so," she said, "anyway, things wouldn't be so bad if it wasn't for some of them fool humans." "How now," said Fritz. "Why, it's this way," said the one called Nellie, "the boss hired another new boy three or four days ago, and when he brought him out to clean us fellows and hitch up he took particular pains to point out our collars and hames and so on so's he wouldn't get 'em mixed up, but that there boy just naturally can't remember which collar is which, and here to-day I got Sam's collar on and I don't know who's got mine. We brought in nearly 80 bushels of wheat, and if I don't have sore shoulders after this I miss my guess, and that ain't all neither, now—" "You drew the wrong number, that's all, Nellie," said old Fritz, "you ought to be livin' out at our place. Look at me, fat and sassy and slick as grease, and I ain't had a sore shoulder nor a sick day for more'n a year." "Well, your boss is probably some horseman," said Nellie, "now mine—" "Naw," said old Fritz, "he ain't no horseman, don't know nothing about horses, he's just lazy that's all, and fixes everything to save hisself work. Take us four now, we ain't slept in a barn since the snow went off the ground just because the boss don't like to clean stables nor curry us fellows." "Don't he curry you none?" asked Nellie, "you sure look like he did." "Oh, yes sure he curries us," said old Fritz, "but not enough to hurt, just roughs us up with the curry-comb, scrapes off the worst places, runs the brush over and lets her go at that. Of course, now when we come to town like this we have to stand for a

pretty good cleanin', but ordinary we can't complain. The way he does, though, he has a rack fence built along the hay stack with oat boxes nailed on, and in the morning he comes out and fills up the boxes with oats, a gallon and a half each three times a day, and then he goes out in the pasture and whistles whee hoo, whee hoo, and we come a lippin' in, and while we're eating the oats he cleans us off and puts the harness on and goes gets his own breakfast. There's hay there all the time right up against this here fence, and we eat all we want. When he comes out we go to work and we got to do pretty near three rounds an hour for four hours and a half or we get what's coming to us, then at noon we get a drink of water and we line up then and eat hay for an hour or more, then another gallon and a half of oats. When we come in at night we get another drink, off comes the harness and we eat all the hay we want. After he gets his supper we get our oats again and turned loose. After we take a good roll or two and a good drink of water at the spring we go out and eat up grass. In the pasture, too, there's a big chunk of rock salt and a fellow can have a lick any time he wants it. I don't know, of course, whether that's the reason or not but we ain't never sick or off our feed, and I'm getting fatter every day and working hard nine hours at that."

"How about your shoulders?" asked Nellie. "Shoulders! Why I don't know, they ain't sore none, that's all, our collars fit for one thing, and so does the hames, and he's always particular not to get any of the mane under the collar and he scrapes the collars frequent, and every morning curries and brushes our shoulders especial so's to get all the loose hair off, and then a couple of times he washed our shoulders with cold, salty water. First few days, too, he'd come and lift our collars up every few rounds and look at our shoulders, that's all he done, but as I say we ain't had no sore shoulders. Here's your boss now, eh? Well, so long, be good to yourself, and don't take in no wooden money. By by!"

"O. U. FARMER,"

"The Farmer's Advocate and Home Journal,"  
Winnipeg, Man.

### The Ear is the Vital Place in Starting a Balker.

Balking is a bad habit or vice in horses. As a general thing no one wants to buy a horse that balks if he knows it and the honest owner of a balker is obliged to handle his horse the best way he knows how. It seems that the ear is the vital place in the horse. Some time ago we published a note describing how a horse which had stood "balked" for some time, and which had been first patted, then pounded, was started in less time than it takes to tell it by a passerby who stopped, gathered a few dry leaves from underneath a tree at the side of the road and stuffed the balker horse's ears full of these. The horse started off at once without further trouble. Simpler still is the method outlined in the following written by Alfred H. Pope and recently published in "Our Dumb Animals":

"Of all vices that equine flesh is heir to, the most annoying to the average horse owner and driver is balking, or near balking, which consists in rearing or plunging when first asked to start, particularly after a few days' rest, or what is still worse, trying to start

with a jump when only half hitched. The main reason that I think it is so aggravating is that so few know how to combat it. A balky horse has the most sense, the confirmed runaway the least of any horse.

"I have bought more balky horses than those with any other vice for that reason. Once they are broken of balking, they make the best of horses, not afraid of the objects that usually scare those of other temperaments.

"The little simple trick I am going to describe and that has proved so satisfactory in so many cases is not intended to break the horse of balking, which in most cases involves a lot of time, patience, and more or less thorough knowledge of horse nature, but rather to help those who have been caught, perhaps with a new horse that started away from home all right but has now balked, because the conditions under which he has balked before have again presented themselves.

"The average driver, when caught in this way, starts in by petting and coaxing the horse and winds up by losing his temper and beating it until stopped by passers-by or some policeman.

"A horse has only one idea in his head at a time, and in this case he has decided not to go any further with that particular load, and the coaxing and patting are not sufficient to cause him to think of anything else. The whipping only makes him more stubborn and determined not to move. Now we have got to find something that will give him something else to think about.

"All horses, and mules more so than horses, hate to have their ears hampered. In fact no horse ever decides upon a different course of action without first moving its ears from the normal position, and here is the key to the whole idea. As soon as it balks get down from the seat and deliberately take one ear and push it under the crown piece of the bridle so that it is fast and leave the horse to its own devices for a few minutes. He will commence shaking his head and doing everything he can think of to get that ear loose, until he has forgotten all about balking and his whole thoughts are centered upon freeing that ear. Now let the driver get back on the wagon, call on the horse to start, and off he goes. I have proved this trick to be successful with cow-horses that thought it necessary to buck and pitch when first mounted in the morning, and with rearers in the saddle and horses hard to hitch. Leave the ear where it is for about twenty minutes, then stop and free it. Let the horse have time to shake his head and be satisfied that everything is all right again, and off he will go as pleasantly as possible.

"As I said before, this trick will not break a horse from balking, but it will invariably start one that has balked on the road, provided he hasn't already been whipped and abused to a point where nothing matters."

There is generally enough neglect on the farm, but poultry, as a rule, gets an unfair share. How often is the hen-house cleaned, and what precautions are taken to market nothing but strictly fresh eggs?

Where more stock can be maintained on the farm by devoting the bulk of the land to the growing of roughage, buying concentrates can often be made profitable. This is a case of the application of business methods to farming.



Horses Appreciate Plenty of Water, and Often, in Hot Weather.



## LIVE STOCK.

## Our Scottish Letter.

EDITOR "THE FARMER'S ADVOCATE":

Off the western coast of the Orkney Islands on Monday afternoon or evening H. M. S. Hampshire suddenly went down with all on board. She carried an exceptionally valuable crew and passengers—the latter including Field Marshal Earl Kitchener, of Khartoum, K. G., Minister of War, and his staff. All have found a watery grave. No greater tragedy has ever taken place in the story of Great Britain and her sea power. The great General was on his way to Russia, on what high errand only politicians of the first rank know. The entrance to Russia in these times is by the north, through her White Sea ports, and one wonders whether there was any connection between this journey of Kitchener and the frustrated effort of the German Navy to break through the North Sea cordon five days earlier. Perhaps there was no immediate connection, but there certainly must have been an indirect connection. Whether the Hampshire was torpedoed by a submarine, or blown up by a floating mine, or whether she struck on a dangerous reef, as some North Sea trawlers think, is at the moment undetermined. What is significant is the comparative silence of the German press over the death of Kitchener. The less speculation is indulged in the better; it does not admit of doubt that Kitchener's last fight is over. Others will need to put the copstone on the mighty fabric which he reared. It was the magic of Kitchener's name which, more than anything else, enabled Great Britain to raise and equip a voluntary army of almost 5,000,000 men. The world has never witnessed such a spectacle. Generations unborn can hardly improve upon it. It abides the crowning glory of British rule and British patriotism. The response of the daughter dominions across the seas is the other side of the same glorious shield. Kitchener, of Khartoum, will live in history as one of the most magnetic figures the British race has ever produced.

The War drags its weary length along. Many are the tokens of impending great events. As we write the newspapers report some progress by the Germans at Vaux in the Verdun area, and determined assaults, with some slight success, on the British positions at Ypres. What one would like to see in the British army is conclusive evidence that all our commanders and officers, as well as our rank and file, had imbibed the wholesome doctrine taught by Kitchener, that we are up against an enemy who has been organized for war and believed that he was organized for victory. The worst mistake our Army can make is to underrate their enemy. Not while in that mood will victory crown their efforts. Men must make up their minds for a long conflict. They must remember that the man who knew most about it said in August, 1914, that this War would last three years. Everything, at the moment, goes to confirm this estimate of its duration. Therefore, we must organize for conflict and recognize that alike by land and sea, Britain's sons must strain their every effort in order to secure victory.

In many respects our Government are doing well. They are now gripping the economic situation in a fashion that was sadly lacking in the earlier stages of the conflict. Wheat and flour are coming back in price, and there is every prospect that the freight policy, which has operated to this end, will not be resiled from. It is surprising how comparatively little damage the German blockade has been able to inflict on the carrying trade of these islands. The management of available tonnage has not always been masterful, but there are tokens of a mighty improvement. This policy is, no doubt, operating adversely to the interests of our grain-growing farmers, but even at present rates they are getting double the price for wheat that they would have regarded as remunerative in pre-war days. Great Britain is determined to show the world that, with her Fleet masters of the great ocean highways, no weapon that is formed against her can prosper. Bread is certainly high in price and meat overwhelmingly so. In the Edinburgh market this week a 21-cwt. Holstein fat bull made £70 sterling. That, according to the transatlantic method of calculating these things, works out at about 15 cents per lb. live weight. This figure was, however, altogether eclipsed at Wellington, Salop, in England, where a Hereford bullock weighing 12½ cwt. made 90s. per live cwt. This works out at 19 cents per lb. These figures are unprecedented in British markets, and there can be no doubt that meat will go to famine prices here. The poorer people will be unable to purchase butcher meat. At present, however, such high wages are being earned that the artisan classes are really the purchasers of the highest class of food products. In this sense a vast amount of extravagance is going on, and one trembles at the anticipation of the day of reckoning that seems due.

The spring season of 1916 has been one of the wettest within living memory. The rainfall in May at Kilmarnock was over 3 inches, while in May, 1915, it was less than one inch. This tells its own tale. The hay crop of 1915 was short, this year there promises to be an abundant hay crop, and already on the better lands in the Lothians it is pretty nearly flat. How it is to be harvested is a question that takes some thinking out. The wages for farm labor have gone to an unprecedented figure. The increase in most of the Scottish counties is about 50 per

cent. since the war broke out. Ploughmen are earning £100 a year, and some rather more. Labor to work the hay crop which used to be hired for 18s. to 22s. per week cannot now be got for much less than 5s. per day or 30s. per week. Yet, strangely enough, there has been less complaint of scarcity of labor during Spring than one would have anticipated. Farmers do not hesitate to say that work has been retarded more through unfavorable weather conditions than through shortage of labor. The rainfall has been excessive, and since June came in there has been little or no improvement. During the past few days we have had, almost universally throughout Scotland, a low temperature and heavy rains. It is almost impossible to cultivate the heavy clay lands, and the prospects for getting in the turnip crop on such land are at the moment rather gloomy. On the other hand the excessive rainfall has proved a great help to farmers who cultivate the light, friable soils on the south-western seaboard. They have been "making good" and their crops are looking well. There is an extraordinary demand for milk in England, and some farmers in Ayrshire have been sending their milk to London. They are getting 1s. 2d. per gallon for it. A gallon is four quarts. Early potato crops on the Ayrshire coast have already been sold, and it is reported that some of the most advanced lots have made £50 an acre.

In spite of perils by the sea some Clydesdales have recently been shipped to Canada. Both Ben Finlayson, Claresholm, Alberta, and the veteran William Colquhoun, Mitchell, Ont., shipped a number of good horses about a month ago. Clydesdales have been making great prices. Work horses of a high grade have been making £100 apiece, and much more in individual cases. There are very few inferior stallions in the country. Such are much more valuable as geldings, for which £90 to £120 can easily be obtained. All this is for the good of the country. The worst thing that can happen the horse-breeding industry is the multiplication of inferior stallions, and their unrestricted use as sires. There are hints that legislation may be passed making it illegal for unworthy horses to travel. The difficulty in connection with such legislation is to find the bench of judges who are to determine suitability. Naturally veterinary surgeons think the power should be placed in their hands, but we do not agree. Some veterinary surgeons

in Aberdeenshire, 20 Clydesdales, constituting the stud owned by the late James Argo, made an average of £127 5s. 8d. each; the highest price being £315, paid for a mare. At Uppermill, Tarves, the famous stud of the late John Marr, was sold, when an average of £106 16s. 6d. was made, and the highest price was again £315.

There has been a big rumpus between Argentine exporters and breeders of Shorthorn and Aberdeen-Angus cattle about the application of the tuberculin test. Exporters complained that the charts published in the sale catalogues, in many cases were belied by subsequent experience of the animals, and they issued a manifesto in which they declared that they would not buy except on a guarantee that an animal sold with a chart would stand the test within a period of thirty days after the date of sale. The breeders would not have this, and for a time it looked as if there was to be a deadlock. However, the northern breeders, under the pilotage of Mr. Duthie went slow. They resolved to "wait and see" what might be the effect of informal interviews and conferences. The result has been published this week, and while the issue cannot be regarded as heroic, it appears to be a case of all's well that ends well. The tuberculin test is to be a matter of mutual arrangement between buyer and seller, independently of any public contract. Tacked on to this finding there is a curious inconsequent-looking reference to the hygienic condition of some of the public sale yards. The relevancy of this to the business in hand is not quite apparent, but no doubt the authors of the agreement have some definite end in view.

SCOTLAND YET.

## All Kinds of Veal.

EDITOR "THE FARMER'S ADVOCATE":

While veal can hardly be classed as a standard flesh food along with beef, pork, and mutton, it occupies an important position in the meat market of villages, towns and cities. The veal season is chiefly confined to the spring months, although a considerable amount of it is consumed at all seasons of the year. Veal is very largely the product of dairy farmers, and the major portion of it sold consists of the calves of herds kept for the production of milk.

It is unfortunately true that a large proportion of the spring calves received in the larger markets are of exceedingly poor quality. Before the advent of federal inspection in 1907 very large numbers brought in were less than one week old, and a certain proportion of these still find their way to the market to meet confiscation or be disposed of through local uninspected slaughter houses.

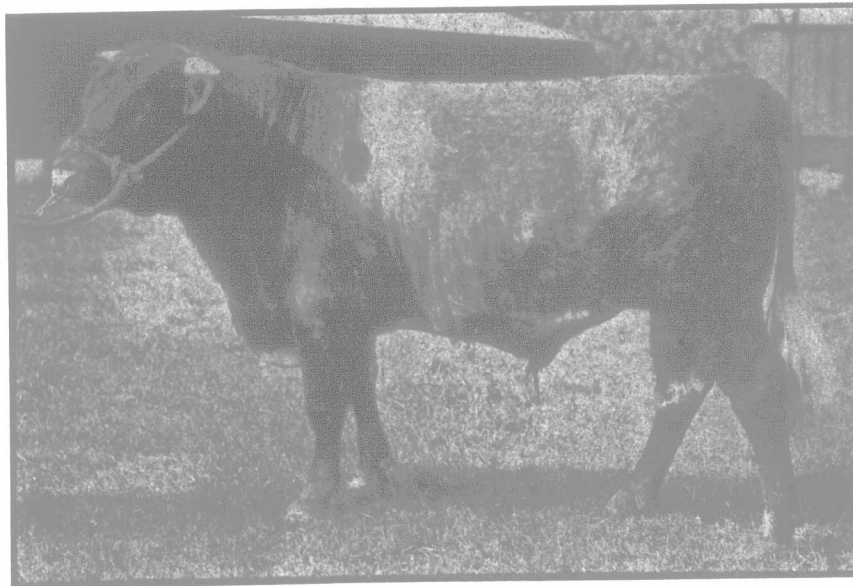
Of the calves three weeks and over, which make up the great bulk of the offerings, there are several classes ranging from prime veal to very inferior stock. The stretch of quotations in the market reports, especially during the spring months, indicates the range of quality. From two to ten dollars per head or from six to nine dollars per cwt. are common quotations and tell a striking story.

Veal may be roughly classed as heavy, prime and common. Heavy calves may again be subdivided into fat and rough. While the former bring a better price per pound than the latter they are by no means as desirable to the trade as prime veal.

A calf weighing more than 200 lbs. is not wanted by the butcher unless at special seasons of the year, such as Christmas and Easter, when a striking display in the shop is desired. Unless a calf is disposed of before it passes that weight it should be carried on for beef. Old or heavy veal not only cuts too large but is tough, coarse of grain and of bad color, being too dark for veal and too pale for beef. This is why heavy calves are undesirable and cannot be sold at a profit.

A prime veal must have two qualifications. It must be between the age of four and eight weeks and be well fattened. In addition it should carry a good depth of flesh on the back. The last named qualification is more a matter of breeding than fattening. That is to say a calf from a sire of a beef breed would yield a more fleshy carcass than one from a dairy bull. Of the many calves received at the leading markets of Canada the number of prime veals is comparatively small.

A good veal weighs from 100 to 200 lbs., a prime specimen ranging from 120 to 160 lbs. A well-fattened veal calf dresses from 65 to 70 per cent. with the skin on, in which condition it is usually sold. The meat is juicy, fat, finely grained, white and firm. The fat is firm and almost pure white. Prime veal properly prepared is a delicious article of diet and is at all times in demand. It is important that one who attempts to raise veal understand how to judge when a calf is at its best.



Windmill Lord Mayor.

A Shorthorn bull, first in its class and winner of the Society Champion Prize, also champion silver medal, Dublin Show, 1916.

are good judges of draft horses, but the majority of them are not. It has been colloquially declared that, as a rule, veterinary surgeons know a good deal about the inside of a horse, but very little about its outside. One ill result of the War has been to curtail the activities of the Board of Agriculture in connection with its work of stock improvement. The methods which the Board was adopting in that department were gradually bringing about the elimination of the unsound and unworthy stallions. Its resources have, however, been greatly impaired by the Treasury, and it has had to reduce all its grants. This is not a good thing for the general interests of the country, and there are directions in which economics might have been exercised which would have benefited the country and done injury to no interest that makes for the well-being of the commonwealth. The Coalition Government has been most heroic in instituting economies which mean little, but it has been singularly complacent to the liquor interest in all its phases. That interest does no good to any one, yet the restrictions imposed upon it have in no wise impaired its profit-making character to those engaged in it. Agriculture has been rather severely hit, in so far as these stock-improvement schemes are concerned, and the results are not helpful.

At three dispersion sales in May, rendered necessary by the death of the owners of the studs, high prices were made for Clydesdales. At the Balgreddan sale in Kirkcudbright, consequent on the death of David A. Hood, a well-known breeder, 14 Clydesdales made an average of £129 15s. each, and 70 Ayrshire cows of an ordinary cheese-making dairy type, made an average of £14 1s. 3d. each. At Crannabog,

The common in the spring of t ing comparatively The high price of impression that its whole state few days the calves skim milk. A buyer who w bring. Before t too young for th has largely put a calves. While m large quantity v shops, marked in readily taken by the skim-milk c

Inferior veal those insufficient is from eating s very undesirable in the spring mo poor in larger cit high prices for that season of t of the lean veal s for it would grea enhance the v assuredly pay fo be necessary to f Elgin Co., On

EDITOR "THE F

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The common or inferior calf, that floods the market in the spring of the year is a scrawny specimen, carrying comparatively little flesh and that of inferior quality. The high price of milk in recent years gives many the impression that it is too valuable to feed to calves in its whole state, with the result that after the first few days the calves on many farms get little more than skim milk. They are then turned over to the first buyer who will take them at whatever price they will bring. Before the days of meat inspection, no calf was too young for the market, but the risk of confiscation has largely put a stop to the marketing of very young calves. While much of the 'bob' veal went into cans a large quantity was sold over the counters of meat shops, marked in many cases at so low a price as to be readily taken by the poorer buyers. Then there is the skim-milk calf.

Inferior veal whether from very young calves or those insufficiently fed is a poor article of diet. It is from eating such that veal has become to many a very undesirable food. True it is that cheap veal in the spring months is a blessing to many of the very poor in larger cities who are not able to pay the usual high prices for beef, pork and mutton prevailing at that season of the year. It is also true that if much of the lean veal sold were properly fattened the demand for it would greatly increase and this would at once enhance the value of good calves that would then assuredly pay for the milk and other feed that would be necessary to fatten them.

Elgin Co., Ont.

E. L.

**O. P. V. Silage.**

EDITOR "THE FARMER'S ADVOCATE":

Nova Scotia is not an ideal corn-growing country. The nights are too cool for that heat-loving plant, and, as a consequence, the farmers who try to raise corn for silage are often disappointed. The Nova Scotia Agricultural College believes in succulent feed for stock in the winter, and in looking for a substitute for corn silage found that oats, peas and vetch sown together yield a big crop, and when put in the silo make excellent silage. This material has been used with success by several farmers in the neighborhood of Antigonish, N. S., for some years.

In 1914 the Agricultural College seeded something over five acres with oats, peas and vetch at the rate of a bushel and a half of oats, three-quarters of a bushel of peas, and half a bushel of common vetch per acre. This yielded on the average over eleven tons of green feed per acre, and on three acres in the piece the yield was fifteen tons per acre.

This O. P. V. silage kept perfectly in the silo, the cattle ate it well and it kept them in good condition. The same year five acres of corn grown, yielded only eight tons per acre. The season was cold and backward, and the conditions that made a heavy crop of oats, peas and vetch gave a light yield of corn, with practically no ears formed. An analysis of the silage from the two crops is given below:

Constituents.	O. P. V. Silage.	Corn Silage
Dry matter.....	28.15	20.00
Protein.....	2.31	2.37
Carbohydrates.....	23.42	15.33
Fat.....	.83	.88
Ash.....	1.59	1.42

It will be seen from the analysis that the oats, peas and vetch contained 8.15 per cent. more dry matter than the corn. Comparing the amount of dry matter obtained per acre from the two crops we find that the oats, peas and vetch gave 6,418 lbs., and the corn 3,200 lbs., or only half as much. When we consider further that the labor of growing the oats, peas and vetch is less than half that required to care for a crop of corn, we see that for a cool country there is no doubt as to which will pay better.

In 1915 these results were practically duplicated, although the crop of oats, peas and vetch was not quite so heavy and the corn a little better than in 1914.

In order to get a heavy yield of oats, peas and vetch the mixture should be sown on land containing a good deal of fertility. A light crop will fill up the silo very slowly.

We sow as early in the spring as we can get the soil in proper condition. In Truro this is generally about the last week in April. The oats, peas and vetches are mixed together in the proper proportion and sown with the grain drill at the rate of about 3 bushels per acre, using the scale given on the drill for oats. The last two years we have used two bushels of oats, three-quarters of a bushel of peas and one-third bushel of vetch per acre, and find this mixture about right. It is cut for the silo just when the oats are coming into the dough stage, when there is only a little yellow color beginning to show on the straw. If left until the oats get too ripe it will not pack solid in the silo and is liable to mold. When cut in the field with a mowing machine, it is loaded directly on the wagons and taken to the silo at once. It should not be allowed to dry in the field, as that would interfere with solid settling in the silo.

We have had no trouble in getting it to keep in the silo when put in and kept level and tramped in the same way in which corn is usually handled. It can be cut with an ordinary cutter, and elevated with carriers, or put through cutter and blower.

We have put it in the silo the first of August

and finished filling the silo with corn in October. Before starting to put in corn the oats, peas and vetch that had spoiled on top was thrown out. The corn on top was fed until April and when the oats, peas and vetch, in the bottom, was reached it was in perfect condition.

N. S. Agricultural College. JOHN M. TRUEMAN.

**Grade or Pure-bred for the Farmer?**

The question as to whether farmers in general should attempt to establish pure-bred herds or continue with grades cannot be answered by the fact that one class of stock is superior to the other, the deciding factor is the man. At the outset we wish to record here, that if any young, ambitious agriculturist will start in a modest way with pure-breds and pay attention to the principles of breeding and the commonsense rules of caring for good live stock he will be making a move that may alter his whole farming career and substantially increase his revenue. If one is to continue in the way of indiscriminate breeding, crossing breeds, mating with any kind of a sire because it is convenient and on the whole operating in a cheerful haphazard manner, he has no business looking a pure-bred in the face. On the other hand, the live-stock industry of this or any other country depends upon the quality and numbers of the pedigreed animals on the record books, and if any careful and ambitious farmer starts in the pure-bred business and keeps abreast of the time in the application of ideas and the assimilation of information concerning his chosen breed he has a bright future before him. From one viewpoint it is less expensive to grade up a herd or flock of animals to a certain degree of excellence than to purchase pure-breds, and so far as the production of milk or beef is concerned the results in the two cases are comparable. However, many of our breed association herd books are closed to the short-pedigreed animal, and a breeder, after even a quarter century's work is unable to have his stock recorded, though it be right in type and conformation and has a sufficient number of top crosses to ensure the transmission of its good points to the progeny. These animals and their get, be they ever so good, must continue to sell at prices they would command in the market for beef or milk production. Without utilizing space here to laud or condemn this system it must be said that a careful breeder scarcely meets with his just reward, in this regard, for his many years of toil. On the other hand the concession, if granted, to register short-pedigreed animals might militate against the best interests of the breed; consequently we must accept the rules as we find them and do the best possible under the circumstances. The man who will breed up grade cattle so they should qualify for registration would be a valuable asset to the country as a breeder of pure-bred stock.

It now appears that a fairly good class of pure-bred females can be purchased at a reasonable cost and at a price not beyond the average agriculturalist. Any young farmer whose heart is in the work and is determined to put forth every effort and avail himself of all opportunities to improve his farm animals should, if possible, start a pure-bred herd but, at first, only in a modest way. One female and future success is preferable to a brilliant start, but a poor finish. Don't over-feed or pamper the pedigreed animal and bring about sterility at the beginning. Many amateurs fail in this very direction. A succulent ration that will induce thrift is preferable to heaping measures of grain and meal. The good herds of cattle have been for generations in the same families and few have been established by breeding in less than 20 years, so one should not aim at a high standing in only a short period. The pure-bred requires a little extra effort, a little extra ability and a little extra care; if these are not forthcoming don't meddle with the pure-bred.

**These Fall Pigs Were Profitable.**

Fifty-seven fall pigs fed at University Farm, St. Paul, last winter and marketed recently, left a margin of \$4.56 a head to cover cost of labor, risk, interest, profit, etc.

R. C. Ashby of the animal husbandry division at University Farm, began a series of tests two years ago to determine whether raising fall pigs is profitable in Minnesota. The margin of nearly five dollars a head is the result of the test.

Eleven sows farrowed fall litters for the tests, and the pigs were weaned December 16. They were put on feeding tests two days later. The records kept cover all feeds consumed by sows and litters from farrowing to weaning and from the time the actual feeding test was begun until it was finished.

The total cost of feed for the sows and pigs up to weaning time was \$186.81. From weaning time to the time of marketing the feed cost \$577.88, making a total cost of \$13.42 a head. The feed was counted at these prices: Shelled corn, 75 cents a bushel; ground barley, 65 cents a bushel; shorts, \$26 a ton; tankage, \$55 a ton.

The pigs averaged 191 1/4 pounds when sold May 6. They were sold at \$9.65 in South St. Paul, a price equivalent to \$9.40 at home. The selling price of \$17.98 left a balance of \$4.56 each. No account of manure is taken in these figures.

The pigs were fed in five lots, three lots from self feeders and two lots fed by hand. Those in the lots in which the self feeders were used did better than those in the other lots. The corn-fed lots required

about seven bushels of corn, forty pounds of tankage, and from thirty to forty pounds of shorts for each pig from weaning time to the close of the test.

The pigs were fed grain alone. They were given no milk and did not have access to the cattle yards. Mr. Ashby thinks that when milk is available or when the pigs can pick up after cattle the margin will be correspondingly increased.

**Big Returns.**

A York County subscriber writes that one of his neighbors has six ewes which raised thirteen lambs which sold for \$145 in the fall. This besides the wool was a pretty fair return. The flock was fed on ordinary farm feed and the lambs weighed when sold 1,480 lbs. The return in lambs was over \$24 per ewe. Our subscriber wants to know who can beat this. Of course the sheep were grades and the lambs were sold to the butcher. The wool from the ewes netted \$12.

**THE FARM.**

**A Run for His Money.**

EDITOR "THE FARMER'S ADVOCATE":

Owing tae the somewhat unsettled state o' the weather during the past few weeks, an' mair, I hae got intae the habit o' gangin' intae toon an' spendin' pairt o' the day wi' ma friends an' acquaintances there an' discussin' the war an' sic like matters that will aye be comin' up for settlement. But the last time I wis in I met a young friend o' mine wha has lately gone intae the dry-goods business, an' wha is full o' enthusiasm an' new ideas as tae how tae get yer share o' the public's attention an' money. He's an unco' wide-awake chap, an' I'm minded tae tell ye some o' the things he said the day I wis talkin' tae him aboot his plans an' prospects. "In the first place, Sandy," says he, "ye don't want tae try an' mak' ower muckle money out o' ony o' yer customers at one slap. It's a case o' killin' the goose that lays the golden eggs. The chances are that he'll find oot aboot it, an' yer business relationships will be at an' end. Gin it ever happens that I mak' a mistake an' sell a customer an article for maybe less than it cost me, it doesna worry me ony, for I ken that I'm no' likely tae lose trade by it onyway, but when the mistake is the ither way an' I hae charged him mair than I should, I never ken how muckle I may lose by the transaction. The chances are he may leave me an' tak' some o' ma ither customers along wi' him. It has aye been ma aim tae mak' people think that by dealin' wi' me they were makin' money; gettin' increase for themselves as weel as for me. It's this increase o' life that everybody is after, an' the mon that helps them tae get it is the mon that they are willin' tae reward for his services. Ane o' the best thinkers o' the last century said that gin a mon made a guid mousetrap or a guid jack-knife the world would wear a pathway tae his door, even though he lived in the woods. An' there's something in it. Ye become a centre o' attention as soon as ye let people ken that they will better their condection by dealing wi' ye. What helps tae gie the impression o' wealth an' increase tae yer customer will help tae increase yer ain wealth. An' the one way tae mak' the ither mon believe in yer ability tae help him is tae believe it yersel'. Without faith in yer ain power tae succeed ye willna' hae muckle effect on ither. Ye maun show yer confidence in ilka action. An' dinna' forget that it is by increasing the prosperity o' oor friends an' neebors that we oorselves can maist easily become prosperous. There's eneuch material in the world tae mak' us a' rich, gin we only gae tae wark in the richt way an' get it. We dinna' need tae compete wi' ane anither for it. What we want is mair producers. The men wha speculate on the price o' wheat in oor stock exchanges are competing wi' ane anither, an' ilka dollar any o' them makes is taken frae some ither man, an' wi'oot giving him onything in exchange for it. But the producer o' wealth, as the farmer or miner or lumberman for instance, is warkin' for the hale community as weel as himsel'. He is makin' the world richer, while the mon that tries tae mak' money simply by a rise in the value o' something or ither, adds naething tae the wealth o' the community, an' mair aften than not leaves the ither chap the poorer for the transaction. Society is made up o' three classes o' individuals, the producers, the distributors an' the parasites. I dinna' think ye can pit yer finger on a son o' Adam that willna' fit intae ane o' these groups. Oor farmers, miners, fishermen, lumbermen, doctors, teachers, preachers, an' so on are a' producers. Oor merchants, railroad companies steamship companies, an' all classes o' middlemen an' dealers are the distributors, while the stock-dealers, speculators, gamblers an' tramps are the parasites. They get a living oot o' the community but add naething tae its wealth.

"Sae ye can see by this that tae mak' a financial success o' life, that is, something that will be permanent an' real, ye must wark for the benefit o' yer fellowman as weel as yer ain. We must gae on the principle o' the mon wha said, 'what I want for myself, I want for everybody.' As a matter o' fact oor interests are sae mixed up wi' those o' oor neebors that ony ither policy is foolish an' short-sighted. But some people dinna' see it that way yet, though they hae been gettin' object lessons along this



line a' their lives. They dinna' realize that the mair prosperous the community is in which they live, the easier it is for them tae become rich. It's a fact, juist the same. I remember seein' an example o' this in a place I was in once. A young farmer there got it intae his heid that he could improve his herd o' cattle as weel as his ain financial condection by introduc'in' some new blood among his stock, sae he bought three or four pure-bred animals at a price that his feyther thocht wad put them a' on the road in a few years, but the young chap wis full o' faith an' enthusiasm an' he went ahead, an' ilka year saw his stables better filled wi' better stock than they were the year before. Soon he wis in a posection tae sell some o' his animals tae his neebors, an' before lang a dozen or mair o' the farmers o' the place were raisin' pure-bred stock, an' takin' mair interest in their wark than they had ever done before. An' when, a few years later, this same chap held an auction sale o' his entire stock, they were bought in mony cases, by men he had started in the business, an' these same

men paid him prices that showed they appreciated what he had done for the community as weel as the fact that they wanted weel-bred stock. I've fooned this oot, Sandy," says ma friend, "the Auld Book is richt when it says 'no man lives unto himsel'." We're one big family an' in the end we'll sink or swim thegither. The individual will no' get vera far ahead o' the race. He'll have tae tak' the crowd along wi' him or sit doon an' wait for them tae catch up." "Weel," says I, "the trouble wi' me has been tae keep the crowd frae gettin' ahead o' me." "I ken that Sandy," he replied, "an' it's trouble you'll hae sae lang as ye look at matters frae that standpoint. Try helpin' yer neebor tae get ahead o' you, for a change, only ye must see that he gets a good run for his money." "Weel," I said, as I got ready tae start for hame, "I'll try it, an' the next time I'm in toon I'll call an' let ye know how the neebors are progressin'." I'm gettin' unco' interested in their welfare already." SANDY FRASER.

