

Twice a Day for Half the Year

SOMEONE has to attend to the furnace; most people look on it as an irritating, dusty job. It need not be. It is not, if you have a Sunshine Furnace.

Shaking down the Sunshine Furnace does not raise a dust. The fine ashes are drawn up the chimney; there is never that fine sprinkling of dust that lights on everything in the basement, and even floats up through the house. No. That is one thing the owner of a Sunshine Furnace never has to contend with. The Sunshine is as clean as a piece of furniture.

There are extra sturdy grates that turn with a long handle to crush with ease the hardest clinkers. A slight rocking that hardly requires stooping, cleans down the ashes. The ashes fall as the grates are shaken, for the sides of the fire-pot are straight. This saves bother—and heat; because if ashes bank up around the fire-pot they stop the radiation of heat. The ashes come out in a big ash-pan. There is no shovelling or spilling ashes about.

And the door is large, as it should be for convenience in firing up. Or if need be, a large chunk of wood will go through this door. The dampers can be operated from the rooms above. This saves you the

nuisance of running up and down stairs to shut off the drafts and open up the check damper. SUINSING Furnace

Would you like to have definite information about the cost of installing a Sunshine Furnace in your home? Send the coupon for our booklet "Sunshine." At the same time, if you wish to know what it will cost to heat your own home, our Heating Engineer will tell you. He will show you how to plan the distribution of heat so as to get the utmost warmth from the coal you burn. No, there is no charge. Simply address him at

2. Also forms for filling out, so that your heating engineers can tell me how to order and install a system that will properly heat my home.

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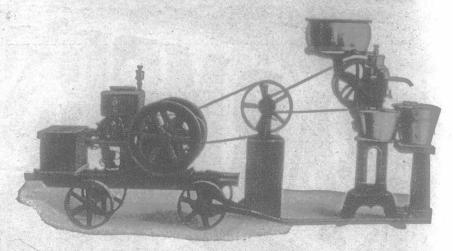
SYDNEY BASIC SLAG

Most Effective and Economical Fertilizer for Fall Wheat

E want every Ontario farmer who reads this advertisement to realize that we are incurring the cost of this advertisement to secure his attention. We make money by supplying him with something that will make money for him. Sydney Basic Slag costs \$20 per ton, and will grow at least as good a crop of Fall Wheat as other fertilizers costing considerably more money. We can give you the names of hundreds of Ontario farmers who have already proved this. If you can save \$10 to \$15 per ton in the cost of your fertilizer, is not that of material importance to you? Drop us a line and let our general salesman come and have a talk with you. His visit will cost you nothing, and we believe you will find it profitable.

Interesting descriptive literature will be sent on application.

The Cross Fertilizer Co., Limited SYDNEY, NOVA SCOTIA



SOLVING THE "HIRED HELP PROBLEM"

This MONARCH 1½ h.-p. Engine attached to our Intermediate Friction Clutch Pulley solves one of the problems for hired help. No counter shaft needed with this attachment.

The machine driven is always given its speed automatically, and needs no special attention from the operator. We also make special pulleys to fit separator.

Get our catalogue. It's free for asking.

We make all sizes of engines, from 1½ to 35 h.-p. Ensilage Cutters, Grain Grinders, Pump Jacks, Saw Frames, Friction Clutch Pulleys.

Canadian Engines, Limited

FROST & WOOD Smith's Falls, Ont. Selling Agents East of Peterboro

ARE YOU AMBITIOUS?

Then why spend one or two years longer than necessary in your preparatory course? We prepare students for Junior Matriculation in two or three years. Are our students successful? Write us and find out. We also teach Faculty and First year Arts. SAVE TIME BY COMING TO

In war time our rates are low. NOW is the time to spend that year or two in Music, Art or Expression. Fit yourself in some line to be self-supporting. The Commercial World needs book-keepers and stenographers. Our Commercial course is thorough, practical and up-to-date.

Write us the subjects you are interested in, and we will gladly mail you a ccpy of our College Calendar, and give you additional information of

Fall term commences Sept. 7th.

ALBERT COLLEGE Belleville, Ont. E. N. BAKER, M.A., D.D., Principal

Sweet Fresh Ensilage down to the last forkful

THE HYLO SILO is per-fectly air-tight. No frozen spouled ensitage around the uls. Convenient end perfect ing doors, adjustable without maner or wrench. Made of grantfeet Lee Lee Valley

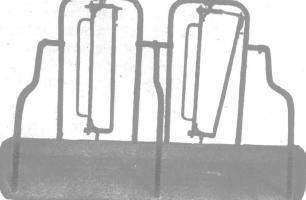


CLAY TILE

Prices and quality right. For prices on sorted car-lots, write

WM. DELLER R.R. No. 4 Ontario

Farmer Mr. and Dairyman:



Do not fail to send for our catalogue if you are thinking of remodiling your stables.

BUCHANAN'S Steel Cow Stalls, and Adjustable Positive Lock Stanchions have features found in no other found in no other make in Canada. The arch stall makes a farmer's stable look like a show stable.

The noise and clang so common to the head rail stall is entirely done away with.

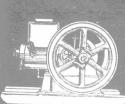
Buchanan's Stall. We use a positive steel lock to lock our stanchion can be adjusted for the smallest calf or the largest cow. We have been serving the Canadian Farmer for nearly forty years and thousands of farmers will testify that BUCHANAN Stalls and Stanchions are in a class by themselves. Write us for prices and catalogue. They will interest you.

M. T. BUCHANAN & COMPANY, Mfrs. Haying Tools, Cow Stalls, Stanchions, Water Bowls, etc.

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Agents wanted in sections where we are not represented:

Stover's Good Engines



nother gasoline engine made to-hes the "STOVER" for weight, bility. This is a strong statement, There is not another gasoline engine made to-day that touches the "STOVER" for weight, power and durability. This is a strong statement, but we are prepared to prove it.

We offer the "STOVER" in all sizes and for any purpose, at prices that defy comparison.

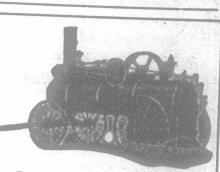
Write for descriptive booklet TO-DAY.

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National Equipment Co., Ltd. 33 Wabash Ave.,

They run as you hoped they would





Rebuilt Portable, Traction Engines and Threshers

A number of good rebuilt Portable and Traction Engines suitable for Silo filling and Threshing, also a few good separators for

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

RIDER AGENTS WANTED



In every community to ride and exhibit a sample 1916 Hyslop Bicycle.

10 DAY'S TRIAL If owner is not a sample 1916 Hyslop Bicycle.

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

TWO CENTS is 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 marve-lous offer ever made on a bicycle. You will be astonashed at our low prices and remark-for Bicycles, Tires and Sundries. DO NOT with the day. HYSLOP BROTHERS, LIMITED DEFT. 2 TORONTO, ONT.



Build Silos, Dwellings, or any class of building from Concrete Block. The London Adjustable Concrete Block Machine makes every kind and size of Block, High grade. Moderate price. We manufacture a full line of Concrete Machinery. Send for Catalogue No. 3.

MACHINERY

CONCRETE MACHINERY CO. Dept. B, London, Ontario World's Largest Manu acturers of Concrete Machinery

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Pump

THE RIGHT OIL IN THE RIGHT PLACE

NO lubricant is good enough for every purpose. You don't want to use the same oil on a high-speed, low-power tractor as on a low-speed, high-power tractor. You can't use the same oil in your thresher as you do on a spindle.

The Imperial Oil Company makes a special oil exactly suited to every part of every farm machine.

STANDARD GAS ENGINE OIL

Recommended by leading builders for all types of internal combustion engines, whether tractor or stationary, gasoline or kerosene. It keeps its body at high temperature, is practically free from carbon, and is absolutely uniform in quality.

PRAIRIE HARVESTER OIL

An excellent all-round lubricant for exposed bearings of harvesters and other farm machinery. Stays on the bearings; will not gum or corrode.

CAPITOL CYLINDER OIL

The most effective and economical lubricant for steam engine cylinders; proven superior in practical competition with other cylinder oils.

ELDORADO CASTOR OIL

A high-grade, thick-bodied oil for lubricating the loose bearings of farm machinery, sawmills and factory shafting.

THRESHER HARD OIL

Keeps the cool bearing cool. Does not depend on heat or friction to cause it to lubricate.

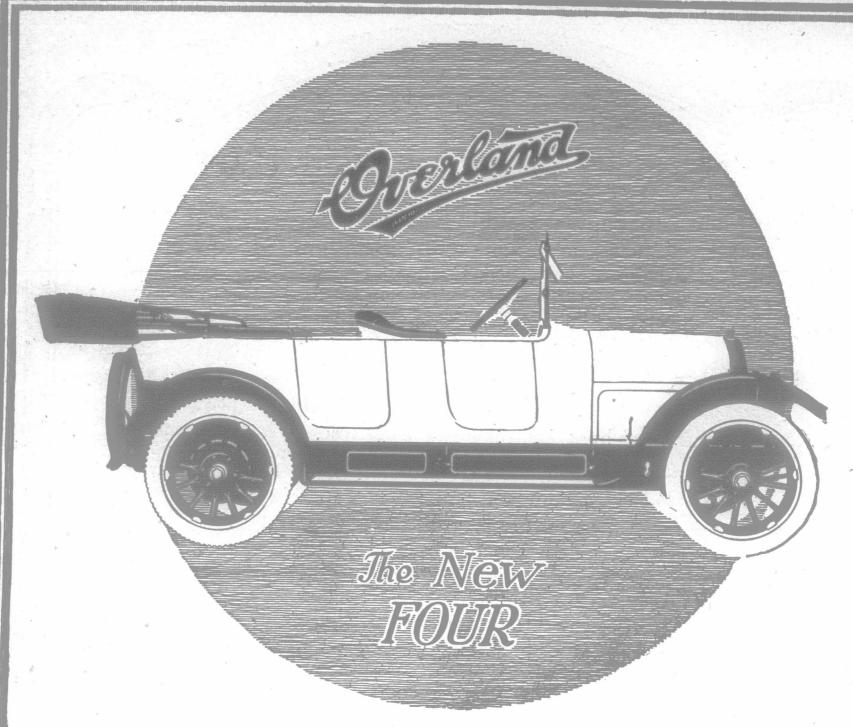
STEEL BARRELS—All our oils can be obtained in 28-gallon and 45-gallon steel barrels. These barrels save their cost by eliminating leakage. You use every drop you pay for. Clean and convenient.

If your lubricating problem gives you trouble, let us help you. Tell us the machine, the make, the part—and we will gladly give you the benefit of our experience.

THE IMPERIAL OIL COMPANY

Limited

BRANCHES IN ALL CITIES



What 1000 Cars a Day Make Possible

Here is one of two new Overland models which again emphasize the enormous economy of enormous production.

No one has ever before made 1000 a day of cars of this size and class nor half that many.

1,000 cars a day enable us to use materials of a much higher quality and not only permit but actually enforce an accuracy of workmanship which smaller productions of cars in the same price range neither permit nor require.

1,000 cars a day make possible better, larger, much more comfortable cars than have ever be-

The New Four

Model 85-4

35 horsepower en bloc motor 112-inch wheelbase 32 x 4-inch tires Cantilever rear springs Auto-Lite starting and lighting
Vacuum tank fuel feed
Gasoline tank in rear with gauge
Electric control switches on steering column

fore been possible at anywhere near the price.

This newest Overland is the largest Four ever offered for so low a price.

In the first place, note the longer wheel base—112 inches.

The en bloc 35 horsepower motor which has made the Overland famous is continued.

True—it is perfected even more and now it is a fitting climax of the experience obtained from a quarter of a million of these Overland motors in daily use.

Shock absorbing cantilever type rear springs are a big improvement.

The gasoline tank placed in the rear is another improvement.

The vacuum system insuring a steady even gasoline flow at all times is still another improvement.

The famous and complete Auto-Lite electric starting and lighting equipment is furnished.

All electric switches are on the steering column right within reach.

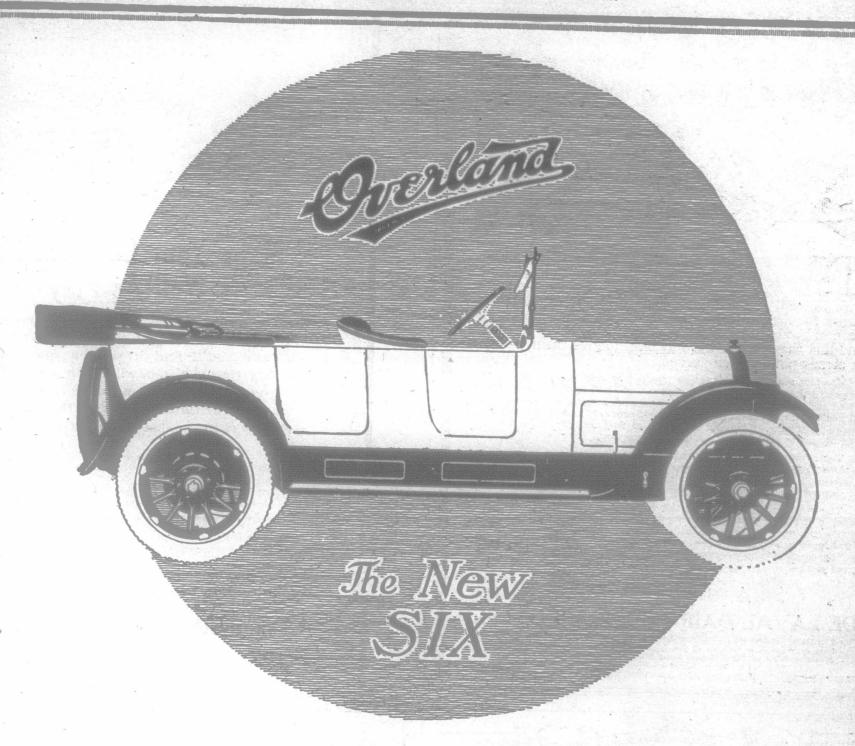
The artistically designed steamline body with one piece cowl makes this car one of America's most attractive models.

Yet the price of this, our greatest Four cylinder value, is less than any car of its size ever sold for before.

Catalogue on request. Please address dept. 759

Willys-Overland, Limited, Head Office West Toronto, Canada

JULY 6, 1916



Cars of Higher Quality —Greater Values

The newest Overland Six is no less a pace maker than the new Four.

Here is the Six of Sixes! A snappy five passenger long stroke 40 horse-power model—easy to handle, light, economical, mighty comfortable, having all the advantages of higher priced sixes, yet it comes absolutely complete at a lower price than any other Six of its size.

Its smart body design is long and low—having lines of artistic simplicity.

And the motor! This will warm the heart of every six cylinder enthusiast in the Dominion.

The New Six

Model 85-6

35-40 horsepower en bloc motor 116-inch wheelbase 32 x 4-inch tires Cantilever rear springs Auto-Lite starting and lighting Vacuum tank fuel feed Gasoline tank in rear with gauge Electric control switches on steering column

You've heard all about fast get-a-ways—smoothness—crawling and climbing on high. This Six does all that and then some!

The wheel base is 116 inches. It has cantilever springs and evenflow vacuum system with the gas tank in rear.

The tires are four inch. It has the complete Auto-Lite electric starting and lighting equipment with all switches on the steering column.

Some Six! Yet the price is lower than any other Six of its size.

All emphasis falls short of expressing the real superiority in quality of Overlands compared with other cars in the same price class.

You must grasp the enormous advantage of our

greater production more than double that of any other producer of cars of like size—or Overland prices will lead you to underestimate Overland quality.

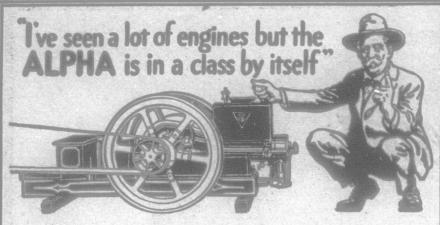
In a comparison of values
Overlands have always
dominated but this season's Overlands dominate by a margin wider
by far than ever before.

But go to the nearest Overland dealer and see these new models. Go over them—note all the very real and important improvements, and learn the prices.

The Overland dealer is ready to make demonstrations of both models now.

Catalogue on request. Please address Dept. 759

Willys-Overland, Limited, Head Office West Toronto, Canada



THE more a man knows about gas engines the stronger is his recommendation of the Alpha. Users of the Alpha who have had lots of engine experience will tell you that the Alpha gives them the most power for the fuel consumed, is the least troublesome to keep in good working order, costs the least for repairs, and that they can always rely on it to give them plenty of steady power when needed.

The fact that the Alpha is not affected by cold weather is one of its good points that is especially appreciated by Canadian users. The speed and fuel consumption of the Alpha are accurately regulated to all loads by the quickest acting and most sensitive governor ever used on a gas engine. There is no waste of fuel and the engine runs steadily under all loads—light, heavy or varying.

The Alpha has no troublesome batteries. It starts and operates on a simple low speed magneto. The entire ignition system is remarkably simple and assures you of a hot, fat spark at all times. You can use either gasoline or kerosene for fuel.

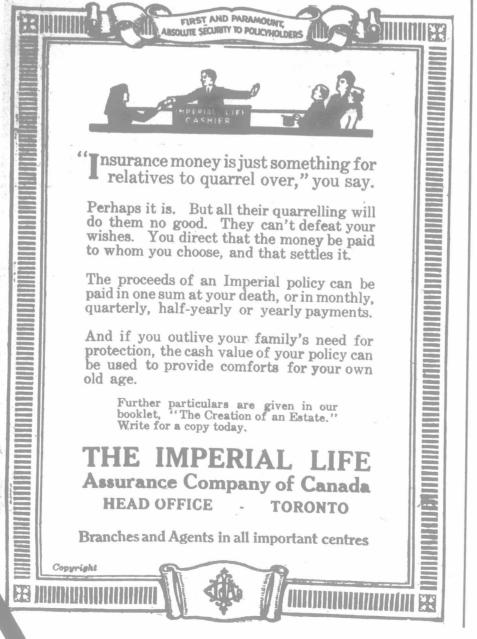
The strong recommendation the Alpha gets from its users is the result of features that you can readily appreciate when you see the engine or the illustrations and descriptions in our large catalogue. Send for a copy of this catalogue at once. Read it carefully and you will agree with Alpha users that this engine is in a class by itself, and gives you the most for your money.

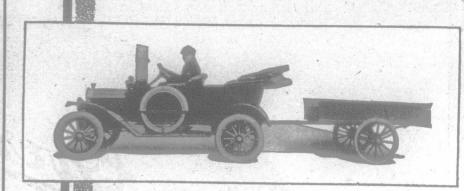
Alpha Engines are made in eleven sizes—2 to 28 H.P. Each furnished in stationary, semi-portable, or vortable style, with hopper or tank cooled cylinder.

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LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA.
Sole distributors in Canada of the famous De Laval Cream Separators.
Manufacturers of Ideal Green Feed Silos. Catalogues of any of our
lines mailed upon request.

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Make Your Car Work As Well As Play

You might as well get a double service from your car. Hitch a FOX Trailer to it, and you'll find it such a splendid utility that you, too, will catch some of the enthusiasm responsible for the demand in the United States for thousands of trailers in the last few months.

For the farmer, for the delivery man, for anyone For the farmer, for the delivery man, for anyone with a hauling problem to solve, nothing so useful has been developed for years. The FOX Trailer can be attached to any make of automobile with absolutely no risk of injury to the car. Built in accordance with the best principles of automobile design. All-steel chassis; ball-bearing wheels, interchangeable with Ford wheels; solid Dunlop tires, guaranteed for 10,000 miles. Size of body 6 feet by 4 feet. Price \$85 f.o.b. Windsor. Send for descriptive catalogue. for descriptive catalogue.

Ask Your Local Automobile Dealer, or Write

Fox Brothers & Co., Limited

WINDSOR, ONTARIO

Dealers wanted in unreserved territory. Write or wire to-day for Dealer's proposition and territory reservation.

Aylmer Bronze Sprayer



Get a

Trailer

(Used by Seven Governments)

You cannot afford to take any chances on the short-spraying season—the loss is too serious.

OUTFITS AND PRICES.

With Barrel. 4.00
With Two Brass Triple Heads, Six Nozzles,
instead of as in Outfit F—Add to list...\$ 2.50
The Aylmer makes child's play of Spray

Day.
You take no chances—you get results. It is
the sprayer you will buy sometime. Why not
now?

The Aylmer Pump & Scale Co., Limited, Aylmer, Ontario



Send to-day for our Engine Book - showing how to solve power problems on the farm.

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Don't neglect the summer-fallow.

LI.

Breed and feed are important factors in the livestock industry.

Throw the swine a few freshly-cut sods and some green_feed each day.

Work horses on pasture at night require their regular grain allowance three times a day.

When working at the hay, horses, as well as men, are refreshed by an occasional drink of water.

A good sire is an asset to the community. Why not club with a few neighbor farmers and obtain one?

The corn and potato crops are made or lost by the cultivation they receive during the growing season. Keep the cultivator going.

When flies are thick and the weather warm the calves will thrive well in a shed or stable during the day with cut grass or good clover hay.

Every cloud has a silver lining. The hay crop should be good. Have the machinery ready to harvest it in the quickest and best possible manner.

The preserving season is here, and authorities say that fruit can be canned without sugar. Sweetening will be necessary when the product is consumed, but unnecessary to preserve it.

Many weeds are controlled by preventing them from going to seed. A few hours spent this year in pulling stray plants out of the growing crop may save days in cultivation later on.

In many cases the good cow goes and the poor one remains to eat up the profits. The scales and tester would prevent this, for the figures themselves shame the man who acts so unwisely as to sell the profitable producer and feed the poor one.

Do not deprive the stock of salt. Their digestive system requires it. Rock salt may be placed in the open in the pasture, but salt in bulk should have a cover over it to prevent rain dissolving and wasting it. Place the supply within easy reach of all classes of stock.

Guard against blight destroying the potato crop by spraying thoroughly with Bordeaux mixture several times during the season. An article in this issue on summer treatment for controlling potato diseases contains pointers which may assist the grower in preventing diseases of this crop becoming established in the field.

Rape sown in drills at the rate of two or two-and-one-half pounds per acre will furnish an abundance of fall pasture for feeding cattle, sheep and hogs. Having it in drills permits of cultivation which assists in eradicating many noxious weeds. A good crop may be expected if rape is sown by the middle of July. Latter seeding will give a fair amount of feed.

LONDON, ONTARIO, JULY 6, 1916.

Who Will Name the Men?

The Minister of Trade and Commerce has announced that delegates of the various branches of Canadian industrial life will be asked to convene during the early autumn and prepare for the unusual conditions which are sure to follow in the wake of restored peace. Agriculture, the announcement says, will send its quota, and the question arises, who will appoint these representatives of Canadian agriculture? It is not a matter of no suitable representatives, we have them, but the machinery for appointing them is lamentably wanting. To be effective the conference cannot be large, and probably every branch of industrial life will send only a very few. In such a case several phases of farming must be represented by a few men who have a large field and a great diversity to consider. The Manufacturers' Association could elect one man because they are a unit unto themselves, but consider for one moment how even two or three delegates could be named to voice the opinion of all the rural constituencies. There are numerous farm organizations, but there is no council of agriculture for the Dominion of Canada that can, even to a small degree, speak for the people at large. Some of the organizations we have are strong in their particular fields, but a fruit growers' association cannot represent the mixed farming interests no more than the grain growers can speak for the live-stock breeders. One might say, "let all the farm organizations get together and elect their representatives." Here again obstacles might arise through the multiplicity of the different bodies, each of which would consider their interests paramount. To get actual representation anywhere the farmers must select and appoint their own delegates, but as previously stated, the machinery for doing so is not yet in operation.

What Canadian agriculture needs at this time is a council of agriculture to speak for the people whose representatives they are. If all the various organizations could be welded together into one unit we would then be able to voice our sentiments with authority and effect.

Do Not Breed Cattle Too Young.

There has always been a tendency on the part of some breeders to allow their heifers to freshen before they have acquired sufficient growth and maturity, and now that the demand for all kinds of cattle has received an impetus through a world-wide shortage, the evil practice may be tolerated by many who are not far-sighted enough to appreciate the consequences. The results of premature breeding were in evidence last winter at some auction sales. Where heifers were permitted to bring forth young at an early age, representatives of the herd generally showed a lack of substance, constitution, ruggedness and thrift, and this untoward effect will be the reward of any breeder who departs from the path beaten by his successful competitors and hastens his young females into the producing class. Some animals mature more quickly than others, and the individual itself and the way it is developing will suggest to the herdsman the proper time for mating it with the bull. The dairy heifer allowed to freshen when 30 to 32 months of age should make a large-framed animal with plenty of constitution and vigor, and when we consider that we expect 9 to 12 years' labor from a cow it appears reasonable that they should be thoroughly equipped. There may be a slight present gain by getting the females into the working class, but the subsequent profits are sure to be decreased thereby. It requires several years to breed up a herd of cattle under the best management, and if the future is not looked to

some breeders may, in after years, regret their haste. Only recently an instance of too early breeding in a beef herd came to our attention, and at the annual meeting a year ago of one association, which champions a beef breed, they considered it necessary to add a new rule to the Rules of Entry, as follows: "No application for registration shall be considered where the sire of the animal offered for entry was less than 8 months old at the time of service, or where the dam of the animal offered for entry was less than 9 months old at the time of service." Such a clause as this should be altogether unnecessary, but it was intimated that registration had been applied for on animals with even younger parentage than was allowed in the new rule. Some of these, no doubt, were due to accident, and the sires and dams were not mated by the herdsman or caretaker. Yet, in the opinion of the directors such restrictions were deemed necessary to safeguard the interests of the breed.

This is no time to jeopardize the quality of our breeding stock by too early matings. Canada can become the source of foundation animals for other countries if we have the proper material, and that can only be produced through wise and cautious breeding.

Keeping the Boss in His Place.

A famous Canadian political leader once declared

that the farmer was the most patient of beings-he never asked for anything, and he never got anything. In the conduct of the affairs of the country the case of the farmer, not being unitedly and effectually presented, could be safely ignored. It was and still is, by the mischievous devices of partyism, that other and less important interests attain their ends, while those of the class that feeds them all are sidetracked. In his notes "On the Open Road," Ralph W. Trine attacks the blind following of a party simply because one chances to belong to a particular party, and many times just because his father or his uncle or his mother or his aunt belonged to it. This has been one of the chief causes of the most notorious political corruption and debauchery. It is for this reason, more than anything else, that bosses and machines have been able to grasp and hold things as they do, and in the name of party fealty have stolen the rights and natural possessions of the people for their own enrichment. We resent the expression that Mr. So-and-so "belongs" to some particular political party as though they owned him body and soul, and all they had to do on election eve was to "ring him up" and he would be "there." "We can count on Jones; he's all right." But it is a hopeful sign that Jones is becoming less and less dependable from the standpoint of the political boss. Now and then in the affairs of the country a man of independent integrity looms up of a little larger calibre than the "Boss" and the people back him up. What is it that deprives the "Boss" of the power of corruption? Simply decisive independence in party affairs. Mr. Trine very properly goes further and puts it up to men as a moral obligation to support "their party" only when its platform is essentially the best, and when it is constructed for the purpose of being fulfilled and, not in whole or in part, for purposes of deception, and when its candidates are the ber men that can be named. Once this becomes tinctly known and that men and parties who b the public interests will be promptly turned in office, it means a revolution and a reno apart political life. Government is not someax payer. and distinct from the individual voter, and he is In a sense it is an expression of him lies, that it morally bound to see, as far as in little circle we is conducted aright. If in our

any chances on a loss is too ICES.