## Water in the Farm Home.

The man who builds a new house in the country and does not have at least a moderate amount of plumbing installed is a quarter of a century behind the times. Generally speaking, there are few obstacles in the way of a water supply on tap in the dwelling, and a water service system can be put into a home, already standing, at only moderate cost, that will work satisfactorily. The conveniences in urban homes and the ease with which the work can be done, are the chief advantages of town or country life. Give the country people a dwelling with a supply of soft and hard water on tap, a bath-room and closet, and they have conditions which will be envied by many who live in towns and cities, simply to spare the life and health of the women folk. This phase of the matter requires no lengthy discussion. The facts are appreciated by all. The rural female population is at a disadvantage in this regard, and although labor is extremely scarce and considerable farm machinery is an absolute necessity, it would not be an injustice to the men if they would postpone the purchase of some implement until the work within the four walls of the dwelling house is made lighter by the installation of a water supply and some conveniences that will lighten the labor there and make life a little more enjoyable.

This article is prepared with an earnest desire on the part of this Journal, that farmers will realize the necessity for this home improvement, and that they consider it economical from the viewpoint of money, health and pleasure. Several modest types of equipment will be described, but the most elaborate is not beyond the reach of the average farmer. We believe the cost of an efficient service will appear surprisingly low when the reader views it from every aspect.

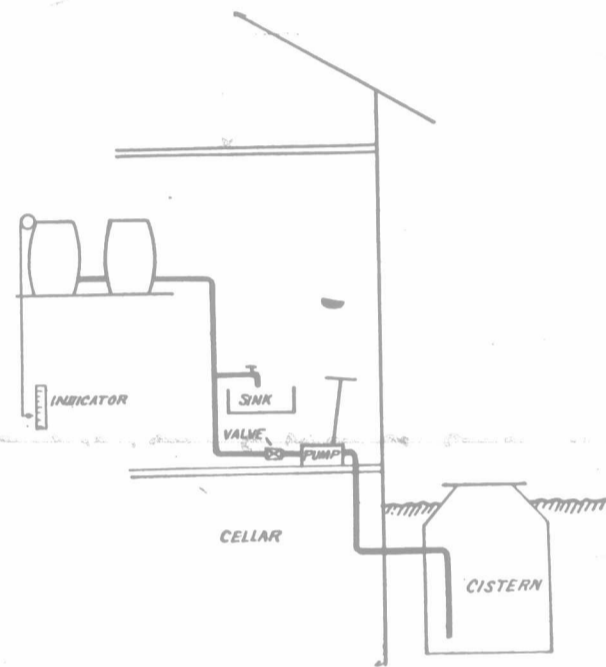
### The Pneumatic Water Supply System.

Undoubtedly the pneumatic system for supplying water to all parts of the dwelling or buildings is one of the most efficient of any in common use. A compressed body of atmosphere in a tank containing both air and water, provides the pressure which forces the water as high as required, and sends it to the stables, milk-house, lawn or garden. Sometimes the house only is equipped, and this limitation of its usefulness very materially decreases the cost of the apparatus.

The tank is a central feature of the outfit, it is made air-tight and in any desired proportions. For the average dwelling where the house only is to be supplied, a tank 2½ feet in diameter and either 6 or 8 feet long is generally considered to have ample capacity. The smaller of the two would hold approximately 183 gallons of water, exclusive of air, and the larger about 244 gallons. This part of the apparatus can be located in any convenient place, and when being used solely in the house it is usually located in the basement.

The next requirement is a pump to force water and air into the tank. It is generally advisable to purchase a pump that will renew the air as well as the water in the tank, as considerable air will be carried out through the taps with the water when being used. This will decrease the body of atmosphere, and also the air pressure which is the driving force. When the quantity of air is insufficient the tank is said to be water-logged. There are many pumps on the market, and no difficulty should be experienced in obtaining one adequate in every way. A hand pump is used with a small system, and when the lift of water is not great it is found satisfactory. It will pump both air and water simultaneously, and the pressure in the tank obtained can be made sufficient. A system comprised of a hand pump and tank, including pressure and water gauges with valves and connections, will cost in the vicinity of \$75. This does not include the piping to the source of water or from the tank to the various parts of the house. The power being used influences, to a large extent, the character of the pump required, so it will now be timely to mention the means by which pumps are operated.

The hand pump has already been referred to, but windmills, gasoline engines and electric motors are more serviceable. The latter equipment is the more nearly ideal. The initial cost is slightly higher than when a gasoline engine is used but the fuel is



A Modest System for Running Water.

cheaper and therefore it is less expensive to operate. Furthermore, it is practically self operative. An automatic switch starts and stops the motor and pump automatically when a minimum and maximum pressure is obtained. For instance, if one considered 25 pounds of pressure the minimum desired and 50 pounds the maximum, the switch could be set to cut in at 25 and cut out at 50 pounds. With an occasional oiling the motor and pump will maintain a working pressure with no further attention. This equipment is practically noiseless, and is very well suited for residences. The factor which will most likely decide the matter relative to the use of the electric motor is whether or not electricity is available.

Next on the list is the gasoline engine. Water can be pumped with it for both house and barn at a very moderate cost, even at the present high price

of fuel. We saw one operating only a short time ago, and it was using about one gallon of gasoline weekly. It was working from 30 to 45 minutes per day and supplying the house and barn with water, the requirements of the latter being almost 20 barrels of water daily. This was a large outfit, and far above the capacity usually recommended for farm service. The cost of a system made up of a tank 30 inches in diameter and 8 feet long, a two-horse-power gasoline engine and a power pump will be approximately \$175. This will include gauges and necessary valves, but not the piping. This is only the approximate cost of a system useful in a dwelling house. A larger tank, a pump with greater capacity, or a more powerful engine would, of course, add to the expense. It is not necessary to have this outfit in the cellar. It can be installed in any outbuilding and made frost proof. One pipe from the tank leading to the house will carry the supply of water. Under the approach to the barn is not an inconvenient location, especially when the stable is a part of the system to be supplied. Gasoline engines can now be equipped with an apparatus that will automatically stop the engine when the pressure arrives at a certain point; in such a case it is necessary to start but not to stop it.

There is yet the windmill to be considered, and it is one of the cheapest of all powers. A larger tank should be used with the windmill than with either the electric or gasoline motor, in order to insure a constant supply of water. If preferred the tank can be buried near the windmill, and the water conveyed through pipes to any desired point. Although the accompanying illustration shows the tank in a vertical position it can just as well be, and often is, installed horizontally.

### The Pressure.

The pneumatic-pressure system is a very satisfactory way of conveying the water. One pound of pressure in the tank will deliver water about 2½ feet high. For all practical purposes it is well to calculate that one pound of pressure shown on the gauge will give the water an elevation of 2 feet. In other words, to raise a supply of water to the top of the tank in the bathroom, say 30 feet high, 15 pounds of pressure would be necessary in the pneumatic tank. The taps deliver the water more satisfactorily when the pressure is not too great. From 15 to 25 pounds is adequate in the majority of cases if that amount is sufficient to elevate the water to the highest desired point. In washing vehicles with the hose a little more pressure would be better.

### Amount of Water Required.

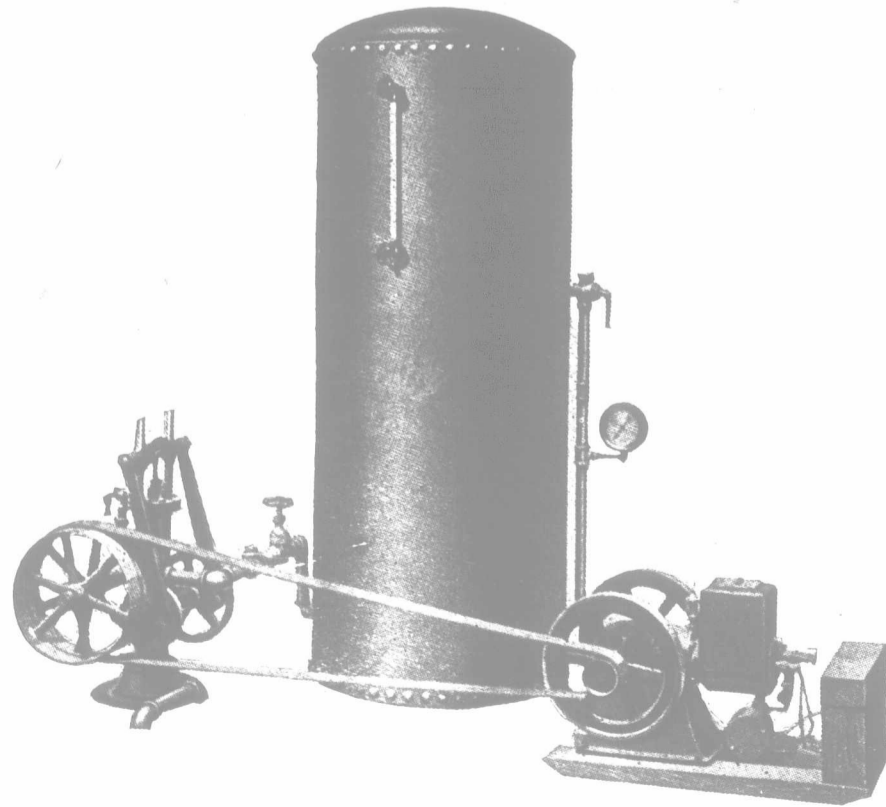
At the best, only an estimate of the amount of water that will be used can be stated here. When water is carried in buckets from a well 50 or 100 feet away the quantity necessary for use in the dwelling will be exceedingly small, but when it is on tap and an inexhaustible supply is available the same precautions are not exercised and the number of gallons will be much larger. The average city home consumes less than 75 gallons per day throughout the year. This often includes the lawn service as well as that used in the bathroom, toilet and kitchen. This figure might be decreased by 25 gallons in the country home and still be substantially correct.

A mature cattle beast should have at least 10 gallons of water per day, according to scientific findings; from 10 to 12 gallons, or 100 lbs., per day should be allowed for each horse; swine should have about 12 lbs. of water to each 100 lbs. of live weight at weaning time, and this ranges down to 4 lbs. per 100 lbs. of live weight for a mature or fattening hog. On protein-rich feeds hogs will require more water than when on starchy feeds. A gallon of water weighs approximately 10

lbs. From this information anyone can calculate the quantity of water required in the stable or fields for the live stock. Owing to evaporation and the increased requirements of horses and cattle for water in summer, a fair allowance should be made over and above the figures given. It is necessary to know how much water will be used before the size of the tank and capacity of the pump can be decided upon.

### Hard and Soft Water.

In the majority of cases the source of the water will be the farm well or a spring, and this is often too hard for the laundry. By collecting the rain water from the roof into a cistern it can be pumped by the same power and pump into a second pneumatic tank. The house can thus be supplied with both hard and soft water. Either quality of water can be made to circulate through a water front in the kitchen range or through the furnace and provide hot water



A Pneumatic Water System Outfit.

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for the kitchen and bathroom. It is frequently heated in both manners in order to have the supply in summer as well as winter.

**Piping and Fixtures.**

There is nothing required in this line that varies in price at the present time more than piping. It has increased considerably since the beginning of the war and is still fluctuating. When estimating the cost of a system in the home it would be wise to consult the local plumber, for in the majority of cases he is called in to install the equipment and could quote a price that would apply at the time the work was being done. The same is true of bathroom fixtures. There is a wide range in prices, according to the quality of the article desired. Universally, one pays for quality, and this is true regarding the necessary bathroom fixtures. Cheap ones are worth no more than they cost.

A running water system requires some provision to take care of the sewage and drainings from the sink. The septic tank, easily constructed, and which has been several times described in these columns, is the most desirable equipment for this purpose.

**The Elevated Tank.**

The elevated tank as a means of supplying the dwelling and stables with water is not yet to be despised. This system has lightened the burdens of many a man and woman in the country, and has given them conveniences comparable with those found in city homes.

The tank may be elevated to the loft of the barn, in the house, or outdoors, and the water can be forced to it with the hand pump, windmill, gasoline engine or electric motor. The first method is now somewhat antiquated and the latter is not possible, in the majority of cases, owing to the lack of electric service. It would be a fairly easy matter to install a tank in the attic of the house and serve the dwelling from it. The size of such tank will depend upon the requirements. When supplied by a windmill it is well to have the tank plenty large so a calm spell will not leave the home without water.

**Data Re Water and Tanks.**

We have stated previously that 50 gallons per day will serve the average country home. A tank to hold one week's supply should contain approximately 56 cubic feet, which will be equal to about 350 gallons. The length of a square or rectangular container, multiplied by the depth, and the product multiplied by the width will give the number of cubic feet, provided the figures used are

feet. One cubic foot of water equals about 6.23 gallons. For example, a tank is 8 feet long, 4 feet wide and 4 feet high. The cubical contents will be 128 cubic feet. This figure (128) multiplied by 6.23 equals 797.44 gallons of water, or the capacity of the tank. For smaller vessels, measurable in inches, multiply the three dimensions in inches, as was done in feet, and divide the product by 277.274, which will give the number of gallons contained therein. The gallon measure used in Canada contains 277.274 cubic inches. The United States gallon is smaller. For practical purposes of calculating, a cubic foot of water weighs 62½ pounds, so a vat with a capacity of 128 cubic feet would contain 8,000 pounds of water or 4 tons. One gallon of water weighs about 10 pounds.

It hardly requires a tank 8 x 4 x 4 feet in the average dwelling to supply hard water only. In some instances a tank of this size is installed and divided in the centre, one-half being used for hard and the other half for soft water. A portion of the roof water can run directly into the attic soft-water tank, and the remainder to a cistern in the cellar or in the ground outside. From the cistern it can be pumped to the tank as required.

There are many systems in use throughout the country similar to the one just described, and the windmill is frequently the power used in pumping. The gasoline engine will prove quite as efficient and probably more reliable. When a large tank is installed in the attic extra supports are necessary, and they should be included in the framework of a new house if the intentions are to use this system.

A tank in the loft of the barn needs no additional explanation. It should be large enough to supply both house and stable with water, if it is to be the only one, and it should be higher than the greatest elevation in the dwelling to which water must be raised.

It is not uncommon nowadays to erect large cisterns or reservoirs outdoors, and sufficiently high to serve the stable and first floor and basement of the house. A concrete structure is best in such a case, and in a good-sized tank freezing does not interfere with the efficacy of the system.

The pressure from an elevated tank does not compare with the pressure provided by the pneumatic tank. Owing to the friction in the pipe, elbows and bends the drop of one foot will only provide about one-half pound of pressure. Or, again, a fall of water through 10 feet of space will register only about 5 feet of pressure.

**The Hydraulic Ram.**

Many streams and springs throughout the country go unused when they might as well provide the home and buildings with an adequate supply of water. These can often be harnessed with a hydraulic ram at little cost. The water ram is not generally understood, so a brief explanation here should not be out of place. The work accomplished by the common ram will depend upon the fall of water in the stream, the amount of water falling, and the height to which the water must be lifted. To determine the quantity of water supplied to the ram select an average spot in the stream. Then multiply the depth of the water in feet by the width in feet, and this product by the velocity of the stream in feet per minute. To ascertain the latter, throw a light shaving or chip on the water and measure the distance it travels in one minute. The same quantity per minute will flow past every point in the stream in the same length of time. Space will not permit us to fully explain here the methods by which the water raised may be determined, but the efficiency of the ram decreases greatly with the lift. A ram provided with 25 gallons per minute from a fall of 10 feet will elevate only about 5 gallons of the amount 40 feet high. The remaining 20 gallons are utilized in operating the ram. There is a certain relationship between the lift and the fall of the water in the stream, which must be consulted in determining what percentage of water will be raised. A hydraulic ram could be used in many instances to force water to an elevated tank to supply the country home. We have seen these in operation and giving satisfaction.

**The Acme of Simplicity.**

While a farmer can spend considerable money in equipping his home or stables with water, he can also secure a reasonable amount of service at very little expense. In order that the women might have water on tap for work in the kitchen only, some arrangement could be put together on the second floor that would be both useful and inexpensive. The most simple and least costly container would be an oil barrel with the oil burned out. A battery of two or more of these could be installed and connected near the bottom with short pieces of piping. A small force pump costing 8 or 10 dollars would elevate the water to the barrels, and a float in the top of one, attached to a string coming down through the ceiling with a weight on the end, would indicate when the vessels were full or near empty. The price of the barrels, the piping, one tap and a few connections would be the entire outlay over and above the cost of the pump.

**Some Noxious Weeds and How to Combat Them.**

Every tiller of the soil is forced to wage continuous warfare against persistent weeds, which never cease in their efforts to gain a foothold in the soil. Some weeds are peculiarly adapted to growing, maturing and reproducing in the grain field, others in the pasture, hay crop, garden or orchard. There are a vast number of weeds that grow up, produce seed and die in one season. Practically all that come in this class are controlled or eradicated in a similar way. It takes two years for certain plants to reach maturity, consequently they are more difficult to control than those previously mentioned. However, there is a third class which have a long lease of life, and some members of this family tax the ingenuity of man to contrive methods of eradicating them from the fields. The loss caused by noxious weeds amounts to an enormous sum every year. Not only is the soil robbed of moisture and plant food by these worthless plants, but they crowd out useful plants, increase the cost of

preparing the seed-bed and harvesting the crop, interfere with the regular crop rotation, lower the cash value of the farm, not only by their unsightliness but by decreasing the crop yield, and certain weeds are frequently credited with causing the loss of stock. These intruders have silently found their way to the farms of this country, from far lands, through the natural agencies of wind, water, birds and animals. Man has himself to blame in many cases because he has not been careful enough of the seed he sows, of the feeds he purchases, nor of the cleanliness of the machine that does his threshing. Nature has furnished many seeds with means of transportation. Thus the sow-thistle seed is attached to a tuft of hairs which act as a balloon, and the wind may carry it many miles. Curled dock is fitted with life preservers, and it is carried down stream with the flood. Some seeds stick to anything they come in contact with and are carried long distances from the parent plant. A cultivated plant in one part of the world may be a pest under different climatic and soil conditions. While some of the weeds are natives of this country, many of the most troublesome were imported in one way or another from foreign countries. One or two specimens of a plant, that produces numerous seeds, will soon infest a whole field if neglected. With the many agencies of distributing the seed it does not take long for a whole community to become infested. While some weeds flourish on one kind of soil and some on another, there appears to be a troublesome, persistent weed for every variety of soil and for every crop.

If the first plants seen in the field had not been permitted to produce seed much difficulty would have been avoided, but, owing to a limited knowledge of weeds, very few recognize those that are dangerous until it is too late, and one seeding oftentimes makes several years weeding. Many noxious weeds that propagate by both root and seed are not yet known in some sections, and by united effort on the part of all landowners in the district these weeds could be kept out. New weeds are frequently making their appearance, and some of the recent additions to the list are proving very stubborn plants to combat. A strange seed in the bag or bin, or a new plant in the crop should be viewed with suspicion. Some of the worst weeds are attractive plants but they usually produce an enormous number of seeds which quickly disseminate themselves about the place. From one farm they spread to the next, and if allowed to go unchecked the land in the whole community soon becomes seeded. While the individual can guard against sowing bad seeds it requires the co-operation of the entire district in keeping under control such weeds as have the ripened seed spread by the wind. It is almost impossible to keep a farm free from

perennial sow thistle if the weed is allowed to grow and seed on a farm within half a mile or more.

**Preventing Weeds Getting a Start.**

Sowing of grains, grasses and clovers that are free from impurities is the first principle to follow in endeavoring to keep the farm clean. True, no farmer will knowingly sow weed seeds, but some of these seeds are very minute or are similar in shape and color to seeds of the cultivated crop being sown, and thus escape notice. It is difficult to secure clover or grass seed absolutely free from weed seeds, and so it is little wonder that many farms are producing more weeds each year. Through being familiar with the seeds of the various weeds the purchaser of clovers and grasses could discriminate against samples that contained noxious seeds, and so prevent new plants being introduced to the farm. With grain, the smaller seeds can be screened out, but one must



Wild Oat—(Annual).



Perennial Sow Thistle.





Field Bindweed—(Perennial).

be on their guard against wild oats, chess and some of the larger weed seeds. Many new seeds are brought on to the farm in millfeed. Some of them have great vitality. Not only do they escape being crushed in the grinder, but they pass through the animal with their vitality unimpaired and are carried to the field with the manure. If hay or straw from a weedy field is fed to stock, the fresh manure may carry the weeds to a clean field. Where weeds are allowed to mature it is difficult to keep them from spreading.

**Cleaning the Farm.**

Before endeavoring to clean the fields of weeds an effort should be made to destroy them in fence corners, along roadsides and in waste places. It is useless to spend a season cultivating a field to destroy weeds and permit the same variety to grow and reproduce around the fences. If the roadsides and fence corners were cut regularly there would be fewer weeds in the cultivated crop. When it comes to exterminating the weeds from the field the nature of the plant and habits of growth must first of all be considered, and an endeavor made to strike the plant at its weakest point. Annuals may be eradicated through any method which starts germination and then destroys the young plant before it produces seed. With biennials it is a little different. Two years elapse between dropping the seed and maturity of the plant. Cutting before they produce seed will rid the land of this class of plants. A single mowing the second year will often induce the plant to send out new branches, which, if not cut, will produce seed. Frequent cutting through the season or plowing when practicable will be sufficient to clean the land. The perennial class of weeds are the most troublesome and require thorough treatment. The root-stocks of many perennial weeds are very persistent, and growth will start from small sections of the root broken off and distributed by plowing or cultivation. A method of cultivation that will expose



Bladder Campion (Perennial).

the roots to the surface and prevent them starting growth is usually followed. Destroying any growth above ground or using a smothering crop has also proved effective. Plants such as sow thistle, couch grass, bladder campion, etc., store food in their fleshy root-stocks, during the fall season, to furnish nourishment to start new growth in the spring. Early cultivation breaks up these root-stocks and spreads them. The sun's rays are not sufficiently strong at that time of the year to destroy them, consequently the weed is spread rather than exterminated, unless cultivation is continued. The first growth in the spring is produced mainly by the plant drawing on the nourishment stored the previous fall. In June this food is practically exhausted and the plants are at their weakest stage, as they have not commenced replenishing the food supply. The temperature is usually such as to quickly sap the exposed weakened roots of their vitality and they readily succumb. Plowing at the time the flowering stems have attained full growth but before seeds form, and following up with thorough cultivation for several weeks is an effective means of cleaning a field of some of the worst weeds. This prevents sowing a cereal crop, but rape may be sown up to July 10, and, if it is planted in drills so it can be cultivated, any weeds that might remain are destroyed and the rape is benefited by the summer cultivation. Some sow buckwheat or millet after a few weeks' thorough cultivation, and find that they harvest a crop besides destroying weeds. If the crops mentioned are not sown the field may be summer-fallowed up to time of sowing fall wheat, but unless preparation is made to give frequent cultivation to prevent any growth, the work is not of much avail in the way of weed eradication. If the root and corn crops are judiciously cultivated many weeds are destroyed while profitable crops are growing. On farms where a short rotation is followed, weeds have less chance to become established than where one crop predominates year after year. Either a three or four-year rotation, which works in grain, roots and hay or pasture, might profitably be followed on most farms. Sheep also prove to be weed destroyers, and more might well be kept in this country.

**Perennials Requiring Thorough Cultivation.**

Quack or couch grass is a persistent weed that spreads rapidly and chokes out other plants. Although it produces a fair amount of fodder if allowed to grow, the roots form a solid mat in the soil and seriously interfere with the growth of any grain or cultivated crops. It spreads both by seeds and creeping root-stocks. When the roots are brought to the surface by cultivation, they should be raked up and burned.

Perennial sow thistle has a flower which closely resembles a dandelion, and it seeds from July on to the time of frost. It spreads very rapidly by both seed and running root-stocks, and is one of the most aggressive weeds. Heavy loss is caused by it every year, as it completely chokes out practically every kind of crop in which it gets a start. The stems are prickly, and a pungent odor is emitted from the plant when it is cut or broken. Thorough cultivation will eradicate it in one season. If there is one bad field in a neighborhood no field can be kept absolutely clean. Plowing and cultivating a field through June, then sowing rape in drills the fore part of July, and cultivating it twice through the season has destroyed this weed on many farms. The rape soon grows up and covers the space between the drills, which assists in smothering any weeds that might remain. A field so treated should be seeded down the following spring. Breaking up a sod field immediately after haying and working it during the fall is also an effective means of combating this weed. Bladder campion is a bad weed which is not generally known. It has deep-running root-stocks which send up branched flowering stems, and is frequently found in hay fields along fences and roadsides. The seeds are hard to separate from red clover, and care should be taken to see that the clover seed sown is free from this weed, as once it becomes established it is hard to suppress by cultivation. The stem of the plant is a pale green and perfectly smooth. The seeds, which are kidney-shaped with tiny tubercles on the surface, are held in a globular capsule. Where this weed is prevalent in a hay field the crop should be cut early to avoid the production of seed. Deep plowing of the sod, followed by thorough cultivation the remainder of the season will destroy many of the plants.

Field bindweed is another persistent plant with creeping, cord-like, fleshy root-stocks, every portion of which will produce a new plant if broken up. The roots have great vitality and are difficult to destroy. An entire season of thorough cultivation followed by a hoed crop is practically necessary to make much impression on the plant. It spreads principally by being dragged on cultivating implements, therefore, care should be taken not to run a cultivator through a patch of bindweed and continue on across the field without removing any particles of the plant that might be clinging to the cultivator teeth. The Canada thistle is a common weed that causes much annoyance, but it readily yields to proper cultivation at the right season. If plowed under about the time it is coming into bloom and given a stroke or two with the cultivator it is not likely to give much further trouble. In grain crops an effort should be made to cut the thistles to prevent seed forming.

**Meadow and Pasture-land Weeds.**

Ox-eye daisies are abundant in many old pastures and meadows, but are seldom seen in cultivated crops. The plant is a vigorous grower and soon



False Flax—(Annual)

chokes out the grass. So long as the land remains in sod there is little possibility of getting rid of the weed once it becomes established. Fall plowing of sod and short rotation of crops will keep it in check. Sheep will keep this weed from seeding.

Wild carrot is becoming established in many permanent pastures and along roadsides. When the land can be brought under cultivation this weed will not give much trouble, but it should not be permitted to seed. It will be necessary to cut it several times in a season in order to control it.

Rib-grass or buckhorn is considered a forage plant in some countries, but in Canada it causes considerable trouble in clover fields. The seeds ripen about the same time as clover, and they are hard to separate. This one weed causes a heavy loss to many who endeavor to grow clover. In fact it is difficult to get clover seed entirely free from rib-grass seed. It is desirable to go through a field that is not badly infested and spud out the plants. The seed is about one-tenth of an inch long, boat-shaped, with rounded ends and a longitudinal groove in the centre. It is chestnut brown in color.

Clover dodder is only an annual plant, but it causes heavy loss in clover fields. Although it starts from a seed it twines its slender stems around the clover and becomes a parasite. It obtains its nourishment direct from the clover plant instead of from the soil. The seed is only about one-twentieth of an inch in diameter, irregularly spherical in shape and of yellow or brown color. It is frequently imported with clover seed. It spreads rapidly from a single plant and destroys large patches of clover, leaving the field with the appearance of having been burnt in places. If this parasite is noticed in a clover field the infested patches should be mown and the crop destroyed. Care should be taken not to save seed from dodder-infested fields.

Docks are sometimes troublesome in hay or pasture fields, and depreciate the value of the fodder. The plant should either be pulled or cut below the crown



Ox-eye Daisy (Perennial).

before it produces it gives very little

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There are mustard family of seeds, and a considerable work seeds of some variety remain in the ground when conditions charlock is the most brownish red or seed. It spreads plants are allowed field. A few plants carelessness on the with it, several years in order to from seeding for number. Spraying of 10 pounds to of iron sulphate effective in de Harrowing the ground three inches high harvest cultivation

Bali mustard rotation of crop troublesome.

False flax is prevalent in clover wheat. It has objectionable to two to three feet Small, pale-green the seed is held narrow margin are growing the field becomes infested for

Wild oats are in the cereal vigorous than the vitality longer. of other grains, or during harvest right-angled awn

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Farming is ed to the usu some enforced of management lay off, many left the farm an all-year jo



before it produces seed. Where a rotation is followed it gives very little trouble.

**Controlling Annual Weeds.**

There are several plants belonging to the mustard family which produce an enormous number of seeds, and unless they are looked after may cause considerable work in keeping them in check. The seeds of some varieties are of an oily nature, and will remain in the ground for some time and then germinate when conditions are favorable. Common mustard or charlock is the most common of these. The seeds are brownish red or black and somewhat resemble turnip seed. It spreads entirely by the seed. Once a few plants are allowed to mature it is difficult to clean the field. A few plants can be pulled, but when through carelessness on the part of someone a farm is infested with it, several years of vigilant cultivation are necessary in order to eradicate it. Preventing the plants from seeding for several years will greatly lessen the number. Spraying with bluestone in the proportion of 10 pounds to 40 gallons of water or with 80 pounds of iron sulphate to 40 gallons of water has proved effective in destroying mustard in grain crops. Harrowing the grain fields until the grain is two or three inches high will destroy many plants. After-harvest cultivation is also recommended.

Bali mustard is becoming more common, but with rotation of crops it is not likely to become very troublesome.

False flax belongs to the mustard family, and is prevalent in clover fields, new meadows and in fall wheat. It has a disagreeable flavor which makes it objectionable to farm stock. The plant grows from two to three feet high, with lance-shaped leaves. Small, pale-greenish, yellow flowers are produced, and the seed is held in pear-shaped pods with a thin, narrow margin around them. Where only a few plants are growing they should be hand pulled, but when a field becomes infested treatment similar to that recommended for perennials may be employed.

Wild oats are possibly the most prevalent impurity in the cereal grains. They are hardier and more vigorous than the cultivated varieties and retain their vitality longer. The kernels ripen earlier than those of other grains, and drop to the ground either before or during harvest. They have a strong, twisted, right-angled awn, with bristles around the basal-scar.

An endeavor should always be made to sow clean seed. The soil may be rid of wild oats by a method of cropping which induces the seeds to germinate and permits of the destruction of the plants before new seed is produced.

There are other weeds that may cause extra work on some kinds of soils and in some localities. There are also many common weeds which seldom cause serious loss to the growing crops, but are more or less of a nuisance. The use of a weeder or harrow after the crop is up will destroy many small weed plants. The most persistent weed can be eradicated if its nature of growth is understood and proper methods used to combat it. The first principle is to sow clean seed and then never allow weeds to mature. Cultivation early in the season and after harvest to destroy seedlings is an aid to clean farming. A study should be made of weeds and weed seeds, and a constant watch kept to prevent new weeds becoming established. Short rotations are beneficial not only in destroying weeds but also in increasing crop yields. The ordinary implements found on the average farm if used properly and often enough are all that is necessary to dislodge the most persistent noxious weeds. A season like the present is a handicap in the fight against perennial weeds. More can be done in two or three weeks of dry, hot weather than in a whole season of catchy weather. However, an effort should be made to prevent many of the weeds producing seed, and so make fewer weeds to combat next year.

Note.—Illustrations used are from the Ontario Department of Agriculture Bulletin No. 188, Weeds of Ontario.

**Favors Deep Cultivation.**

EDITOR "THE FARMER'S ADVOCATE":

With the continued wet weather which some have considered serious, work continues very backward and much land that was to have been in spring crop is still unsown, but if the weatherman will promise less rain in the future considerable of this land will go in with turnips, millet, buckwheat, and no doubt some with corn.

At present we need a week to ten days to get the corn in, and with weather as it has been, till the 1st of

July, and then haying will be right with us and the prospects are for a good crop.

This spring has proven the benefit of tile draining and one tile man who opened a kiln last week had fifty teams waiting to draw them away.

About five years ago, when driving on a certain road, inside the fence of a neighbor's field I saw a small patch of French weed or stink weed and I have watched this patch every year since. I worked on said farm last year and only saw two plants grow and I pulled them myself, but as I drove by a couple of weeks ago the stink weed was as thick as it could grow and six or seven times as large a patch as when I first saw it. What is the best way to get rid of this weed? I had never seen it before in this county but had seen hundreds of acres of it in Saskatchewan and know it to be a very bad weed.

Much has been written in "The Farmer's Advocate" on skim plowing after harvest, and as I know different parts and different soils need different treatment and although I would not say aught against skim ploughing, still anyone who is not altogether satisfied with former results might try a new plan: right after harvest plough the same as fall ploughing, harrow at once and cultivate once every two weeks or every week if possible till freezing up time. Whether this ground worked in the foregoing way will need ploughing or cultivating in the spring will depend on the nature of the soil, but spring ploughing with a two-furrow, riding plough with a land packer (not roller) attached to the plough is one of the best ways to work the land.

We see much written these days about who is and who is not doing his part in the present war; also about the scandals of the government and we ask ourselves: when shall we get men of mental mold and moral might in our government? Still we are only ordinary "Hayseeds" and our part in this Dominion of Canada is not to criticize the government, but to crown Canada Queen.

And equity will usher in,  
For those who build and those who spin  
And those the grain who garner in  
A brighter day.

Perth Co., Ont.

SAM MULHOLLAND.

**Canada's Young Farmers and Future Leaders.**

**On the Boy Question.**

EDITOR "THE FARMER'S ADVOCATE":

The depopulation of rural districts, cause and effect, seems to be a problem which causes as much, if not more, controversy than any other social condition, and possibly more discussion than many economic problems. As mentioned in your article of June 10th, some people have handed out ready-to-use ideas intended to solve the question, but when the acid test of practice has been applied, it has been found that the condition still remained. In the first place, because we are reared on the farm is not a warranty that we would make farmers who would be of an economic value to the state or a credit to ourselves.

Why do boys leave the farm? The answer has been inconsiderate fathers and employers, lack of variety, etc., until, a farmer whose son has left him for some other occupation or a farmer whose men have at various times followed the cityward trend, is pictured as an ogre. Fortunately the fathers and farmers are not wholly to blame. The drift to urban centers has been the result of many unavoidable causes. At an earlier era the difficulty of clearing and breaking the land, the years of painstaking effort to establish a homestead made the more sedentary occupations most alluring. Later, as at the present time, the years that must elapse before a boy can become the owner of a farm and farm stock causes many young men to seek an occupation, offering more immediate results. There is a strong human tendency to prefer the immediate to the ultimate gain. At the present time, even with the increasing gross returns from a farm, many commenting on why boys leave the farm fail to realize that the increased gross returns have raised the price of plow lands higher than when everything was so abnormally low in price, as was the case at the time from which they draw their comparison. Everything must be paid for in value received and come first from the soil, so it will take just about the same effort and time to pay for a farm holding in the present generation as it did in the past generation.