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Outfit A, Ten Attached, Two poock, One Y, Rod, without \$20.00

16 Rod, in place \$2.00

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The Farmer's Advocate

AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

 THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday.
 It is impartiel and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and homemakers, of any publication in Canada.

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United States, \$2,50 per year; all other countries, 12s., in advance.

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WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns, Rejected matter will be returned on receipt of postage.

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Address—THE FARMER'S ADVOCATE, or THE WILLIAM WELD COMPANY (Limited), London, Canada.

start out with the idea of securing "pap" and "patronage" and condone the "higher ups" for dipping into the public chest, counting on all hands to fall in line and run amuck with the other party every four or five years, just so surely may we expect the country's affairs to go to the dogs. There has been a disposition to look askance at men who were not "dependable" politically, or who, in other words, were liable to "kick over the traces" if things were not going straight. Being just too independent for the "Boss" such men have again and again been the saving remnant of a political party or of the best interests of their country. Instead of being frowned upon they are rather to be honored.

Do Your Bit for the Fall Fair.

There is one line of work where many farmers are called upon to assist agriculture and where too often they neglect to exert themselves, and that is with the fall fair. When this is read the fair dates for Ontario will have been, or will soon be, announced, and they should act as a signal for all directors and committee men to get busy. Some directors are energetic in assisting the secretary before the event, on fair day, and after it is over. Others appear only for their badge and dinner ticket. Fortunately the majority of the officers are big enough men to see the importance of fostering the local fair, and making it a success, but we are appealing to the indifferent directors who had not the manliness to decline the honors when appointed, or the spirit to help when needed. A fall fair is a local event, and every farmer, whether an officer or not, should have pride enough in it to boost it in every way. A greater effort should be made to get the good stock out this season, but perhaps this cannot be done without sheds or some better accommodation. Few breeders will risk tying valuable horses or cattle to a fence post. There is also, generally speaking, room for considerable improvement in the display of agricultural products. Pianos and sewing machines are useful all the time, and are all right at the fair, but the farmers might adopt some of the merchants' enthusiasm regarding the display of goods, and make the products

of the old farm eclipse anything the town can bring forth. Endeavor to make a strong feature out of some class of live stock or farm products; it will draw the crowd and help the fair for the succeeding years. Some fall fairs are noted for their show of heavy and light horses, others for their display of fruit, some again for poultry and vegetables, while still others make cattle a drawing card. The directors should work up these lines and advertise them. Go to the men who have these things to show and get them to come out. Work for and boost the fall fair so that the people who are now beginning to see something in agriculture will be obliged to admit that after all there is nothing that can surpass the old farm and what it can produce.

Care Needed in Handling Milk.

There is a trite saying that we have never seen contradicted, and it is to the effect that "we are only going through this old World once." While this is generally accepted as a fact, we should not take it to heart to such an extent that we become careless and indifferent and go through this old World too quickly. Some, who disregard the laws of nature, make a very hurried trip across this planet, and pass off without leaving footprints on the sands of time. The fate of a child depends not only upon a mother's love and tender care, but to a very considerable extent upon the intelligence and practical wisdom with which the parent is endowed, and which is put into practice. Infant mortality increases as peoples adopt the so-called ideas of civilization, without applying the latest and correspondingly important rules for the maintenance of health. The Indians got along very nicely so long as they lived in tents, pitched from time to time on fresh fields or built in different parts of the forests, but as soon as they adopted the white man's way of living permanently in houses disease became more persistent, because they did not,



Showy Lady's Slipper

at the same time, observe the white man's rules of sanitation. While the country folk have steadily improved with the years in the care of food consumed at home or sold to the public, there is an increasing demand for even greater vigilance on the part of the producers, particularly relating to milk and other dairy products. To the agriculturist, who with his family has enjoyed good health on the same fare that he has sold to others, the pasteurization and clarifying of milk may appear unnecessary and ridiculous. However, by the time milk reaches the urban dweller's cupboard or cellar it has usually had time to increase its bacteria content by millions and become a medium teeming with germ life. Without pasteurization this product is more than milk, and some unsuspecting consumer in the general routine of eating and drinking takes a glassful, as he thinks, to prolong life, but often the result is quite the reverse. It has not been very long since we began to hear so much about tuberculosis in cattle, and perhaps if we had lived one hundred years ago we should not have had all this worry. However, the disease has crept into so many herds and has become so prevalent that a careful farmer will not take whey from a cheese factory for his pigs unless it is pasteurized. This precaution has become so general that someone wittingly remarked, "To enjoy any degree of protection one must be a hog.

An article in the Dairy Department of this issue discusses the possible germ content of milk, and explains the necessity of greater care in the handling

of this product. While it may appear that too much stress is laid on this phase of the matter, evidence is piling up to such an extent that we can no longer doubt the scientists' declarations about the diseasecarrying properties of milk. Traditions and ways of our fathers and mothers are no guide to us when the things with which they worked have changed, and we are supplied with altogether different material. The new-fangled ideas and hobbies of the present, as some view them, may become the custom and practice of the next generation. Even on well-ordered farms and in the good housewife's kitchen there is need of care and sometimes extra precautions to insure the health of the family and particularly of the younger children. "There is nothing constant except change," and we must meet these exigencies as they arise. The urban consumer can regulate the quality of the stuff he buys largely by the price he pays, and until he is ready to defray the expense of producing the best his words and admonitions will count for naught. Salaried health officers are supposed to look after this matter and see to it that the urbanite is supplied with food fit for consumption, but the rural people are left largely to their own devices, and it is they who should exercise proper precautions that the inner man is catered to in full accordance with the laws of nature in their revised form and amended to suit the race and conditions as we find

Nature's Diary.

BY A. B. KLUGH, M. A.

A very bright little bird which is common as a summer resident in eastern Canada is the American Redstart. This species is about five and a quarter inches in length, the adult male is black above and white beneath, with the sides of the breast and large white beneath, with the sides of the breast and large blotches on the wings and on the upper portion of the lateral tail-feathers, orange red; while the female is olive-brown above, white beneath, and marked with pale yellow in the same places as the male is marked with orange. Of all our Warblers, extremely active little birds though they are, not one displays so many different motions per minute as the Redstart. It dashes different motions per minute as the Redstart. It dashes to and fro, up and down, in and out among the branches, with an infinite variety of movements. Seemingly an overflowing of superabundant energy, this activity is really an energetic insect hunt. All through the songseason of May and June the male Redstart makes his presence known, for he is an unusually constant singer and may be heard at almost any time of the day. The nest of the Redstart is made of leafstalks, thin strips of bark, plant down and similar soft vegetable materials. Usually it is lined with fine rootlets. It is placed in the crotch of a sapling at a height of from two to fifteen feet from the ground. The four or five eggs are white, variously blotched and spotted with brown The young males of this species do not attain full plumage until the second year, but breed the first year in a plumage similar to that of the female.

The insect food of the Redstart is perhaps more varied than that of any other common species of Warbler. Apparently there are few forest insects of small size which do not, in some of their forms, fall a prey to this bird. Caterpillars that escape some of the slower birds by spinning down from the branches and hanging from their silken threads are snapped up in mid-air by the Redstart. It takes its prey from trunk, limbs, twigs, leaves, and also from the air so that there is no escape for the tree insects which it pursues, unless they reach the upper air, where the Redstart seldom goes except in migration. While there are few small pests of the deciduous trees that it does not eat, it is not confined to these trees, but forages more or less among the cos trees as well. Also it is seen at times in orchards and gleans among the shade trees in localities where the woods have been cut away. It is an efficient cater-pillar hunter, and one of the most destructive enemies of the smaller hairy caterpillars. It catches bugs, moths, gnats, flies, small grasshoppers, and beetles. The summer home of the Redstart extends as far north as Labrador and southern Alaska, in fact it goes almost to the limit of tree-growth throughout Canada. The southern boundary of its breeding range may be roughly traced by a line extending from the mountains of North Carolina to Utah.

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As this species is highly insectivorous in its food habits it migrates far south in winter. Many of the eastern Redstarts follow down the Florida peninsula, and then across to Cuba, Haiti, and others of the West Indies, where they pass the winter. The larger number, however, reach the sea at various points along the west coast of Florida, Louisiana and Texas, from which they strike out for Cuba or Yucatan, making the journey in a single night, though the distance is from five to seven hundred miles.

One of the most beautiful and certainly one of the most striking of our wild flowers-the Showy Lady's Slipper—is now in bloom in the peat-bogs. This species does not inhabit the open bog nor does it grow in dense shade, but along the partly shaded margin of the bog is its favorite haunt. It is fortunate that this lovely plant grows in the bogs and not in locations visited by a great number of people or it would long since be extinct in all well-settled localities. Even

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as it is one knowing of a place where it grows should be careful to whom he gives this information, and should only guide to the place persons he can trust not to injure the plants. Many people have a wild idea that they can succeed in transplanting this species and growing it in their gardens. Such efforts are only a waste of the plants and of the individual's time, for garden conditions are not bog conditions. A friend of mine, one of the best gardeners I have ever known, and a man who knew Orchids, both native and foreign, from A to Z, tried his best to grow this plant in his garden—and failed. He did succeed in getting it to live for three years, but the plants in the second and third years were small and weakly, and by the fourth year were dead.

Ornithology on the American continent has experienced a seed loss in the death of W. H. W. H.

Ornithology on the American continent has experienced a sad loss in the death of Wells W. Cooke, who for the past fifteen years has had charge of the bird-migration work of the United States Biological Survey. His work brought him into close touch with those interested in bird life all over the continent, and many of these observers who sent in reports to him were located at different points in Canada. A great deal of our knowledge of bird migration in North America is due to the pains-taking work and clear thinking of W. W. Cooke, and our only consolation for his passing while still in his prime is that he made the best use of the time allotted him.

THE HORSE.

Lameness in Horses—XXIX.

Open Joint.

Each true joint is enclosed by a thin ligament, called the capsular ligament. This ligament resembles a section of a sack, one end of which is firmly attached to the lower end of the upper bone of the joint, and the other end to the upper end of the lower bone, thus forming a cap or sac which completely encloses the joint. The inner surface of this ligament is lined by a synovial membrane, which is plentifully supplied with little glands, which secrete synovia or joint oil, which is for the purpose of lubricating the joint. That condition known as "open joint" is when the skin and underlying tissues are punctured or incised, and the wound penetrates the capsular ligament and allows escape of synovia. In some cases the ligament is not actually punctured at first, but is bruised or injured to such an extent that it sloughs and causes open joint.

Symptoms.—In cases where the wound has actually penetrated the ligament, there will be a more or less free discharge of synovia at once. Synovia is a thin clear, slightly amber-colored, oily looking substance. It has a well-marked oily appearance and if a drop be pressed between the thumb and finger, it has a well-marked oily feel; at the same time the actual percentage of fatty matter is very small. In many cases the discharge is slight for a few days, and the general symptoms slight. In a period varying from 2 to 10 days the patient commences to show severe symptoms. The joint becomes swollen. The swelling is at first tense, but elastic, however, it soon becomes hard and unyielding, and accompanied by more or less severe constitutional disturbance; the pulse becomes hard, wiry and frequent, and the animal evinces acute and agonizing pain. Lameness is excessive. The patient is scarcely able to put the foot to the ground, whilst at the same time the pain causes him to keep it in an almost continual state of motion. He may stand quietly for a few minutes, and then suddenly flex the limb, which motion often causes a considerable quantity of synovia to escape in a jet. An injury, not at first penetrating the joint may do so in the course of 3 or 4 days, by sloughing of the tissues, these having been destroyed, but not removed by the violence of the injury.

The discharge of synovia may be slight for a few days after the accident; but it gradually increases as the inflammation advances mixed with flakes of lymph; coagulates upon the tips of the wound, and oozing through this there will be a thin watery discharge. There generally is an exudation of a large quantity of lymph into the tissues surrounding the joint, which becomes partly organized, forming a hard, firm swelling. The excretion from the wound becomes purulent, or tinged with blood, and abscesses are liable to form around the joint. A purulent discharge, tinged with blood and accompanied by well-marked constitutional disturbance, indicates that air and infectious matter have entered the joint, and that the articular cartilages are sloughing. In such cases recovery is doubtful and the best recovery that can be effected is a permanently stiff joint. Unless the animal is valuable for breeding purposes, the owner should consider carefully, whether he will be justified in going to further expense and trouble, or whether it would be wiser to destroy the patient.

Treatment.—If the wound has been inflicted by a clean-cutting object, and the condition noticed promptly, prompt treatment may result in a cure in the course of a few days, if the introduction of air and infectious matter into the wound can be avoided. The patient should be placed in a clean, comfortable stall, and kept as quiet as possible. It is not wise to place in slings, as he suffers very little and slings tend to excite, but he should be tied so that he cannot lie down. The wound should be thoroughly washed with a solution of corrosive sublimate, say 15 grains to a pint of water; the wound then filled with 1 part

iodoform and 4 parts boracic acid, then covered with collodion and bandaged. This dressing (provided considerable swelling or well-marked constitutional disturbance is not manifested) should not be removed for about 10 days, by which time the wound will have healed and recovery have taken place. Of course, such recovery can take place only in cases where no foreign substance has been introduced into the wound and treatment has been adopted soon after the injury has been inflicted.

In other cases, where local and constitutional symptoms are marked, it is not wise to endeavor to check discharge suddenly, as infection has taken place and the infected matter must be allowed to escape. It is now wise to place the patient in a sling. As if he should lie down the exertion and flexion and extension of the limb during the act and when rising, or attempting to rise, tend to make matters worse. The wound should be cleansed with the above lotion, all foreign bodies or partially detached tissue removed and endeavors made to prevent acute inflammation, as far as possible, check secretion of synovia and encourage healing. The constant application of cold, as pounded ice, or irrigation by keeping a small stream of cold water constantly running over the joint, will probably give the best results. If the application be intermittent, the wound should be dressed frequently with an antiseptic, cooling lotion, as one made of 1 oz. each of acetate of lead and sulphate of zinc in a pint of water, or 4 drams each of acetate of lead and sulphate of zinc in 7 oz. water, add to this 1 dram each of glycerine and tincture of muriate of iron. Saturate a little absorbent cotton with this and keep it on the wound.

Different methods of plugging the wound or forming a coagulum are recommended, but the writer's experience has been that it is better to gradually decrease the discharge, as when quickly stopped the pus will seek another exit, which complicates

matters.

Constitutional treatment consists in administering a laxative of 1 to 1½ pints raw linseed oil and feeding on laxative food, and if necessary giving rectal injections to cause movement of the bowels. If pain be excessive it is good practice to administer an anodyne as 1 to 2 drams of the solid extract of belladonna 3 or 4 times daily.

Whip.

for keeping a horse in condition. The forenoons' work is fairly regular, but when hauling in, trotting to the field with the empty wagon is often as hard on a draft horse as drawing the load at a walk. On many farms the custom is to have tea at five o'clock and then work until dark. Too frequently the horses are turned to the mow to secure their supper, and are deprived of grain until the day's work is finished. If man is forced to continue working two hours past the regular time of quitting with only a lunch to sustain him he feels the effects of it. If the horse is to be kept in fair flesh he must have his regular feed at the right time. Sometimes too much is expected of a horse in the hot weather.

At best, haying and harvest is heavy work for horses, and an effort should be made to make it as light as possible. A tongue truck on the mower and binder will lighten the load on the neck and possibly prevent sore necks. During the summer grease wears off the wagons and other implements very quickly. Before the teamster realizes it there is a call for oil or grease. When it gets to this stage the draft has been greatly increased. A little oil makes machinery run smoothly, and well-greased wagons make the load draw light. It is neglect on the part of the teamster to pay attention to details that knocks the life out of his team. It is a pleasure to drive a team that is in good condition and has plenty of life, but it is a disagreeable task goading on horses that have had their spirit broken by hard work and neglect.

LIVE STOCK.

Removing Tuberculosis from Purebred Cattle.

Whether tuberculosis can be entirely removed from all the cattle in an entire province or state and kept away after-such removal has not yet been proved. That it could be done would seem possible, but in a province containing hundreds of thousands of cattle it may be questioned whether the cost involved would justify such a course of action. The experiment in this

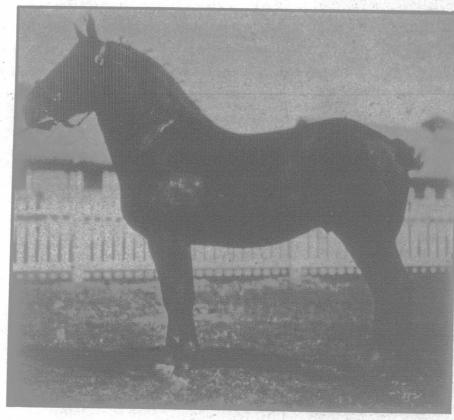
line in British Columbia will doubtless throw light on this question. In that province the testing of cattle for tuberculosis is compulsory when kept for breeding uses. But it is possible to virtually free the pure-bred cattle in a province or state in a province or state from the disease. This has been shown in the experience of the breeders of pure-bred stock in the State of Minnesota during recent years. This experience is worthy of careful observation.

In 1910 the Live Stock Sanitary Board of Minnesota secured the passage of a law which prohibited the sale of pure-bred cattle over the age of one year to any party within the state without furnishing a certificate from the said Board that the animal was free from tuberculosis. The farmers had been prepared gradually for this legislation, which may seem radical, by what had been done previously.

been done previously. Why was this legislation aimed specially against pure-bred stock? For two or three reasons. In the first place the Board had ascertained that it was through the distribution of pure-bred sires more than through any other source that tuberculosis was being distributed throughout the state. In the second place the fact was obvious that when cattle were sold to go out of the state it was usually for breeding uses, and that usually they were purely bred. To have them tested made them ready for shipment to any state calling for such a test without further delay. In the third place, the important cities had adopted measures for the testing of cattle which supplied milk for the same and these were usually grades. It was felt that there was no possity for distinctions this was the same and these were usually grades.

that there was no necessity for duplicating this work.

What was the outcome? In the first place virtually compelled the owners to test their car. They grew them for sale, and after they were year old they could not sell them as breeders up the year old they could not sell them as breeders up the year old they could not sell them as breeders up the year old they could not sell them as breeders up the year old they could not sell them as breeders up the year old they goard after the year a request to have an animal test to have had sold. They found it was far year after the whole herd tested every year. The year they was free from tuberculosis result was that lasted a whole year. The second they was free from the year. The second they was the year of the year of the year. The second they was the year of the year. The second they was the year of the year. The second they was the year of the year.



A Three-year-old Percheron Stallion.

Attend to Details and Save the Team

July and August are usually hard months for the average work horse. The work may not be as steady nor as heavy as at some other season of the year, but irregular hours and frequent change of work appear to have a detrimental effect on the animal system. Many horses get thin and have a haggard appearance. In the busy season of haying and harvest there is a tendency to somewhat neglect the horses. They are rushed from barn to field, oftentimes given only a short time to feed and go from noon to sundown without their grain ration. As they are too wet to clean properly they are turned to the pasture uncleaned for the night. It is not the work that hurts the horse so much as the irregularity in feeding and lack of sufficient cleaning. It does not pay to neglect the teams. Although a few minutes extra time may be gained in harvesting the crop, the spirit of many horses is broken, and they do not regain their usual life for the fall work. In the end time is lost.

Turning the horse on pasture is good for it, but when doing heavy work it should have its regular feed of grain in the morning, and be given a thorough cleaning to remove sweat and dirt from the skin. There is often as much in the cleaning as in the feed

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the disease was virtually almost stamped out in purebred herds. This has been accomplished in five years. In 1915 less than one per cent. of the pure cattle tested reacted. In 1908, seven years previously, the reactions in the same were 36 8-10 per cent. The third result was that soon the breeders became anxious to have their herds tested, however hostile they may previously have been to the test. They found it was better in every way to grow cattle free from tuberculosis.

The change of sentiment on this question in Minnesota during recent years has been very great. Even as late as 1903, when the Live Stock Sanitary Board was formed, the breeders of pure-bred cattle in the state were almost a unit in their opposition to the test. They vowed that it was not reliable. They claimed that it injured the cattle and said many other things against it. A few of them, however, did not think thus. They tested their herds and advertised the fact, and this gave them an advantage in selling which led to others doing the same. But still the progress was slow until the law was passed that compelled the breeder to furnish a clean bill of health with every pure animal that he sold that was over one year old.

The owners of live stock in the state have been leniently dealt with in the case of animals found tuberculous. The animals which fail to pass the test are kept under strict isolation or slaughtered. Those that are slaughtered are paid for as follows: Before slaughter they are appraised. The appraisal may be as high as the real value of the animal, but it cannot go beyond \$150. It is then sold when slaughtered. The price obtained for the carcass is then deducted from the appraised value, and the owner is paid three-fourths of the difference, and also the value of the carcass. This treatment is at least fairly liberal, and it also has done much to disarm opposition to the test.

It is in a sense surprising that the tuberculin test has met with so little favor in Britain. The proportion of the herds tested is relatively small. This is all the more surprising when countries that import from Britain are a unit in demanding a certificate of test with reference to every animal imported. When the writer selected animals that were to be imported for Mr. Hill in 1913 and 1914, not a few of those at first selected and bought on the condition that they would pass the test failed to pass it. In every instance they were left in the herd. Can a more effective way be imagined of spreading the disease? Many of the breeders will tell you frankly that they have no faith in the reliability of the test. In such instances the conclusion may be safely reached that there is more or less of tuberculosis in that herd.

Some herds are tested, and the number of those is on the increase. These are the herds to buy from when importing. In one such herd the writer bought 27 animals without a single instance of reaction. In another herd, one of the largest in England, six cows were bought conditionally. Five of the six failed to pass the test. The sixth was brought to this country and when tested she reacted. Thus it is that though an animal should pass the test in a herd that is much infected in Britain there remains the hazard that the germs of the disease have been contracted, and that they are in process of incubation. If importers generally aimed to buy only from breeders who regularly tested their herds, the influence on those who did not would be very wholesome. Of course, where herds are badly infected, to remove the infection will involve loss, but the loss will be less than it would be in the end if the infection were not removed.—Prof. Shaw, in "The Farmer's Advocate and Home Journal," Winnipeg, Man.

English Live-stock Notes.

Editor "The Farmer's Advocate":

The English Dairy Shorthorn Association prints in its 1916 Year Book the milking records yielded by 505 cows between October 1, 1914, and September 30, 1915. Thirty cows gave 10,000 lbs. of milk and over; 50 cows 9,000 lbs.; and 59 cows 8,000 lbs. Yielders of over 11,000 lbs. I quote below:

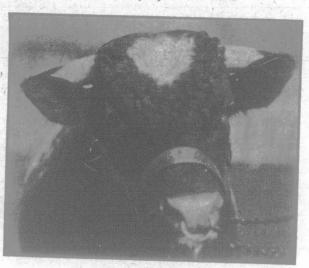
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For sappy, dairy Shorthorns capital prices were secured at J. C. Cooper's sale at East Haddon, averaged \$293.82, and three bulls \$246.66 apiece, whilst six bulls submitted for sale by Captain A. S. Wills, at the same time, averaged \$378.12, and so gave the sold. One bull, Thornby Don, a rich dark-roan yearling by Drusus, from Victoria 2nd, giving over 60 lbs. of milk daily with her second calf, made 200 guineas, Burge. One of the beet type, the kt. Hon. Frederick Dublin for 900 guineas, or about \$4,500. This sale prices wer got considering.

The show season has started, and the Suffolk Agricultural Society gave us a fine all-round exhibition of breeds chiefly produced in Eastern Anglia. Suffolk horses were, of course, well represented, and the competition was chiefly between studs of Kenneth M. Clark, Arthur T. Pratt, and Sir Cuthbert Quilter. Pratt showed the champion stallion, in Morston Friday, last year's Royal Show champion. The champion mare was selected from the yearling fillies. She was Kenneth Clark's Sudbourne Moonlight by the unbeaten Sudbourne Peter. Arthur Pratt also did well with his stallions, taking firsts in the two-year, three-year and aged classes. The best collection hailed from Sudbourne Stud.

Red Poll bulls were a particularly fine lot, the champion being W. Woodgate's four-year-old Redgrave Reveller. He was second at the Royal last year. The Easton herd of the Marchioness of Graham supplied the champion two-year-old heifer, Marham Alma.

Jerseys were of exceptional quality. Joseph Carson had an outstanding win in what could be called the champion male class with his young bull, Minley's Self Acting. W. M. Cazalet won the female championship with his cow Jolly Berne Lass.



Shorthorn Character.

The head of a champion and high-priced young Shorthorn bull.

Suffolk sheep made a capital display, and Herbert Smith easily held his own, taking championship for best pen of ewes, while he also won the award for best collection. Miller Osmond won championship for two-shear rams, and Lady Wernher was winner of champion trophy for Southdown shearing expensions.

shear rams, and Lady Wernher was winner of champion trophy for Southdown shearling ewes.

Best beef in London is making up to \$2.28 per 8 lbs. Best sheep are making from \$2.24 to \$2.48 per 8 lbs. Lambs sold up to \$2.88 per 8 lbs. for best, and \$2.64 for second grade. At Ashford, best beef is fetching \$2.12 per 8 lbs. Prime Scots cattle at Leeds are costing 28 cents per lb. Prime English and Scots at Salford average 27 cents per lb. At Leicester Scotch bullocks make 28 cents per lb. Shorthorns 27 to 27½ cents, young cows 24 to 25 cents, heifers 27 to 28 cents. At Darlington sheep in wool make 30 to 34 cents per lb. Pork at Lincoln make \$2.52, a stone of 14 lbs. At Cambridge it is worth \$2.64 to \$2.88. Porkers at Newcastle realize \$3.00, and bacon pigs \$2.88 a stone. Strong store pigs at Kirbymoorside are sworth \$9.60 to \$12, and small store pigs tange from \$8.40 to \$9.60. Milch cows at Wakefield sell up to £40, and store cattle at from

T. A. Buttar, a Scottish breeder of the Shrop-shire sheep at Corston, Coupar-Angus, has sold to John Miller, Jr., Ashburn, Ontario, 102 ewes and 27 shearling rams of rare quality.