Possibly, were some of the most successful farmers asked why they stayed on the farm, answers which would surprise their hearers would be brought forth. Many boys leave the farm for other occupations because of the wanderlust, more than for a reason. The spectacular success of many captains of industry allures many other boys to seek opportunity where fortune seems to have handed out the richest laurels.

Farming is more or less a casual occupation, subjected to the usual climatic changes of the year, causing some enforced idleness in winter even under the best of management. On account of this usual winter lay off, many industrious, thrifty young men have left the farm and gone to employment that offered an all-year job. It appears, after viewing the result

that romance of the success of others has taken many boys cityward. The very thrift of many industrious young men has been partly the reason for their leaving the farm. Aiding and encouraging the boys while working on the farm may help keep them more tolerant toward farm life. Although it seems to me that until we have had our little fling and seen a little variety so as to learn from experience that far away hills look greener. What seems to be the immediate gain will make a stronger impression on our imaginations than the ultimate gain. There is no bazaar advertisement for farming and the sentiment of farm life will not make a strong enough competitor for the alluring charm of city life. But, after all, supply and demand rule the markets, and as the farmers become fewer so also does the demand for farm products become keener. Farming is becoming more remunerative. The effect will, in this instance, like most other economic problems, if left alone, equal the cause. Too far east is west. The trend may be some time soon, for people to move countryward to learn a paying job.

York Co., Ont. H. STUART CLARRY.

**Which of These is the Better?**

Two men were leaning over the pasture bars. "Yes, sir, that colt is for sale, but he belongs to my son in the field yonder. You'll have to bargain with him," said the farmer, motioning to the boy. "He'll be here presently and you can talk to him."

"That boy!" ejaculated the stranger. "Yes, George is seventeen and a smarter boy never was raised on any farm—if I do say it. You ought to hear him in debate. He can hold his end with the best of 'em. He raised that colt and the sale money goes into the bank in his name. He's saving for a course in an agricultural college, then I'll step down and out and he'll run the old farm. Here, George, this man is looking at your two-year-old."

The bargain was soon concluded, but not before the buyer had learned that the seventeen-year-old boy was a keen judge of horse flesh and knew the worth of his colt.

Two men were leaning over the pasture bars. "Yes, sir, them steers are as good as ever was raised in this town. That boy over there calls 'em his, and has fussed with 'em ever since they were calves. Hey? Oh, that makes no difference when it comes to selling. They were fed from my mow, and I reckon the cash goes into my pocket. Boys are ungrateful nowadays. He keeps talking of quitting and I can't keep him longer than he is twenty-one. He might take the old farm and let me have a rest, but he will not listen to that. Well—it can't be helped as I see. You don't offer quite what I consider the steers worth, but there's no use in feeding 'em any longer. They're yours." Which boy made a successful, contented farmer, and why?—Western Farmer.

**Essential Education.**

EDITOR "THE FARMER'S ADVOCATE":

In practically all other branches of human endeavor we begin the training of the mind during childhood, first in the essentials of general education, and later by specializing in some line. We go so far as to give the growing mind opportunity for following its natural inclination to a certain extent in the middle grades of our public schools, but the only opportunities that are presented are along the lines of a higher academic training or along scientific or mechanical lines. What do we do for the great agricultural resources of the country in the training of the minds of the children in the public schools? Practically nothing. True, we have built up several colleges for the training of the few who, in spite of all other lines of education which have been thrust at them, still persist in the desire to acquire a thorough agricultural training.

The greater part of farming to-day is not a science as it should be, but a tradition handed down from father to son, instead of having been acquired as a part of an educational training. Take, practically any child, do they not show a desire for a return to nature even before the age of school days, by industrious digging in a back yard and sand heap? Here, however, it is allowed to rest unless the impulse is of such a nature as to defy the following years of educational misfit.

The average farmer of to-day wishes his sons to have a college education. Why? Because the life of the farm does not appeal to them as one of scientific interest, and the sign-boards of the city call to them as being in a class above the digging in the earth after the few dollars he may have left over at the end of a toilsome year. He does not realize that, had his education been properly selected, the interest of even a Luther Burbank might have been developed.

Emigrants come to this country and settle on the farms that the sons of our farmers are allowing to go to weed and seed, and make them pay. Why the necessity of this, if our system of education in this country embraced the teachings of the science of farming from the lowest grades of our public schools to the highest, there would be little need of calling on the emigrant farmer to till our farms. This educational factor should be brought to our children in some form or other even in the kindergartens of our schools, for here the mind of the child is amenable to all things living and growing. It is to be hoped that the time will arrive when its great need will be felt, and it will be embodied as a part of the educational system in all grades of our schools.

Leeds Co., Ont.

ELDON K. STAEBLER.

After the first three days of sunshine following the most troublesome and long-protracted wet spell Ontario has experienced in years, we found two farmers discussing the drouth which they believed had set in. How quickly things change!



**The Need of Young Herdsmen.**

Throughout this country and the United States there is a dearth of men who are available, and at the same time competent, to take charge of a good herd of pure-bred cattle, either beef or dairy, and show favorable results. Capable herdsmen are all busy either in the employ of some fortunate breeder or in business for themselves. There are many trained herdsmen but they have acquired the talent, skill and ability in their own employment, caring for their own cattle; they are our best live-stock breeders and feeders. While one is usually able to hire farm hands, very few of them could be entrusted with a stableful of pure-bred cattle. This is not due so much to a lack of intelligence on the part of the laborer as to a lack of experience. Many young men who hire with farmers were reared on a farm, and general belief is that a farm boy, so long as he has cared for a few pigs, fed a few calves and driven the cows to and from pasture, is fully qualified, when he grows up, to manage a large herd of cattle. There is something about highly-bred animals that requires more than common good judgment on the part of the caretaker. A good herdsman

must know live stock in general, and those directly under his charge, very intimately. He must be able to detect any derangement in the individual and at the same time know how to correct it. We have some excellent live-stock breeders and feeders in this country, and still further we have some who can put a gloss and finish on a beast that will challenge successful competition. It is this latter qualification to which many aspire and few attain. Books do not tell us how, and the veteran herdsmen do not seem able to explain wherein lies their greatest strength. It is a matter of skill and not of a large fund of information acquired from books. The latter help wonderfully to understand certain phases of caring for live-stock but we must have the experience and training.

Young men to take charge of valuable herds are in demand, but they must qualify, and this demand is liable to increase. Farmers' sons do not always remain at home and those who intend to go out for themselves and have a liking for animals could employ much of their time very profitably by storing up some knowledge and applying it in connection with the farm herd or flocks. Besides a thorough study of the stock about the place it would be well to read books on the different types of farm animals and impress upon the mind a mental picture of the good kinds. This imprint could be made more indelible by attending

some of the leading exhibitions and watching the show-ring with interest. Follow this with some work on feeds and feeding and learn the character of different feeds and how they may be combined to the best advantage. The principles of breeding are worth some consideration and there is much literature concerning this phase of the industry. There is no better place to get a grasp of these subjects than right on the farm working with the animals themselves. Every young man who is at all interested should have some branch of the live stock under his direct charge and it is then that he can test the value of the many laws regarding breeding and rearing.

Considering the importance of the industry and what good live stock means to the country, any young man, so inclined, will not be the loser if he devotes his spare hours to the acquisition of knowledge and experience regarding animal kind. A period with a successful breeder and feeder would be time well spent. We would not advocate this training if one could use his ability and experience only in the employ of someone else. There is a great need of more wisdom and a clearer policy on the part of stock farmers at large, and any young man with bright ideas and good judgment is sure to prosper if he should launch out upon an enterprise of his own with live-stock as the leading branch of his farm operations.

**Automobiles, Farm Machinery and Farm Motors.**

**Power.**

**Drawbar Horse Power.**

We all know that some power is required to run the engine. If the engine was standing idle and we wanted to see it run without working under its own power, we could do this with another small engine. The size of this engine would be just the difference between the "Indicated Horse Power" and the "Brake Horse Power." This power is not available for work at the belt because it is required to run the engine itself. Now this brings us to another horse-power problem, with is of special interest to the man who wants to use a tractor. What power has the engine at the drawbar? Here we again have horse power the same in all respects as before but available at the drawbar in place of on the belt pulley. The real source of power is the cylinder where in the gas engine the charge of gasoline and air is ignited, or in the steam engine the pressure of the steam is exerted upon the piston and needless to say the further away we get from the source of power the less we have. Here another loss takes place between the brake horse-power and the drawbar horse-power, and it is much greater than the loss between the cylinder and the belt pulley. Why? Because the engine is heavy and much power is needed to propel itself. The friction of the transmission gearing, the bearings, and the engine moving on the ground all consume power.

Let us suppose we had a 30-brake horse-power tractor, that is 30 H. P. at the belt pulley, but owing to its weight, and the great friction from lack of oil, or faulty construction, we found it had just enough power to propel itself along. It could not turn a single furrow or haul 1 load of grain, it would have no drawbar horse-power at all. Now let us replace this 30 H. P. motor by a 60 H. P. engine, and what have we at the drawbar? 30 H. P., is that clear? The loss as we see is 30 H. P. When you see an engine advertised as a "30-60" you know that it is supposed to deliver 60 H. P. on the belt and 30 H. P. at the drawbar. Its indicated horse power would be more than either, but as farmers it does not concern us.

This problem of power causes a great deal of confusion, and after all isn't it a simple thing when studied a little carefully. It is a very important factor for the farmer who has to pay for these engines and operate them, and has a constant outlay for repairs because he does not understand his job. It is a problem over which a little time is well spent.

I do not advocate that every farmer with a tractor should purchase an expensive dynamometer to test the drawbar pull of his engine, but I do believe when farmers purchase their engines they should understand what they are looking for, and if a salesman wishes to demonstrate an engine and show that his goods are right they can intelligently understand what is being done.

A dynamometer is attached between the drawbar of the engine and the plows. This will register a pull in pounds. For example we will say 6,000 pounds, then our problem is: 6,000 (pull in pounds) x 176 (feet per minute for an engine travelling 2 miles per hour) 32 H. P.—33,000 (1 H. P.) Now you see this question of power is the same, whether it be a man lifting sacks of wheat, or a small gasoline engine chopping wheat, or a tractor plowing the land, and I hope simpler than it was before. In the first case the wheat is lifted up, in the second the tendency of the fly wheel is to pull the load on the scale round in a circle, and in the last the tractor pulls its load along the ground. In all three cases the pull is in pounds and the distance in feet per minute. Much is written on this subject in a very technical manner and we hope the omission of some of these terms has not in any way disappointed the reader who may have studied the subject more than his fellow farmer and feels that he knows all about it. We acknowledge that horse power is not everything we require in an engine. Besides developing power the engine must stand up under normal conditions, consume the smallest possible amount of fuel for the work done, and last the longest without wearing out,

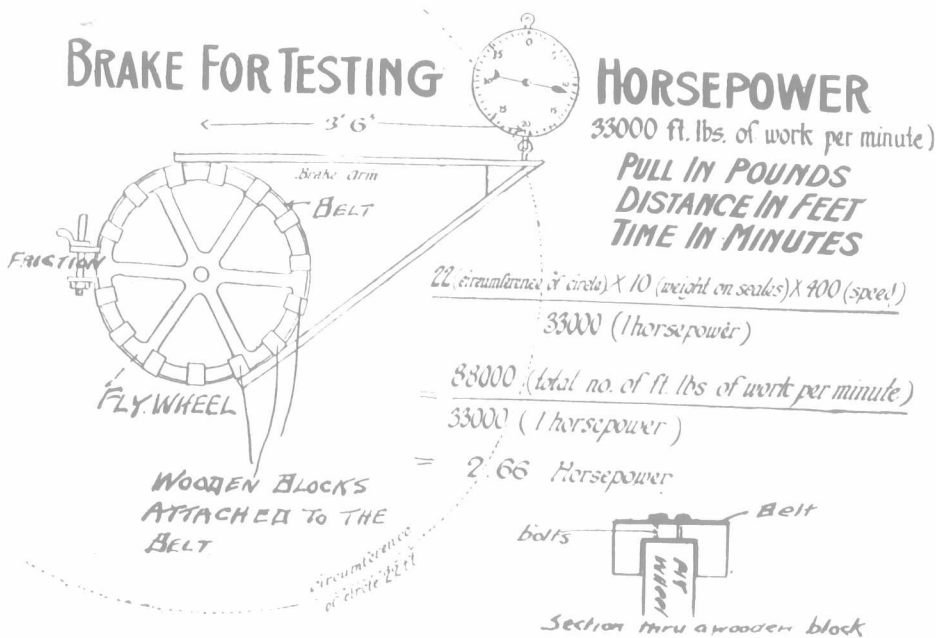
or breaking down consistent with proper handling. Engines are purchased with one purpose and that, as in buying any farm machinery, to help to do more work with less labor in the shortest possible time.

**Brake Horse Power.**

The "Pure Food Laws" are rapidly being applied to many commodities that we buy, the reason being a growing demand to get what we pay for. It is well that these things are so because it is good for the legitimate producer as well as the purchaser. One of the farmer's largest investments is machinery, because it offers in a great measure a solution of our ever-increasing labor problems. The chief factor to be considered in purchasing an engine is the amount of power it can deliver. This we clearly understand the meaning of from the previous article on power. An engine is sold for four horse-power; we do not have to accept the statement on fact but we test it for ourselves. Later on the ignition may be out of time, the valves require grinding, the carburetor needs adjustments, and we can easily see at any time by this simple test if our engine is developing as much power as it should. There are three kinds of horse-power:

(1) Indicated horse-power. This is developed in the cylinder and can be tested with an indicator; outside of engineering laboratories it is seldom used. What interests the farmer is: "what power the engine develops at the belt to do my work." This we can test with a home made "Prony Brake." By this simple device we find the second kind of horse power—(2)—Brake Horse Power. The third kind of horse-power—(3)—Drawbar Horse Power. This kind of horse power will be dealt with in the next article on power.

The figure shows the brake attached to the fly wheel of the engine. Blocks of wood with a piece cut out so that they fit the rim of the wheel are attached to a leather belt by small stove bolts, the heads being counter-sunk into the block, see illustration. There



are two arms, as shown in diagram. Any desired amount of friction can be given by tightening the screw. What happens? The engine is running and with the brake on the wheel the tendency is for the engine to carry the brake arm round with it. To prevent this the end is attached to a spring balance and thus registers a pull in pounds. The engine is tending to pull this load, say 10 pounds, through a distance equal to the circumference of the circle that would be described by the brake arm if the scale were not holding it back. In this case the brake arm is three and a half feet. The

circumference of a circle with this radius would be 22 feet, and you see we have the second factor—distance in feet—multiplying this product 10 x 22=220 by the number of revolutions per minute of the engine (400) we will get the total number of foot pounds of work developed in a minute (88,000). Dividing 88,000 by 33,000 (one H. P.) we get the horse power of the engine. Platform scales could be used, the pressure being registered on them.

That is all. The friction must be applied very gradually as you can tighten the friction till the engine will die, but after a trial you will know the best load for it to carry at the speed recommended by the maker. It is not wise to exceed this. You can adjust the needle valve to a nicety, and, what is better, feel absolutely satisfied that you are not being "done," in which case you can return the engine and give good reasons for not keeping it. Reliable makers always rate their engines so that they have a little surplus power. In the figure a case is worked out showing exactly the result which is obtained. Theoretically the radius of the brake arm is a horizontal distance from the centre of the shaft to the point where the load is applied, but the diagram shows a method that is very satisfactory, and at the same time easy to work out for the layman.

J. MCGREGOR SMITH.

**The Car is Purchased.**

The heat caused by the compression and explosion of gas in the cylinders, renders necessary a cooling system that will be constant and positive in action. This water line runs from the cap at the front of the hood down through the radiator, which is either tubular or honey-comb in type, through a pipe to the base of the cylinders where it circulates in the jackets, later on rising to a tube that connects the heads of the cylinders to the top of the radiator. Thus it can be readily seen that the water which is cooled in the radiator, passes to the jackets

where it reduces the heat caused by the constant firing, and subsequently is again carried down the radiator. In some cars the thermosyphon method is employed. This is a simple idea, the expression meaning no more nor less than the following of a law invariably true in nature, that warm water rises to the surface. As the warm water rises and then falls through the radiator, it is, of course, immediately cooled. In the better class of cars, the circulation is kept up by a pump. With this impeller there is no occasion for waiting until the water is warm, as the driving force keeps it whirling round the circle.

Gas is the life blood of an automobile. It can be carried under the seat or below the cowl in front of the instrument board. When stored in this fashion, it runs by gravity to the carburetor, where it is allowed to mix with a specific quantity of air. Gas storage in any spot around the driver's seat is not satisfactory in many respects, because of the dangers incident to it. When the tank is being refilled, the greatest caution must be exercised, and in any event, there is always a rather unpleasant odor from the fluid. The safest and best place to carry the gas is on the rear of the frame. This removes every cause for worry and

certainly pro... With rear sto... to the carb... is a series of... method being... The most a... which operate... the engine... created in th... of the car... last system, a... utmost econo...

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EDITOR "THE...

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certainly provides a much better balanced vehicle. With rear storage the gas is conveyed by two systems to the carburetor, pressure and vacuum. The first is a series of pipes operated by a hand pump, the method being to force the mixture by compressed air. The most advanced idea calls for a vacuum tank which operates itself in accordance with the speed of the engine and the demand for power. As a vacuum is created in the tank, the gas rushes from the back of the car and is prepared for explosion. With this last system, a car can be run at any angle and with the utmost economy.

A question that always constitutes a subject for keen discussion, is the number of cylinders necessary to complete enjoyment. Four will provide all the speed that any sane driver could ask, but six are considered the proper combination, as with them a machine can be idled down to three or four miles an hour, speeded to thirty or forty or even sixty-five, sent up steep hills and down heavy grades, without any gear changing from direct drive. In other words, the necessities of traffic are met with the smallest amount of effort and danger. No rule can be laid down regarding starting devices. If you will remember always to keep the spark retarded, the cranking of a car should not cause any fear, but for owners who do not wish to sacrifice their pride and sometimes their feelings, an approved self-starter will be found a source of unending satisfaction. There are many standard makes that will give excellent results. The principle of their operation is extremely simple. From a storage battery filled with electrolyte and distilled water, energy is transmitted in sufficient quantities to turn over the engine with the same results achieved by hand. At any speed above six or seven miles, the battery automatically refills itself and is always ready for every occasion.

With the general information now provided, you should not make any serious mistake in the purchase of your car. We shall presume that you have bought one and proceed in the next article, to outline the efforts that must constantly be put forth to ensure maximum care, minimum cost of upkeep and the largest measure of enjoyment. AUTO.

**Small Tractor is Growing in Favor.**

The farm tractor is generally a profitable implement if enough land is cultivated to use it economically. This is the opinion expressed by three-fourths of the two hundred tractor users in Illinois to investigators for the United States Department of Agriculture. About one-third of the men in this list increased the acreage, on an average 120 acres to the farm, after buying the tractors and finding that they did not have room to use them to the best advantage.

The average size of the farm on which the two-plow tractor is used is 270 acres. The average size of the farms that make room for the five-plow tractor is 420 acres.

Here is the minimum size of the farm on which the Illinois tractor owners think their machines could be used profitably: Two-plow tractor, 140 acres; three-plow tractor, 200 acres; four-plow tractor, 250 acres; five-plow tractor, 320 acres.

The large tractor is going out of use on farms. Thirty-nine per cent. of the tractor owners estimate that a four-plow tractor is the best size for use on a 750-acre farm, while only 22 per cent. of the men using tractors favored the eight-plow machine. None recommended one as large as ten-plow.

That the small tractor is coming into greater use in Minnesota is the report of J. L. Mowry of the division of agricultural engineering, University Farm, St. Paul. Many are favoring the three or four-plow machines, while but few find use for the large ones that were often tried a few years ago.—University Farm News, St. Paul, Minn.

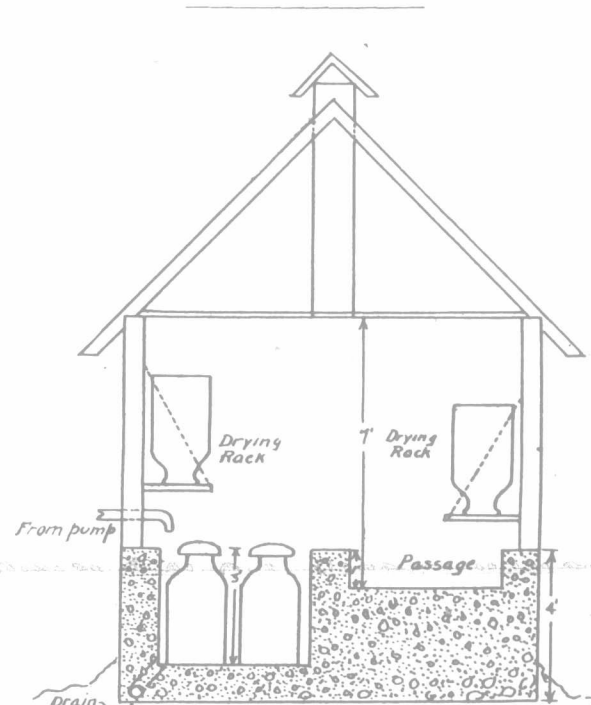
**Drivers Should Give Warning.**

EDITOR "THE FARMER'S ADVOCATE":

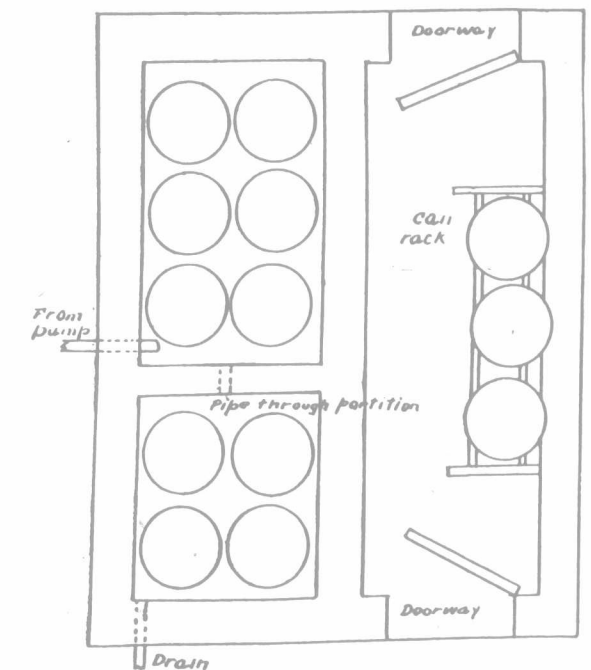
In looking through your paper at noon to-day, I noticed that you had started an automobile column. I turned to it and read it through. Now, we do not own a car, but live on a county road which is very much used by cars. The concession road on which we do our road work crosses this road right at our house. We have been expecting an accident there for a long time. This afternoon, a very few hours after I read your article by "Auto," one very nearly happened. Our little girl, three years old, was running across the road, when a car came around the corner without blowing the horn. They didn't even blow the horn when they saw the youngster; they yelled "look out" at her. I did not see this myself, as I was back in the field at the time, but my wife was in the yard near by and saw it all, and, as nearly as I can make out, when they yelled at the child she got excited and instead of hurrying across the road she hesitated. The driver did his best to stop, but before he got stopped the child was jammed so tightly between the front of the car and the neighbor's mail-box post, that her head and knee were both bleeding. Though she was not seriously hurt there were four badly-scared people, the child, her mother, and the two men in the car. This road was graded and gravelled last year. Last fall and this spring I spent a good many hours with an old split-log drag, smoothing and rounding up the road and raking the stones off with a garden rake, and I have been told there is no better piece of road in the county. It certainly

is a lot better than the county road. Now, to-night I am just wondering what I had better do, haul a load of stones and dump them on the corner or still keep the road in as nice condition as possible, so that cars may speed around the corner and endanger the lives of every person that attempts to cross the road. I might just add that not one driver in twenty blows his horn before coming to this corner. Oxford Co., Ont. D. W. CLARK.

[Note.—There is a hint in this article for all who drive motor cars. Give due warning wherever there is any danger, such as cross roads, bad turns in the road, hills, etc. The safety of yourself and the public generally demands it. Our correspondent made and maintains a good road, and because it is good the life of his child is endangered. And, too, it is always well to stop, look and listen before crossing a road much travelled by cars. Of course, children forget, and the driver of the car should always remember this and go slow where there is danger and give plenty of warning.—Editor.]



Cross Section of Milk House.



Ground Plan of Milk House.

**New Tourist Auto Regulations.**

The Canadian department of customs has issued an order to its collectors governing the passing in and out of automobiles. Under reciprocal arrangements now existing between some Canadian provinces and certain of the American states, regarding motor licenses. The new regulations provide that when a non-resident owner of an automobile or motor cycle manufactured abroad desires to bring such a machine into Canada for a stay of not more than one month, he shall report at the customs house at the frontier port in Canada and present a certificate. The collector, if satisfied that the machine is imported in good faith, may admit it without formal entry, furnishing the owner with a certificate, to be given up to the collector at the port of departure and returned by him to the issuer. The certificate will contain a complete description of the machine, the owner in each case subscribing to the statement that "the machine is not to be used for any commercial or business pursuits whatever while in Canada, and shall be exported from Canada within one month." If a report of exportation is not received within forty days by the collector issuing the permit, he is required to forward to the department at Ottawa a duplicate of the certificate.

**THE DAIRY.**

**A Simple, Economical Milk-house.**

EDITOR "THE FARMER'S ADVOCATE":

About this time last summer we decided to build a milk-house to cool the milk which we shipped to the city. It took us some time to decide on the location, size and construction of that house, as we were anxious to have it as conveniently arranged as possible. At the same time we had to consider the regulations set by the government inspectors.

The way we had been cooling our milk was old-fashioned and unsatisfactory. We strained the milk into cans at the barn, and then carried it about sixty feet to a small tank near the house. We pumped water into the tank by hand, then after half an hour or so we emptied the tank, and again filled it with cool water. This was a regular nuisance, and kept us back with our work morning and evening. As we had only commenced to ship milk in the spring our supply of ice was very limited—so that we used ice only on Sundays. Then again, the tank we had was too small to hold all of Sunday's milk, so that on Sunday we had the provoking task of cooling milk in the tank, and then setting it in the troughs to make room for the new, warm milk. This method also wasted too much water, and often did not cool the milk to the required temperature.

After looking over many milk-houses in our district, and consulting with some of the inspectors, we planned a simple, economical milk-house which has been a very satisfactory investment. Our barn is on a knoll, so drainage was a very simple thing. There is a lean-to roof on one side of the stable, which extended out for eighteen feet or so. We built the milk-house just beyond this, as it gave a protected passage from the stable to the milk-house. This also made the house the regulation twenty feet from the stable.

We milk twenty cows, and decided that a house 9 feet by 12 feet would be best suited to our requirements. We do not keep ice in the milk-house, but in an old log house a short distance away. We keep nothing but milk and utensils in our milk-house, and this enables us to keep it very clean. This is why we built such a small house. It is a great temptation to add a few feet when building, but if this is done the grindstone or a few bags of feed will find their way into the house, and this is just what we wished to avoid.

Coming to the house itself. The base is all of concrete, and is set on the top of the ground. The side walls are twelve inches thick and are four feet high. This allows it to project a foot above the floor, except at the doorways. The tank is sunk two feet below the floor and extends for a foot above. It is two cans wide and the length of the house. This permits a fairly broad passage between the doors, with room enough for two drying racks. We divided the tank in two with a concrete partition. One part is larger than the other. This is for Sunday's milk, and for when we are shipping heavily. The smaller compartment naturally holds fewer cans. This arrangement makes it necessary to fill only one compartment with ice and water, and saves a great deal of ice. We placed a pipe and cap in the concrete of the partition of the tank, and another in the base to drain the water to the ditch.

The construction of the upper part of the house is very simple. Bolts are set in the cement at the corners, and to these are fastened 2-inch by 4-inch scantling, which is used throughout. The inside is finished with matched lumber. On the outside we put rough lumber and then clap-board. The roof is shingled and the loft leveled with matched lumber. We set a window and shutter in the south wall, and ran a ventilator through the roof. We can now load the cans on the wagon from the milk-house without lifting them more than a foot. On the west of our house is the windmill. From it we have run a supply pipe to the tank. This, of course, saves hand pumping.

We hired two carpenters to build the house for us as we were short of help and very busy at the time. We paid thirty dollars to have it built, and we furnished all the material. We drew the gravel and sand when convenient, and what lumber we did not have on hand we drew from the village when there with the milk. A coat of paint of an attractive color then gave us a house to be proud of. Altogether this milk-house is inexpensive and very satisfactory. And it has done away with a lot of drudgery which was formerly incurred in cooling our milk.

Glengarry Co., Ont. F. W. DOHERTY.

**System of Feeding for Milk Production in Stormont County.**

Although there is a good deal of individuality shown in the management of every farm there is a similarity in the general methods of cultivation practiced, the variety of crops grown and the kind of stock kept in a district. The line of farming that will return the largest revenue under the existing soil and climatic conditions is usually followed. Local markets or shipping facilities invariably open up for such products as are produced in quantity. In Stormont County, conditions are favorable to the development of the dairy industry. Crops that make milk-producing feeds grow luxuriantly, and cheese factories or the city whole-milk trade furnish a good home market. Summer dairying is most generally



followed and cheese factories are numerous. Very few dairymen have far to haul their milk to market. In districts where the demand for whole milk to supply a city trade is increasing, winter dairying is gaining in favor. Dairying and hog raising work fairly well together, as the by-product of either factory or creamery is valuable feed for hogs of all ages. Throughout the county a considerable number of hogs are kept on every farm. Where the by-product is utilized the value of the whole milk is materially increased.

The stables are practically all built of lumber and are constructed so as to furnish plenty of light and ventilation and yet be warm enough even in the coldest weather.

Hay, pasture, oats, corn and roots are the principal crops grown. Corn is relied upon to form the basis of the roughage ration. A large silo is to be seen on practically every farm, and on many farms the second silo is being built to furnish silage for summer feeding. The silos are built differently to those in many parts of the country. Two-by-four-inch scantling are used and an eight-sided silo is constructed. The scantling are laid on their broad side with the ends overlapping each other. The first layer is put in place and the ends spiked together. The next layer is spiked to this and so on up to the required height of the silo. This method of construction leaves a two-inch space between each scantling. The structure is spiked solidly together and can be built by anyone who is handy with carpenters' tools. Tongued and grooved inch pine lumber is used on the inside. This makes a firm structure which will last for many years. On one farm there is a silo of this description that was built 14 years ago and it appears as though it would last a number of years yet.

A four-year rotation is aimed at. It consists of a crop of corn followed by oats or mixed grain seeded down largely with clover and left in hay or pasture for two years, then broken up for corn and grain. Several make a practice of applying a light coating of manure to new seeds after the grain is harvested and claim that it is a profitable place to put the manure. Some manure the hay field, that is to be broken up for corn, early in the spring and then not apply manure previous to planting corn. Others favor plowing sod for corn, in the fall and applying the manure direct from the stable. On some soils one method gives better results than another.

The system of breeding and feeding followed by A. P. McLean of Stormont county, is giving good results. On the 100-acre farm about 30 head of cattle are kept, and sufficient rough feed and about enough concentrates are grown to furnish the herd with a productive ration. Pure-bred cows have displaced most of the grades and by a system of elimination, careful breeding and good feeding the present herd of 22 milk cows averaged about 9000 pounds of milk last year. Cows that do not come up to a certain standard of production are disposed of. Heifer calves from the best cows are raised but the bull calves are vealed. The calves that are kept are fed liberally. Up to the time they are three months old they are fed from 8 to 10 pounds of whole milk daily. Clover hay is always within their reach and they are given a feed of whole oats night and morning. Stalls, mangers and all feeding utensils are kept clean. Thrifty calves cannot be raised in dirty pens nor if fed from dirty pails.

During the summer, pasture is relied upon to furnish the bulk of the feed for the cows although when grass becomes dry or short it is supplemented with green oats and corn. One or two years there has been a little silage left in the bottom of the silo after the stock went on grass. This was fed to the cows in July and was readily eaten. As corn yields the heaviest of any crop grown, Mr. McLean believes a summer silo would pay for itself in a short time. A small quantity of concentrates are fed to cows that respond to the extra feed.

About 40 pounds of silage is fed daily to each mature animal during the winter. To this is added straw and hay. Cows not in milk are fed a ration that will induce them to put on flesh. It has been found that it does not pay to permit a cow to get in poor condition before freshening. A variety of feeds are fed. About 300 pounds of bran, 300 pounds of ground oats, 100 pounds of shorts, 100 pounds of oilcake and 50 pounds of cottonseed meal are mixed. A cow giving around 60 pounds of milk per day is fed 15 pounds of this mixture of concentrates. The meal ration is largely governed by the quantity of milk produced and the ability of the animal to convert the feed into milk. No stockman can feed intelligently unless he makes a study of the individual animals he is handling. Many dairymen are finding out that it pays to increase the grain ration for some cows, above the amount ordinarily fed. Where summer dairying is followed it is necessary to furnish feed other than that supplied by the pasture in order that the cow may do her best. Grain, soiling crops or silage prove satisfactory in keeping the flow of milk up to normal during the period of short pasture. No matter how well bred a cow is she must have the proper feeds and plenty of them in order to produce a large flow of milk. Mr. McLean purchases a considerable quantity of expensive feeds each year but finds that it pays when by their use he can bring his herd up to a high average of production. Good breeding and proper feeding must be combined in order to build up a profitable herd.

## HORTICULTURE.

### Mushroom Growing.

EDITOR "THE FARMER'S ADVOCATE":

Mushrooms are the fruit of the mushroom plant, and are not the plant itself, as is generally supposed. The mushroom plant is really a whitish or bluish-white mold, called mycelium. To look at it is a network of thin, white threads, and the mushrooms grow from the joints in these threads.

Success in mushroom growing, as in any or all branches of farming, depends on good stock, good conditions and good care. Mushrooms are grown from spawn. This spawn is really the seeds of the plant carried in dried manure—usually horse manure. The manure in the cakes is of no special value, except as a means of carrying the seed. There are two kinds of mushroom spawn on the market—English and French, of which the most common is English, or brick spawn. The bricks measure about eight and three-quarter inches by five and five-eighths by one and five-eighths inches, and weigh about a pound and a quarter. Before being planted each brick should be broken up into fifteen or twenty pieces. The French spawn is imported in flakes of dry, strawy, horse manure, usually in three-pound boxes. Mushrooms can be grown almost anywhere in the open, or under cover, wherever there is a dry bottom on which to set the beds. The beds should be kept at a moderate temperature and not allowed to suffer from severe fluctuations. The beds should be protected from wet overhead, and from winds, drought and direct sunshine.