To a Connecticut lover of the Aberdeen-Angus breed, J. J. Cridlan, Maisemore, England, has sent five valuable specimens of rare breeding.

The Importance of Good Pasture.

In live-stock farming the pasture land is becoming a very important factor. With ample silo capacity, plus soil and climatic conditions favorable for the production of corn, a farmer can winter a goodly number of live stock on 100 acres. He then gradually cuts into the pasture to provide more available land only to find that his wintering problems have vanished

and have been replaced by the difficulty of procuring sufficient grass for summer. When labor was reasonably plenty the old pasture land could be made to yield more abundantly under hoed crops or grain than under grass, and for several years there was much breaking of the sod and a continual diminution of the permanent pastures. At present, with few farm laborers available, one man on 100 or 150 acres will find it difficult to maintain the balance he has adopted between his cultivable and grass land, and will probably be obliged to relinquish some fields previously cropped. Too often the pasture receives no consideration except adequate fencing, and here is where we lose through neglect. A farmer is a busy man in summer, and has little time to devote to his store or growing cattle. Nevertheless they should be thriving and putting on gains, for if this is not accomplished during the grass season they will make costly cows or feeders. In some instances it requires 3 acres of grass for one cattle beast, this is too much; often two head are maintained on each acre, and we have seen grass land that would and did support one head per acre. The latter condition is getting near the ideal. On Jersey Island, with an area of 28,717 acres, there were about 40,000 head of cattle kept for years, but the soil is fertile and the climate mild. Undoubtedly the character of the soil and the nature of the summer weather are influential factors in determining the possibilities of our pasture land, yet viewing these from the standpoint of averages we do not so handle our grass lands as to induce them to carry the numbers they should.

the numbers they should.

If there is to be an increase in pasture land, as we expect there will, some thought and attention should be given to the matter. First, as regards seeding, a clover and timothy sod is not the most productive. When to be used for pasture land, it should be seeded with a mixture of grasses and with the kinds that are likely to bear in different periods of the season. On low-lying land, red top is useful, and alsike clover does well, both to be sown with timothy and red clover in diminished quantities. A mixture of red clover, timothy, meadow fescue, Kentucky blue grass, white clover and red top grass will make a far better pasture than will timothy and clover sod. Second, as regards fertilization there is much that can be done. Upland pastures can be improved very much by a top-dressing of barnyard manure, and where this has been done it has paid handsomely. Sheep manure, however, should not be applied to land where sheep are allowed to graze. Disease and insect pests are spread in this way. Basic slag is a good invigorator, and bone meal is serviceable, particularly where phosphates are required. Lime, too, will often effect a change for the

A whole book could be written on the care of pastures, but it is our object here only to direct the attention of our readers to the importance of their grazing lands. They are becoming an important part of each farm holding, and when the maximum number of animals per acre can be carried over summer a step will be made towards the maintenance of more live stock.

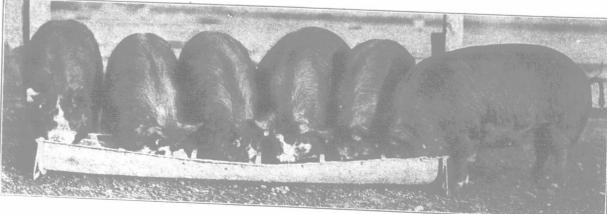
THE FARM.

Another Letter on Economy.

Editor "The Farmer's Advocate":

After reading Mr. Good's "Reply on Economy" in the June 15 issue of your paper in which he accuses me of writing a letter largely of invective, I felt that, though paying him in his own coin, I had perhaps been rather generous with it. If so I humbly beg his pardon. And were it not that my name appears at the end of the letter to which he refers, not because I put it there, but because otherwise the letter would not have been published, I would have said no more about it, but would have let him march out with the honors of war. Justice and courtesy, however, demand an answer.

The reason I did not reply to his "protest" concerning a letter on co-operation was that as "the "Farmer's Advocate" is devoted largely to practical farming and has little sympathy with mere wordy controversies I did not wish to use valuable space by an unprofitable discussion. And the reason I did reply to his articles on political economy was not that I entertained towards him a feeling of malevolence, but that I did not want to see Canadian farmers deluded into thinking that a great stimulation would come to agriculture



ALBION.

A Berkshire Banquet

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by the simple application of Mr. Goods theories. Nevertheless, he has shown himself to be possessed of considerable ingenuity both in the articles above referred

to and in his answer to my last letter.

In that letter I attributed to Mr. Good the statement that Canadian farmers buy two-thirds of all goods imported as well as of those made in Canada. He however, repudiates that as a misrepresentation. Of course if I do not quote his exact words he can always reply! "I did not say that." This then is what he did say. After arriving at the conclusion that there is an indirect tax of \$270,000,000 on all homemade goods consumed in Canada, he homemade goods consumed in Canada, he says: "A very conservative estimate would place the farmer as purchaser of fully twice as much in the way of manufactured articles as the average city worker." If Mr. Good contends that that statement refers to only protected goods made in Canada and dutiable imports he may as well say that any other statement means something else. And by what strange process of reasoning he concludes that farmers buy a much smaller proportion of free goods and unprotected manufactures

than of others I cannot understand. An examination of the lists of those goods does not warrant that conof the lists of those goods does not warrant that conclusion. Supposing, however, that the farmer buys only one-third of these articles, some very simple mathematical deductions from Mr. Good's figures would still show an agricultural deficit of about \$200,000,000.

Mr. Good appears to be rather mystified by the last sentence of my letter and would like it elucidated. One of the laws of human nature is that man is a gre-

One of the laws of human nature is that man is a gregarious being and enjoys the society of his friends. But some, like Mr. Good's first settler, for the sake of But some, like Mr. Good's first settler, for the sake of financial betterment, are willing to forego that pleasure for a period of many months or perhaps years. And so they settle beyond the confines of civilization hoping eventually to possess a good farm in a prosperous community. But when that day arrives Mr. Good's taxing machinery would be set in motion and would take from them this so be set in motion and would take from them this so called "unearned increment;" unearned perhaps by the sweat of their brow, but certainly earned, as few of us would want to earn it, by years of privation and solitude. This would, in many cases, be the unhappy

ending of ignoring the laws of human nature in our blind attachment to principles based on economic theories. There would be "confusion worse confounded." Mr. Good would, I fear, find considerable difficulty in arriving at a just estimate of this "unearned increment." He has bestowed sufficient thought upon economic problems to understand that land in itself has no value apart from that given it by the world's population. And, if he is going to do absolute justice to all, any increase in value must go to the whole working population. This would necessitate the organization of a co-operative commonwealth where everyone would receive wages according to his ability and the necessaries of life according to his needs.

Whatever flaws we may pick in Mr. Good's theories there is no doubt that his intentions are good, that he is zealously working in the interests of farming and Canada's prosperity and as such is worthy of our attention and, if possible, our support.

Hyper County Ont

Huron County, Ont. JAMES LOVE.

Increase the Yield of the Potato Crop by Controlling Diseases

Potatoes are successfully grown on different kinds of soils and under varied climatic conditions, but there are few crops produced in which the yield is so materially influenced by the treatment given it during the growing season. Of course, the variety planted, nature of soil and weather conditions play an important part, but if the grower neglects to use the cultivator or allows bugs or disease to get in their destructive work, a profitable crop need not be expected. The soil should be frequently stirred, the bugs kept in check, and an effort made to control diseases to which the plant is susceptible. Lack of cultivation permits the soil to become firm, and the tubers have no opportunity to expand uniformly tubers have no opportunity to expand uniformly in all directions from the parent stem. After the crop is planted the harrows should be used a time or two to keep a dust mulch and destroy any weeds that might germinate. As soon as the rows can be followed the horse cultivator may be worked. The first time over the field cultivation should be fairly deep, as it is the last opportunity to safely loosen the soil between the rows to the depth of the tubers. The tiny feeding roots soon spread out, and before the season is over will practically reach from row to Several cultivations through the season are neces-On sandy or light loam soil level cultivation is usually followed, although some growers prefer to mold the soil to the rows the last time over with the cultivator. With this method there is less danger of loss of moisture than from rows banked high with the plow. However, in clay soil or in a wet season the deep furrows drain the excess water away and there is less danger of rot setting in. It is necessary in either case to have the growing tubers covered with soil to prevent sunburn. The looser the soil around the tubers the more even they grow.

Colorado Potato Beetle.

The potato beetle is known to all growers in districts where the crop has been under cultivation for a number of years. It is claimed that the beetle has not found its way to some of the newer sections. Where it is common it soon strips the leaves from the vines unless steps are taken to control it. Many crop yields are greatly reduced by having the first leaves of the plant destroyed. Without a full growth of the foliage the manufacturing process which goes on in the plant is hindered. The adult beetle hibernates during the winter, but puts in its appearance about the time the first shoots peep through the ground. Eggs are laid on the underside of the leaves or on blades of grass or weeds which happen to be near. These eggs hatch in about seven days, and it is the young larvæ that feed so ravenously on the tender Where only a few potatoes are grown it is a good plan to go over the patch a couple of times and destroy the adult beetles. This will save anv further trouble However, this is not practicable where the crop is grown on a commercial scale. Poisons or insecticides must be relied upon to keep the bugs from completely destroying the vines. As the eggs are not all laid at one time, it is frequently necessary to apply poison several times during the necessary to apply poison several times during the season. Paris green is most commonly used, and may be applied as a dry powder or dissolved and put on with a watering can, knapsack sprayer or large twelve or more nozzle outfit, made on purpose for doing the work rapidly. When used dry it is customary to mix one pound of the green with 50 pounds of slaked lime land plaster or some other dry powder. of slaked lime, land plaster or some other dry powder, and shake it over the vines when they are damp. A small can with a number of holes punched in the end may be used to apply the material if a speciallymade receptacle is not at hand. When a sprayer is used 8 ounces of Paris green to 40 gallons of water proves effective. Some growers advise adding several ounces of lime to neutralize the effect of burning by free arsenic in solution. Three pounds of arsenate of lead are required to 40 gallons of water in order to supply sufficient poison to destroy the bugs. While this material is slower acting than Paris green it is not so readily washed off the vines, consequently in a wet season it is preferable. The use of one-half the regular quantity of each to a barrel of water is recommended by some growers. At least two and sometimes three applications are necessary. With 40 gallons of the material to an acre, the amount of Paris green required to control the bugs on one

Early Blight. The concentric markings are characteristic of this disease. From Minnesota extension bulletin No. 35,

acre will cost in the neighborhood of 50 cents. When arsenate of lead is selling at 12 cents a pound each application will cost 36 cents per acre for material alone. This is not expensive, and an effort should be made to have some kind of poison on hand, so that the larvæ may be attacked before they destroy too much of the foliage. Besides the poisons mentioned there are several prepared mixtures on the market that have proved effective.

Of recent years a predaceous insect known as the soldier bug or friendly perillus has been found destroy-



Late Blight. From "The Potato," by Grubb & Guilford.

ing the larvæ of the Colorado beetle. When they increase in numbers they may be able to cope with the situation and save using poisons. This new bug can be recognized by its black color with orange or yellow markings.

Late planted potatoes oftentimes escape attacks of the bug, but when planting is delayed the season of growth is shortened and the yield usually decreased.

Late Blight.

Late blight of potatoes not only attacks the foliage of the plant, but follows down the stem to the tuber

where the disease may remain dormant. However, it frequently causes rot to develop either before the potatoes are dug or after they are placed in storage. This disease causes a heavy loss to many growers every year. With warm, moist weather the latter part of July, August and September the disease spreads very rapidly, and a whole crop may become badly infected in a few days if some means is not taken to grand against it.

taken to guard against it.

The disease is caused by a blight fungus which may winter in the tuber and be planted the following spring. Infected tubers usually send up weak shoots bearing the fungus fruiting spores, which are spread from one plant to another by cultivation, splashing the class coming in contact with seals. of rain, and the plants coming in contact with each other. The first indication of trouble is seen on the tip or edge of the leaf. Under favorable conditions the fungus spreads very rapidly and soon destroys the tissue of the whole leaf. An offensive odor is detected in every badly-infected field. The characteristic leaf markings are a water-soaked appearance in damp weather, and in dry weather they are usually brown. The diseased leaves are no longer able to perform their The diseased leaves are no longer able to perform their

customary work, consequently the tubers seldom increase much in size after the plants become infected.

As the development and spread of the disease depends a good deal on weather conditions, it may not do much harm one year but be quite prevalent the next. Because the crop is free from an attack this year is no guarantee that it will not be infected the following season. It is always advisable to guard against any chance of infection. Planting clean seed and following a system of crop rotation are the first means of control. This should be followed by coating the leaves and stems with Bordeaux mixture every ten days or two weeks after the plants are six inches high. This material destroys the spores of the disease before they gain an entrance to the leaf tissues. In a wet season five or six applications may be necessary, while in an ordinary season less may be sufficient. The proper strength of Bordeaux mixture carefully applied has saved many crops of potatoes from being a failure. Not only does it prevent blight developa failure. Not only does it prevent bight developing, but it appears to have a stimulating effect on the leaves. Invariably the foliage of a treated crop is larger and healthier looking than that of the untreated crop, even though no disease be present. Experiments have shown that it is possible to materially increase the yield by several applications of Bordeaux.

Bordeaux Migture.

This material is made by using 4 pounds of copper sulphate and 4 pounds lime to 40 gallons of water. Copper sulphate is rather hard to dissolve in cold water, but if it is put in a coarse sack and suspended in hot water it will readily go into solution. A wooden pail should be used, as the material will destroy tin or iron, and iron has a detrimental effect on Bordeau. deaux. For immediate use dissolve the copper sulphate in one vessel which holds 20 gallons, and put the lime in another of a similar size. Lime that has not been air slaked should be used and slaked in a small quantity of water, then add water to make up to the 20 gallons. The two solutions may then be poured into one receptacle. An ordinary barrel will hold 40 gallons, which is sufficient to go over one acre, provided nozzles are used that will give a fine spray. The material may be effectively applied with the small, hand sprayer, but where there is a considerable acreage grown the work can be done more quickly and thoroughly with a power machine. Tanks are and thoroughly with a power machine. Tanks are built on two-wheeled carts with the power developed from the wheels. The nozzles are arranged to apply the spray underneath and on top of the plants so that no part escapes being coated with the spray material. Different sized machines are on the market. Three or four rows may be sprayed at once, according to the number of nozzles used. To do the work most effectively plenty of pressure must be generated The required amount of material applied at too lo pressure may not control the disease.

Where a considerable amount of spraying is done it is advisable to make a stock solution of Pordeaux. Dissolve the copper sulphate at the rate of one pound to one gallon of water. Slake lime and add water to make the proportions of one pound of lime to one gallon of water. When using the stock solution one gallon of each would represent one pound of the dry

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material. Four gallons of each would be required to make up 40 gallons for spraying. They should be diluted separately to 20 gallons before mixing together. In case there might be any dirt or lumps to clog the nozzles the material should be strained into the barrel. Paris green or arsenate of lead may be mixed with the Bordeaux, and one application serves two purposes.

Early Blight.

This disease is caused by a fungus, but is not nearly so destructive of the crop as late blight. It usually appears in July and may continue to work throughout the season. It is distinguished from other leaf diseases by the concentric markings on the leaves. These may increase in size and cause the leaves to die back from the margin. The stems are not affected, but the death of the leaves interferes with the production of tubers. Bordeaux mixture will control this disease, and at the same time go a long way in preventing the more destructive blight getting a start.

Little Potato.

There are several diseases which cause heavy loss in some sections, but no spray material has yet been found that proves effective in checking their spread. Every grower should look over his crop occasionally and be on guard against new but destructive diseases attacking the crop and getting into the soil. Some of the newer diseases remain in the soil for a number of years, rendering it unfit for potato growing. The disease known as little potato is quite common in some districts, but does not usually cause much loss. The leaves often curl and the tops have a semical to the control of the co The leaves often curl and the tops have a compact appearance. Small, green potatoes are frequently produced above ground in the axils of the leaves, at other times they are found growing in clusters just below the ground surface. This reduces the crop considerably. Infected tubers are often covered with small, dark masses resembling bits of soil. These contain a fungus which may spread rendering the tubers unfit for seed, and sometimes are the means of causing rot to start. Diseased plants should be destroyed in the field. In order to control the disease only clean seed should be planted, and it is advisable to treat suspicious looking tubers with formalin as for common scab.

Blackleg.

This is a bacterial disease which is spread by seed tubers. Reports from several districts indicates that this disease is gradually spreading. It has been introduced to this country on imported seed. Infected tubers not soon after being planted, which results in a wealth stand of plants being produced. The rot spreads up the stem, turning it black. The plants stop growing, have a sickly appearance, and frequently die before any tubers are set. In sections where die before any tubers are set. In sections where potatoes are grown for seed every effort should be put forth to prevent this disease becoming common. Disinfecting the seed and destroying diseased plants are control measures.

Fusarium Wilt.

This is another disease which is not common, but may be distinguished in the field by rolling and wilting of the leaves, causing premature death of the foliage. The leaves appear to lack moisture, but death seldom occurs until within three or four weeks of the normal time of maturing. Therefore, infected hills may be passed unnoticed in the field. The disease extends to the tubers, forming brownish rings at the stem end. Tubers often develop rot in storage although many do not, and are a source of infection if planted. It is through seed that the wilt is spread, consequently being careful to select healthy tubers for planting is the best means of control.

Potato canker, black rot, powdery scab and common scab are diseases affecting the potato canker.

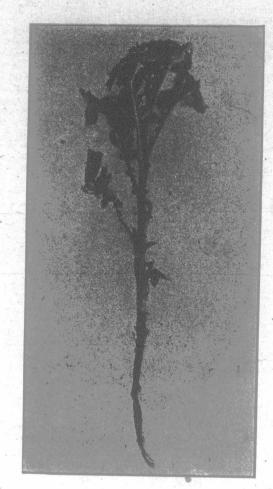
mon scab are diseases affecting the potato, causing heavy loss wherever they become established. Their presence in the field is not shown by the foliage, therefore, the loss is not known until the tubers are

Rogue the Crop.

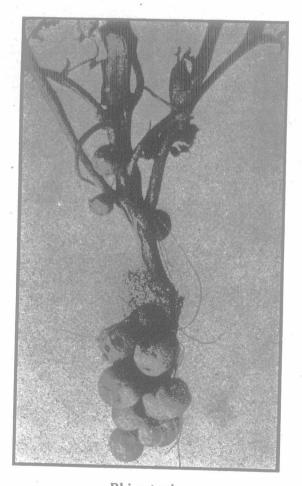
Every potato grower grow the crop for seed purposes, should go over the field carefully at least twice during the season, preferably about the time the plants are blossoming, and destroy any that show symptoms of the diseases mentioned so that no tubers will form. This will aid in preventing the spread of the disease through seed. Any plants not true to variety should also be removed from the field, or else marked so that they may be dug when mature and kept by themselves. Plants that appear a little different from the average might be marked, so that a study could be made re garding the relation of type or size of tops to yield and size of tubers. Hill selection has been the means of increasing the yield of potatoes. If there is not time to rogue the entire patch a few rows should be done, and the mature product from these rows saved

It has been proven that the two potato blights an be controlled by spraying with Bordeaux mixture. commence when the plants are 6 or 8 inches high, and give at least three applications at intervals of ten days or two weeks. To be effective the plants ten days or two weeks. To be effective the plants must be covered with a fine mist. Cost of spraying material being higher than usual should not deter any grower from spraying to prevent the disease developing. The cost of material will not exceed \$2.00 per acre for each application, and the returns may be ten fold. Any suspicious-looking plant should

be removed and an endeavor made to prevent diseases, that might infect the soil as well as the tuber, from becoming established. The heavy yearly loss caused by disease could be largely overcome by the growers planting clean seed, and then giving the crop proper treatment during the growing season.



Black Leg. Note the diseased stem. From Penn. Bulletin No. 140.



Rhizoctonia. Showing development of tubers on stem. From "The Potato," by Grubb & Guilford.

Daylight Saving Versus Efficiency. EDITOR "THE FARMER'S ADVOCATE"

In an issue of "The Advocate" some weeks ago, noticed an article in which the writer, R. H. Harding, roticed an article in which the writer, R. H. Harding, called upon farmers to give their opinions regarding the so-called "daylight saving". In his criticism of the scheme Mr. Harding meets with my hearty approval.

Where it possible to "save daylight" by so simple a means as moving the hands of the clocks forward,

the world would have done so before nineteen hundred and sixteen, A. D. By this time the day has been so suitably divided in accordance with the habits of the people, that so far as I can see, no improvement can be made on the existing system. It is utter non-sense to imagine that the lifelong habits of a people can be changed by simply putting forward the time by a definite number of hours.

Among us farmers the chap, who does not now utilize every available hour of daylight for the advantage of his farm work, is not the farmer who is going to do the country much good. Further, as Mr. Harding points out, every farmer knows that for killing weeds and harvesting the crops one hour in the evening is worth many in the early morning. If some of the "daylight savers" would kindly enlighten me as to what advantage a daylight-saving law would be under such circumstances I should be much obliged. In our towns and cities let us suppose that the average working man retires at 10 o'clock p. m. [standard time]. If a daylight-saving law were passed it is not likely that he would go to bed an hour earlier, which would be shortly after dark in the summer months. But work would start an hour earlier in the morning, so that one hour's every available hour of daylight for the advantage of an hour earlier in the morning, so that one hour's sleep would be given up every morning for one hour's pleasure the night before. It is a well known fact that

sleep would be given up every morning for one nour's pleasure the night before. It is a well known fact that already, especially among the younger people, far too many hours' sleep are sacrificed for amusement; why decrease further the efficiency of the working people, when one of the things that the nation needs most at this time is greater personal efficiency?

Perhaps the most objectionable feature in connection with this scheme is the way it is being introduced throughout the country. Almost daily the press bears record of its adoption in some town or city of the Dominion. The only possible result that can come from such a haphazard distribution of "daylight-saving" centers will be endless confusion and inconvenience, especially to the travelling public. If the plan of "saving daylight" by moving forward the hands of the clocks must become law, let it be adopted universally throughout the country. However, if the legislators and agitators of such shallow and sensational "schemes" would devote more of their time and energy to saving needless expense rather than the freer daylight, I feel assured that Canadians would appreciate more their patriotic efforts.

Perth County, Ont.

EXCELSIOR.

Perth County, Ont. EXCELSIOR.

England's Farm Labor Problem.

EDITOR "THE FARMER'S ADVOCATE":

Considerably over 50,000 women have registered in the villages of England in connection with the scheme being carried out by the Boards of Agriculture and Trade to recruit women labor for our farms. And let it be added that the farmer is coming forward in a much more encouraging way, and making use of the women on the register. Laughed at at first, the truth is being borne steadily home upon farmers and breeders of live stock that there are many valuable uses which the help of the gentler sex may be put to. They proved it during the lambing season. They have already earned clorious opinions as sex may be put to. They proved it during the lambing season. They have already earned glorious opinions as careful and expert shearers, and now, in the show ring, they are found to be quite capable of exhibiting young stock, and particularly cattle not too bulky of frame and reasonably amenable to quiet handling. Lord Selborne, the Minister of Agriculture, has told us that he can only enlist women's help on the land and on our stock farms by appealing directly to their patriotism, but he has succeeded very well, and each week brings more and more recruits to the large army of women workers. Judged on the efforts that are being put forth all over the country to secure still more willing and patriotic workers of this kind, the 50,000 figures should be well nigh doubled ere the 50,000 figures should be well nigh doubled ere the cereal harvest is upon us. Let me add that at the Suffolk County Show, held in Ipswich, England, a little time ago, a woman "herdsman" led into the ring and exhibited a Jersey heifer. She did it very well too, and got into the money with her charge.

Between them, the Yorkshire Council of Agricul-tural Education and the Agricultural Department of the University of Leeds seem determined to address themselves to the subject of training women workers. Their idea is to get farmers to receive several women for a fortnight's preliminary training. The farmer is to house and feed his pupils, for which he will receive half a sovereign a week each from the Agricultural Council. At the end of the fortnight the probationers may go to other farms or stay with their teacher if he wishes. It is recognized that only the good sense and patriotic spirit of the farmers will induce them to undertake this work, as little value could be attached to the assistance rendered by women, at any rate during the first week of their stay on the farm. These proposals were made so recently that it is impossible to say yet how far they will answer. Negotiations with the object of bringing suitable women workers, and farmers willing to receive them together are so delicate that a little more time must be allowed for the experiment. A considerable number of farmers would be willing to train, say, four women each for a fortnight if they could find accommoda-tion for them. That is one of the foremost difficulties. Another drawback is that of finding sufficient women to meet the requirements of the farmers. Women of the middle classes, to whom the question of wages is not an important consideration, are readier to undertake farm work than women of the industrial classes, to whom the rewards of the munition and other factories, and of other employments in civil life are too strong for them to resist.

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A training scheme worked by Mrs. Herbert Peake, at Bawtry, Yorkshire, has created much interest, and may probably be intimated with advantage. Twenty girl pupils, furnished in relays of ten a week, are actively engaged full ordinary farm hours doing

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does not now utilize or the advantage of no is going to do the Mr. Harding points killing weeds and he evening is worth me of the "daylight s to what advantage r such circumstances working man retires nel. If a daylightcely that he would ould be shortly after work would start so that one hour's ning for one hour's ell known fact that

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EXCELSIOR.

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add that at the swich, England, an" led into the She did it very th her charge. uncil of Agricul-Department of nined to address women workers. e several women The farmer ıg. which he will from the Agrine fortnight the r stay with their ed that only the he farmers will , as little value dered by women, heir stay on the o recently that hey will answer. ringing suitable to receive them more time must iderable number ay, four women nd accommodaforemost diffifinding sufficient of the farmers. the question of ion, are readier of the industrial

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in civil life are

all kinds of work that a man could possibly be set to do on a farm. Each pupil is vigorously trained to do on a tarm. Each pupil is vigorously trained for a fortnight, and she is sorry when it is over. They are housed on one of the three holdings which Major Peake farms on the Bawtry Hall estate. The day's work includes milking, feeding calves, pigs and poultry, lessons in handling horses, wood cutting, stock tending, and cleaning out byres and stables. Though usefully varied, the work is not hard, and the food and companionship are pleasant. Such experi food and companionship are pleasant. Such experiments as this ought surely to help to brush away much of the prejudice which keeps apart farmers and the women who could and would help them.

Thousands of women in France to-day are energetic agricultural workers, many compulsorily so by reason of the war, and a question is now discussed in that country as to whether they are competent to look after live stock to the best advantage. It is conceded, however, that, so far as horses are concerned, women can be taught to manage them pretty successfully, both in the stable and out, if such teaching is begun when the pupils are young, and that they must be gradually strengthened to the work. Big cart horses, gradually strengthened to the work. Big cart horses, for instance, are not always an easy proposition. Whilst of an amiable temper, as a rule, and docile enough, they are apt to be ponderous in their movements and slow to convince. Grooming operations, again, might prove to be a difficulty. But, at the present time, in many parts of France, girls and women are looking after horses of all kinds with success, doing splendid work in that way. "They have begun young," say the experts, "so acquiring strength and confidence; a little later, and they might have been afraid to pick up a horse's foot." It is satisfactory to read, moreover, that stable and similar accidents are now rare in France, and that many even quite young girls soon make friends with the horses.