Mushrooms are often grown in cellars, and while a cellar is not imperative, yet by reason of the even temperature and absence of sunshine the location is a good one. The beds should be about fourteen inches deep, and can be placed on shelves. Practically the only two things in mushroom growing are the spawn—of which I have spoken, and the manure to grow them in. The best manure for mushroom growing, speaking generally, is horse manure. One can vary this of course, as for instance, one part of well-rotted cow manure mixed with three parts of horse manure makes an excellent combination. Then, too, a little well-rotted sod loam, up to one-quarter of the total bulk, can be added with benefit. Indeed, it is very often desirable to add a little sod loam, as the manure treated this way does not heat so much, and becomes ready for use sooner than straight horse manure. Another important point is that the addition of loam prevents the beds from becoming exhausted quite so soon. In selecting the manure, get it, if possible, from animals that have been fed on hard foods, such as oats and hay. Animals that have been fed extensively on roots produce a manure that is liable to prove unsuitable for mushroom growing if it does not turn out to be actually injurious. Select manure fairly free from long straws, and that has been well tramped on and wetted in the stable. When it begins to heat turn it over, shake it up well and tramp it down solidly again until it begins to heat again. If it is too dry it must be wetted. The manure must be turned and shaken until the heat will not rise above 130° F.—probably with ordinary stable manure it will require turning three or four times. Care must be taken not to let the manure burn. If it becomes intensely hot spread it out to cool, after which pile it up again. When the heat does not rise above 130° F. the manure is ready to use. The best results are obtained with beds about fourteen inches deep. Put the manure on in layers of two inches, then beat down firmly, then another layer, and beat down again, and so on. Leave the beds for a few days until the heat in them has fallen below 100° F. It is generally found that 90° F. produces the most satisfactory results.

The next step is planting the spawn. The bricks are broken up, each brick being broken into 15 or 20 pieces, and these pieces should be planted in rows one foot apart, and the pieces nine inches apart in the rows. Dig a hole about two or three inches deep, put in the piece of spawn, and then cover tightly with manure. When all are planted pack the bed down firmly. It is well to cover the beds with straw or matting to keep the surface moist. At the end of nine days the mulching should be removed, and the beds covered with a layer of loam two inches thick. It should be evenly spread, and pressed down well into the manure. The best temperature in which to keep the mushroom beds is 55° Fahrenheit. Sixty degrees F. is good, but it exhausts the bed too soon. Anything over 60° is too hot, and though the mushrooms appear to do well in it, yet actually they are inclined to be thin and short lived. Should the temperature fall below 50° F. it must be raised artificially by covering the beds.

Generally speaking, mushrooms appear to do better as a winter crop, say from September to May. A bed treated as I have described should begin to bear in about seven or eight weeks, and should bear continuously for about three months. The bricks of mushroom spawn can usually be obtained from any reliable seedsman, though it must be distinctly stated that they are fresh, because old bricks do not produce satisfactory results. The bricks usually retail around 25 cents each.

British Columbia.

H. C. HADDON.

### The McIntosh Red Apple in Dundas County.

The soil and climatic conditions in Dundas County are favorable to the growing of apples on a commercial scale. In past years large orchards were set out, but owing to the prevalence of insects and fungus disease attacking foliage and fruit, rendering the ripened product practically unmarketable, the orchards were neglected, and for a period of ten or fifteen years very few new orchards were set out. In this county is to be found a variety of apple known as the McIntosh Red, which is unsurpassed in quality and appearance by any of the fall or early winter varieties. Its rich flavor makes it particularly suitable as a dessert apple. Since the public have become acquainted with this apple the demand has increased, which has had the effect of raising the value, consequently the returns are such as to make it worth while to look after the orchards.

Six years ago very little pruning was being done, and practically no spray material was being applied. Since then the majority of old orchards have been renovated, and this spring one fruit growers' association, in the county, with 30 members, used 3 tons of raw sulphur, 2 tons of lime and 2½ tons of arsenate of lead in their fight against insects and disease. The effect of pruning and spraying in increasing the yield and improving the quality of the fruit has been clearly demonstrated in the county by the Fruit Branch and Department of Agriculture of Ontario. The results of their work is in evidence in all parts of the county. During the past five years a number of young orchards have been set out and are being well looked after. This spring one nursery sold about 5,000 trees, of the McIntosh variety of apple, to be set out in the county. Other varieties do well, but an effort is being made to push the one variety which is particularly adapted to the district.

The soil is well prepared before the young trees are set, then cultivation is given for several years. A strip of about six feet around the tree is kept clean throughout the season, but the remainder of the land is usually planted to a cultivated crop. This treatment produces a quick, strong growth. As the tree grows it is pruned to the desired shape. When the trees have been out six or seven years and begin to come into bearing it is found advisable to lessen the amount of cultivation around the tree. In older orchards cultivation through the summer has been the cause of winter injury. The bearing orchards are now left largely in sod. Possibly once in 5 years they are broken up lightly, either by shallow plowing or by disking several times when the ground is soft. This treatment does not appear to injure the roots to any great extent, but it loosens the sod, making it easier for air to penetrate to the roots.

The best results have been obtained in that particular district by following the sod-mulch system in the orchard. An occasional coating of manure is applied, and the grass which grows up is cut and allowed to rot on the ground. It is found impossible to harvest a crop of hay and gather a profitable crop of apples from the same soil year after year. Orchard land must be fed as well as the soil intended for roots or corn. Where this system is followed the trees appear healthy, and the fruit is better colored than it is from orchards under cultivation.

The old trees are headed back, and the bearing wood thinned to permit of free circulation of air through the tree. Once a tree is properly pruned it does not require much time each spring to go through it and remove suckers or cross limbs. Many who have set out young orchards are pruning them each spring, and thus save extra work in one particular season. Pruning in early spring has a tendency to encourage the growth of suckers, but this is partially overcome by doing the work in June. In one or two orchards, where the trees are 6 years old, some pruning is being done in August in order to determine whether or not the season of year pruning is done has any effect on starting the tree to bear fruit earlier. In all the orchards an effort is made to keep the trees headed low, so as to facilitate the work of spraying and picking.

The apple scab is the worst enemy the growers have to fight. The McIntosh Red is particularly subject to this disease, and in the average season the fruit is unmarketable unless the trees have been thoroughly sprayed at the proper time. Tent caterpillars have been destructive during the past few years, and trees that escaped being sprayed with some poison material were stripped of their foliage. The codling moth and bud moth do a certain amount of damage each year, but are easily controlled by the poison spray. Four and sometimes five applications of spray material are necessary for the production of clean fruit. Lime sulphur and arsenate of lead are the common sprays. Besides applying them on the dormant wood, before the buds burst and after the blossoms drop, a fourth application is made in June, probably ten days or two weeks after the previous spraying, depending on weather conditions. Frequently it is necessary to spray again in August to check development of scab on the fruit.

Thinning the apples in early July is not generally practiced, but in orchards where it has been done the fruit was larger and of superior quality to that from trees not thinned. When apples grow in clusters they do not grow as large nor as even and uniform in shape as do those growing singly. Fruitmen in the district who thin their apples claim that even at the present high price of labor it pays well.

The McIntosh is a dessert apple, and is at its best from November to January. Being a somewhat tender variety it does not ship well in barrels. Boxes make a much more satisfactory container in which to put

this particular are aiming at p boxes. Some and so ensure possible condi receive the sam but they are all expenses, in picking and ma of over \$200 an orchards were occupied. How that the orchar they commence and thinning i controls the in

### Time

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Buckwheat a crops. Buckw the soil when moisture rapidl a crop very we fruit crop is har are impaled or tramped around very well. Fr bushel is suffi covering; it als and produces c the soil. Neith land, nor will during their de are produced t in some form vetch are quite general charact go well togeth naturally twine from the air, i soil and the ot Mother Earth. crop but the ve few farmers wil condition some purpose clover of crop is sown by fall. For y it will use up

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Flies are becom broody here as they ar



this particular variety on the market, and growers are aiming at putting up their entire pack of No. 1's in boxes. Some will wrap all their first-quality fruit, and so ensure it arriving at its destination in the best possible condition. The winter varieties of apples receive the same cultural care as does this special variety, but they are usually marketed in barrels. After paying all expenses, including cost of pruning, spraying, thinning, picking and marketing, some orchards give a net profit of over \$200 an acre per year. Six years ago these same orchards were scarcely paying rent on the land they occupied. However, as soon as the growers were shown that the orchards could be made to pay a good revenue, they commenced to look after them. Proper pruning and thinning insures large fruit, and thorough spraying controls the insects and fungous diseases.

**Time for the Cover Crop.**

Fruit growers understand the function of a cover crop in their orchards but generally they do not appreciate its importance. Of recent years there has been too much late sappy growth of wood in many districts, due, in part, to the prolonged and belated cultivation. A cover crop will serve many purposes but commonly it is sown to use up some of the unnecessary moisture in the soil and thus check and harden the wood growth on the trees. Nitrogen can be added to the soil, at little expense, if leguminous crops are permitted or encouraged to grow. Most any vegetation will hold the leaves and snow as a cloak for the land in fall and winter. A mat of herbage on the soil will prevent the injury of much fruit and keep it cleaner than will fallow land. These are points to remember and they should receive consideration in so far as conditions demand.

There are few sections in Ontario where the sowing of a cover crop should be postponed beyond July 1. In most cases the seeding should already be done. The excessive moisture in most districts will encourage a vigorous growth, and if this is not hardened and prepared for winter considerable injury may result.

Buckwheat and rye are two very common cover crops. Buckwheat does not add much humus to the soil when allowed to mature but it uses up the moisture rapidly and fulfills the demands upon such a crop very well in this regard. When cut before the fruit crop is harvested, many apples falling to the ground are impaled on the stubbles. It can, however, be tramped around the trees and made to serve the purpose very well. From one-half to three-quarters of a bushel is sufficient to sow. Rye makes a good fall covering; it also starts to grow early in the spring and produces considerable humus with which to loosen the soil. Neither of these crops add fertility to the land, nor will they enrich it in any way, except that during their decomposition a certain amount of acids are produced that many liberate plant food locked up in some form unassailable by plant life. Rye and vetch are quite opposite in manner of growth and general character and on account of these differences go well together. One grows tall while the other naturally twines along the ground; one gathers nitrogen from the air, the other does not; one enriches the soil and the other gives up only what it received from Mother Earth. Together they make a splendid cover crop but the vetch is expensive at present and probably few farmers will care to use it. If the land is in poor condition some legume is necessary and for such a purpose clover seed would not be costly. If this kind of crop is sown early enough it will develop a fair stand by fall. For young orchards rape is very good, and it will use up moisture as quickly as any vegetation. However, it should not be too strongly recommended for the bearing orchard. It is late drying off in the morning and the excessive moisture on the crop often bothers the apple pickers. Fruit dropping into it is frequently injured or lost. Clover, buckwheat and rye are the three crops most commonly used and they can be depended upon to serve the growers' purpose.

**POULTRY.**

**Keep the Hens Producing.**

During the summer is the natural season for hens to produce eggs but it oftentimes happens that after April and May the egg production from many flocks rapidly decreases until the latter part of August and then there is an increase for only a few weeks. With the present high price of eggs it is desirable that the egg yield be as large as possible. The hot weather and a large number of hens going broody is given as the cause for the decrease in egg yield. It has frequently been noticed that when harvest commences and the fowl have access to plenty of grain they usually start laying. It is possible that many hens would give a better account of themselves if they were fed more carefully on an egg-producing ration. Many find that it pays to give the hens access to a dry mash at all times, besides the regular grain ration. Where the runs are shaded the summer egg yield is usually increased. Exercise is necessary during the summer as well as in the winter, but unless the heavy breeds are given such they become very lazy. On one large poultry farm the egg yield was increased about 15 per cent. by giving the birds the run of an orchard during the hot weather.

If hens are removed from the nests as soon as they become broody and placed in a box with a slat or wire bottom they are easily broken up. In a couple of weeks

they commence laying again, if they are well-fed. It is a mistake to allow a hen to remain on a nest for weeks at a time during the hot weather. They become very thin and usually infested with lice. Not only is the hen affected but the nest becomes a breeding place for lice which readily spread through the whole pen. With eggs selling around 25 cents per dozen it does not pay to have the hens idle, if a little extra feed and attention will keep them working.

**Feeding the Growing Chicks.**

When chicks are confined in a pen or small yard near the house they usually receive plenty of feed and clean water, but after they are six or eight weeks old and put out on free range it is more difficult to give them the required attention. Frequently they are not all around for feed at the regular feeding time and some birds of the flock get more than their share. Although the growing chicks have the run of the place and can pick up a good deal of feed, special care is required to force development and prepare the pullets for early laying. A stunted chick will never make a profitable hen. Grit, green feed and meat food can usually be gathered in the fields. For the grain ration there is no one grain that will take the place of wheat, but it should be good wheat. A successful poultryman when speaking of feeds for poultry, remarked that poor wheat or other grain is expensive at any price. He will not feed frozen or burnt wheat to his fowl, but endeavors to get the best on the market and finds that it pays in the end. While the chicks fed grain two or three times a day do well, better results are obtained where they have access to feed at all times. A variety of feeds is necessary for the quickest development. Equal parts of middlings, bran, ground oats and cornmeal with about 5 per cent of meat food makes a good ration to keep in the open hopper. These feeds furnish material for the development of bone, muscle and feathers. Middlings or low grade flour and cornmeal soaked in sour milk makes a splendid mash to supplement the other feeds.

Fowl of all ages require a considerable quantity of water and it should be supplied them fresh every day. Dirty water or dirty drinking fountains cause and spread disease. The birds should frequently be examined for lice and if any are found grease could be applied to their heads and under the wings, and the sleeping quarters sprayed with kerosene or some prepared louse killer. With good attention and plenty of feed cockerels should be ready for the fattening crates when between four and five months old and the pullets sufficiently developed to commence laying when six months old. About 4 pounds of grain including dry mash will produce one pound of chicken. Where birds are neglected it may take a good deal more grain than this to put on a pound of flesh. The method of feeding that will give quick development is the most profitable system.

**FARM BULLETIN.**

**Current Comment.**

BY PETER MCARTHUR.

In the course of human events and measles it became necessary for me to take charge of the growing possessions of a number of young poultry fanciers. In carrying out all the instructions I received I had intimate dealings with a number of fussy, but no doubt well-meaning, clucking hens and found some food for thought. I am inclined to think that long association with mankind, especially with farmers, has had a bad effect on hens. In spite of all their fussing they are more easily imposed upon than any other living creatures. When it comes to mothering infant industries a hen has even the farmers beaten and that is saying a good deal. When people want to raise turkeys they pass the job to a motherly hen and expect her to hatch out and rear a brood of gobbling ingrates that instead of honoring her in her old age will take the food out of her mouth as soon as they can do it. In the same way they set the hen to the task of hatching and rearing ducks, geese, guinea-fowl and what not, and the fool hen goes to it without a complaint. Indeed I suspect that if they knew how to do it the hens would pass laws that would saddle on them the whole business of rearing infant prodigies of all kinds. I even knew one hen that adopted a litter of kittens and insisted on covering them with her wings when the mother cat was not around. If hens only knew how to do it I am sure they would grant protective tariffs and special privileges more freely than do the country voters through their parliamentary representatives. And apparently hens are the only fowls that are imposed upon with the family cares of others. I don't think I ever saw a turkey, goose or duck rearing a brood of chickens or indeed rearing the young of any kind but their own. They must have a Gobbler, Gander and Drake Association of some kind to look after their special interests. And there is another respect in which hens resemble farmers. As soon as they lay an egg they cackle to notify all the world where it is and then someone comes along and steals it. That is just like the farmer who puffs and steals it. Then some one comes along and relieves him of his wad. I have been told that scientists have been unable to give any reason why hens cackle when they lay an egg. All other birds and fowls hide their nests and approach and leave them quietly and stealthily, but the hen tells everyone just where her nest is and when she has laid

an egg. I submit to the scientists that this foolish habit on the part of the hen is entirely due to her association with farmers, and to learning to copy their habits. Now I don't want to push this simile too far, but before leaving it I want to point out one more resemblance. To-night I saw a motherly Plymouth Rock hen trying to induce a flock of young ducks to roost in an apple tree with her. And all they did was to squat on the ground and make derisive remarks about her attempts to reform them. I have noticed many human attempts to carry through reforms that were just as foolish as those of the hen which tried to uplift ducklings by getting them to roost in trees. Hens have certainly suffered from long association with human beings.

In his inaugural address, Col. Cantley, the new President of the Manufacturers' Association, stated that the burdens of the war must be borne largely by the manufacturers and the farmers. This will be news to many farmers who hold to the belief that the farmers are forced to bear most of the burden of establishing manufacturing industries in the country. It may also be taken as an indication that the manufacturers, seeing trouble ahead, will be on a rampage to get further protection. It must be admitted that the war has given the manufacturers a new claim on the country, inasmuch as they have turned over their plants to the manufacture of munitions. Under modern conditions of warfare a great manufacturing capacity is indispensable to the country. A nation at war needs an industrial system that can provide ammunition in time of need and even so agricultural a country as Canada will not be safe without great manufacturing capacity. Just to what extent our fostered infant industries have proven valuable in the present war cannot be known until the war is over. I understand that most of our manufacturing forces are now at work on munitions, but there must have been something wrong at the beginning. The recent investigations brought out the fact that those who had charge of the munition contracts did not consider Canadian manufacturers capable of handling them. As our manufacturers have received somewhat lavish protection in the past this unpreparedness must be explained away before the people will care to make things any easier for the manufacturers when they begin to share with the farmers the task of bearing the burdens of the war.

Sir George Foster, who has been almost alone among our public men in realizing that the greatest hardships of the war will be felt during the reconstruction period which will follow it, has issued a "Call to Action" through the Canadian Trade and Commerce Bulletin. He proposes to have a convention of Canadian business men "to devise ways and means of meeting the dislocation of commerce and industry which will inevitably accompany restored peace." It is suggested that before the convention is held preparation for it must be made by the large business interests of the country. As the agricultural interests are mentioned among those to be consulted, it would be well for the various farm organizations to give the matter immediate attention so that they may be represented properly. As the purpose of this convention will be to advise the government, it is very necessary that the farmers should be fully represented. The farmers will not only have to bear the chief burdens of the war but it is inevitable that a large percentage of the returned soldiers and of those who will be thrown out of employment by the stoppage of the manufacture of munitions will be obliged to go to the land to make their living. How to do this without upsetting present agricultural conditions is a grave problem. Sir George says: "The seriousness of the coming crisis is not realized by many. The work to come will be greater than the war."

The newspapers of both parties are almost unanimous in condemning Sir Sam Hughes for making public his letter to Lord Kitchener, in which he protested against continuing to hold the Ypres salient where so many Canadian soldiers have since fallen. They seem to regard his protest as presumptuous and indiscreet, but I see no reason for such a conclusion. Whatever Sir Sam's faults may be, cowardice is not one of them and if he did not wish to have the Canadian troops sent to that particular part of the battle-front he must have had good reason for his opposition. His conclusions are said to have been based on the opinion of Canadian officers familiar with the ground, and the record of our officers and troops exempts them from any charge of cowardice in the matter. They must have been convinced that holding this particular spot was of no strategic value. Now comes J. L. Garvin, editor of the London Observer, a journalist whose articles on the war have been regarded as particularly well-informed, and he does not hesitate in saying that the Ypres salient is of no military value but is held merely as a sentiment. A sentiment which costs Canada over six thousand soldiers strikes me as being entirely too costly to be entertained. Who has a right to indulge such a sentiment? Any wasting of men is not to be endured. Here is a matter more worthy of investigation than fuse contracts and I should not be surprised but Sir Sam is in the right. This is an old man's war and old men are often stubborn. We may have men high in authority who are too stubborn to yield a valueless and dangerous position. In my opinion the war will not make much progress until younger men are put in charge. As some poet has written:

"A young man's wrath is like straw on fire  
But like red hot steel is an old man's ire."



Young leaders have dash and daring and are usually open to conviction, while old leaders, besides being over-cautious, are often vindictively stubborn.

Prospects for Fruit in Eastern Canada.

Local reports would lead one to conclude that the apple crop will be far lighter than was at first expected, but telegrams from the fruit-growing districts east of the Great Lakes received and communicated to the public by the Dominion Fruit Commissioner, D. Johnson, collectively show the prospects to be good for a crop.

In the Georgian Bay district apple trees were in good condition. The fruit had set well and the weather was favorable. There was some danger of the trees being overloaded and the fruit consequently small.

Conditions were generally favorable in the Annapolis Valley, Nova Scotia. Apples were setting well and promised a larger crop than was expected a few weeks ago.

A Word of Warning to Cheesemakers

EDITOR "THE FARMER'S ADVOCATE":

The Dairy Instructors for Eastern Ontario met in conference under the Chief Instructor Publow, at the Finch Dairy Station, on June 21. The chief object of the gathering was to make the instructors familiar with the use of pepsin as a substitute for rennet in the manufacture of cheese.

J. A. RUDDICK, Dairy Commissioner.

Dr. C. C. James Passes.

The agricultural interests of the Dominion have lost a faithful and brilliant servant in the person of Dr. C. C. James, Agricultural Commissioner for Canada, who died suddenly, in the prime of life, at St. Catharines, Ont., on the evening of June 23.

Charles Canniff James was born in Napanee, Ont., on June 14, 1863, so that he had just passed his 53rd year. He was graduated, in natural science, by the Victoria College, Cobourg in 1883, and in 1886 he took his M. A. degree from the same institution.



The Late Dr. C. C. James.

as Deputy Minister of Agriculture and Secretary of the Ontario Bureau of Industries under the late Hon. John Dryden, and it was in this capacity that he became so well and favorably known to the people of Ontario and other provinces.

grown to considerable proportions, is outstanding among his later accomplishments while a servant of Ontario. In February of 1912, Dr. James resigned his office as Deputy Minister of Agriculture and was appointed by Hon. Martin Burrell, Canada's Minister of Agriculture, to study conditions throughout the Dominion and advise his Department as to the best policy the Government might adopt relative to that particular industry.

A brilliant literary student and lover of poetry and historical subjects, Dr. James maintained a high academic standing besides his activities in the councils of agriculture. He was a member of the Board of Regents of Victoria College, of which he was a distinguished graduate, and a member of the Senate of Toronto University.

The late Dr. James is survived by his wife, to whom he was married in 1887, and one son Lieut. Wilfrid C. James of the 142nd Battalion. The immediate family and relatives are not alone in mourning the loss of this pioneer and friend of agriculture who for three decades labored in the interests of the farmer.

An Epidemic of Silos.

A silo census of Lennox and Addington County has just been completed by the District Representative, G. B. Curran. It was found that 263 silos were standing in the county, there being 196 wooden and 67 cement.

Currie's Shorthorn Sale.

The Shorthorn sale at the farm of A. E. Currie, Guelph, Ont., was held, as advertised, on Wednesday, June 21. A goodly number were present but the farm being somewhat remote from railroads or towns caused a diminution in the attendance, particularly of buyers from a distance.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards from Saturday, June 24, to Monday, June 26, numbered 223 cars, comprising 2,945 cattle, 470 calves, 427 hogs, 449 sheep, and 1,580 horses.

The total receipts of live stock at the City and Union Stock Yards from Monday, June 19, to June 23 were:

Table with 3 columns: City, Union, Total. Rows for Cattle, Sheep, Hogs, Calves, Horses.

The total receipts for the corresponding week of 1915 were:

Table with 3 columns: City, Union, Total. Rows for Cattle, Sheep, Hogs, Calves, Horses.

The combined receipts at the two markets show an increase of 1,143 cattle, 389 calves and a decrease of 63 cars, 21 sheep, 982 hogs, and 2,140 horses.

Butchers' Cattle.—The feature of the live-stock market for the past week was the scarcity of choice butchers' cattle, very few, comparatively speaking, of this class being offered.

Stockers and Feeders.—The market for common stockers and feeders was very slow, as there was a very limited demand for this class of cattle at present.

Milkers and Springers.—Milk cows are slow, especially the common kind. Choice cows sold at from \$90 to \$125 each, common cows at from \$60 to \$85.

are hard to sell, and are \$5 to \$10 lower than for the last week.

Veal Calves.—Choice veal calves remain steady; the common variety are easier and are not in much demand.

Sheep and Lambs.—Choice spring lambs were from 1c. to 2c. lower than a week ago; the very best selling at from 14c. to 15 1/2c. per lb.

Hogs.—Hogs continued to advance in price. At the first of the week packing houses paid for fed and watered \$11.15, and \$11.40 weighed off cars.

Butchers' Cattle.—Choice, \$9.75 to \$10.25; good, \$9.10 to \$9.70; medium, \$8.75 to \$9.25; common, \$8.50 to \$9.00.

Stockers and Feeders.—Feeders, 800 to 850 lbs., \$8.25 to \$8.50; stockers, 600

to 750 lbs., \$7 to \$7.75; light steers and heifers, \$6.50.

Milkers and Springers.—Choice milkers and springers, \$80 to \$100 each; good cows, \$60 to \$80; medium to common, \$50 to \$60.

Veal Calves.—Best veal calves, \$11.50 to \$12.50; medium to good, \$10.50 to \$11; common, \$8 to \$10; common Eastern grassers, \$6 to \$8.

Sheep and Lambs.—Choice spring lambs, 14c. to 15c.; choice light butcher sheep, 8 1/2c. to 9 1/2c. per lb.; heavy, fat sheep, 5c. to 6c. per lb.

Hogs.—Fed and watered, \$11.35; hogs weighed off cars, \$11.60 to \$11.75; one choice lot at \$11.85.

Country Produce.

Butter.—Prices remained about stationary on the wholesales during the past week. Creamery, fresh-made, pound squares, 30c. to 31c.; creamery solids, 29c.; separator dairy, 27c.; dairy, 25c.

Eggs.—New-laid eggs firmed slightly, selling at 27c. to 28c. per dozen by case lots, and 30c. per dozen in cartons.

Cheese.—Old, 21c. to 22c. per lb.; new, 18c. to 19c. per lb.

Honey.—Is off the market.

Beans.—Primes, \$4.

Poultry.—Spring chicken receipts continue to be light, and they have remained about stationary during the

past week. with a good only being with little de per lb.; spring 18c. per lb.; dressed, \$3.6

City hides cured, 18c.; 17c.; country skins, per lb. 28c.; sheep skins, per lb. 35c.; No. 1, 6 1/2c.

Wheat.—freights out to 99c.; No. 3 coming to frei 83c.; No. 3 bay ports), No. 2 northe \$1.11 1/2.

Oats.—On 49c., accord commercial oats (track, 52c.; No. 3 feed, 51c.; N

Rye.—No. Buckwheat— cording to c Barley.—C according t barley, 60c. outside.

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past week. Fowl receipts are heavy with a good demand. Spring ducks only being received in small quantities with little demand. Spring chickens, 35c. per lb.; spring ducks, 20c. per lb.; fowl, 18c. per lb.; turkeys, 20c. per lb.; squabs, dressed, \$3.60 to \$4 per dozen.

**Hides and Skins.**

City hides, flat, 20c.; country hides, cured, 18c.; country hides, part cured, 17c.; country hides, green, 16c.; calf skins, per lb., 30c.; kip skins, per lb., 28c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1.55 to \$1.70; horse hair per lb., 43c. to 45c.; horse hides, No. 1, \$5 to \$6; No. 2, \$4.50 to \$5.50. Wool, washed, 42c. to 46c. per lb.; wool, rejections, 35c. to 38c. per lb.; wool, unwashed, 32c. to 35c. per lb.; tallow, No. 1, 6½c. to 7½c.; solids, 6c. to 7c.

**Breadstuffs.**

Wheat.—Ontario, (according to freights outside) No. 1 commercial, 98c. to 99c.; No. 2 commercial, 94c. to 96c.; No. 3 commercial, 88c. to 90c., according to freights outside; feed wheat, 83c. to 85c. Manitoba wheat (track, bay ports), No. 1 northern \$1.17½; No. 2 northern, \$1.16½; No. 3 northern, \$1.11½.

Oats.—Ontario, No. 3 white, 48c. to 49c., according to freights outside; commercial oats, nominal.—Manitoba oats (track, bay ports) No. 2 C.W., 52c.; No. 3 C.W., 51½c.; extra No. 1 feed, 51c.; No. 2 feed, 48½c.

Rye.—No. 1 commercial, 94c. to 95c. Buckwheat.—Nominal, 70c. to 71c., according to freights outside.

Barley.—Ontario, malting, 65c. to 66c., according to freights outside; feed barley, 60c. to 62c., according to freights outside.

American Corn.—No. 3 yellow, 80c., track, bay ports; 83½c., track, Toronto.

Peas.—No. 2, \$1.70, sample peas, according to sample, \$1.25 to \$1.50.

Flour.—Ontario, winter, \$4.05 to \$4.15 in bags, track, Toronto; \$4 to \$4.10, bulk, seaboard. Manitoba flour—Prices at Toronto were: First patents, \$6.50; second patents, \$6.00, in jute; strong bakers', \$5.80, in jute; in cotton, 10c. more.

**Hay and Millfeed.**

Hay.—Baled, car lots, track, Toronto, No. 1, best grade, \$17 to \$19; No. 2, per ton, low grade, \$14 to \$16.

Straw.—Baled, car lots, \$6 to \$7, track, Toronto.

Bran, \$20 to \$21 per ton; shorts, \$24 to \$25 per ton; middlings, \$25 to \$26 per ton (Montreal freights, bags included). Good feed flour, per bag, \$1.55 to \$1.60.

**Wholesale Fruits and Vegetables.**

Canadian strawberries are once more coming to the front, and the American shipments dwindling. The quality of the home-grown for the first part of the week was very poor, most of them being watery and tasteless, but towards the end the quality greatly improved, and there were some really choice quality received; they are now selling at 11c. to 16c. per box. Week before last was the heavy one for the American brands, when 37 cars were received among the different wholesales, and as a car averages about eight thousand quarts, this means the Toronto trade amounted to nearly three hundred thousand quarts; representing an outlay of nearly forty thousand dollars for the week ending June 17.

The first Canadian cherries for this season arrived on the market last Wednesday. They were rather small, mostly consisting of the stone, but brought rather high prices; the 6-qt. flat baskets selling at 75c. to \$1; the 6-qt. lenos at \$1.25 to \$1.50, and 11-qt. lenos at \$2.

Gooseberries are gradually increasing in quantity; the quality being fairly good, and selling at 40c. to 60c. per 6-qt. basket.

Some splendid home-grown, new cabbage is now being received; both it and the imported remaining quite firm in price; the Canadian selling at \$1.25 per bushel box; \$1.35 to \$1.50 per bushel basket, and the imported at \$3 to \$3.50 per case.

The first Canadian new carrots for this season came in Thursday from Chas. G. Syer, of Bartonville. They, however, were rather small, selling at 50c. per dozen bunches.

Hot-house tomatoes (home-grown) are coming in very freely, and the prospects

are that shipments will be exceptionally heavy this week. The bulk of the choice No. 1's are now selling at 17½c. to 18c. per lb., a few extra choice 20c. The imported, outside grown, are of better quality than have heretofore been received, and sell at \$1.25 to \$1.50 per four-basket crate.

Onions remain quite firm; the Texas Bermudas selling at \$2.85 to \$3 per 50-lb. crate, and the Egyptians at \$4.75 to \$5 per sack of 100 to 110 lbs.

Imported, new vegetables have remained about stationary; carrots selling at \$1.50 to \$1.75 per hamper, also \$4.50 per crate (about 100 bunches); beets at \$3.50 per crate (100 bunches), also 50c. to 60c. per dozen bunches; cauliflower, at \$4.50 to \$5 per case of 2½ dozen. Canadian cauliflower of good quality is coming in in small lots, the 11-qt. baskets selling at \$1, and 16-qt. baskets at \$1.25.

Lettuce has been coming in freely, the Leaf selling at 15c. to 30c. per dozen; Canadian Head at 40c. per dozen, and Canadian Boston Head at 50c. to \$1 per dozen.

Oranges have been a little lower during the past week; the late Valencia selling at \$4.25 to \$4.75 per case.

Watermelons are arriving freely, three cars coming in on Thursday, selling at 60c. to 75c. each.

New potato shipments are increasing and they have materially declined in price, now selling at \$5.50 to \$6 per bbl., a decline of \$1 to \$1.50 per bbl. in a week. Old potatoes are still bringing high prices; New Brunswick Delawares selling at \$2.10 to \$2.15 per bag. There are not any Ontarios on the market.

New cabbage has firmed slightly; the Canadian selling at \$3.50 to \$4 per case, and American at \$3.50 per case.

Canadian strawberries sold at 11c. to 17c. per box.

New Potatoes again declined, selling at \$5.50 per bbl.

**Montreal.**

The local cattle market was quite firm during the past week. Supplies were scarce, and very few choice steers were offered. Demand continued moderately active, more particularly as the weather, at no time really warm, turned yet cooler during the week. Sales of good to fine steers were made at 9½c. to 10c. per lb., while fair quality sold at 8¾c. to 9¼c., lower grades bringing 7½c. to 8½c. Butchers' cows brought all the way from 7c. to 8¾c. per lb., according to quality, while bulls ranged from 7½c. to 9c. per lb. Demand for sheep and lambs continued active, but prices showed little change, being firm. Sales of sheep were taking place at 7c. to 7½c. per lb., and of lambs at \$5 to \$7 each. Calves were in fairly good demand, and export to the United States was still going on. Prices of choice calves were 9¾c. to 10c. per lb., good being 8½c. to 9c., and lower grades 6½c. to 7½c. per lb. A somewhat easier tone was reported in the market for hogs, and selected lots changed hands at \$11.35 to \$11.60 per 100 lbs.; rough stock selling at \$11 to \$11.25.

Horses.—Dealers report one of the duldest seasons on record, so far as the regular commercial demand for horses is concerned. On the other hand, very few horses are offered for sale, so that the market is practically steady so far as prices are concerned. Quotations were as follows: heavy draft horses, weighing 1,500 to 1,700 lbs., \$200 to \$250 each; light draft horses, weighing 1,400 to 1,500 lbs., \$150 to \$200 each; small horses, \$100 to \$125 each; culls, \$50 to \$75 each; fine saddle and carriage horses, \$200 to \$250 each.