Just as I close this note I learn that the War

Just as I close this note I learn that the War Office has allowed the following male labor to be left

One able-bodied man to every team of horses, the team to be the number of horses required to plough any particular holding—a two-horse or three-horse

One able-bodied man to every twenty cows in milk, with the assistance of a boy or woman.

One able-bodied man to every fifty stall-fed cattle, with similar assistance.

One able-bodied man to every 200 sheep on enclosed land, exclusive of lambs.

One able-bodied man to every 800 sheep on hills.

Canada's Men of Military Age.

The last number of the Census and Statistics Monthly, published by the Department of Trade and Commerce carries an analysis of Canada's population, chiefly regarding the men 18 to 45 years old or of military age. Percentages of Canadian born, British born and foreign born are also given. The accompanying table compiled from the Census of 1911 is self explanatory. It sets forth where the different classes of man of military It sets forth where the different classes of men of military age are to be found.

Percentages by Provinces.

Provinces	Canadian born p. c.	British born p. c.	Foreign born p. c.
Canada	64.49	17.82	17.69
Prince Edward Island.	98.37	0.93	0,70
Nova Scotia	87.22	8.57	4.21
New Brunswick.	93.42	3.45	3.13
Quebec. Ontario.	87.44	5.90	6.66
Untario	70.57	18.38	11.05
Manitoba.		32.43	26.95
Saskatchewan	38.51	24.46	37.03
Alberta British Columbia	30.46 26.23	26.00 34.57	43.54 39.20

Of the total Canadian born 18 to 45 years of age, the Maritime provinces possessed 15.03 per cent., Quebec 30.81, Ontario 37.04 and the Western provinces 17.12 per cent., of the total British born, the Maritime provinces contained 3.57 per cent., Quebec 7.53 per cent., Ontario 34.93 per cent. and the Western pro-

cent., Ontario 34.93 per cent. and the Western provinces nearly 54 per cent; while of the foreign born 2.10 per cent. were in the Maritime provinces, 8.56 per cent in Quebec, 21.15 per cent. in Ontario and 68.19 per cent. in the Western provinces.

Canada, says the "Census Monthly," had 1,720,070, of a male population between the ages of 18 and 45 years on June 1, 1911. They were located in the different provinces as follows: Prince Edward Island, 16,868; Nova Scotia, 98,493; New Brunswick, 68,710;

Quebec, 390,897; Ontario, 582,246; Manitoba, 122,762 Saskatchewan, 158,907; Alberta, 122,915; British Columbia, 158,272. The report says still further:
While these figures represent conditions existing on June 1st, 1911, yet, because of the heavy British immigration in 1912, 13 and 14 as well as to the known tendency of young and 14 as well as to the known. tendency of young countries to maintain a high birth rate, they also show fairly well the numbers from which eligibles for military service may now be expected.

Wet Weather in the Eastern Townships.

EDITOR "THE FARMER'S ADVOCATE":

We were pleased to read the letters in "The Farmer's Advocate" from Prince Edward Island; it seems good to know that there is one spot at least that crops and season are favorable. Here in the Eastern good to know that there is one spot at least that crops and season are favorable. Here in the Eastern Townships of Quebec we have had such continuous rain, with cloudy, cool weather, that seeding is not finished yet. I think this season beats the memorable year 1867 for rain and cold. Still we have escaped frost. Oats are now being sown for fodder in place of corn. An odd piece of corn, planted at the usual time, may be seen looking very yellow and small. Others never came up; many potatoes rotted, and had to be planted over, and not over forty per cent. of the oats sown will even have a ghost of a chance to ripen. We sowed 5 acres to-day, June 24, it being the first time this season that the ground would do at all to sow, and now even it is too wet. The early sown grain, on dry ground, is like what Sandy Frazer said last week about the grain in Ontario: "The least said the better." Grass looks well, and early potatoes on dry ground look fairly well. Lots of ground that had a heavy growth of corn last year has been seeded in the mud, or else not plowed at all, and it is very rare to find a piece of grain seeded and finished up as it should be. In most cases the work is done in a kind of a way between rains. Rain fell on twenty-five days between May 16 and June 24, and many of these were such terrible downpours that it kept the ground soaked all the time. To-day was quite summer-like, and we hope to have warm weather.

Shefford Co., Que. P. P. Fowler. warm weather. Shefford Co., Que.

P. P. FOWLER.

Canada's Young Farmers and Future Leaders.

The Value of Crop Rotation.

EDITOR "THE FARMER'S ADVOCATE":

Look here boys, how many of you run a regular rotation of crops on your farm? Perhaps all of you, maybe you know more about it than I do, but if you will kindly give me your attention for a few minutes I will give you my experience in crop rotation.

About fifteen years ago, when we took over this farm, it was generally termed a sandy farm. It is very rolling; the hill tops would grow nothing but June grass. The cropping system had been to grow hay after hay, till it ran out, then plow up, and grow two or more crops of grain, seed down and leave in hay till it again ran out, so you can imagine the condition the farm was in when we took hold of it, the hill tops were very little else but blow sand.

' A few years later some odd copies of "The Farmer's Advocate" got into our hands, we subscribed for this paper, and through its tolumns learned of crop rotation and building up of soil fertility. We decided to break the farm into a four-year rotation, i.e., hoe crop, grain, clover hay and timothy and clover.

The first thing that was done was to break up in the fall half of the farm. In the spring following half of this breaking was well worked up. There was some humus in it, owing to the rotting of the sod, and it was in fair condition. This quarter of the farm was sown to oats and seeded down with eight pounds clover, four pounds timothy and four pounds alsike per acre. The mixture was sown on top of the finelyharrowed land and rolled in. The next few days came hot and dry, and we soon saw the folly of having a rolled surface, for the dust that blew off that field was terrible, and I decided that another year I would harrow very lightly after rolling. But in spite of the dry weather and high winds there was a fair crop of oats (28 bushels per acre) and a good catch of clover and grass, the roller evidently having got its good work in by bringing the moisture from the subsoil to the tiny clover and grass-seed roots.

On the second quarter of the farm another problem was met. What could be sown on a quarter of a farm for a hoe crop? In a section where corn can be grown. and you want to go to the expense of putting up a silo and getting the necessary equipment for making silage, the problem was easy enough. But in a section where the season is too short for growing corn, as it is here in the Muskoka District, some other crop had to be put in that would keep the ground cultivated and free from weeds all summer. So what manure was made during the winter was put on this quarter and well worked in. A portion was sown to roots and potatoes, and the year previous, the balance had been sown to fall rye. This rye was cut green for hay on June 24th, and allowed to grow up a second time, this second crop to be plowed under to enrich the soil. This left the ground in good tilth and free from weeds.

The crop was cut before any weeds ripened, and plowing down the aftermath left the ground in good shape

for seeding down next spring.

The other half of the farm was let run in hay till its turn came to be treated as the other fields had been. The next year, on field 1, which had been seeded, crop of clover was taken off, and the aftermath allowed to lie on the field and rot. The third year a good crop of timothy and clover was taken off, and there was still plenty of clover left in the aftermath to plow down. You would be surprised at the won-derful effect the plowing down of that clover had on the soil. This same soil no longer grows June grass but good timothy and clover, and the very best of potatoes. Last year a crop of oats grown on this soil yielded 40 bushels to the acre, compared with 28 bushels of a form work acre. bushels of a few years ago, and won second place in the "Standing Field Crop Competition." The soil is no longer called sandy, but a loam, and considering the few years the rotation has been practiced there are still great hopes of further bettering this soil. Every time that it is plowed up it is darker in color and contains more humus. All that is wrong with it now is that it is lacking in lime, and consequently sour. I am experimenting with lime now, and, another time, will tell what effect this lime has.

Muskoka District, Ont.

R. D. RILEY.

Raising Chickens.

EDITOR "THE FARMER'S ADVOCATE":

Last spring, in the early part of April, I brought the incubator from the cellar where it had been stored for some years, and which was regarded as a useless machine, and put it into a cement building which had formerly been used as a goose house, with the intention of trying my hand at hatching chicks. It was an ideal place for the machine as the walls and the floor were solid, so it was not easily jarred.

After running it for a couple of days to become accustomed to the size of the flame necessary to keep an even temperature, I secured five dozen eggs (Plymouth Rocks) from a neighbor, and filled the remaining space with our own hens' eggs (mostly White Leghorns) amounting to one hundred and seventeen in all. I followed the direction book almost to the letter. Usually the temperature was between one hundred and one, and one hundred and three and a half.

On the twenty-first day there were no chickens, but on the twenty-second day they began to appear, and on the twenty-fourth day all that were coming were out and dry. The cause of their belated arrival was due to the fact that the temperature was below

one hundred and three the most of the time.

There were eighty-five of them, bright, fluffy, smart chicks with the exception of a few "spraddlers"

which a few inches of string soon cured. I tied the string about an inch long around the ankles, and the maabout an inch long around the ankles, and the majority of them straightened up. I put them with four hens which I had ready, as I think the hens will raise them more satisfactorily than the brooder. Since then some hens which I had set brought out twenty-five or thirty, so I have one hundred and ten chickens which will be ready for a fairly early market. When they were a couple of weeks old several seemed dumpy, and, as I saw in "The Farmer's Advocate" to grease their heads and under their wings if they show symptoms of lice, I did so, and they have been doing well since. doing well since.

J. MORLEY HANBIDGE.

An Experiment with Oats.

EDITOR "THE FARMER'S ADVOCATE":

In the year 1915 I conducted an experiment with three different varieties of oats. The varieties were O. A. C. No 3, O. A. C. No. 72, and Early Market. The former two were sent to me from Guelph, and the latter was our own kind of oats. There was a pound of each kind. The ground was plowed and worked up fine, so as to have a good seed-bed. was one rod wide by two rods long. We sowed the three varieties on May 20th, each in a separate plot. I was delayed sowing owing to a big rain. The grain was up nicely in a week. All summer the weeds were picked out of the plots. The O. A. C. No. 3 oats grew the fastest at first and were darker in color than the other two varieties. The No. 3 than the other two varieties. The No. 3 headed out about July 20th and were ripe on August 14th. I cut them with the sickle that day. The number of days to maturity was 85. The straw was slim with very little blade on it. They grew 33 inches high. About August 1st there was a big rain and wind, in which the O. A. C. No. 3 oats fell flat. The Early Market oats fell a little but the O. A. C. No. 72 oats stood straight owing to the straw being much stronger. stood straight, owing to the straw being much stronger and stouter. The O. A. C. No. 72 and Early Market were cut on August 31st. The length of time to maturity was 103 days. The Early Market straw is much like the O. A. C. No. 3, only it is a little stouter with more blodge. with more blades.

I took all grain in when it was dry, and threshed each variety separately with the flail. The straw of the O. A. C. No. 3 oats weighed 34 pounds, and the grain 25 pounds. The grain is smaller than the other varieties. The Early Market grain is a little large. and the O. A. C. No. 72 grain longer and plumper sill.
The O. A. C. No. 72 grain longer and plumper sill.
The O. A. C. No. 72 straw grew 48 inches nigh,
and was big, stiff and had more blades than the
other variety. I had 28 pounds of grain and 38
pounds of straw off the O. A. C. No. 72 plot.
The Early Market straw grew 32 inches long.
It was a little stouter and stiffer then the O. A. C.

No. 3 straw. I had 22 lbs. of grain and 35 pounds of straw.

All three varieties received the same amount of care, These oats were sowed on black clay soil. I took my neighbors to see them while they were growing. We learned considerable about the oats, and we liked the O. A. C. No. 72 oats the best. I bought 10 bushels and sowed them this spring, because they grew more straw and a larger yield of oats than the other varieties. Renfrew Co., Ont.

PERCY MOORE.

Two Boys Who Are Interested in Farm Work.

At a recent dairymen's meeting there was no one who showed more interest in the proceedings than did two boys, both under 15 years of age. They listened attentively to the addresses and discussion which followed, and one was heard to remark that he was looking after his calf in much the same way as the speaker outlined. When a number of animals were brought into the ring to be judged these boys sized them up, and placed them according to their way of thinking. Sometimes their judgment differed from that of the judge, but they were not convinced they were wrong until reasons were given and the main points of difference mentioned. Most of the young men and many of the older men present were not paying much attention to the judging, and few of those who were could converse on the breed in question as intelligently as the two boys. Back of the boys' knowledge and enthusiasm was the interest of the father, not only in a particular breed of stock but in two growing boys. Instead of leaving them at home

to cut thistles or chore around he brought them with him, a distance of 30 miles, in order that they, as well as himself, might secure information relating to their daily occupation

daily occupation.

There is plenty of work on this dairy farm. The younger boy, who is 12 years old, is required to milk 5 cows night and morning besides doing other chores. The older brother milks 6 cows. Board, clothes and spending money are not considered to be sufficient pay for the work done, so a year ago each boy was given a pure-bred heifer calf, and this spring they were given another. It is not a case of the boys' calf and father's cow, but a straight business proposition in which the success depends on the boys. The boys are familiar with the pedigrees of the calves, and have decided on the sire they wish to use when their heifers are of breeding age. Feeding is also made a study of in order that a suitable ration may be fed and the calves kept in good condition, because it is their intention to exhibit them at the local fairs this fall. A little milk is fed at the start, but the ration consists principally of rolled oats, shorts, oil-cake and clover. Care is taken to keep the pen clean and to put the feed in a clean manger. The calves are taught to lead, so that there will be no trouble at show time. Last year one calf took the red ribbon at each place it was shown, and the prize money was banked by the boy. The father takes his boys into his confidence, he discusses the work with them, and in turn they take an interest in everything done on the place.