Dressed Hogs.—There was nothing new to note in the market for dressed hogs, demand being about the same as for the previous week, and supplies being moderately large. Prices continued unchanged at 16c. to 16½c. per lb.

Potatoes.—Continued wet weather has endangered the crop in this province, and it is declared that the seed and the new potatoes are rotting in the ground. Meantime, the old crop is becoming scarcer and dearer. Quebec potatoes were quoted at \$1.85 to \$1.90 per bag, extra-track, and Green Mountains at \$1.95 extra-track, the weight being 90 lbs. For smaller quantities, 10c. to 15c. per bag was added to these figures.

Honey and Maple Syrup.—No change

took place in the market for syrup, the price being 85c. to 90c. per 8-lb. tin; \$1 to \$1.10 for 10-lb. tins; \$1.25 to \$1.50 each for 13-lb. tins, according to quality. Maple sugar was 13c. per lb. Honey showed very little change in price, white clover comb was quoted around 15c. per lb, and extracted, 12c. to 12½c.; while brown clover comb was 12½c. to 13c., and extracted 10c. to 11c. Buckwheat honey was 9c. to 10c.

Eggs.—The tone of the market for eggs continued quite firm for this time of year. It is understood that sales were being made for shipment to Great Britain, and that prices were even better than could be obtained locally. Straight-gathered stock was quoted at 26c. to 27c., while No. 1 was 27c. to 28c., and No. 2 24c. to 25c.

Butter.—The market for butter in Great Britain is very firm, and a shortage will develop unless Russia allows export of Siberian butter. Meantime, it is said that trade is mainly in Margarine. Prices of finest creamery were 29½c. to 30c. here; fine goods being about ½c. under these prices. Held creamery was still quoted at 27½c. to 28c. for best, while dairy butter was 22½c. to 23½c.

Cheese.—Finest Westerns were quoted at 17¼c. to 17½c., and fine at about ½c. less. Finest Easterns were 16½c. to 16¾c., and fine 16c. to 16½c.

Grain.—No. 2 Canadian Western oats were firmer, being 55c. per bushel in car lots, ex-store. No. 3 and extra No. 1 feed were 53½c.; No. 1 feed, 52½c., and No. 2 feed, 51½c. Ontario and Quebec No. 2 white were 53c.; No. 3 white, 52c., and No. 4 white, 51c. per bushel.

Flour.—The market was very quiet, with Manitoba first patents \$6.60; seconds \$6.10, and strong bakers' \$5.90 per barrel, in bags. Ontario first patents, \$6 to \$6.25, and choice 90%, \$5.40 to \$5.60 per barrel, in wood. The latter was \$2.55 to \$2.65 per bag. Straight rollers were \$5.10 to \$5.30 per barrel in wood, and \$2.40 to \$2.50 per bag.

Millfeed.—Bran was \$21 per ton, including bags; shorts, \$24; middlings, \$25 to \$27; pure grain mouille, \$31 to \$32, and mixed \$27 to \$29.

Hay.—The market was steady at \$22 to \$22.50 for No. 1; \$21.50 for No. 2 extra good; \$22.50 to \$21 for No. 2; \$19.50 for No. 3, and \$18.50 for clover mixed, ex-track.

Hides.—Lamb skins advanced to 55c. each. Calf skins were steady at 33c. and 31c. per lb.; beef hides being 20c., 21c. and 22c. Horse hides were \$2.50 to \$3.50 each, and rough tallow, 1½c. to 2½c. per lb., with rendered 7c. to 7½c. per lb.

**Buffalo.**

Cattle.—Choice to prime dry-fed shipping steers, running from 1,200 to 1,500 lbs., sold full steady to strong on the Buffalo market the past week, while a medium, half-fat kind of steers and the grassy female stuff generally ruled from a quarter to forty lower. There were around thirty-five cars of shipping steers, and these found very ready sale and more were wanted at the close. Best shipping steers reached the extreme top of the previous week, four loads bringing \$11.40, with other sales running from \$11 to \$11.25. A few fairish kinds of shipping steers sold around \$10.50 to \$10.75, but were not very heavy dressers. On butchering steer stuff yearlings showed the wide range from \$9.50 to \$10.50, and prime, handy steers sold up to \$10.25 to \$10.50, but they were very desirable. On a half-fat, medium and fair kind of butchering steers and especially where they were grassy, trade was a full quarter lower. A few fancy dry-fed, fat cows and heifers sold steady, best heifers up to \$9.25, and best heavy, fat cows up to \$8.25 to \$8.50, but there were few to bring these prices. Grassy cattle are beginning to run freely now, and indications are for lower levels. The weather has been so wet all along that the grass is very watery even yet, and the grassers are on the "washed-out" order and kill very poorly. It will not be until the grass is well matured and the cattle show harder flesh that killers may be expected to take hold of the grassers at anything like satisfactory prices, though, as compared to the dry-feds, they appear to be bringing high prices at this time. Stockers and feeders are selling lower

and are moving slowly, bulls are lower, except a few strictly dry-fed kinds, which ruled steady. Light supply of milchers and springers the past week, and these sold strong to \$2.50 per head higher. Receipts for the week were 4,550 head, as against 4,250 for the previous week, and 3,875 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$10.75 to \$11.40; fair to good, \$9.75 to \$10; best Canadians, \$9.75 to \$10; fair to good, \$9.25 to \$9.50; common and plain, \$8.50 to \$9.

Butchering Steers.—Choice, heavy, \$10 to \$10.50; fair to good, \$9.25 to \$9.75; best handy, \$9.50 to \$10; common to good, \$8.60 to \$9.25; light, thin, \$8 to \$8.40; yearlings, prime, \$9.75 to \$10; yearlings, common to good, \$8.25 to \$9.50.

Cows and Heifers.—Prime, weighty heifers, \$8.50 to \$9.25; best handy butcher heifers, \$8.50 to \$8.75; common to good, \$7 to \$8; best heavy, fat cows, \$7.75 to \$8.25; good butchering cows, \$7 to \$7.50; cutters, \$4.75 to \$5; canners, \$3.25 to \$4.50.

Bulls.—Best heavy, \$8 to \$8.50; good butchering, \$7.75 to \$8; best feeders, \$7.50 to \$7.75; common to good, \$6.75 to \$7.25; best stockers, \$7.25 to \$7.50; common to good, \$6.25 to \$7.

Milchers and Springers.—Good to best, in small lots, \$80 to \$100; in car loads, \$70 to \$75; medium to fair, in small lots, \$60 to \$65; in car loads, \$55 to \$60.

Hogs.—Market was erratic the past week. Monday and Tuesday the general market for best grades was \$10, Wednesday packers' kinds and good yorkers moved at \$10.15 and \$10.20, Thursday the same weight grades reached \$10.40 and \$10.45, and Friday the top was \$10.30, with the bulk selling at \$10.15 and \$10.20. Range on pigs the past week was from \$9.50 to \$9.75, with some lights bringing up to \$10, roughs sold from \$8.50 to \$9, and stags \$7.50 down. Receipts for the week ending Friday reached approximately 31,200 head, as compared with 25,261 head for the week previous, and 32,000 head for the corresponding week a year ago.

Sheep and Lambs.—Receipts the past week were very light, grand total being approximately 3,300 head, as against 4,257 head for the week before, and 3,300 head for the same week a year ago. Offerings, as a rule, were made up mostly of small bunches and prices were held steady all week. Best springers sold from \$11.75 to \$12, few \$12.25, and top, dry-fed yearling lambs ranged from \$10.25 to \$10.40. Best wether sheep are quotable from \$8 to \$8.25, and the ewe range was from \$7.50 down, heavy ones selling generally at \$7 to \$7.25.

Calves.—Market was pretty uniform the past week, tops going at a range of from \$12 to \$12.50; medium grades sold from \$11.25 to \$11.75, and culls went from \$11 down. Trade was active, and a good clearance was had from day to day. Buyers are beginning to discriminate against weighty veals, and during the past week kinds weighing up around 200 pounds were hard to place even at prices \$2 to \$3 per cwt., under the tops. Receipts showed 3,500 head for the past week, 3,329 head for the week previous, and 3,125 head for the same week a year ago.

**Chicago.**

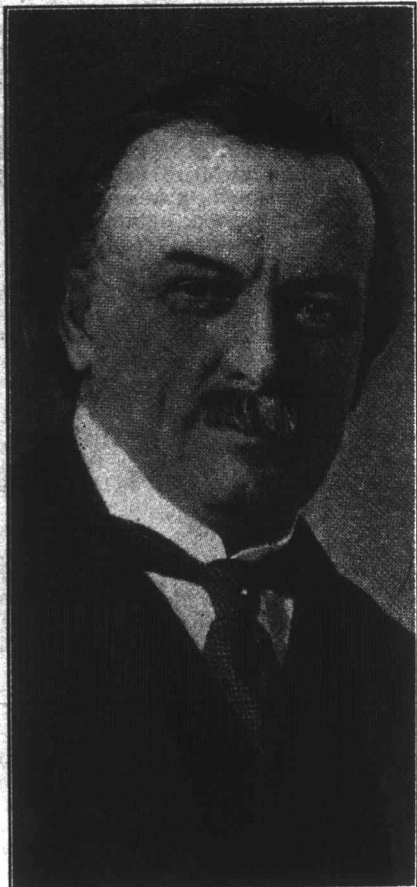
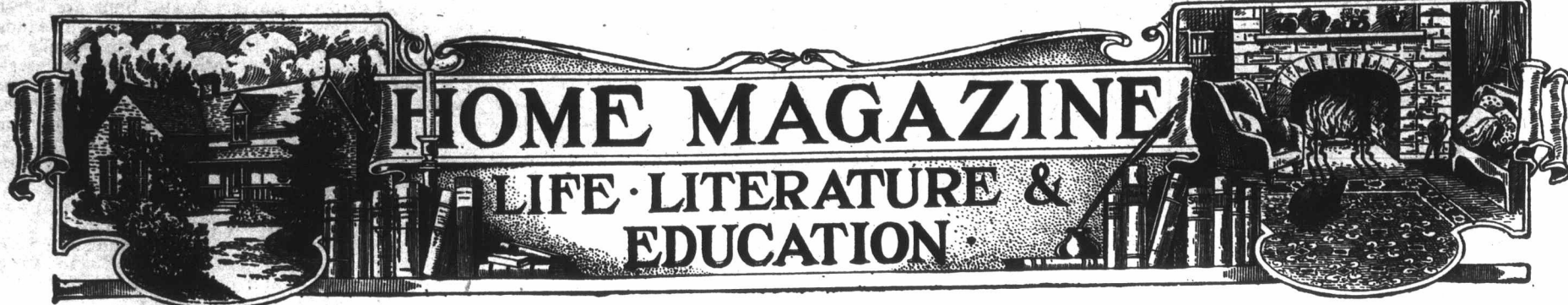
Cattle.—Market steady; beefs, \$7.50 to \$11.30; stockers and feeders, \$5.75 to \$8.70; cows and heifers, \$5.75 to \$9.75; calves, \$8.50 to \$11.85.

Hogs.—Market strong, light, \$9.15 to \$9.75; mixed, \$9.35 to \$9.85; heavy, \$9.25 to \$9.90; bulk of sales, \$9.60 to \$9.80.

Sheep.—Market steady; lambs, native \$7.50 to \$10; springs, \$8 to \$11.70.

There has always been a question in the minds of some people as to whether the Scotch possessed any sense of humor or not. An English gentleman travelling through Scotland thought he would satisfy himself on this point. Strolling along the road, he looked over a hedge and saw Sandy at work in the garden. He called over and asked him if he saw a load of monkeys pass by that morning. "Na, I didna," replied Sandy. "Why do ye ask? Did ye fa' out?"





Hon. David Lloyd George.

**Dominion Day.**

(Somewhere in France.)

This is the Day,—  
The Day we celebrate. What for?  
Well, now, it's in the history books  
—search me!  
Oh, yes—Confederation—that's the word.  
In 1867, Old John A.  
Tupper and Tilly, Brown and Cartier,  
And a lot more besides—you've seen the  
picture perhaps?  
John A. standing up, and laying down  
the law,  
Brown looking wise, and Tupper rather  
ferce.

But after all—that was before my time.  
Dominion Day! When school is out for good,  
Examinations over, and the crick  
Just right for swimming. No Canadian boy  
Wants any history book to tell him that.

Strawberries plenty, and I know this year  
The old man's looking for a record crop.  
Oceans of rain, they say, too much by far  
For other things, although the hay is rank.  
But strawberries can use a lot of wet.

I got a letter from my girl last post,  
She said whole fields were slopping wet  
in May,  
No getting over them to work the soil,  
Weather too cool, and farmers looking blue.

Yet after all "I never saw" she said,  
"The vegetation looking quite so fresh.  
The maples are a mass of living green,  
With cattle standing knee deep in the  
grass.  
Plenty of milk. They say the creameries  
Expect a heavy season's make at once."

That's what she said, and many other  
things.  
So, I would like for once to get a sight  
Of the old spot.  
Well, here's the orderly,  
Now, what's the game? Special deliveries  
of smokes.  
All made in Canada! Dominion Day.

Next year, allowing for a soldier's chance,  
Please God, I'll spend the day where it  
belongs.  
Sarnia, Ont. W. Q. L.

**The Munitions Minister.**

At no time in the world's history, perhaps, have reputations been made or snuffed out with such lightning speed as during the present war. Names that loomed large in 1914 have sunk into comparative oblivion: French, Hamilton, Ivanoff, Von Kluck, a score of others,—where are they? And to-day men talk of Joffre and Petain, Brusiloff, and Haig, and Sarrail.

In the slower business of statesmanship, there is always the same query in regard to a new personage—will he stand? and all history is but the story of the rising, and falling, or enduring, of the great men of the ages. On the desk before the writer of this, there lies an article written by H. Linton Eccles in the fall of 1911—"Lloyd George: A Spent or a Growing Force?"—a query that brings a smile at this day when, after an additional five years developing into the most strenuous and difficult period in the history of the world, the little Welshman holds his place, with his hand, now on this lever, now on that, guiding the nation, as few but he could guide it, through its time of crisis.

Like Disraeli, Lloyd George had an additional obstacle to fight on his way up among the statesmen of his land. Disraeli was a Jew; Lloyd George is a Welshman, and the Welsh as a class are objects of suspicion in England,

said himself, "I do not remember a hand being held out to me from above, and a voice saying 'Dring i fyny yma' (climb thou up here). But don't misunderstand me; there have been thousands of hands which have pushed me up from behind."

Forging his way ahead, first as schoolmaster, then as solicitor, he found himself in Parliament, in the Cabinet, and wherever he went men must perforce sit up and listen, not because he spoke with all the magnetism of Celtic fire, although that means much, but because there was conviction, and purpose, and daring, and the whole burden of the cause of the "greater number" behind his words. His great opportunity, however, came in 1906, with the political crisis with which Mr. Chamberlain was identified. It was necessary to make a bold stroke and Mr. Lloyd George attacked the land monopoly—and won through his famous Budget of 1909. Reform followed reform—taxes on luxuries to relieve the pressure on the poor; old age pensions; measures looking to free trade;—always the good of "the people" from the standpoint of the seer who had been one of them and knew whereof he spoke.—And as Chancellor of the Exchequer Mr. Lloyd George was in a position to compel a hearing.

When the Great War struck England—England, all unexpected, all unpre-

pared as she was—the task thrown upon the men at the head of affairs was staggering. Upon Lord Kitchener devolved the burden of organizing an immense army, and with all speed. Early in the war the importance of munitions—to meet forty years of preparation at Krupp's—became evident, and before long that much of the burden was raised from Kitchener's shoulders by the creation of a ministry of Munitions, with Lloyd George as Minister. His push and thoroughness did what was expected, and to-day, with munitions' factories going at full blast in every part of Great Britain, supplies are not wanting to the British troops.

At the present juncture, following upon the trouble in Ireland, new duties have fallen upon the Munitions Minister. He has been called upon not only to provide instruments of destruction for Teuton foes, but also to provide balm of healing for a discontented and bleeding faction. Whatever the settlement, no sane judgment could be depended upon to assist in so critical and delicate a situation.

And what do the "privileged few" think of his proposal that the little Welshman who has trodden his way up from teaching in a little Welsh school, be appointed as successor to the great Kitchener? Perhaps they are saying little these days. When a nation has come to the veriest crisis in its existence there is little worry about precedence: the truly big men step into their places and even privilege is glad to say Amen. In private life the Munitions Minister is said to be one of the most genial of men. In public life he is admittedly, in the words of Mr. Eccles, beyond reproach. "I have had the advantage," he says, during twelve years' experience in Britain with modern politics and newspaper work, of studying, and to some extent knowing Mr. Lloyd George in the three most important phases of his life—as a politician, as a churchman, and as a family man. . . . And if I were asked to take a solemn and binding oath on my knowledge of his character, I would assert without hesitation that I believe no more honest or more moral man is playing a prominent part in politics to-day, either in Great Britain or in any other country."

To close with a smile—for smiles are never far from Lloyd George's seriousness—the Minister of Munitions is blessed with a ready wit, a faculty that stands him in good stead often, upon one occasion, in South Wales, a preceding speaker jocularly twitted him about his small stature. Instantly Mr. Lloyd George retorted: "Here you measure people below the chin. Where I came from, in North Wales, they measure above it." . . . To quote Mr. Gardiner again: "There are fanatics in every party," interrupts Mr. Tim Healy, sitting lonely in his corner seat. "Yes, even in a party of one," comes the swift retort, and Mr. Healy, who loves a neat stroke, even though it goes through his own body, raises his hat in recognition of the swordsman."

But, wherever he is, with whomever he hobnobs, the little Welshman's heart is in his native hills. "When you die we'll give you a funeral like that," said someone to him, at the memorial service to the Marquis of Ripon. "No, you won't," he replied, "when I die you will lay me in the shadow of the mountains."—So little do mere pomp and show appeal to the man who has achieved true greatness.



Russian Troops in France—All are Picked Men.

the natural difference between Celt and Saxon. His real struggle, however, has been with the aristocracy, the privileged few who were not slow to see that this little fighter, speedily making himself the democratic driving force behind Asquith, threatened the very foundations of privilege. He was decried as a socialist; he was proclaimed as a menace to the political life of England; but he went on his way unperturbed. The dynamic obtained in his long drive from the first humble beginning had given him power to stand against the onslaught from the high places. And it had been a long drive. The son of a Unitarian schoolmaster, he began with neither money nor influence. In the graphic telling of Mr. A. G. Gardner (in "Pillars of Society"): "But Mr. George did not go to Eton, he went to a penny village school, was a Welsh village school. The uncle who brought him up did not own a brick; he mended boots—think of it, O Maxims! He mended boots and preached in a strange tongue in a little tubercular at the foot of the mountains. And now . . . but words fail. Maxims fail. It feels that the linchpin has fallen out of the Universe." . . . "In all my career," Mr. Lloyd George has

pared as she was—the task thrown upon the men at the head of affairs was staggering. Upon Lord Kitchener devolved the burden of organizing an immense army, and with all speed. Early in the war the importance of munitions—to meet forty years of preparation at Krupp's—became evident, and before long that much of the burden was raised from Kitchener's shoulders by the creation of a ministry of Munitions, with Lloyd George as Minister. His push and thoroughness did what was expected, and to-day, with munitions' factories going at full blast in every part of Great Britain, supplies are not wanting to the British troops.

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And what do the "privileged few" think of his proposal that the little Welshman who has trodden his way up



General Brusiloff.

She was an ardent suffragette and he defended men's superiority over women. However, she appeared to be getting the best of it when he said: "At least there is one good, sweet, perfect thing which a man can have and a woman cannot."  
"Never!" exclaimed his wife, hotly: "never! I deny it. What do you mean?"  
"A wife."

**One Woman**

BY KATHLE  
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**One Woman's Experiment.**

BY KATHLEEN K. BOWKER.

Two and a half years ago, the place where our house now stands, and the acre surrounding it, was a pasture of clover, alfalfa, and twitch grass. There seemed to be any quantity of alfalfa and clover at that time. But as I dig among my potatoes to-day, I begin to think that the clover and alfalfa were an idle dream; and that it must have been ALL twitch grass in reality.

The first year we were so busy beginning the garden at the side and front of the house, that we hardly touched the third of an acre that lies to the back. That is to say, my husband was so busy beginning it! My part was that of an admiring onlooker merely. I have never wanted to garden. My parents have always been ardent gardeners, my husband is the same. There had to be someone to look after the house. I liked that better any way. I did hint, tentatively once or twice, that I might help to weed, "or something", but as I had always had a difficulty in distinguishing the Cow from the Cowslip, till one bellowed and the other bloomed, my husband dissuaded me from gardening; said no one who disliked a thing could ever make a success of it anyway; I'd better stick to my housekeeping and cooking, considering what superlative pies I made! So I went off and made one.

Gradually I became an adept at flower picking and arranging. I did like that. Liked it so much that I would get up before six, to pick the Shirley poppies "whose silken flowers display their sweets" each morning with the dawn. If one is early enough, one can help them out of their damp green nighties, and shake out their pretty frillies for them, and take them indoors before the first sleepy bumble bee comes bumbling along. If one beats the bees, the poppies stay fresh in water for two whole days.

We have a little bank at the very back of the acre, a slope of some ten feet, and about a hundred feet wide. Below that are two great trees where the children play, and we have picnic lunches. As the long grasses grew greener and greener on it, till they were ready to be turned into a cosy little crop of sweet scented hay, I longed more and more to see flowers bloom in it, golden heads through the green. Daffodils! My husband agreed that it would be pretty, but decidedly impracticable. Nothing would grow in that tangle of roots. Certainly not bulbs. When I said "But let's try" he said "waste of money" and finally and thoroughly refused to put in what he knew wouldn't grow.

So I said I would put them in myself. He scoffed, and said that I would find it harder work than I expected. I did! My word! It was hard. But I planted each bulb (as Mr. Elliott advises re the Emperors and Empresses) so that their crowns were four inches under cover. Such fat Royalties they were, that their holes had to be pretty big ones. My husband unbent so far as to have the trowel sharpened for me. But even so, my hands were blistered, and I ached all over, before it was done.

How eagerly I looked for them last spring. How I hunted on my hands and knees among the thick grass, when it began to grow green and to sprout. Nothing! My husband never said "I told you so." He just smiled.

Then one day—quite suddenly—there were the gallant spears of the advance guard, three inches high. I smiled then!

They grew fast; and so did the grass. They had a race with one another. If the Royalties were to see the sun at all, Hey Presto! They must flower. They did it, royally. I had planted seventy five bulbs, and seventy-six came up. Every bulb flung at least two golden crowns in the air.

We were all delighted. That fall (1915) I put in seventy-five more, and this spring they were a rapture of delight. I had at least thirty dozen blooms. The house was gay with them, and I sold enough, at thirty-five cents a dozen, to put in another hundred and fifty bulbs this fall. The tall grasses help them to produce wonderful long thick stems before they flower. They fairly stand on tiptoe to get the light. Some of them had stems eighteen inches long, and they all had glorious great

blossoms. This second year the flowers from the first planting of bi-colored flowers were not so large. But they were very perfect and beautiful. They were exceptionally vigorous flowers, and lasted five or six days in water.

That summer (1915) we let the patch at the back between the house and the bank, be used by a neighboring gardener to raise potatoes in. This, my husband argued, would help to remove weeds and twitch grass from that plot, and make it more usable, with less labor for us, later on.

The neighboring gardener was a very busy one. He only managed to hoe those potatoes twice during the summer. He never sprayed them, and the place was fairly overrun with potato bugs. They hardly even waited to finish the potatoes before they began on the flowers in our garden. But they ate those potatoes down to the ground. Only a few tragic stripped stalks stood up, when the time came to dig up the crop. Then it proved to be the best crop anywhere in this vicinity.

My husband accepted a couple of bags of these very fine potatoes as rental. Since Christmas we have been buying potatoes (about a bag a month,) at \$2.25 a bag.

then promptly fell into the hole himself. Sometimes he fell headfirst, as tho' to kiss the seedling good bye. Sometimes he fell backwards, and sat on that tuber so long, that one might think that he was trying to hatch it. But the results were excellent.

When I plant potatoes next year, I mean to do them either with a wide trowel, or a narrow light spade. I find digging with the hoe especially hard work. This is a heavy clay soil, held together with long stiff roots, and it seemed to me that in making the hole the right depth, much superfluous energy was wasted in making it so unnecessarily wide. But women take a long time to gain the courage to go forth and buy the tools that suit them for a certain purpose. To talk of putting in potatoes with a trowel, has a kind of "puttering" sound, I know. Like eating soup with a fork! But I find it easier working on my knees. I can go on for hours on my knees, happily, prayerfully, praisefully. But digging with a hoe in this ground, makes me feel like Mr. Gladstone with his axe!

Another month—if anyone is interested, and the kindly "Farmer's Advocate" will let me, I'll tell how the plot—thickens!



The Garden, Aged Five Months.

All of which "gave me to think," and I suggested to my husband that we put that back bit in "under" potatoes for ourselves this year.

He said that he simply couldn't manage it, in addition to the rest of the garden, for he only has "after office hours" to work. He was planning to take in a strip of it to use for other vegetables. So I said I would do it myself. We had a good deal of argument over it. I can play tennis for three hours in the blazing sun, at a stretch, and have been known to ride all day. But he felt that to dig I was unable. Even to-day (June 14th) he said I would never succeed in getting the weeds out. But I go on digging.

We had the plot ploughed fairly early. After that it rained, and then rained again; and then some. Farmers know! But at last we got it harrowed. Then one eventful evening, coming home from a teaparty about six o'clock, I changed from glad to garden rags, and got to work. I put in six rows, before darkness and the pangs of hunger forced me to stop. The rows run on a kind of slant at one end, where a path cuts across. There are twenty rows, from 85 to 105 feet long. Altogether I dug about six hundred holes with the hoe, before I finished. And it took me three "goes" to do it.

The first fourteen rows are planted with Early Cobbler. The last six with seed potatoes bought back from the man who used the plot last year.

Oh! Mercy, but I was stiff "before the job was done." Even my finger- and-toe-nails ached. The children helped. John planted a row, while Mary did five and a half. She did them very well, and it was a great help, as I find the stooping up and down the hardest work of all. John made a great success of his half row. To each piece of material he said firmly, "I tuck him in"; and

**Hope's Quiet Hour.**

**Learning to Pray.**

Kneeling fair, in the twilight gray,  
A beautiful child was trying to pray;  
His cheek on his mother's knee,  
His bare little feet half hidden  
His smile still coming unbidden,  
And his heart brimful of glee.

"I want to laugh. Is it naughty? Say,  
O, mamma! I've had fun to-day,  
I hardly can say my prayers.  
I don't feel just like praying;  
I want to be outdoors playing,  
And run, all undressed, down stairs.

"I can see the flowers in the garden-bed,  
Shining so pretty, and sweet, and red;  
And Sammy is swinging, I guess.  
Oh! everything is so fine out there,  
I want to put it all in the prayer,  
Do you mean I can do it by 'Yes?'"

"When I say, 'Now I lay me'—word  
for word,  
It seems to me as if nobody heard,  
Would 'Thank you, dear God,' be right?  
He gave me my mother,  
And papa and brother—  
O, mamma! you nodded I might."

Clasping his hands and hiding his face,  
Unconsciously yearning for help and  
grace,  
The little one now began.  
His mother's nod and sanction sweet  
Had led him close to the dear Lord's feet,  
And his words like music ran:

"Thank you for making this home so  
nice,  
The flowers, and my two white mice,—  
I wish I could keep right on;

I thank you, too, for every day,  
Only I'm 'most too glad to pray;  
Dear God, I think I'm done."

"Now, mamma, rock me—just a minute,  
And sing the hymn with 'darling' in it.  
I wish I could say my prayers!  
When I get big I know I can,  
Oh! won't it be nice to be a man,  
And stay all night downstairs!"

The mother, singing, clasped him tight,  
Kissing and cooing her fond "Good  
night,"

And treasured his every word.  
For well she knew that the artless boy,  
And love of her precious, innocent boy,  
Were a prayer that her Lord had heard.

M. E. DODGE.

**Speak to Him.**

"Speak to Him, thou, for He hears, and  
spirit with spirit can meet,—  
Closer is He than breathing, and nearer  
than hands and feet."

His disciples came, and took up the  
body, and buried it, and went and told  
Jesus.—St. Matt. 14:12.

What a wise thing to do! St. John  
the Baptist had been cruelly murdered  
in prison, and his followers were broken-  
hearted and almost ready to despair.  
They reverently buried the body of their  
master and then went straight to St.  
John's Kinsman and Friend. Did our  
Lord comfort them? We can only guess  
about that, but at least He shared their  
grief. When He heard their sad tidings  
He at once departed by ship into a desert  
place, seeking quiet and rest.

Perhaps you may say: "He must  
have known all about it, without being  
told." So, also, you may feel sure  
that He knows all your troubles and  
temptations better than you do your-  
self. What is the use of telling Him  
when He knows everything already?  
Try it, and see if you do not find prayer  
a mighty help.

God is listening for your voice.  
Millions of people are praying, and  
yet His ears are open unto your cry.

"He listens to the silent tear  
For all the anthems of the boundless sky—  
And shall our dreams of music bar our ear  
To His soul-piercing voice forever nigh?"

One evening, years ago, when a little  
visitor of mine had hurried through her  
prayers and climbed into bed, I had a  
quiet talk with her about the reality  
of prayer. I said: "Did you think  
about God, while you were on your knees?  
Did you remember that He was listen-  
ing?"

She looked very serious for a moment,  
and then said: "I'll say them over  
again!" and again the little clasped hands,  
as she knelt beside the bed. If she  
did not grasp the meaning of all the words  
she used, at least she knew that God  
was listening, and that her words were  
not spoken into empty space.

We don't always understand God's  
way of answering our prayers; but let  
us take courage, even when He shows  
no sign of hearing them. Sometimes  
we only "say our prayers" as a matter  
of duty or habit; sometimes it is of  
vital importance to us to have our  
earnest prayer reach the King of all  
this troubled earth.

When Jacob was far away from home  
and friends, sleeping on the ground  
like our soldiers at the front, he saw  
in a dream a wondrous ladder which  
was set up on the earth and the top  
reached to heaven. "And, behold, the  
LORD stood above it." Our Lord  
claims to be the ladder; upon the Son  
of Man the angels ascend and descend  
(S. John 1:51.) That Ladder is set  
up wherever a humble and penitent  
soul is kneeling. It is ready for you now  
—the WAY— and the LORD stood  
above it." Jacob discovered. What  
have you discovered?

A few weeks ago a poor woman was  
listening in terror to the crashing thunder,  
and trembling as the lightning flashed.  
She was afraid for herself and also  
worried about her husband in France.  
She was too nervous to sleep and grew  
more and more troubled. Then she  
thought about something she had heard  
at a Mothers' Meeting, about the use of  
prayer. She got out of bed and knelt  
down, putting herself and her husband  
in God's care. Then a caressing touch  
on her arm seemed to soothe her fears,



and she almost hears the words: "Don't be afraid! I'm here!" She got into bed with a light heart, and soon fell asleep. She said: "I have told several people about it, and some of them say it was imagination, but I am sure it was not." She will remember that experience—the experience of a "mystic," you may say—and it will help her to believe that God is really listening when He makes no sign. We walk by faith, not sight; and He does not always make His Presence so plainly felt. Even during the "Great Forty Days," between the Resurrection and the Ascension, the disciples only saw the Lord when He chose to manifest Himself to them. He was in the midst of them—invisibly—before He allowed them to see Him; and just as really present when invisible as when He could be discerned by their bodily senses.

About a year ago a young officer was killed, about fifty yards from the German trenches. His brother went to bring him back—alive or dead—and was forced to creep along by inches in the face of the "flares" of the enemy. He wrote about his awful experience in this way: "When I started I said a prayer, and I kept on praying the whole of the time, and I felt as if a power stronger than mine was guiding and holding me up, and there is now one man who knows, and will always know, the truth of those old words, 'I can do all things through Christ, who strengtheneth me.'"

One day in June, I had the great pleasure of meeting some of the readers of the Quiet Hour. Old friends they were although I had never seen them before. Their wholehearted kindness has given me new courage and made me feel as though all the readers of our corner were friends of mine. Shall we—disciples of Christ—follow the example set us in our text? We may be thousands of miles from each other, but in His presence we are close together.

"In the gloom and darkness  
Clasp His living hand,  
He will guide and cheer thee  
Through the desert land."

DORA FARNCOMB.

Gifts from Readers.

Thank you, "Ray," for your nice letter and for your donation of a dollar for the needy—I am glad to hear that our Corner is not entirely filled by women. Thank you, too, Mrs. Johnson, for again sending five dollars for our poor fund. Have you forgotten that you sent \$5.00 in March and \$10.00 in May? I begin to feel nervous—afraid that you are trusting me too much, and that I may not be spending the money as you wish. Nearly all of it goes out in comforts or necessities for sick people; and I try to spend it wisely, feeling responsible to God as well as to you and our other generous readers.

HOPE.

Fashions Dept.

How to Order Patterns.

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.

When ordering, please use this form:—  
Send the following pattern to:  
Name \_\_\_\_\_  
Post office \_\_\_\_\_  
County \_\_\_\_\_  
Province \_\_\_\_\_  
Number of Pattern \_\_\_\_\_  
Age (if child or misses' pattern) \_\_\_\_\_  
Measurement—Waist \_\_\_\_\_ Bust \_\_\_\_\_  
Date of issue in which pattern appeared \_\_\_\_\_



8998 (With Basting Line and Added Seam Allowance) Bathing Suit for Misses and Small Women, 16 and 18



8712—Gown, 34 to 42 Bust.



8595—Gown with Three-piece Skirt; 34 to 42 Bust.



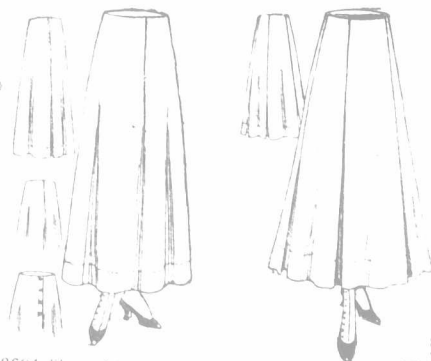
8610—Middy Blouse for Misses and Small Women; 16 and 18 years.



8619—Boy's Suit; 4 to 8 years.

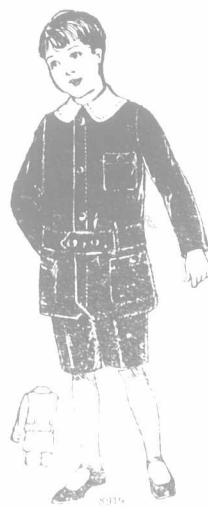


8554—Blouse; 34 to 42 Bust.



8604 Three-Piece Skirt, 24 to 34 waist.

8955 Six Gored Skirt, 24 to 36 waist.



8910 Girl's Suit, 6 to 8 and 10 years.



8580 Girl's Dress, 4 to 8 years.



8924 Child's Dress, 4 to 8 years.



8656 Child's Norfolk Coat, 4 to 8 years.

The Inq

[Rules for correspondents: (1) Keep letters to 100 words. (2) Always use real name. (3) Enclose stamp. (4) Allow one month for answers.]

Our Friends

Dear Friends, letters to people that is what I'm morning; I am letter about bo a man whom yo to ever know Yet it's strange, one may know s things they ha Grayson" for in if anyone could Stannard Baker him also as Day

And now I v other man just good a comrad It must be since a favorite a little green- "I want you t I think you wil spring." The l and Wild Hor over the pages bees, and birds the big, wild, of-doors; told a straight simplic that spells *lie* mean, that go and takes capti magic in words perception that

In the year everything by into my h "Pepacton," "Far and Nea account of a could find ou himself except near the Hud had builded y called "Slabst

Little, evid about the li Yet it does r man must be famous, and are written of perhaps, has of late in rec Twain, and and James W to follow in th but once ne and the scaro They have bee their country those, also, Burroughs."

that if you well, howeve world would door." John thing superla has made a p tracked path the woods to in short, livin as he sees and simplici spite of him pilgrimages; comrade, alw come always those who 2

And a bo used as the been written "inside," to Batus, has him, as frie fitting, som should be w may write work, but a tell the litt that reveal And this C Friend, Jol Miller Co., ing, sympath makes us A

A long said to a



# 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.]

## Our Friend John Burroughs.

Dear Friends.—Do you ever write letters to people about books? Well that is what I am going to do this morning; I am going to write you a letter about books, or rather, about a man whom you and I are not likely to ever know except through books. Yet it's strange, isn't it? how very well one may know some people through the things they have written. "David Grayson" for instance. Indeed, I doubt if anyone could ever really know Ray Stannard Baker who had not known him also as David Grayson.

And now I want to talk about another man just as appealing, just as good a comrade.

It must be nearly fifteen years ago since a favorite cousin came to me with a little green-bound volume, saying: "I want you to read John Burroughs. I think you will want to read him every spring." The little book was "Locusts and Wild Honey," and as I turned over the pages I saw that it told about bees, and birds and flowers, and all of the big, wild, peaceful, changeful out-of-doors; told about it, too, with that straight simplicity and charm of diction that spells *literature*, real literature, I mean, that goes straight to the heart and takes captive the imagination, the magic in words joined to the keenness of perception that brings pure delight.

In the years that followed I read everything by Burroughs that came into my hand—"Wake Robin," "Pepacton," "Songs of Nature," and "Far and Near," the last a delightful account of a trip to Alaska; but I could find out little about the man himself except that he lived somewhere near the Hudson in a house which he had builded with his own hands and called "Slabsides."

Little, evidently, had been written about the life of John Burroughs. Yet it does not always follow that a man must be dead before he becomes famous, and biographies and eulogies are written of him. The United States, perhaps, has been particularly happy of late in recognizing her heroes; Mark Twain, and William Dean Howells, and James Whitcomb Riley did not have to follow in the path of the now famous but once neglected Edgar Allan Poe, and the scarcely less neglected Thoreau. They have been among those whom in life their country delighted to honor, and of those, also, is "Our Friend, John Burroughs." Emerson said somewhere that if you did anything superlatively well, however small it might be, the world would "make a path to your door." John Burroughs has done one thing superlatively well, and the world has made a path, a hard-beaten, many-tracked path, up the hill and through the woods to "Slabsides." Burroughs, in short, living his own life, telling things as he sees them, with absolute truth and simplicity, has become, perhaps in spite of himself, the objective of many pilgrimages; yet he is ever a good comrade, always ready with a warm welcome always ready to reveal himself to those who are of his company.

And a book, whose title has been used as the heading of this article, has been written about him—from the very "inside," too, since its writer, Clara Barrus, has been long associated with him, as friend and secretary. It seems fitting, sometimes, that a biography should be written by a woman. A man may write better, perhaps, of a man's work, but a woman is more likely to tell the little things, the little sidelights that reveal so much of the real self. And this Clara Barrus has done: "Our Friend, John Burroughs" (Houghton Mifflin Co., Boston) is at once interesting, sympathetic, and illuminating. It makes us *know* John Burroughs.

A long ago as 1888 Walt Whitman said to a friend, "John is making an

impression on his age—has come to stay—has veritable indisputable, dynamic gifts."

If it should chance to-day that the spirit of the "good gray poet" can wander through the woods and up to the wate fall by which in the body he once sat with John Burroughs, he must smile to see how splendidly his words have come true. For he must see the flocks of people who climb the hill to "Slabsides," and who come away having seen, in the words of the biographer, "more than the picturesque retreat of a

means local. Letters come to him from admirers in every part of the world. Birds have been sent to him from England, pressed flowers from the Holy Land, the Himalayas and Africa,—Fame?—but it is not fame that draws people to send such things; "belovedness" would be, perhaps, a better word, and altogether better befitting John Burroughs.

And now for a more intimate acquaintance with "Slabsides." "Slabsides," by the way, was really built

Miss Barrus tells thus of her first visit to the spot:

"After twelve years' acquaintance with his books I yielded to the impulse, often felt before, to tell Mr. Burroughs what a joy his writings had been to me. In answering my letter he said: 'The genuine responses that come to an author from his unknown readers, judging from my own experience, are always very welcome. It is no intrusion, but rather an inspiration.' A gracious invitation to make him a visit came later.

"The visit was made in the 'month of tall weeds,' in September, 1901. Arriving at West Park, the little station on the West Shore Railway, I found Mr. Burroughs in waiting. The day was gray and somewhat forbidding; not so the author's greeting; his almost instant recognition and his quiet welcome made me feel that I had always known him. It was like going home to hear him say quietly, 'So you are here,—really here,' as he took my hand. The feeling of comradeship that I had experienced in reading his books was realized in his presence. With market-basket on arm, he started off at a brisk pace along the country road, first looking to see if I was well shod, as he warned me that it was quite a climb to Slabsides.

"His kindly face was framed with snowy hair. He was dressed in olive-brown clothes, and his 'old experienced coat' blended in color with the tree-trunks and the soil with which one felt sure it had often been in communion.

"Up, up we climb, an ascent of about a mile and a quarter from the railway station. Emerging from the woods, we come rather suddenly upon a reclaimed rock-girt swamp, the most of which is marked off in long green lines of celery. This swamp was formerly a lake-bottom; its rich, black soil and three perennial springs nearby decided Mr. Burroughs to drain the soil and compel it to yield celery and other garden produce.

"Nestling under gray rocks, on the edge of the celery garden, embowered in forest trees, is the vine-covered cabin Slabsides. . . . Mr. Burroughs has given to those who contemplate building a house some sound advice in his essay 'Roof-Tree.' There he has said that a man makes public proclamation of what are his tastes and his manners, or his want of them, when he builds his house; that if we can only keep our pride and vanity in abeyance and forget that all the world is looking on, we may be reasonably sure of having beautiful houses. Tried by his own test, he has no reason to be ashamed of his taste or his manners when Slabsides is critically examined. Blending with its surroundings, it is coarse, strong, and substantial without; within it is snug and comfortable; its wide door bespeaks hospitality; its low, broad roof, protection and shelter; its capacious hearth, cheer; all its appointments for the bodily needs express simplicity and frugality, and its books and magazines, and the conversation of the host—are they not there for the needs that bread alone will not supply?

"The time of which I am speaking—that gray September day—what a memorable day it was! How cheery the large, low room looked when the host replenished the smouldering fire! 'I sometimes come up here even in winter, build a fire, and stay for an hour or more, with long, sad, sweet thoughts and musings,' he said. He is justly proud of the huge stone fireplace and chimney which he himself helped to construct, he also helped to hew the trees and build the home.

"We sat before the fire while Mr. Burroughs talked of nature, of books, of men and women, whose lives or books, or both, have closely touched his own. He talked chiefly of Emerson and Whitman, the men to whom he seems to owe the most, the two whom most his soul has loved."

Miss Barrus here quotes from the conversation, recollecting Mr. Burroughs' observations on these men, on Holmes, and Whittier, and Tolstoy and Maeterlinck, the famous Belgian. Then, at a turn, she drifts off into telling how the dear old naturalist got supper, baking potatoes and onions under the hot ashes, and broiling a chicken in a toaster under the coals.

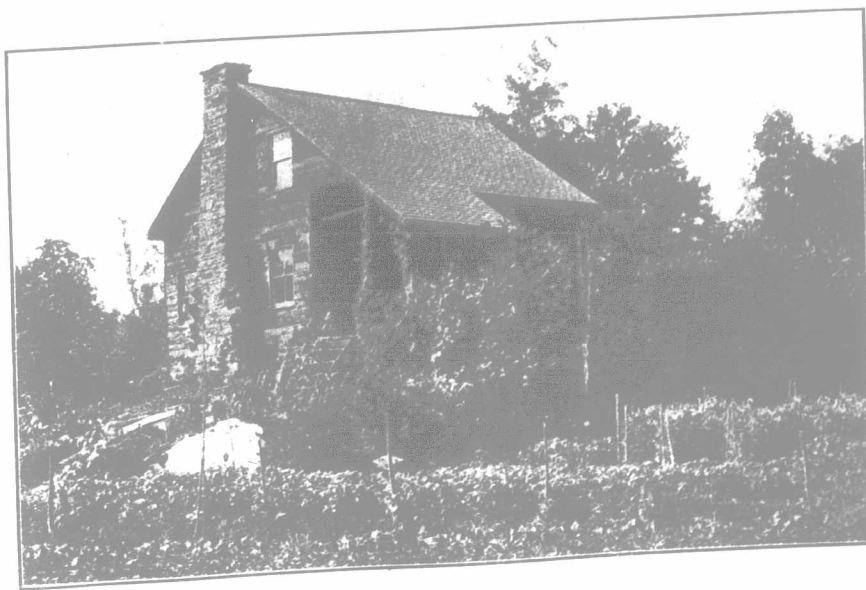


John Burroughs and John Muir. The shorter of the two is Mr. Burroughs.

living author; they have received a salutary impression made by the unostentatious life of a man who has made a profound impression on his day and age; they have gone their separate ways with an awakened sense of the comradeship it is possible to have with nature, and with an ennobling affection for the one who has made them aware of it."

If Walt Whitman can peep into the study, too, (provided that "shades" must needs "peep") he must see that the fame of John Burroughs is by no

by Mr. Burroughs and his son Julian. It is in the thick of the woods, and is covered on the outside by chestnut slabs with the bark left on. "My friends frequently complain," said Mr. Burroughs once, "because I have not given my house a prettier name, but this name just expresses the place, and the place just meets the want that I felt for something simple, homely, secluded—something with the bark on." (The italics are ours, for the phrase tells so much of the real John Burroughs.)



"Slabsides."



Only a woman could appreciate the humour in this:

"As we arose from the table, I began picking up the dishes.

"You are going to help, are you?"

"Of course," I replied, "where is your dishcloth?—a natural question, as any woman will agree, but what a consternation it evoked! A just perceptible delay, a fumbling among pots and pans, and he came toward me with a most apologetic air, and with the sorriest-looking rag I had ever seen—its narrow circumference encircling a very big hole.

"Is that the best dish-cloth you have?" I asked.

"For answer he held it up in front of his face, but the most of it being hole, it did not hide the eyes that twinkled so merrily that my housewifely reproof was effectually silenced. I took the sorry remnant and began washing the dishes, mentally resolving, and carrying out my resolution the next day, to send him a respectable dish-cloth. Prosaic, if you will, but does not Emerson say something about giving—

"To barrows, trays and pans,  
Grace and glimmer of romance"

And what graces a dish-pan better than a clean, whole, self-respecting dish-cloth?

"So there we stood, John Burroughs and his humble reader, washing and wiping dishes, and weighing Amiel and Schopenhauer in the balance at the same time."

I am afraid that I have dwelt more, in this introduction, upon "Slabsides" than upon the spirit that, each summer, inhabits it. But, after all, one has to conceive of a person, or a personage, in a setting, and when we come, next day, to consider John Burroughs himself, we shall be able to see him against this background, so natural to him, this bark-covered cabin in the woods.

JUNIA.

(To be continued.)

**Flies on House Plants.**

I am coming for help; I am troubled a great deal with a small fly (a rather blue-black) on my house-plants. It appears to cause a white worm (small) in the soil. The first indication I have of it is to see it flying around the plants, running around the pots, etc., and if I stir up the soil I sometimes find them running or flying out. I would like to know what is the cause of these pests, and also a remedy. Hoping to see a reply in next week's Advocate or as soon as possible.

Bruce Co., Ont. ANXIOUS.

The maggots in the soil are evidently the larvae from which the flies develop. Would advise you to replot the plants, washing the roots before replotting. Bake the soil, also, before putting it in the pots, to kill any life-germs that may be present.

Soaking the soil with lime water will remove ordinary earth-worms.

**A Request Re Soap-making.**

F. B., Simcoe, Ont., wishes someone to send to the Ingle Nook a method for making hard soap with Gillet's Lye. Will someone who has made the soap kindly answer?

**Seasonable Cookery.**

**Strawberry Preserves.**—Dissolve 4 cups sugar in 1 pint boiling water; let boil and skim. Add a generous quart of choice berries and let boil very gently 10 minutes. Skim the berries to plates, then return all the juice drained from them to the syrup and let boil about 20 minutes, add the strawberries, let boil throughout, then store.

**Strawberry and Pineapple Preserves.**—Take 3 quarts strawberries, 1 pint shredded pineapple, 2 cups water, 5 lbs. sugar. Cook the pineapple in the water about 20 minutes; add the sugar, and, when boiling, the strawberries. Cook 20 minutes.

**Raspberry Jam With Currant Juice.**—Use equal weights of raspberries and sugar and half the weight of the currant juice. Let fruit and juice boil together 15 to 20 minutes; then add the sugar and let boil until thick.

**Sherry Crush.**—Crush 4 quarts strawberries or other small fruit in a pestle; add 3 pints water and the juice of a lemon. Let the mixture stand 2 or 3

hours, then strain through a cloth. Add 3/4 lb. sugar, and stir until dissolved. Add ice and serve when quite cold.

**Chocolate Blanc Mange.**—Take 3 tablespoons cornstarch, 2 cups milk, 1/2 cup water, 4 tablespoons grated chocolate, 1 egg. Scald the milk. Dissolve chocolate in 1/4 cup of the water. Add the cornstarch moistened with the remainder of the water, then pour in the scalded milk, stirring all the time, and cook for 5 minutes. Beat up the egg and add it and stir for a few seconds. Pour into wet moulds and when firm turn out.

**Black-Eyed Susan.**—Put 2 1/2 cups milk in double boiler and bring to the scalding point. Pour milk over 1 cup brown breadcrumbs and let cool. Add 1/2 cup sugar mixed with 1/2 teaspoon cinnamon and 1/4 teaspoon, each of cloves, nutmeg and salt. Also add 2 eggs slightly beaten, 1 tablespoon melted butter, 1/2 cup raisins, seeded and cut in two, and 3 tablespoons currants. Turn into a buttered pudding-dish and bake 50 minutes. Serve hot with sugar and cream.

Here are two methods for making dishes that may be used for supper, or even for dinner in place of meat during very hot weather:

**Bean Loaf.**—One cup cooked beans; 1 1/2 cups breadcrumbs, 1 cup cream, 1 cup cooked tomatoes, pepper and salt to taste. Mash the beans fine, and add the other ingredients, mixing well. Bake in a buttered pudding-dish for 1 hour in a moderate oven. Serve cold in slices.

**Escalloped Eggs.**—Cut 4 cold boiled potatoes in quarter-inch slices. Cut 5 hard-boiled eggs in slices, reserving

the water into a jug and keep it in the hot sun, adding 1 lb. sugar to each 2 1/2 gallons water, also a little hop yeast. Let stand 3 or 4 weeks.

**Cleaning Panama Hat.**

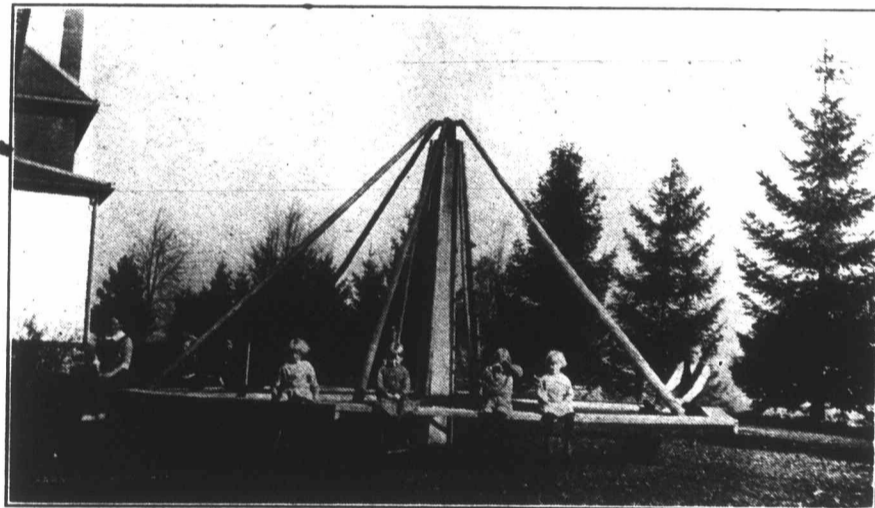
A Panama hat may be cleaned out of doors (away from fires) with gasoline and a brush. Or it may be well scrubbed with Ivory soap and water applied with a brush. Rinse afterwards with clean, soft water to which a little glycerine has been added. This will keep the straw pliable.

**Homemade Vinegar.**

During the warm weather the thrifty housekeeper can easily make all the vinegar she will need for the year. Cider left in the sun, with a thin cloth tied over the bung-hole, will quickly turn into vinegar. When cider is not at hand a very good vinegar can be made from peach or apple parings. Fill a jar half full of parings, add 1/2 cup molasses, fill up with clean, soft water, tie a thin cloth over and set in the sun.

Excellent vinegar may be made from corn. Put a pint of raw corn, taken off the cob, and a pint of molasses in a jar. Fill up with water and proceed as directed above. In about 3 weeks the vinegar will be fit to use, and is said to be one of the least injurious made.

Potatoes also make good vinegar. Wash the potatoes and boil them. Drain the water off and strain it. Put



A Home-made Merry-Go-Round.

and chopping the white ends. Put potatoes and eggs in alternate slices in a buttered baking dish, adding to each layer half a sliced, parboiled onion. Melt 2 tablespoons butter; add 2 tablespoons flour and stir until well blended, then pour on 1 1/2 cups milk, stirring constantly. Bring to boiling point and add 1/2 cup cheese cut in small, thin bits. Again bring to boiling point and season with salt and pepper. Pour sauce over mixture in baking dish, cover with 3/4 cup seasoned, buttered breadcrumbs, and bake.

**The Scrap Bag.**

**Use for Old Straw Hats.**

Old hats may be ripped apart and sewn into waste-paper baskets. Wire the baskets to keep them in shape, using firm, round, covered hat-wire.

**To Remove Grass Stains.**

Rub the stain with molasses, let stand a while, then launder as usual.

**To Restore Faded Colors.**

After washing the faded article and rinsing it well put it through alum water. This will sometimes restore the color to a certain extent.

**To Remove Mud From Silk.**

Rub with a piece of flannel. If that fails rub with linen dipped in alcohol.

**Cleaning With Vinegar.**

Never apply Dutch Cleanser or any other cleaning agent to smoky or fly-spotted picture frames or to fine

the water into a jug and keep it in the hot sun, adding 1 lb. sugar to each 2 1/2 gallons water, also a little hop yeast. Let stand 3 or 4 weeks.

**To Keep Lard Sweet.**

Cover the top of the lard with a cloth; cover this with fine salt, tucking the edges securely to keep the air out. Put the cover on the jar and keep in a cool place.

**A Fruit Hint.**

When making jam, marmalade, and fruit butters the best results are obtained when the addition of the sugar is delayed until the greater part of the water has been evaporated by cooking.

**The Beaver Circle**

**The Catbird.**

BY AMOS R. WELLS.

It mimics the vireo's song,  
Insistent and jerky and sweet;  
Like a robin it ripples along,  
Like a sparrow it rhymes with the street.  
Its call is now duty and far,  
Like a vireo at sunset alone;  
Now sad as the wood pewee are,  
Now bright as the oriole's tone;  
Now making the doughy chewink,  
Now bold in the call of the jay;  
Now matching the crazed bobolink,  
Or the meadowlark's brisk roundelay;  
And all through the marvelous feat  
A something uncanny, untrue,  
A ring of the mocker, the cheat,  
A hint of a petulant mew!

**A Merry-go-round.**

Gentlemen.—Having an hour or so at my disposal this afternoon I write to give you a description of a Merry-go-round, constructed at "The Oaks," a photo of which is enclosed.

It is a great source of enjoyment to the little ones—and some grown-ups too—and unlike a swing or teeter, any number can get on at once, there having been over forty school children entertained at one time on this one.

No doubt it will prove interesting to your many readers and as the money cost is not a great deal perhaps a few will be erected by those mechanically inclined.

This one was built in 1913 and will last many a long year as it is built to stand, having a reinforced cement-concrete pillar and foundation.

With the pillar perfectly plumb, and the bearing for revolving wheels at bottom true and exact, any child that can walk can run it round, as there is practically no friction whatever, with all roller and ball bearings.

The hub at the top which carries the whole weight of the wheel, and all that get on, is taken from a 14 ft. power wind mill, which had served its time on the barn for feed grinding etc. There are many of these scattered all over Ontario, and I don't know of a better use for them than constructing a Joy Wheel for the young folks on the farm.

A. L. CURRAH.

"The Oaks," Bright, Ont.

**Little Bits of Fun.**

They were holding a mid-year examination in one of the schools. The subject was geography. One of the questions was, "What is the equator?" "The equator," read the answer of a nine-year-old boy, "is a menagerie lion running round the centre of the earth."

The Youthful Logician.—"Dad," asked little Toby, "does it cost much to keep a lion?" "It does, my son." "A wolf would make a good meal for a lion, wouldn't it, dad?" "Yes." "And a fox would be enough for the wolf, wouldn't it, dad?" "I suppose so. Go and play!" "A fox would be satisfied with a hawk, and a sparrow would satisfy a hawk, eh, dad?" "H'm! If you don't go away—" "And a spider would make a meal for a sparrow?" "Yes, yes!" "Now—" "Wait a minute, dad! Now we're coming to it. A spider would be satisfied with a fly, wouldn't it?" "Yes, yes, my son!" "And a drop of treacle would be enough for a spider?" "Well, supposing it would?" "Yes, that's just it, dad! Now, what I want you to tell me is this. Could a man keep a lion for more than a year with a pound of treacle?"

**Senior Beavers' Letter Box.**

Dear Puck and Beavers.—I have been a long and silent reader of your Circle of which I am proud. My father has taken "The Farmer's Advocate" for over twenty years. I attend the Walkerton Separate School, which is a mile and a quarter from Walkerton. I will be busy next week and a half writing on the "Promotion Examinations. This will hinder me from writing another letter to you soon Dear Puck and Beavers. I am in the Junior Fourth class now and I'm trying hard to pass. I am twelve years old and like to go to school very much. I have one sister and three brothers of which I am the fourth oldest. My fathers' occupation is fruit growing. He has been at this business for four years. I like the farm very much, but it takes work to do the business. We don't do the work ourselves, we have sometimes as many as sixty berry-pickers of whom most are girls and boys from twelve years to eighteen years. Our farm consists of twenty-five acres. On it are over two thousand apple and cherry trees, also about two hundred or more plum trees. There are also planted seven acres of strawberries, three acres of raspberries and about three of tomatoes. I used to live in Mildmay, which is in Bruce Co., but moved to Walkerton, which is north of Mildmay. For pets I have a grey bull dog and a pair of pigeons. I call my dog Fido. As my letter is getting long I guess I have to close with a cheer and happy,

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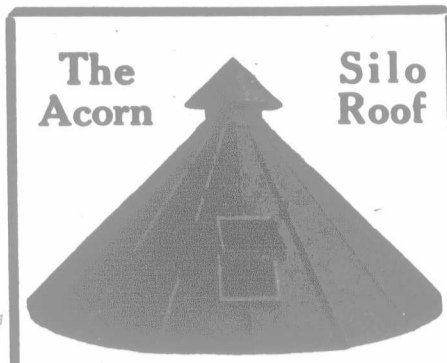


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healthy laugh. Wishing the Circle every success.

Your loving Beaver, MELVIN SCHMIDT. R. R. No. 3, Walkerton, Ont. P. S.—Would some loving "Beaver" be so kind and send a letter north to me?

Riddles.

What is the difference between a conductor and a school teacher? Ans.—The conductor minds the trains, and the school teacher trains the minds.

OUR JUNIOR BEAVERS. Peekaboo Stories.

A Queer Little Pitcher.

One day in June Fairy Peepapeep was carefully picking her steps through the marsh on the edge of a little blue lake, quite surrounded by tall swamp trees. Sometimes the long grass kept her back; sometimes little pools of water in which the bushes and grasses were reflected very prettily, so that it looked as though they were twin-bushes, and twin-grasses, the one kind of each growing head downward.

But all at once she came upon some black oozy ground where the grasses stopped and the plant-stems became thicker and harder to make way through.

"Why, what odd-looking plants!" exclaimed Peepapeep. "I declare they look like green pitchers! The pitchers must be the leaves, too, for there are the flowers above. What pretty red ones they are!"

Then, all at once, from the bottom of the pitcher nearest to her came a sharp, buzzing sound; "Bzzz! Byzz! By-z-z-z!"

Peepapeep jumped aside quickly. "I wonder if it's a snake," she said. But a small voice spoke away down in the pitcher. "No. I'm only a fly! A poor little fly! Help! Help!"

With that Peepapeep went over to the pitcher and looked in. "What are you doing down there?" she asked.

"Doing down here?" said the fly. "Why, this is the worst box I ever got into.—No, the worst pitcher, I mean. It's worse than a milk-jug."

"Then why did you go in?" "Don't you smell the sweet stuff all down the inside?" replied the fly testily. "What fly could resist that?—And here I am at the bottom! Byzzz! Byzz! By-z-z-z!"

"But why don't you come out?" asked Peepapeep.

The fly looked up at her in disgust. "Well, I guess if you were down here you would know," he said. "Can't you see that the inside of this pitcher is covered with sharp hairs that point down. When I try to crawl up they stick into me, and when I try to fly they hinder my wings! And after a while it will rain, and I'll be drowned. I should have remembered that lots of flies are drowned in these pitchers. That's how the plant gets its dinners. Dear me, to think that I'll ever make a dinner for a pitcher-plant! Oh-h-h!—Byzz! Byzz, By-z-z-z-z-z-z!"

Peepapeep looked very much perplexed for a moment. Then a bright idea struck her. "Maybe I can help you," she said.

"Can you?" said the fly. "Yes. Wait a moment."

The fly stopped buzzing, while Peepapeep went off a little way and searched about. Presently she came back with a stout grass-stem. "Now fly," she said, "keep out of the way and I'll put this down the middle of the pitcher carefully. Then you crawl up on it, keeping your wings down as close as possible. Cheer up! You'll soon be out."

"Hurrah for you!" said the fly. "There, don't hit me on the head with it!"

A moment later the stem was in place and the fly was crawling up on it.

When at last he got out of the pitcher, he lay on the grass quite exhausted after his long ordeal.

"Thank you so much," he panted. "If it hadn't been for you I'd have died down there—and milkmaid Mary who comes down to the meadow would have been very glad."

"Well, anyhow, you're out," said Peepapeep, "and be careful about going into pitchers again."

"So I will," nodded the fly. "They're all bad—milk-jugs and pitcher-plants. You're off? Well, thank you. Byzz! Byzz! Byzz!"

The Windrow

Marconi has announced his invention of a device which, if installed on the bridges of ships, will put an end to the danger of collision in fogs.

An article in The London Times deals, in a somewhat surprised way, with the great efficiency of the women who are taking the places of men in England. One instance given is that of a girl working an apparatus formerly operated by a skilled workman. He had turned out 30 shells per shift; she turns out 150.

When Kitchener was twenty he went on a holiday to his father's home in Dinan, France. The Germans invaded the country, and young Kitchener promptly enlisted in the French army as a private. His father had him discharged and sent him promptly back to Woolwich Military Academy. It was a coincidence that, at sixty-five, he ended his career as he had begun it, fighting to free the French from the Germans.

Baden Powell was recently asked: "When do you think the war will end?" He replied: "The answer is simple. The war will be decided in 1935."

"The true victory will lie not so much in the actual tactical gains on the battlefields to-day as in the quality of the men who have to carry on the work of the country after the war. War kills off the best of the Nation's manhood. Therefore, extra care must be exercised to save every youth. We have got to economize our human material for the sake of the nation. Each individual must be made healthy and strong and endowed with character for becoming a valuable citizen for the State."

"Non-combatant men have here as big a national work behind the scenes as the men have who are playing their part so gallantly on the stage in Flanders and elsewhere."

Incidents about Lord Kitchener have, naturally, filled the magazines of late. One of the stories told of him is the following: He detested a fop. Upon one occasion an officer, a subaltern, appeared before him with a monocle at his eye, and other marks of the fop in evidence. Kitchener stopped. "Is there anything the matter with your eye?" he asked.

"No, sir," replied the subaltern. "Then take that thing out!" came the command, which was obeyed in short order.

The breeding of rabbits for food, according to "Vorwarts," has been taken up with great zeal by the Guards in Berlin and elsewhere.

England and France are obliged to pay eleven million dollars per month now to keep the Belgian civil population from starving; besides which the name of Mr. Rockefeller is worshipped in Belgium. He is clothing to-day the naked by the thousands, and has saved countless lives from starvation. Governor-General von Bissing, who shot Nurse Cavell, has a policy all ready in case these supplies stop. It is simplicity itself. The entire population of women and children will be driven at the point of German bayonets across the trenches. The remaining male population will earn their living in German ammunition factories or by tilling the land for their new masters. Of course a great many would die. "It is necessary," Dr. Wilfrid T. Grenfell, in "Outlook."

After a period of six months of widowhood, Bridget consented to enter the married state again. Some weeks after she was led to the altar her old mistress met her in the street dressed in the deepest mourning.

"Why, Bridget," she exclaimed, "for whom are you in black?"

"For poor Barney, me first husband, mum. When he died Oi was that poor Oi couldn't afford to buy mourning, but Oi said if iver Oi could Oi would, and me new man, Tim, is as ginerous as a lord."



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One-third "Lily White" to two-thirds Sugar, by weight. "Lily White" Corn Syrup prevents fermentation and mold—brings out the natural flavour of fruits and berries—and makes much more delicious Preserves, Jams and Jellies than you can make with all sugar.

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CANADIAN PACIFIC DOMINION DAY. The sane way to celebrate is a happy day spent in your favorite summer place. The proper way to go is by the CANADIAN PACIFIC. LOW RATES. Single Fare. Going, July 1st. Return Limit, July 1st. Fare and One-Third. Going, June 30th, July 1st. Return Limit - July 3rd. Further particulars from any Canadian Pacific Agent or W. B. Howard, District Passenger Agent, Toronto.

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Shortest Line—Fastest Time to and from Camp Borden by Canadian Pacific.

Commencing Sunday, June 25th, will be inaugurated a fast and frequent train service between Toronto and Camp Borden via Canadian Pacific as follows:—

TO THE CAMP.

Leave Toronto (Union) 8.10 a. m. daily except Sunday, North Toronto 8.30 a. m. daily, arrive Camp Borden 10.15 a. m. daily.

Leave Toronto (Union) 9.50 a. m. daily, except Sunday, arrive Camp Borden 12.30 p. m.

Leave Toronto (Union) 12.15 p. m. Saturday only, arrive Camp Borden 2.15 p. m.

Leave Toronto (Union) 1.30 p. m., North Toronto 1.40 p. m. Saturday only, arrive Camp Borden 3.30 p. m.

Leave Toronto (Union) 2.30 p. m. Tuesday, Thursday and Saturday, arrive Camp Borden 4.50 p. m.

Leave Toronto (Union) 6.40 p. m. daily, arrive Camp Borden 8.55 p. m.

Leave Toronto (Union) 9.40 p. m. daily, arrive Camp Borden 11.59 p. m.

FROM THE CAMP.

Leave Camp Borden 5.40 a. m. daily, arrive Toronto (Union) 8.20 a. m.

Leave Camp Borden 9.50 a. m. Monday, Thursday and Saturday, arrive Toronto (Union) 12.00 noon.

Leave Camp Borden 9.50 a. m. daily, arrive Toronto (Union) 12.30 p. m.

Leave Camp Borden 1.30 p. m. Saturday only, arrive Toronto (Union) 3.25 p. m.

Leave Camp Borden 4.05 p. m. daily except Sunday, arrive Toronto (Union) 7.00 p. m.

Leave Camp Borden 8.00 p. m. daily, arrive North Toronto 9.50 p. m.

Leave Camp Borden 9.05 p. m. Sunday only, arrive Toronto (Union) 11.10 p. m.

Further particulars from Canadian Pacific Ticket Agents or W. B. Howard, D. P. A., Toronto.—Adv't.

Down Among the Golliwogs

Child stories, says the excellent Gazette of the 3rd London General Hospital, Wandsworth, are generally old. This one, told at a recent entertainment in the Recreation Room, is, we believe, an exception:—

Child: "Mummy, when I go to heaven, may I take my best doll with me?"

Mummy: "No, darling."

Pause.

"May I take my second-best doll?"

"No, darling."

Pause.

"May I take my rag doll? It's only a little one."

"No, darling. You won't be able to take any doll to heaven."

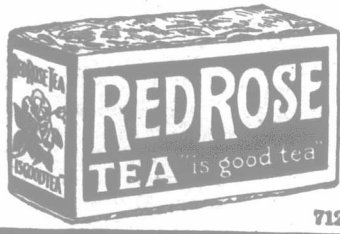
Prolonged pause.

"Then I want to go to hell with the golliwogs."

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TENNYSON'S line is as applicable to our heroes of to-day as when he penned his immortal verses.

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Current Events.

Dr. C. C. James, Dominion Agricultural Commissioner, died suddenly at St. Catharines.

The Duke of Connaught will return to England in October. He may be succeeded by Lord Curzon.

Hon. Dr. Beland, Liberal M. P., for Beauce Co., Que., who was taken prisoner by the Germans, has been released.

It has been officially reported that Major-General Mercer was killed in action.

In Nova Scotia the Liberal Administration has been returned with Premier Murray again at its head.

All of the United States Militia has been called out, and a number of troops despatched to Mexico. Also the Pacific fleet and a detachment of the Atlantic fleet have been sent to the Mexican coast. It is rumored that German influence is at the bottom of the present attitude of Mexico.

French aviators, in reprisal for the German bombardment of towns behind the French lines, dropped bombs on Treves, Karlsruhe and Mulheim. Aerial combats take place along the lines every day.

On June 24 the Germans furiously resumed their attacks at Verdun, and succeeded in carrying the first-line trenches between Hill 320 and Hill 321, but were repulsed at other points. Along the British lines the fighting has concentrated chiefly about Givenchy, where there has been considerable activity, especially in mining operations. The Canadians are reported as gallantly holding their own, although suffering heavily as the long casualty lists show.

Along the Russo-German front the Russians still keep up their career of conquest, successfully resisting the German attacks to the north of the Pripet marshes, and moving rapidly forward to the south of them, having captured Czernowitz and occupied finally all of Bukowina. They are now less than 40 miles from Lemberg, the capital of Galicia, where the Teutons are concentrating, as also at Kovel. The necessity for moving troops to the east to meet the onrush has removed the pressure somewhat from Italy where, in the Trentino, the Italians are again taking the initiative.

From the Balkans comes the news of increased activity, and it is reported that the Bulgars, with 80,000 Germans, are advancing towards Salonika which is now held by 680,000 French, British and Serbian soldiers. An unlooked-for development, very welcome to the Allies, has developed in Arabia, where the Arabs have arisen against Turkish rule and have captured Mecca, the birth-place of Mohammed, the great holy city of the Moslems, also Taif and Jeddah, the chief seaport of Arabia. They are now advancing on Medina, another holy city, in which is the tomb of the prophet. The uprising is ascribed to the drafting of Arabs into the Turkish armies of Armenia, and the general belief that Turkey has become a mere vassal of Germany.

Sunny Jim's Motto.

I took my tip from Nature straight, My motto is, "Hang out the leaves," If rough winds blow, no need to prate And tell just how your poor heart grieves, But cheerful-like your losses bear, And try to cover your despair, "Hang out the leaves!"

The birds go where the ways are bright, Where May is hangin' out her leaves— And there with carols gay and light They tarry 'neath such pleasant eaves,— So try to make your heart like Spring, Some joys will nestle there and sing, "Hang out the leaves!"

One of Nature's Wonders—The Feather.

BY W. S. P.

To most people a feather is just a feather, either pretty or plain according to how the coloring strikes their individual fancy. Yet when a feather is examined critically, it becomes a wonder and yet more wonderful—it is amazing when its details are understood. Never was there a thing better planned and builded for the uses intended.

Take, for instance, a plain feather—say the tail feather of an eagle. The long quill is made of "featherbone," that wonderfully light, yet strong, material that forms the rigid part of all feathers, so tough that it is almost impossible to break it, yet so flexible it will bend into a circle and then spring back like a bit of whalebone! Nothing that man has ever been able to make can equal it.

There is no blood, no nerves, no circulation and apparently no life in a full grown feather, yet it does not decompose; indeed, it is one of the hardest things in the world to destroy by any process of decomposition. It retains its resiliency and all its flexibility for years—all that is necessary is to keep it dry. It is finished all along the rib (or quill) with a hard, glossy enamel on the outside and this enamel keeps its polish as long as the feather lasts.

From an engineering standpoint or the standpoint of the mechanic or artisan, there is absolutely no suggestion of betterment to be made, for the feather is an exact, perfectly finished product. Its long central quill tapers from base to point with geometric precision, thereby giving perfect resistance to bending force and this is one of the combination of secrets that enables the bird to fly as easily as man can walk. Also this long quill is hollow, thereby all extra weight is done away with and added strength gained because of the tube construction; and to make it perfect from a mechanical standpoint, the under side of the quill is reinforced by double-rolled thickening of the shell of the quill itself so that strains are equalized.

This long quill is also curved slightly, to meet air resistance again and overcome it when the whole tail is spread, fan-like, to suddenly alter a direction or check speed in flight.

The long, soft side masses are formed of a multitude of tiny feathers, each one perfectly equipped, perfectly made, mechanically and geometrically without fault. Each of these tiny side feathers has its own midrib that tapers from base to tip and each of these midribs carries its own equipment of side "hairs" so beautifully constructed that it locks automatically into the one on each side of it in such a way that it makes a solid yet flexible mass of the whole surface, against which the air flows as the bird flies.

If these side feathers be split apart they will come back into place so exactly that the split cannot be detected. Nothing else in nature repairs itself with such precision. Many things, for instance the claw leg of the crawfish, will replace itself exactly when destroyed, but the feather alone repairs its own breaks precisely and automatically.

Taken as a whole the feather is one of the most perfect products of nature, because the material used is the one best thing throughout, the engineering principles involved are without fault, the mathematical plan is precise, the construction is perfect, the coloring and artistry are flawless, and there is not one single point about it that can be constructively criticized.

This short article can only hint at the wonderful things one may find in a single feather, and it is something well worth, not an hour, but weeks or months of the most painstaking and careful study, for it covers an amazing field.

Last but not least, the secret of safe and easy navigation of the air will eventually be found, not in the whole wing but in the single wing feather and its individual muscular control in the wing of a soaring bird like the vulture.

Here comes Blinkers. He's got a new baby, and he'll talk us to death. "Well, here comes a neighbor of mine who has a new setter dog. Let's introduce them and leave them to their fate." —Life.

The

A fund The Farmer Magazine for (2) Soldiers Relief. (4) Contributions June 23rd: 1 \$1.00; Flete Ont., \$4.00; C. Fettes, "T," \$1.00 "E. C.," G

Amount edged.....

Total to Jun IF YOU CA GIVE.

Kindly a "The Farm Magazine,"

A Note

EDITOR "T"

The Serb to thank yo in this wor time to tim circs and ho wounded a splendi will not or committee the line and Our Relief of links, fo here to Serb we must ke efforts. Th

(BY CHARL IN "S

Oh, red is th And the lili And the p wheat For the mer sleep Where the g rose And lips as t And the ebl fainted And fail.

Oh, red is th And the lili And the pop For the me But whereve So red and a Will grow, never Can fail.

Our

The Ro

BY WIL Author of "Do at the Doc Rides A

I have thought us found him for Yuan, in a buffet impossible sickening tr this soft tru to announce thing in th at his ease wi —the atm smoke and It was goo we saw that He had lost and had "he first two d mother and to him. Sh courage "up



## The Dollar Chain

A fund maintained by readers of The Farmer's Advocate and Home Magazine for (1) Red Cross Supplies. (2) Soldiers' Comforts. (3) Belgian Relief. (4) Serbian Relief.

Contributions from June 16th to June 23rd: Mrs. A. McKnight, Galt, Ont., \$1.00; Fletcher Buckland, R. 2, Warton, Ont., \$4.00; "M," Appin, Ont., \$2.00; C. Fettes, Oil Springs, Ont., \$8.00; "T," \$1.00; "Unknown," \$3.00; "E. C.," Galt, Ont., \$10.00.

Amount previously acknowledged.....\$2,532.70

Total to June 23rd.....\$2,561.70

IF YOU CAN'T GO TO THE FRONT GIVE.

Kindly address contributions to "The Farmer's Advocate and Home Magazine," London, Ont.

### A Note About Serbian Relief.

EDITOR "THE FARMER'S ADVOCATE":

The Serbian Relief committee wish to thank you again, for your kind help in this work, we are forwarding from time to time all possible funds for medicines and hospital supplies. The Serbian wounded are deeply in need. Your splendid work in assisting the suffering will not only be appreciated by the committee working here, but all along the line and finally the needy in Serbia. Our Relief work required a number of links, for the chain to extend from here to Serbia is a long one and we feel we must keep it busy by all kinds of efforts. Thanking you again.

FANNIE L. EDWARDS,  
Corr. and Treasurer.

### A Song.

(BY CHARLES ALEXANDER RICHMOND,  
IN "SCRIBNER'S MAGAZINE.")

I.

Oh, red is the English rose,  
And the lilies of France are pale.  
And the poppies grow in the golden wheat,  
For the men whose eyes are heavy with sleep  
Where the ground is red as the English rose  
And lips as the lilies of France are pale  
And the ebbing pulses beat fainter and fainter  
And fail.

II.

Oh, red is the English rose,  
And the lilies of France are pale.  
And the poppies lie in the level corn,  
For the men who sleep and never return.  
But wherever they lie, an English rose  
So red and a lily of France so pale  
Will grow, for a love that never and never  
Can fail.

## Our Serial Story

### The Road of Living Men.

BY WILL LEVINGTON COMFORT.  
Author of "Down Among Men," "Fate Knocks at the Door," "Red Fleece," "Routledge Rides Alone," "Midstream," "Child and Country," etc.

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II.  
14

I have a suspicion that Huntoon thought us a bit mad that night. We found him through a card he had left for Yuan, and talked till mid-night in a buffet of his choice—accumulating impossible cigars and drinking dull sickening nothings. In the wash of this soft truck, Huntoon arose frequently to announce that he "wasn't taking a thing in the States." Yet, he was at his ease with the flow of drink about him—the atmosphere of tables, glasses, smoke and loosed laughter.

It was good to have him again, though we saw that he would die in the cities. He had lost the knack of St. Louis, and had "honed" to be away after the first two days, he said; and yet the mother and "Old Top" had been dear to him. She had wept over him for his courage "up the river," and "Old Top"

had offered him business at home. It appears Huntoon had explained that he was just the same, deserved quite as much as ever to be back on remittance. In his own charming selfless fashion, he believed this, but Yuan and I saw it differently—more as *She* saw it, I think. . . . It was I who mentioned South America, and I saw the gladness in Yuan's eyes at the quick-starting interest of Huntoon. This was the best moment of the night.

I was leaving at one in the morning for Philadelphia—to be back in Washington on the third day following. Yuan and Huntoon were to wait for me.

In leaving Yuan Kang Su, I had the odd sense that it was not safe for him to be alone, that he carried explosives without adequate knowledge or respect for them. I never was so close to weeping for a man's plight. This perhaps is just a saying. A jagged mote or an acrid gas would likely be necessary, if I were called upon to deliver tears. But Yuan seemed so young to be divested, and so brave. Many of the things he told me through that long day were too delicate-tinted for the expression of my words—yet they live for me still, perfume-breathing buds in the far night-fields of the mind.

These were days of soul history. Yesterday Yuan; this morning Jane Forbes. Only two hours in Philadelphia. The alternative was a bitter one, indeed—to-night in New York instead of Covent. . . . Jane Forbes was at the Graham Refuge—a charity house for little girls. It was not far from the Broad Street Station. I waited in the superintendent's dingy office. Everything was old and gray; the day was gray. . . . The little girls were passing by the door. They seemed to bring flower-dust and the smell of stuffed birds from the dark halls. They passed out rigidly for their airing. The woman accompanying them was rigid—and her work of the hour was "sets of twos." . . . Gray gingham in sets of twos. Far beyond, in the dark hall, I saw thin compact cots, doubtless in sets of twos—a long dim room of many breathings. . . . There was one little face that passed—fragile and pale as a Roman hyacinth. I felt dry and shrunken about the heart. . . . There was another room of small red chairs—all straight. Rag rugs on the floor, and pale scrawny bouquets were pictured in the wall paper. On the wall before me was an enlarged photograph, done in charcoal—an old man whose beard was not what it had been, when he gave up the vanity of wearing a neck-tie. "Seth G. Graham" was written beneath.

"Seth Gingham Graham," I concluded.

Jane Forbes entered. . . . She had on a cap and was helping. More than ever the drooping curve of the shoulder was there; and the pale face, just as calm as ever, did not look so large. Was it the cap or the incorrigible gray of this Gingham house? . . . I had vowed long ago to sit at the feet of Jane Forbes and learn wisdom, but this place burdened me with the ponderosity of materials—the massy importance of substances. All the more wicked did I feel in my own heart, because this was so. . . . And Jane Forbes had crossed the world from Liu chuan to come home, and this was the home.

"I was brought here a baby," she said. "I lived here fifteen years."

I told her of Yuan—of our yesterday together. All the old spiritual loveliness came back to her presence.

"If China does not want him, because he helped to save our lives. . . . won't you please ask him to tell me? I can gladly let him go for the good of his work—but if China does not want his work, it would be too bad if he did not come to me."

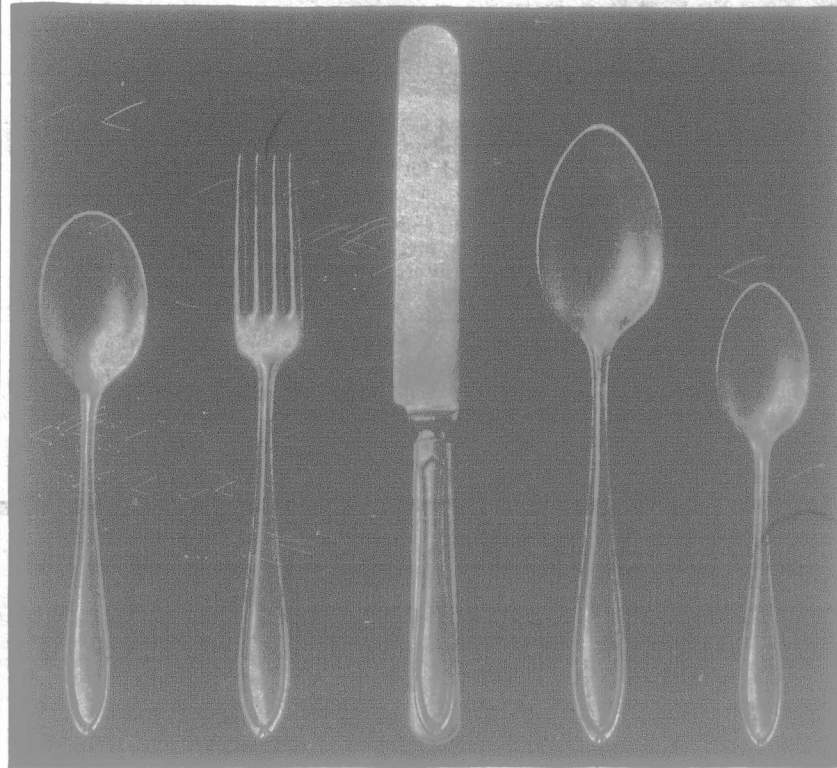
I told her that Yuan felt the recall in the nature of a disgrace—that he must be free from that before he could be happy in the greater thing.

"I have no concern with what China thinks," she said impatiently. "I think he was noble to help us—you do. We have no concern with disgrace like that. Tell him to come to me in China, if they do not want him—or if he is ill. Tell him to find me always, if only for a little while—when he is ill."

"In China?" I asked.

"Oh, yes. I shall go back. China has spoiled me for this. There are enough here to do the work. . . ."

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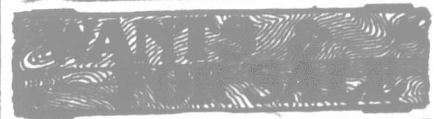
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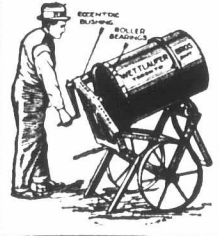


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You know I was always called to China. When I went out there twelve years ago... it seemed as if a dear one had sent for me... It is coming back—that same feeling."

She was hungry to talk of Yuan, and listened with down-cast eyes, the faintest red suffusing her cheeks.

"I did not know what my love for China meant until that day by the river," she said finally. And then I was surprised. But I couldn't see that we were different—only that he was so wise. It was like a knell to hear how great a man he was in his country. He would never have told me. It was Mr. Huntoon after he had gone that day—"

I could see Huntoon telling her—making the best of what he could not fathom picturing Yuan as a prince of yellow men.

"I couldn't be quite happy about that," she went on. "There are always so many complications where one is rich and powerful. And then it slowly made itself clear to me on the Pacific—I was very stupid about it at first—that when we were together, evil came to the minds of others."

I wondered why I always felt like shuddering at the faces. At first I thought it was because I had been inside—away up the River—so long. You see, one dares not be responsible for evil in other minds.

If we went away alone together, then we would lose our work—and the Lord put us here to do our work. One cannot think of one's self altogether.

I know Yuan does not think of coming to see me again. I did not ask him, nor did I tell him not to come. Perhaps it is wisest, but please, you will tell him to come to me, if he is in trouble at Peking—won't you or if he is ill?"

And that was all. More words, but that was the message. The sets of two filed past, and the clatter settled again. I seemed to hear just the crust of things, as one with cotton in his ears. They were not quite alive—nothing in that great gray place was quite alive. Only the brightness upon the brow of Jane Forbes—that was more than life.

"I shall tell him. We shall walk together as yesterday—and I shall tell him all," I said. "And whether you want it or not, I shall come to you—if ever I am ill and alone, and they do not want me in my country—"

"It makes me glad to hear you say that. Do remember to do that, Mr. Ryerson, I would be so grateful and different."

She looked at me searchingly then, and said I seemed very far from loneliness and expatriation, but that she would remember. The rigid woman came in.

Everywhere was gray fog except the lamp of Jane Forbes' brow. . . and I knew what had curyed her shoulders forward. It was carrying little children when she was but a child herself.

Hours of steady travel the New York train, ferry, cross-town, ferry and then the clattering coach for Covent. . . It rather surprised me that it could rain on Long Island; yet here it was, with that heavy wintriness which endures. Upon the mellow maturity of the year a stroke had fallen. Certain trees were like old

Leaves in the storm. The faces in the coach partook of the inexhaustible sadness into which all things were sunken. And so I dragged burdens along Rapture's roadway, but as one who knows a mate stands at the journey's end to help him put his burdens down. Even then, I was profoundly grateful and humble; even then, I realized that I had come into the world intrinsic with many blessings. Few are given to see, as I had seen by Jane Forbes and her lover.

Human souls meeting in all their splendid and eternal valor at the hill-top. . . Now from a distance, I perceive that I was greatly shaken by those days—days that made soul-remembering.

She was to be where I had seen her face—black, round, and a small black, black wing. There was a small black, black wing. There was a small black, black wing. There was a small black, black wing.

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When we spoke, it was of the advantages of the Year. We were very blithe and brave about it; yet my mind was running over the nearest of the seven-times-seven-score ways, in which lovers may lose life or mind. The placid disintegration of Jane Forbes and the stricken Yuan, mystic with suffering—these were scarcely of the earth as I was. For me was the old tension of the parting—the starting into the End. In this I was held cunningly, cripplingly.

On the veranda, after supper, I told her of the two—Yuan swept away by a vile yellow force that meant millions and millions of debased human beings; how he had caught at a frail dream of the little mother, so queer and utterly gone, and how I wandered all day with him as one listening to an immortal poem. And then I told her of Jane Forbes and the sets of twos, the one little flower-like face that haunted me, like a jewel among bleak stones; and again of the woman who only asked her lover to come, when broken in health or cast forth by his country.

"How little we are, to feel miserable," she whispered. "The good Lord, as she says, does not put such masterful mysteries upon us. He has only asked the Year for us to become purer and wiser—"

"As one in the East would go away into the solitude to prepare for Initiation," I finished.

"Yes—and what a holy thing it may be—"

"For the One who smiles from afar—"

Her fingers pressed my wrist in strange rapture.

"We could not be quite happy—if we disavowed this impulse," she said a moment afterward. "It is so old to me—almost as old as Oporto. My mother began talking of it then. It was a dream of hers. She said her life would not have failed—if we were great and good in this forgotten life-business of loving. And then—you knew it before I spoke. Always I feel humble when I think of Hong Kong, and how hard I thought it would be to make you see. And to think that I have been leaning on your strength. . . But that has been dear for me to do. . ."

"And then," she added, "there is something so significant in your going to my father. I've been thinking of that while you were away. My mother would have loved that impulse. You will understand him. You will talk together—and be friends."

Just now we saw the beacon at the far end of the veranda—ash flicked from a fat cigar.

"You took the golden days away when you left, Mr. Ryerson," the proprietor said jovially. "But to-morrow will be fine, past doubt—"

On his way he went, leaving a trail of fragrant smoke and genial chuckles—a combination in which he seldom got far without a fit of coughing.

The next day was not fine, darker if anything, and certainly colder. The wind was straight from the north, and hourly picked up more enthusiasm, until in mid-afternoon it was shrieking across the Sound.

We made a last call at all our haunts—even to the low mounds. It was F Minor day at Concert-Hall, and often we stood in the door of the little house to watch the hurrying clouds—all the shades of gray, weaving together in the rough wide texture of storm. The surf was a new voice below; and the wheeling gulls put a thin plaintive note against the crusty booming. Always that little tuning-fork of the gulls tried to re-organize the dissonances. A vast new acreage of pebbles was lit by the greedy in-creeper seas; and when I looked at the shore where the millions of stones were lying, I turned to Mary Romany with the thought of those who waited unborn in the ocean of time—for the women of the world to become happy.

Night came wildly and with bitter cold. A strong man swiftly wearied of the expenditure of vitality in remaining out. Mary Romany and I stayed by the big open-fire in the sitting-room. I had closed with our host, and he appeared laughingly with a handful of my favorite cigars—stopped a moment by the fire to ask a final question about South America. The far journey seemed to challenge him. Mary Romany left us for a moment, and we talked until she came. I remember his thorough "good-night" to us. . . It was

**FR**

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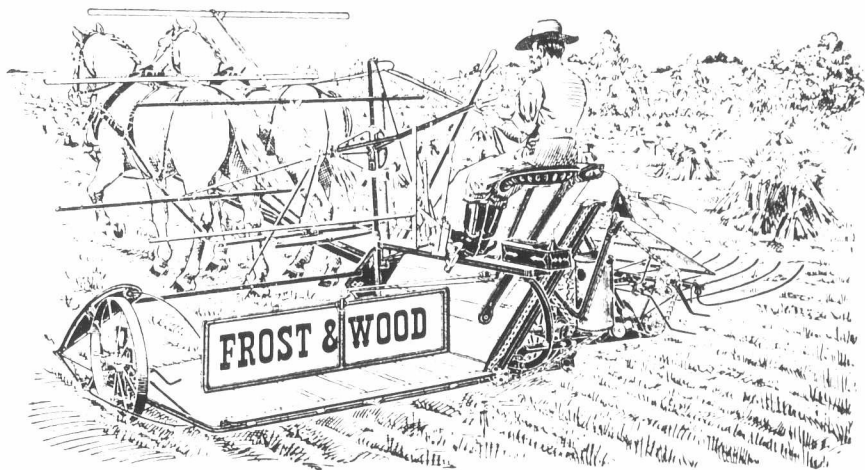
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the last I ever saw of him, for he took a journey of his own that winter. But I have never forgotten.

We talked, staring into the coals. . . . We talked of letters, and the stages of the journey and what her father would say. She told all she had heard of his new venture. Even Santell was mentioned. She only knew that he had been with her father for many years. She was not to stay long in Covent. Letters would be sent me in her father's care. I was to write her at New York until reaching Fropicana, and then give my letters to Mr. Romany. He was always quick to establish postal connections in the remotest places, she said; and she could always be sure of his letters. Her plans for the year were too vague to be told. They would clear in good time, I would know where to come when the year was over. I asked if she meant to study, and she could not even be sure of that.

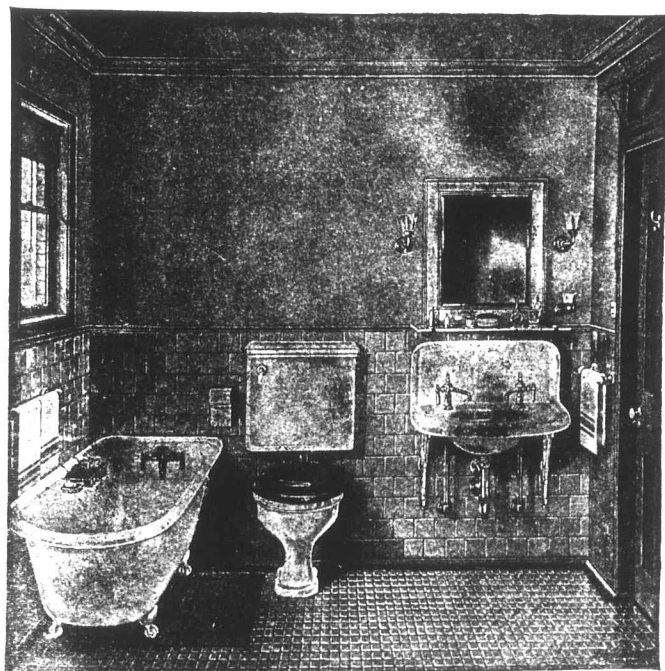
"I'm afraid, I shall want to wait until we can work together," she whispered. "I have found such splendid zest in our little house. It will be hard and tame to work alone. . . . Oh, I shall be thinking of you, down there thinking of you and your mountains. I shall want to come closer to you to some place where my thoughts will not have to travel so far—some place where it is not winter when you are summer."

Once I seemed to open my eyes from a dream that I was coming home. The land breeze came out to the ship from my native country. And I saw little children, and the red earth; and the faint fleshly perfume of the yellow rose that was the land-breath of my country. My eyes were really opened. Mary Romany was bending over, raising me in her arms. I was never farther from sleep, but I had gone away dreaming and there was gray in the panes and the fire was low. Her arms were cold and aching, but when I kissed and pitied them,— "They have so long to be empty," she answered. "They must not be empty now."

To be continued.

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**Canada's Crop Areas.**

A press bulletin issued June 13 by the Census and Statistics Office gives the usual preliminary estimate of the areas sown to grain crops in Canada, and the condition of these crops as reported by correspondents on May 31. The reports show that the spring this year is late, and that heavy rains throughout the Dominion have in many places made it difficult to work the land. In Eastern Canada seeding at the end of May was considerably behindhand, especially as compared with last year; and in parts of the west the sowing of oats and barley had not been completed.

According to the preliminary estimates of correspondents, made in many instances before the completion of seeding, wheat in Canada this year will occupy a total area of 11,491,600 acres. This is 1,494,800 acres, or 11.5 per cent. below the high record of last year when 12,986,400 acres were harvested, but 1,197,700 acres or 11.6 per cent. above the harvested area of 1914, which was 10,293,900 acres. The area to be harvested of fall wheat for 1916 is 1,042,200 acres, leaving the area estimated to be sown to spring wheat as 10,449,400 acres. In the three Northwest provinces the area sown to wheat is estimated at 10,471,200 acres, as compared with 11,744,700 acres, the area of 1915, and with 9,335,400 acres, the harvested wheat area in the Northwest provinces for 1914. In Manitoba the area sown to wheat for 1916 is placed at 2,904,400 acres, as compared with 3,342,900 acres last year, in Saskatchewan it is 5,889,100 acres, as against 6,838,100 acres, and in Alberta 1,677,700 acres, as against 1,563,700 acres.

It is estimated that the area devoted to oats for 1916 is 10,499,500 acres, as compared with 11,365,000 acres in 1915. This is a diminution of 865,500 acres, or 7.6 per cent. as compared with last year, but an increase of 438,000 acres, or 4.3 per cent. as compared with 10,061,500 acres, the area harvested in 1914. The area sown to barley is estimated at 1,317,500 acres, as against 1,509,350 acres last year, the areas sown to other grain crops being as follows: rye, 109,000 acres against 112,300 acres; peas, 159,200 acres against 196,210 acres; mixed grains, 395,000 acres against 466,800 acres. The acreage under hay and clover is reported as 7,963,000, as against 7,875,000 last year, an increase of 88,000 acres; and under alfalfa the acreage is 88,700, as against 92,600 last year.

Measured in percentage of a standard of 100 as representing a full crop, the condition of the principal field crops on May 31 was as follows: Fall wheat 84, spring wheat 92, all wheat 90, oats 90, barley 89, rye 91, peas 90, mixed grains 89, hay and clover 98, alfalfa 94, pastures 97. Converting this scale into one wherein 100 represents the average condition at May 31 of the past six years 1910-1915, the condition of the principal grain crops may be expressed as follows: Fall wheat 101, spring wheat 98, rye 100, oats 97, and barley 97.

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Now readers, would you like a suit or pair of pants absolutely free! A most astounding offer is being made by a well-known English firm! They have discovered a remarkable Holeproof Cloth. You can't tear it! Yet it looks just the same as \$20 suiting. You can't wear it out no matter how hard you wear it, for if during six months of solid, hard grinding work every day of the week (not just Sundays), you wear the smallest hole, another garment will be given free! The firm will send a written guarantee in every parcel. Think readers just \$6.50 for a man's suit, and only \$2.25 for a pair of pants sent to you all charges and postage paid and guaranteed for six months' solid, grinding wear. Now, don't think because you are miles away you cannot test these remarkable cloths, for you simply send a 2-cent post card to The Holeproof Clothing Co., 50 Theobalds Road, London, W. C., Eng., for large range of patterns, easy self-measure chart and fashions. These are absolutely free, and post paid. Send 2-cent post card at once! Mention "The Advocate."—Advt.

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that two-thirds of all complaints about cream separator are due to faulty lubrication. That is because the close-fitting, fast-running mechanism of the separator demands a special oil—and most people use "just any old oil."

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J. B. Hogate, - - Weston, Ontario



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For sale everywhere. Write for Free Sample.

**Douglas & Co., Napanee, Ont.**

**Clydesdales** We have still left some exceptionally good drafty stallions, ranging in age from one to eight years, prizewinners, including champions; also in-foal mares and fillies. There is a horse boom coming. Buy now. **SMITH & RICHARDSON, Columbus, Ont.**

**ORCHARD GROVE HEREFORDS** Have several young bulls and heifers for sale. Satisfaction guaranteed. **L. O. CLIFFORD, OSHAWA, ONT.**

**Maple Shade Farm Shorthorns**—The products of this herd have been in very supply a good young bull at a price which will make him well worth the money. Not many females for sale, but can show a few which should interest you. **Brooklin, G.T.R., C.N.R.; Myrtle, C.P.R. W. A. DRYDEN, Maple Shade Farm, Brooklin, Ont.**

**Spring Valley Shorthorns** Herd headed by the two great breeding bulls, **Newton Ringleader** (imp.) 73783, and **Nonpareil Ramsden 83422**. Can supply a few of either sex. **KYLE BROS., Drumbo, Ont. Phone and telegraph via Ayr.**

**Females SHORTHORNS Females** I can supply females of the most popular Scotch families, **Crimson Flowers, Minas, Lady Fannys, Nonpareil, Butterflies, Amines, Athas, Miss Ramsdens, Marr Emmas, Marr Missies and Clarets.** A few bulls. **A. J. HOWDEN, COLUMBUS, ONT. Myrtle, C.P.R. and G.T.R. Oshawa, C.N.R.**

**Pleasant Valley Farm Shorthorns** For sale, 9 bulls of serviceable age. We can interest you in a real good bull at a right price, for herd headers or use on grade herds. Some sired by (Imp.) **Loyal Scot**; also females. Write us before buying. **GEO. AMOS & SONS, Moffat, Ont. Sta., C.P.R. 11 miles east of Guelph**

**OAKLAND-48 SHORTHORNS** Present offering is one choice red bull, 20 months old, price \$175; also three about seven months old. A few cows with calves at foot and bred again, and some fine heifers bred. All registered and priced to live and let live. **Jno. Elder & Sons, Hensall, Ont.**

**WOODHOLME SHORTHORNS** For sale, a number of yearling and two-year-old heifers, the two-year-olds are bred a short time and a number of good farmer's bulls of the right kind and breeding. Write your wants. **G. M. FORSYTH, Claremont, Ontario**

**Four Imported Bulls** The above bulls are choicely bred, of good quality, and should make valuable sires. We have five Canadian bred bulls from 10 to 18 months old. We invite inspection of our stock and will give correspondence our most careful attention. **Phone Burlington, Freeman, Ont. Burlington, Ont., G. T. R., half mile from farm.**

**Shorthorns and Shropshires**—**T. L. MERCER, Markdale, Ontario**—With 125 head to select from, we can supply pure cows in calf, heifers from calves up, and young bulls from 9 to 18 months of age, richly bred and well fleshed. In Shropshires we have a large number of ram and ewe lambs by a Toronto 1st prize ram; high-class lot.

**Spruce Glen Shorthorns** When in want of Shorthorns visit our herd. We have 70 head to select from. Minas, Fannys, Miss Ramsdens, Florences, Emilys, etc. Many of them one and two-year-old heifers. Also several young bulls of breeding age—level, thick, mellow fellows and bred just right. **James McPherson & Sons, Dundalk, Ont.**

**A Record Con**

On June 7, held an auction will cause events of consignment splendid average females averaged \$3,3 the sale was a calf which sold field, Ohio, King Champion by Rag Apple out of Lady only price equ of this breed that paid for Segis Pontiac 1914. The off 50 herds through from as far e from as far v It was a rec the breed and sale.

**Maxwalton S**

Another succ horn sale circ of Carpenter a on June 9. 55 cattle and amounted to \$ at an average females averag a good bidder sale at Elora, got by Avon was a proven and realized the Several cows with Avondale a feature of Rosewood 3rd heifer calf w walton Mina 6 at foot by Re Headlights Bel female, going a of Argentina p for immediate e By private tro F. A. Gillespie, walton Commar Lady for \$7,00

**Brown**

One of the gr that has not in Ontario its Brown Swiss, a is owned by R Woodside Farm or two relative merits of this preciated by dairy farmers origin of the first coming fro of Asia, and into Europe, a permanent hor they have been dairy characte to-day that li the heart of th highest position Europe in the milk and da Their color is a body large and when in milk, each, and whe rapidly. They and easily m evenly-balanced in fact an ill-s The milk yield from 50 to 80 fat test averag 4 per cent. I records 149 lbs. milk and as high as 19.4 lbs. butter. T averaged 8,298 lbs. butter, g 148.5 lbs. milk They are re given in th given any ki exceptionally v either dairy or for sale some young bulls.



**Gossip.**

**A Record Consignment Holstein Sale.**

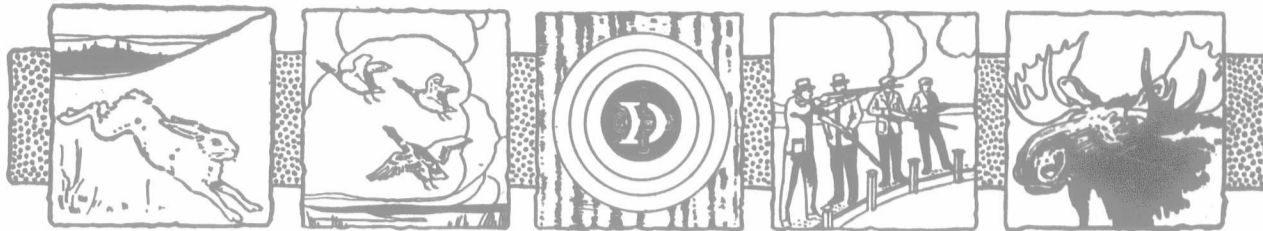
On June 7, in Detroit, Mich., was held an auction sale of Holsteins which will cause one to forget sensational events of this kind in years past. A consignment of 137 head made the splendid average of \$1,119.65; 121 females averaged \$829.90 and 16 bulls averaged \$3,310.95. The sensation of the sale was a seven-months-old bull calf which sold to A. W. Green, Middlefield, Ohio, for \$20,000. This calf, King Champion Rag Apple, was sired by Rag Apple Korndyke 8th and was out of Lady Pontiac Johanna. The only price equalling this for an animal of this breed at an auction sale was that paid for the young bull, King Segis Pontiac Chicago, in June of 1914. The offering was selected from 50 herds throughout the country coming from as far east as Massachusetts and from as far west as Spokane, Wash. It was a record-breaking average for the breed and a wonderfully successful sale.

**Maxwalton Shorthorns Sold Well.**

Another successful event of the Short-horn sale circuit was the auction sale of Carpenter and Ross, Mansfield, O., on June 9. The offering numbered 55 cattle and the total of the sale amounted to \$55,700. Ten bulls sold at an average price of \$1,370 and 45 females averaged \$933. J. C. Andrew, a good bidder and buyer at the recent sale at Elora, bought Lord Avondale, got by Avondale, for \$5,000. He was a proven sire of sterling quality, and realized the highest bid of the day. Several cows in only moderate flesh with Avondale calves at foot were a feature of the sale. Maxwalton Rosewood 3rd by Avondale and a heifer calf went for \$2,350; Maxwalton Mina 6th also with a heifer calf at foot by Revolution sold for \$2,000; Headlights Belle was the top-priced female, going at \$2,800. F. V. Maissa of Argentina purchased several animals for immediate shipment to that country. By private treaty on the same day, F. A. Gillespie, Tulsa, Okla., took Maxwalton Commander and Maxwalton Roan Lady for \$7,000 and \$3,000 respectively.

**Brown Swiss Cattle.**

One of the great breeds of dairy cattle that has not received the recognition in Ontario its merits deserve is the Brown Swiss, a high-class herd of which is owned by R. Ballagh & Son, on their Woodside Farm, near Guelph. A word or two relative to the origin and superior merits of this great breed may be appreciated by some, at least, of the dairy farmers of this province. The origin of the breed was in the Orient, first coming from the steppes and valleys of Asia, and from there introduced into Europe, finding in Switzerland a permanent home, where for centuries they have been bred and their natural dairy characteristics improved, until to-day that little republic nestled in the heart of the Alps, claims one of the highest positions among the nations of Europe in the matter of dairy cattle, milk and dairy products generally. Their color is a solid, dark steel grey, body large and well rounded, weighing, when in milk, from 1,300 to 1,400 lbs. each, and when dry they take on flesh rapidly. They are extremely docile and easily managed, carrying large, evenly-balanced udders and large teats, in fact an ill-shaped udder is a rarity. The milk yield for mature cows ranges from 50 to 80 lbs. a day, and butter-fat test averaging a little better than 4 per cent. In the official R. O. P. records 149 cows averaged 10,690.8 lbs. milk and 427.14 lbs. butter, giving as high as 19,460.6 lbs. milk and 798.16 lbs. butter. Twenty-five two-year-olds averaged 8,298.4 lbs. milk and 345.19 lbs. butter, going as high as 13,485 lbs. milk and 486.91 lbs. butter. They are remarkably easy feeders, always in the nicest condition, if given any kind of care, and cross exceptionally well with other breeds, either dairy or beef. Mr. Ballagh has for sale some right choice heifers and young bulls.



**Ammunition Reliability**

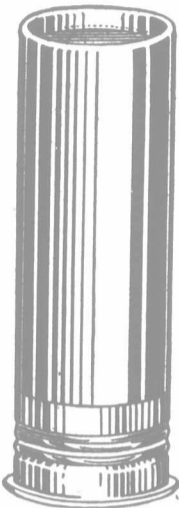
When you face an emergency in big game hunting—When the ducks, partridge or rabbits are making a quick "get-a-way"—When the "clay pigeons" dodge at unexpected angles or when shooting on the target ranges, dependable ammunition is absolutely necessary.

**Dominion Ammunition**

In your shotgun or rifle gives a feeling of confidence that makes satisfactory results certain. Sportsmen who know select it for its speed, accuracy and penetration. The big "D" trade mark is your guarantee of the best Ammunition that money can buy.

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"Now of all times Tire Buyers should absolutely know which tire companies can stand the Canada Test."  
—Handy Andy.

If, when purchasing a new car, you show an unalterable preference for Truly-Canadian tires—Dunlop "Traction" or Dunlop "Special"—you will find that you can get them no matter what tire equipment is on the car at the time. When any opposition is shown to giving you Dunlop Tires you can at once distrust the argument because the salesmanship which does not seek to please, surely cannot be regarded as seeking to satisfy.

"SPECIAL"

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**Dual-Purpose Shorthorns**

Two young bulls, Weldwood Roan Revelation, a dark roan out of Mina Gem, a big, strong cow with an official record of 10,340 lbs. of milk, 388 lbs. butter-fat, and Weldwood Red Victor, out of Lena of Northland, with an official record of 7,501 lbs. milk and 328 lbs. butter-fat. These bulls are both sired by College Duke=85912. Also a few cows and heifers.

WELLDWOOD FARM, The Farmer's Advocate, London, Ont.

**Escana Farm Shorthorns**

FOR SALE: Two imported bulls, proven valuable sires; 12 bulls, 10 to 20 months old, all by imp. sires and from high-class dams; also for sale, 20 heifers and young cows, several with calves at foot, all of very choicest breeding, and especially suitable for foundation purposes. Mail orders a specialty. Satisfaction guaranteed.

MITCHELL BROS. Burlington P.O., Ont.  
Jos. McCrudden Manager. Farm 1/4 mile from Burlington Jct.

**Robert Miller Still Pays the Freight**—And he is offering in Shorthorns some of the best young bulls and heifers that can be produced. Young bulls fit for service, and some in calf. They are of the best Scotch families, and some of them from great milking families. They are in good condition and made right, just what you want to make a proper foundation for a good herd, and suitable to improve any herd in the land. They will be priced so that you can afford to buy, if you will tell me what you want. Our business has been established 79 years and still it grows. There is a reason. **ROBERT MILLER, Stouffville, Ontario**

**Blairgowrie Shorthorns**

Heifers in calf. Four bulls which should be heading good herds. **JOHN MILLER, ASHBURN, ONT., Myrtle Sta., C.P.R. & G.T.R.**

**GLENGOW SHORTHORNS AND COTSWOLDS**

Pure Scotch in breeding, we have an exceptionally choice lot of bulls for this season's trade, ranging in age from 8 to 15 months, big mellow fellows and bred in the purple. Also ram and ewe lambs of first quality. **Wm. Smith & Son, Columbus, Ont., Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.**

**Canada's Grand Champion Shorthorns of 1914-1915**

are headed by the great "Gainford Marquis" Imp Write your wants. **ELORA, ONT. G.T.R. & C.P.R.**  
J. A. WATT.

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SAVE Time—Save Labor—Save Expense  
Our new catalogue describes every kind of device for money-making and labor-saving on farms. Write to:  
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**SHORTHORNS**

Five high-class bulls, from 10 to 15 months, two sired by Real Sultan, others just as good. Am pricing them low, as it is getting late in the season. A few heifers and young cows to offer, some milk ing families. Freight paid.

**Stewart M. Graham, Lindsay, Ont.**

**1854—Maple Lodge Stock Farm—1916 SHORTHORNS and LEICESTERS**

Good quality and choice breeding. Come and see our herd and flock.

**MISS C. SMITH, Clandeboye, R. R. 1, Ont.**

Farm one mile west of Lucan Crossing—Telephone

**SCOTCH SHORTHORNS**  
We are offering choice young bulls from 6 to 12 mos. of age. Cows in calf, heifers from 1 to 2 yrs. of age. Also our big, thick stock bull, Barmpton Sailor. **A. McKinnon, Erin, R.M.D. Hillsburg or Alton Stations. Long-distance Phone**

**Shorthorns** Bulls, females, reds, roans, size, quality. Breeding milkers over 40 years. Cows milking 50 lbs. a day. Big, fleshy cows that will nurse calves right. Prices easy. Write: **THOMAS GRAHAM, R.R. 3, Port Perry, Ont.**

**Fletcher's SHORTHORNS**—3 choice bulls of serviceable age; also females, all of good Scotch breeding for sale. Write before buying. **Geo. D. Fletcher, R. R. 1, Erin, Ont. L.-D. Phone Erin Sta., C.P.R.**



**Six-Year-Old Apple Trees**



Planted with C.X.L. Stumping

**Better Trees—More Fruit**

Plant your trees with C.X.L. Stumping Powder—they will grow faster, crop earlier, be healthier and produce more profits.

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breaks up the sub-soil and lets the roots get all fertility they need.

Use C.X.L. Stumping Powder for ditching, sub-soiling and grading. Safe as gun powder.

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**Six-Year-Old Apple Trees**



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HAMILTON CANADA

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Ninety-six pages, illustrated, indexed and illustrated. Covers over one hundred veterinary ailments. Read this book before you treat any kind of lameness in horses.

**FLEMING BROS., Chemists**  
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**3 Holstein Bulls**

ready for service. 14 lbs. milk a day for 7 days, 63 lbs. milk in 14 days, 107 lbs. milk in 21 days, 1907 lbs. butter, and 25,000 lbs. milk in 1 year. 3 bull calves 4 to 6 mos.

R. M. Holtby, Port Perry, Ont.

**Questions and Answers. Miscellaneous.**

**Horse Tail Weed.**

What is the best method to follow to clean a field of the weed known as horse tail? A. M.

Ans.—This weed usually grows on low-lying land that has every indication of being sour. The use of lime and underdrains are the two means of combating it. When conditions are right cultivation will have more effect.

**Ensiling Clover.**

Could you give me information regarding the ensiling of clover? A. S.

Ans.—Fresh-cut clover has been satisfactorily kept in a silo. It is put in much the same way as corn, but possibly requires more thorough tramping as it does not settle together as readily. When weather is unfavorable for the curing of clover it might be advisable to ensile it. If carefully put in the silo it makes good feed, although the digestible nutrients decrease somewhat from that of green clover.

**Killing Sumachs.**

Will you kindly tell me through the columns of your valuable paper how to kill sumachs? A. E. H.

Ans.—The only way we know is to keep them cut down to ground level. It might pay you in a wet year like this to take a team and chain and pull out all you could by the roots. We have seen such trees fairly well exterminated by pulling, when the land is very wet or just as the frost is coming out.

**Difficulty in Churning.**

I have a cow that freshened May 15. I cannot make butter with the cream, although the cream is treated the same as the other cows' cream. The cows have salt before them all the time and good pasture. After churning over half an hour it comes to a thick cheesy cream, and adding cold water does not do any good. Mrs. F. S. R.

Ans.—It is sometimes difficult to ascertain the cause of trouble. Cream which foams badly is usually poor and contains a gas-producing ferment. If skimmed with a separator, shift the cream screw to skim a richer cream. Get the churning temperature right. Fill the churn only one-third full. If the cream foams, add a handful of salt and a little water, at 70 or 80 degrees F. If this does not settle the foam, remove part of the cream and raise the temperature ten degrees. Heating all the cream to 185 degrees F and then cooling to churning temperature will sometimes remedy the trouble.

**Canadian Seed Growers Meet.**

The annual meeting of the Canadian Seed Growers' Association for the year 1915-16 was held in the Canadian Building, Ottawa, Ont., June 16th. Among others, there were present the President, Dr. J. W. Robertson; Dr. C. A. Zavitz, Guelph, Ont.; Professor James Murray, MacDonald College, Que.; Mr. Savoie, Secretary of Agriculture for Quebec; Professor M. Cumming, Truro, N. S.; J. B. Daggett, Deputy Minister of Agriculture for New Brunswick; W. T. Macoun, Ottawa; G. H. Clark, Seed Commissioner, Ottawa; W. J. Black, Economic and Development Commission, Ottawa; and the Secretary, L. H. Newman.

Owing to the war situation the meeting this year dealt chiefly with business matters, there being no papers nor addresses presented. The reports submitted by the Board of Directors and by the Secretary indicate that substantial progress has been made by the Association during the past year. The membership has increased, as has also the extent of the influence exerted throughout the Dominion.

Dr. J. W. Robertson was re-elected President as was also L. H. Newman as Secretary-Treasurer. The Board of Directors consists of 19 members and is composed of prominent authorities from each of the provinces.

**Tested by Time, Panic and War**

Mortgage Debentures do not fluctuate in value. Neither time, panic nor war affect them. Stocks drop. Some disappear altogether. But through all the excitement and strife of war, Standard Reliance Debentures have stood the test for security of principal and permanency of interest. A \$100 Standard Reliance Mortgage Debenture is still worth \$100 and pays 5% interest in cash on the day it is due.

Canadian Government statistics show that never a dollar has been lost in Mortgage Corporation Debentures.

A \$1,000 Debenture at 5% for five years (if compounded) pays \$280 in interest, or 28% gain. It is one of the safest, if not the safest, investment obtainable.

Write for our book about Profits from Savings. It will surely interest you. Address Dept. 7



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**HOLSTEIN CATTLE**

The only herd in America that has two sires in service whose dams average 119 lbs. milk a day and over 35 lbs. butter a week. Cows that will give 100 lbs. milk a day are what we are trying to breed. At present we have more of them than any other herd in Canada. We can supply foundation stock of this breeding. Visitors always welcome. Long-distance Phone.

D. C. FLATT & SON, R. R. 2, Hamilton, Ont.

**King Segis Pontiac Paul 15940**

WE have for sale a few sons of the above bull, ready for service, and whose dams are large, heavy-producing cows. Here is an opportunity to get the blood of KING SEGIS and KING OF THE PONTIACS at reasonable prices. Correspondence solicited.

Also Berkshire and Yorkshire Swine

**Larkin Farms** Queenston Ontario

**Dumfries Farm Holsteins**—Think this over—we have 175 head of Holsteins, 50 heifers, from calves up to 2 years, as well as a dozen yearling bulls, and anything you may select is for sale. Breeding and individuality the very best.

S. G. & ERLE KITCHEN, St. George, Ontario

**Lakeview Farm, Bronte, Ont.** Offer for sale, sons and grandsons of 100-lb cows; one is out of a 24.56 lb. 3-year-old daughter of Lakview Rattler's 28.20 lbs., the latest Canadian champion 30 day butter cow 8 months after calving, and is half brother to L. D. Artis, 34.66-lb. Canadian champion senior 3-yr-old. Terms to suit purchaser. MAJOR E. F. OSLER, Prop. T. A. DAWSON, Mgr.

**Clover Bar Holsteins** A splendid 14 mos. old son of Minnie Paladin Wayne, who has just completed a record of 26.87 lbs. butter, 545 lbs. milk in 7 days. Her 2-year-old record was 22.33 lbs. For type and color he is second to none. Also her 3-weeks-old bull calf and a few others from good R.O.M. dams.

PETER SMITH R. R. No. 3, STRATFORD, ONT.

**For Sale---Sons of King Segis Walker**

From high-testing daughters of Pontiac Korndyke. Photo and pedigree sent on application.

A. A. FAREWELL OSHAWA, ONTARIO

**For Sale** Only three bull calves from our senior herd sire and a few from the junior herd sire left. In these is combined some of the richest testing blood of the breed. Also females of all ages, 75 or 80 head from which to choose.

M. L. Haley & M. H. Haley Springford, Ontario

**Hospital for Insane, Hamilton, Ont.** For Sale—Holstein bulls, varying in age from 1 to 11 months, from Record of Performance or Record of Merit dams and the grand bulls, Sir Korndyke Wayne De Kol, grandson of Pontiac Korndyke, or Lakeview Dutchland Le Strange, a grandson of Count Hengerveld Fayne De Kol. Prices right. Apply to Superintendent

**FAIRVIEW HOLSTEINS** For Sale—two bulls, mostly white, one 15 months other 11 months, from tested dams. Six 2-yr-old heifers bred to freshen next fall and early winter. Also several heifers not bred, also a few choice young cows. All bred in the purple and priced right.

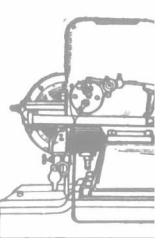
I. P. ABBOTT, R. R. No. 1, Mossley, Ont

**Riverside Holsteins**—Herd headed by "King Johanna Pontiac Korndyke," a brother of the world's record when made. His 10 near relatives have official records that average 34.94 lbs. milk 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.

J. W. RICHARDSON, R.R. No. 2, Caledonia, Ont.

**Evergreen Stock Farm** High Class Registered Holsteins. We keep nothing but the attractive, profitable and producing kind. Just now we are offering a choice young bull 10 months old and ready for light service. The records of his dam and sire show an average 23 lbs. butter in 7 days and 85 lbs. of milk per day. Moreover he is a show bull with just a little more white than black. First cheque for \$100 takes him.

A. E. Hulet, Bell Phone Norwich, Ont.



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Two yearling bulls sired by (Morton Mains Plan) J. R. Kennedy

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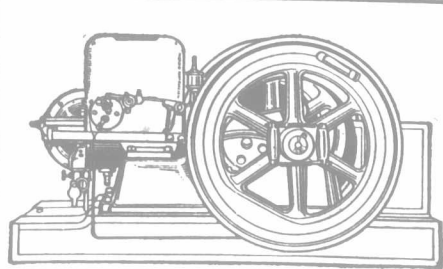
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Line of WASHERS, CHURNS, BUTTER WORKERS, FOOD CUTTERS, GAS ENGINES, etc. Write for Catalogue.  
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A few young bulls or sale from Record of Performance dams, imported and Canadian-bred, sired by Auchenbrain Sea Foam (imp.) 35758, grand champion at both Quebec and Sherbrooke. Write for catalogue.

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Two yearling bulls sired by Lakeside Day Star (Morton Mains Planet). Write for description.  
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D. M. Watt, St. Louis St. P. O., Quebec

**High-Class Ayrshires** If you are wanting a richly bred young bull out of a 50-lb.-a-day and over cow, imported or Canadian bred dam or sire, write me. Females all ages. Prices are easy.  
D. A. MacFarlane Kelso, Quebec

**Jerseys for Sale.** I am offering two very fine Jersey bulls, age 10 and 12 months, also heifer calves from imp. sire and high-testing dams. To prevent inbreeding will sell my stock bull, De La Roche Duke (imp.). Prices right.  
Chas. E. Rogers, Ingersoll, Ont.

**Swine for Sale**—Am 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.

**Questions and Answers.**  
Miscellaneous.

**One or Two Silos.**

We are very much interested in silos. Our old one, a stave silo, has been in use since 1898, and is giving good service yet, but it is too small for us now. It is octagonal 12 feet by 24 feet. Our place is fairly high and dry, is a strong loam and corn does very well on it, as we have had some very heavy crops and depend on it more than any other feed for dairy cows. We intend putting in enough in the future to practically feed the year through with the exception of when the pasture is fresh. Now my question is which in your estimation is more serviceable to hold ten acres of good crop—one large silo or two smaller ones? Could you get high enough (so it could be filled) to hold that quantity without getting too wide to feed off fast enough to keep from spoiling in summer to say twelve cows. Some tell me that there is too much waste in two, and that it is better to just have one large one, but I am afraid that to have to build large enough to hold that amount their would be more waste in not feeding off fast enough, and to keep the size of our old one and go up it would have to go too high to fill as we have had it full off four acres and quite frequently off five. Would just like to have your opinion on the matter as we haven't decided on anything definite yet.

H. A. S.

Ans.—You would have no trouble getting ten acres of corn into one silo as far as height is concerned. We have a silo at Weldwood, 14 feet in diameter and 40 feet high and it has held 12 acres of corn. We would advise building one silo but there would be some summer waste. Read the article on "All Kinds of Silos for All Kinds of Farms" on page 1032 of our issue of June 15. It gives the amounts different sizes of silos will hold, also the amounts fed off per day to different numbers of cattle.

**Gapes in Chickens—Turnip Seed.**

1. What causes gapes in chickens?
2. What will cure gapes?
3. What is the meaning of the word "Limited" when used in connection with a company?
4. Will turnip seed from 1 to 4 years old grow as well as new seed?
5. What will prevent horse's legs from swelling when standing in the stable?

C. R. L.

Ans.—1 and 2. Gapes is due to the presence of minute parasitic worms in the air passages of the fowl. These worms cause irritation and inflammation of the membrane of the passages. Eggs develop and grow to adult worms within the trachea of the bird. These may be coughed up or voided in the droppings. Other birds or chicks pick them up and not only develop the disease but become a source of spreading the trouble. In eradicating the disease it is important to isolate all affected birds so as to prevent its spread. Feed troughs and water dishes should be scalded and houses and runs disinfected. The individual surgical method may be profitably practiced in some cases. It consists of stripping a small quill feather all but a tuft at the point. Moisten it in turpentine and introduce it into the trachea, turn it round, then with draw it with the worms. While this method is effectual the operator must be careful not to lacerate the windpipe or cause suffocation. Horse hair works equally as well as a feather for removing the worms.

3. That the members of a company are individually liable for the company's debts only to a specified amount, often not exceeding the amount of stock that each holds.
4. While old seed may grow the fresher it is the better. Before sowing old seed test out some of it to see if the germination is good.
5. Some horses are predisposed to the trouble. Heavy feeding with insufficient exercise is frequently the cause of legs swelling.

**The Finest Separator in the World is Made in Canada "MAGNET"**

Square Gears  
One-Piece Skimmer  
Double Support For Bowl  
Solid Construction  
Perfect Skimming  
Long Life

**Make More Money from Cows**  
Get More Cream—Cut the Cost of Running Your Dairy.

A cheap separator steals your dairy profits. A Magnet delivers all the butterfat the milk contains. It will skim as close in fifty years as it does to-day. Its solid construction, its sturdy materials, its special design make it a long-life separator that can never wear out. It must be well built to stand the terrific speed at which the bowl turns. Oiling and adjustment are rarely needed because it runs so easily and is so conveniently designed for quick cleaning.

**Long Service: Perfect Service**

The first Magnet Separator ever built is in our factory. It has been run the equal of fifty years twice-a-day service. Yet it skims as close and clean to-day as if it were new. Runs as smoothly as a watch because it is mechanically true. Every Magnet built has been constructed on the same lines with new features added that give years to the life of the machine.

**MAGNET CREAM SEPARATORS**



**STURDY BUILD**

Look at the strong build of the Magnet. Solid perfect castings, sound steel parts and bronze gears, designed with the weight low down. You need not handle the Magnet gently—it's built for hard wear, and years of it.

**LONG-LIFE SQUARE GEARS**

Beware of the quick-wearing worm-gears that are built to make cheap separators. Magnet works on square gears which mechanics have found to be best for high speed work. Remember they have the heft and weight to carry the load when milk is poured into the tank. And they are balanced true so that they will never wear out.

**EASY TO RUN**

There are scores of children operating Magnets to-day—it's the smoothest running separator in the world. Write Mr. Weimar of Donagel, Ont. whose seven year old daughter operates a Magnet. No stopping for oiling and adjustment, or taking the clogging matter from the skimmer.

**EASY TO CLEAN**

Best of all for the woman on the farm, the Magnet can be cleaned in five minutes. Henry Weimar's boy (Belmore, Ont.) was taking apart and fixing the Magnet at 6 years of age. Skimmer one-piece and open, can be cleaned by hand and a cloth. No awkward bends in spots—cleaned quickly with our brush.

**SKIMS THE LAST DROP OF CREAM**

A clean, close skimmer, too, that takes off the very last drop of cream. Hot or cold milk, level or rough ground the Magnet will skim close even up to 66 per cent. cream. Magnet wrench is only tool needed for any adjustment.

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LONDON, ONTARIO  
John Pringle, Proprietor

**YOUNG Brampton Jerseys BULLS**

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 save one. Females all ages also for sale. **B. H. BULL & SON, Brampton, Ontario**

**DON JERSEYS**

Special Offering—A few choice yearling bulls fit for service, also heifer calves six months old, sired by Eminent Royal Fern. Write for what you want.  
**D. DUNCAN & SON, Todmorden, R. R. No. 1, Duncan Sta., C.N.O.**

**City View Ayrshires**—Improve your milk test. Four yearling bulls fit for service, sired by bulls from R.O.P. dams and from R.O.P. cows. Average test for the year 4.15, 4.21, 4.64 and 4.7 per cent. fat. Prices reasonable. Cash or credit on bankable paper. Eggs for setting, R.-C. and and S.-C. Rhode Island Reds. Winners wherever shown.  
**JAMES BEGG & SON, R.R. 1, St. Thomas, Ont.**



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One of the things a King Boiler does is to get most heat out of least fuel, and that SAVES MONEY.



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Write for prices

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No. 3 HALLAM BUILDING - TORONTO

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Young sow pigs recently weaned for sale. All boar pigs and sows advertised have been sold.

**WELDWOOD FARM**  
Farmer's Advocate, London, Ontario

**Pine Grove Berkshires**

Sows bred and ready to breed. Boars fit for service. Young things, both sexes, from my prizewinning herd.

**W. W. Brownridge, R.R. 3, Georgetown, Ont.**

**TAMWORTHS**

Young sows bred for September farrow and some nice young boars. Write—

**John W. Todd, R. R. No. 1, Corinth, Ont.**

**Morrison Tamworths and Shorthorns**  
Bred from the prize-winning herds of England. Tamworths, both sexes, 12 young boars fit for service. 12 young sows to farrow in June, July and August. Choice Shorthorns of the deep-milking strain. Clydesdale stallion, 3 yr. old, a dandy. Chas. Currie, Morrison, Ont.

**PROSPECT HILL BERKSHIRES**  
Young stock, either sex for sale from our imported sows and boar. Also some from our show herd headed by our stock boar, Ring-leader. Terms and prices right.

**John Weir & Son, Paris, Ont. R. R. No. 1.**

**Avonhurst Yorkshires and Collies**

Two choice litters of Yorkshires—both sexes. A splendid litter of registered collies.

**B. Armstrong & Son, Goddington, Ontario**

**Elmdale Herd of Chester Whites**

For Sale—a few selected pigs of three months. Either sex.

**John Pollard, R. 4 Norwich.**

**Questions and Answers, Miscellaneous.**

**Water Proofing Cotton.**

Will you kindly inform me of a preparation for water-proofing cotton, as I am making a tent? I saw a receipt for water-proofing cotton with linseed oil and turpentine. Do you know another method, as linseed oil discolors the cloth and I prefer it white? P. L.

Ans.—The usual custom is to paint the cotton with raw linseed oil. The following recipe has been used. Add to three pints boiling water 2 ounces of yellow soap, when dissolved stir in 1 quart boiled linseed oil, and, when cold add ¼ pint drier. We are not familiar with a treatment that would leave the cotton white.

**Horses Eating Wood.**

Horses are out on grass, and when they get filled up they stand and bite the rails. A decayed or soft wooded rail seems to be their favorite. They break off pieces and eat it. One was that way in the stable. They get all the salt they want and plenty of old meadow grass.

1. Will eating the wood do them any harm?  
2. Is it some necessary nourishment they need that is not in the grass?

J. F. F.  
Ans.—1 and 2. Eating or chewing wood is usually a vice which does not necessarily do the horses any harm. Lack of phosphates in the fodder frequently starts the habit, and it is difficult to break them from it.

**Transplanting Trees.**

1. We built a new house two years ago, but there is not a tree of any kind near it. We have young balsam, pine, willow, beech and soft maple trees in the bush. Which would transplant best and give shade? I would like to plant them as large as possible.

2. I have the whole set of children's encyclopedia, which make up 8 volumes, and I think I can get the covers from the publishers, or, if I don't, could you supply the covers and do the binding? The books are getting shabby without the proper covers. M. R.

Ans.—1. Taking everything into consideration, maple trees would give the most satisfaction. They are not difficult to transplant in the spring; they are a symmetrically shaped tree and grow sufficiently large to furnish plenty of shade.  
2. We are not in a position to do book binding, but there are firms in practically every city who make a business of that work.

**Clover for Silage.**

1. This is a wet spring and we haven't been able to plant corn yet for our silo. We have some small, red clover, new meadow, which is growing quite stout, would it be advisable to put some of that in the silo?

2. What time should it be cut for the silo?

3. If the season continues wet how should we manage to get it in the silo? Should it be cut with a cutting-box and put in the same day as it is cut in the fields?

4. If it should get wet after being cut in the field what should we do?

5. Would it be all right to put some in and leave it for a few days, if we should get rain, and then fill again?

6. Some of it has timothy mixed in. Would that be all right to put in? A SUBSCRIBER.

Ans.—1. If weather conditions were such as to hinder curing the clover for hay, it would be advisable to ensile it rather than have it spoil in the field.

2. Same time as for hay.

3. It is advisable to cut in the field and ensile the same day. The cutting box used for filling the silo with corn is suitable for cutting clover. If the clover dried out before being put in the silo there would be danger of the silage molding and spoiling. Fresh-cut clover will pack together in the silo much more satisfactorily than it will if dried.

4. Run the tedder over the hay immediately after a rain, and the clover is ready to ensile.

5. Yes. It might be necessary to throw out a few inches from the top, if it appears to have spoiled a little, before putting in fresh clover.

6. Yes.

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More Wool and better grade Wool comes from sheep whose fleece is kept free from ticks by the use of Zenoleum, the great standard Coal Tar Disinfectant. Zenoleum-treated sheep have fine, white fleece, which brings best price. Sheep kept healthy by Zenoleum put on weight and are more profitable for marketing as mutton.

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**HENRY ARKELL & SON, ROUTE 2, GUELPH, ONTARIO**

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From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.

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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 has been produced through many years of careful breeding and selection.

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**Cloverdale Large English Berkshires!**

Sows bred, others ready to breed; boars ready for service; younger stock, both sexes, pairs not akin. All breeding stock imp. or from imp. stock. Prices reasonable.

**C. J. Lang, Burketon, Ont. R.R. 3**

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Our offering never better. Champion hog winner of 12 firsts, 5 championships, 2 years showing, still at the head. Boars and sows, all ages same breeding.

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**Duroc Jersey Swine, Jersey Cattle**—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.**

**Lynnmore Stock Farm**

Our present offering is young breeding Berkshires, both sexes and any desired age, sire and dams imported, high class in type and quality and priced right. Also one 2-year-old imported dairy-bred Shorthorn bull with official backing for generations back.

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My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys, the best strain of the breed, both sexes, any age.

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For sale—we have a number of choice sows bred and others of breeding age; also a limited number of young boars.

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**Newcastle Tamworths and Shorthorns**

Boars ready for service. Sows bred to farrow in June and July, others ready to breed; both sexes ready to wean. All descendants of Imp. and Champion stock. Several extra choice young bull and heifer calves, recently dropped, grand milking strain, 2 bulls, six and seven months old, several extra choice young cows with calves at foot, also heifers of all ages. Prices reasonable.

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**Maplehurst Herd of Tamworth Swine, S.-C. W. Leghorns, and White Rocks**—This herd has won about 90 per cent. of the prizes offered in the last ten years at the Canadian National, Toronto, Ottawa, London and the Guelph Winter Fair.

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**When Writing Please Mention Advocate**











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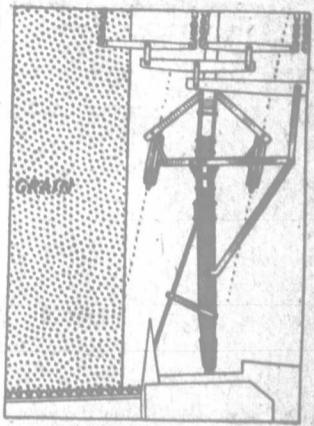
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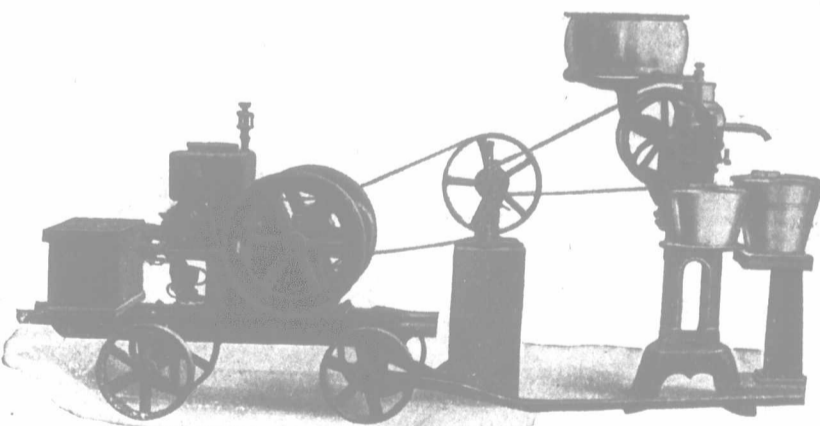
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