Richard and Wesley Pinnegar, of Middlesex County, for these are the boys' names, are studying the why and the wherefore of work done about the feet many takes.

Richard and Wesley Pinnegar, of Middlesex County, for these are the boys' names, are studying the why and the wherefore of work done about the farm, and take a pleasure in doing their share of the chores because they understand what they are doing. They know what families of the breed they own, are most

prominent, and they know that certain feeds, more than others, go to produce bone and muscle on the animal body. Although still at the age when most boys think of nothing but play, they are endeavoring to find out the quality of stock other breeders have, and to see how it compares with their own. It is fairly safe to predict that Richard and Wesley will make successful stockmen. If many boys and young men who are dissatisfied with farm life would only stop and view things from a different angle they would discover that the farm offers splendid opportunities for advancement to those who make a study of its numerous problems, and then put their knowledge into practice.

Get in the Competition.

Essays are now coming in for the big competition announced in our issue of June 22. We want all boys who have had experience in any branch of farming to give us an account of what last year's experience meant to them, either financially or in the matter of improving their understanding of their business. It is not a difficult task. Write 800 words or less on some of your work, and win \$10, \$8 or \$5 as a special prize. Those not winning, but worthy of publication, will be published and paid for. Our young readers have asked for this kind of information. No one can give them what they want in a better way than you. Farm boys and young men, let other farm boys and young men know what you are doing. Mail your essays early. Contest closes July 22, and all must be mailed on or before that date. See announcement in the issue of June 22 for further particulars.

Automobiles, Farm Machinery and Farm Motors.

The Care of a Car.

The care of a car is largely a matter of common sense, and we feel sure that every farmer can exercise this faculty to far better advantage than his city brother because of his acquaintance with machinery and its needs. After you have driven your car home, make arrangements for a wash rack. This should be located in a shed or barn, but if such a building is not available, any shady spot will do. Make sure, however, that the place selected is not reached by the sun, as the cleaning of an automobile in the bright rays of Old Sol would soon dull the varnish and kill the lustre. If you have a satisfactory building, see that there is a vent in the middle of the floor in order that the water may be run off to some place where the earth can absorb it. Sloping down to this vent you should have slatted boards in order that the dirt may be carried away without unnecessary trouble. The big essential for preserving the appearance of your car is water. This can be arranged for by a pipe from a windmill or a pump. These sources of supply not being handy, the water should be brought up in barrels, as an unlimited quantity is absolutely necessary. The pre-liminary arrangements having been made and the car liminary arrangements having been made and the car placed upon your rack, cover the engine with thick oil cloth or other water resisting material. You are now ready to proceed. Throw the water, either with a hose or a bucket, all over the car from end to end and side to side. If a large quantity of dirt has adhered to any part, give separate treatment, but do not in any event rub the earth except in a flow of water, as fine particles of grit are sure to scratch the paint and enamel. When all the dirt has been removed, give another application of water and follow the spray along with a sponge. Having been completely assured along with a sponge. Having been completely assured that all foreign matter is removed, rub down the car with chamois leather, and when it is dry, move it out into the sun, but under no circumstances allow any hot rays to strike the machine until every drop of water has been rubbed off. If this system is followed with regularity, your automobile should present a spick and span appearance years and years after the date of its purchase, but neglect will rapidly throw your investment into quick depreciation. As long

as your engine is covered, no possible damage can come to any part of the motor, and tires are built to withstand water under every condition.

Automobiles require liberal quantities of oil and

grease. The agent from whom you buy your car, will advise you the level for the oil in the crank case. Do not exceed the point he indicates because then there not exceed the point he indicates because then there will be a large amount of burnt oil exhausted from the back of the car and your driving will become a source of inconvenience. Perhaps you have noticed upon many occasions, the great volume of smoke that is thrown out on the road by a passing machine. This is always due to an excess of oil. You should also have your agent advise your regarding the grease guest. have your agent advise you regarding the grease cups which necessity demands should be turned down at regular intervals in order that the lubricant they contain may be allowed to work to the best advantage. If upon looking under the hood you find that there is not a place provided for an oil can, buy or build a little bracket yourself in order that the oiling of the angine may be brought constantly to your atthe engine may be brought constantly to your attention. Naturally, any piece of machinery constantly becomes covered with the products necessary for its easy operation, but an oily, greasy mechanism of any kind never looks attractive, so do not hesitate to use large quantities of rags or waste in wiping down the engine. If you make visits to city or town garages, it might be well to ask for a coal oil or gas spray. Shoot the mixtures into all the external parts of the motor, and by subsequently rubbing it down, the power plant can be kept bright and shiny. Do not, however, start your engine until the gas and coal oil have been wiped off as there is sometimes an element of danger. There are many ways of keeping the leather in firstclass shape, but it seems useless to waste any words of advice upon farmers in this respect, as their vocation has always called for skilled service in the maintenance of harness and kindred products. When the top of your car is down, make sure that the envelope has been pulled over it snugly in order that the dust may not fill the creases, and never under any circumstances, operate your automobile if this envelope has been removed. Should you do so, your top, when next erected, will present an inferior appearance that will not impress your guests. Upon filling a car with gasoline, it is always advisable to cease smoking, and under no

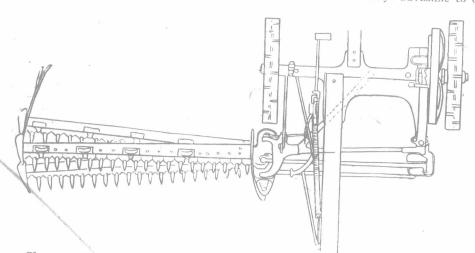
circumstances allow the presence of a naked light, as a breath of wind may blow the vapor in the direction of the flame and cause instant trouble of the most serious character.

Auto.

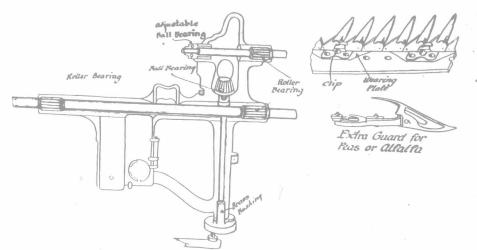
Some Information About Your Mower.

Haying time is with us, and he is a wise man who has his mower in good shape. When a new mower has to be purchased it is necessary to know exactly what is required, and it is our purpose to consider some points in the construction and operation. Roller bearings should be provided for the main bearings and the pinion end of the crank shaft, and a plain bearing at the crank end. It is not possible to use a ball or roller bearing because of the vibratory action of the shaft tending to wear the bearing out of round. There should be an adjustment at the end of the countershaft to take up wear between the bevel gears. Wooden pitmans seem more satisfactory than steel, because the steel, due to the vibration, becomes crystallized and weak. Some arrangement should be made to take up wear in the hinge joint between the cutter bar and the main frame so that it can be kept in line with the pitman (Fig. 1). The best mowers are equipped with wearing plates where the back of the sickle comes in contact with the cutter bar (Fig. 2). The clips which hold the sickle in place are malleable and may be hammered without danger of breaking. The space between the clip and the knife should be about as thick as a sheet of paper, and under no condition large enough to allow grass to wedge under the clips. The clip is put on to hold the knife in place and give it the required sheaving action.

No matter how fast or slow you drive, the knife must have sufficient clearance. Measure the circumference of the main drive wheel and suppose we find it to be 108 inches, divide by the number of strokes made in one revolution of the wheel, and we will find the distance the mower moves forward for each stroke. Let us suppose it makes 56 strokes, then 108 divided by 56 equals 1.8 inches. It is evident the knife action can cut no more than its length, which



Showing How the Cutter-bar May Sag Causing the Pitman and Knife to Go Out of Line.



Showing Mower Adjustments and Parts.

certain feeds, more and muscle on the the age when most hey are endeavoring other breeders have, h their own. It is ny boys and young rm life would only nt angle they would endid opportunities ake a study of its ut their knowledge

etition.

the big competition 22. We want all in any branch of f what last year's inancially or in the rstanding of their Write 800 words win \$10, \$8 or \$5 nning, but worthy and paid for. Our and of information. want in a better ung men, let other hat you are doing. loses July 22, and e that date. See ne 22 for further

a naked light, as uble of the most AUTO.

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out Your

e. When a new ecessary to know s our purpose to iction and operarided for the main crank shaft, and It is not possible e of the vibratory the bearing out stment at the end between the bevel satisfactory than ibration, becomes gement should be oint between the at it can be kept e best mowers are the back of the ter bar (Fig. 2). ace are malleable ger of breaking. knife should be nd under no conwedge under the ne knife in place

ction. drive, the knife sure the circumsuppose we find umber of strokes el, and we will orward for each trokes, then 108 is evident the ts length, which

alfalfa

may be 2 inches. If it wears down till it is less than 1.8 or even 1.8 inches it has nothing to come and go on. Therefore, see that the knife has something to spare for a heavy cut.

The growing of peas always brings us to the question: How can I cut them? Use a windrowing attachment, which consists of a set of curved fingers attached to the rear of the cutter bar, which rolls the swath into a windrow. Notice figure 2, showing a large guard which is easily put on. The guard raises the vines so that the sickle can get at them.

Mowing machines are usually operated with two horses for a five-foot cut, indicating a draft of about 300 pounds. A leading manufacturer places the draft at from 190 to 325 pounds for a five-foot machine. Two other authorities place the draft at from 285 to 310 lbs. for the same width. The draft may easily be doubled by dull knives, tight boxes, etc. In one test five mowers were run in gear but not cutting, and showed an average draft of 154 lbs. While cutting, the average was 268 lbs., showing 57½ per cent. of the total draft due to the running of the mower itself. In an actual test of a 41/4-foot mower and a 6-foot mower of the same make, the drafts were 203 and 263 lbs. respectively. It is evident that the wide cut mowers are economical in the same way that an engine is economical when running at a high per-centage of its rating.

Each section has to pass from the centre of one guard to the centre of the next guard during each stroke; if it does not, it is not timed right, and will pass farther in one direction than in the other. There should be an adjustment to correct this; some have an adjustable pitman. If a mower leaves a narrow strip of grass uncut, it indicates that one of the guards has been bent down, a common occurrence in stony ground. The guards are malleable, and after sighting over the ledger plates they can be hammered into line. The knife must be kept sharp, and the boxings well oiled.

THE DAIRY.

Milk Teems with Germ Life, and Should Be Pasteurized.

The cow is the foster mother of the world. She is a manufacturing plant in herself, and changes the various foodstuffs produced on the farms into a substance that furnishes all the ingredients required to build up the body, keep it in repair and supply heat, besides the power required to do its work. Milk drawn by clean milkers from clean cows, housed in clean stables, is the choicest food product of nature. It is food for young and old. However, it is subject to contamination from the time it is drawn until it is consumed. Lactic acid and destructive bacteria develop very rapidly in milk at ordinary summer temperature. Disease organisms lurk around and may come in contact with milk. Epidemics of certain diseases have broken out, and the cause has been attributed to the milk supply. Scientists have isolated the specific organisms responsible for the trouble, and have demonstrated how to render them harmless. authorities endeavor to guard the city milk supply, but the average consumer judges the quality milk by the amount of cream in the milk bottle and by the taste. Little thought is given to the qualities, consequently nature's choicest food may be the means of carrying organisms destructo health.

Children are larger consumers of milk than are adults, and they suffer most from the effects of bad milk. Their systems are not so capable of throwing off the organisms. Many children die from intestinal trouble. Dirt and bacteria in milk, which are harmless to strong, grown folk, irritate and inflame the intestines of children, causing sickness. Septic sore throat may result from using raw milk. It is claimed that bacteria found on sore udders or teats of cows resembles very closely the bacteria found in sore throats. Causes of typhoid fever, scarlet fever and diphtheria have been traced to the milk supply. That dreaded disease tuberculosis is very common in dairy herds. While human and bovine tuberculosis organisms are different, it is possible for children, especially, to contract the bovine type through the use of raw milk. Few food products are so subject to contamination, and few are handled so carelessly as milk. As a rule it is pure when first drawn, but, unclean milkers, a dirty stable, a piece of straw, a hair or dust from the cow's body may add thousands of bacteria to the milk before it ever leaves the stable. In fact, very little of the average milk used is clean. This may seem a strong statement, but it can be proven by use of the sediment test. Take a pint of milk and filter it, then note the real dirt that is retained on the filter paper. Besides the dirt there may be countless disease organisms that pass through the filter. By a little extra care milk could be kept

cleaner than it is.

Clean cows are the first essential. Certain diseases can be diagnosed at sight, but the tuberculin test is the only reliable method of determining whether or not a cow is affected with tuberculosis. Authorities estimate that over 50 per cent. of the dairy herds contain tuberculous cows. To guard the human race against possible injection all milk should be pasteurized. To guard the human race Milk from an inflamed udder or a cow off her feed is not wholesome.

Combing and brushing the cow tend to keep her body clean, and so lessen the chance of dirt falling

into the milk. However, cleaner milk would be secured if every milker wiped the cow's flank and udder with a damp cloth before commencing to milk. The stable should also be as free as possible from dust or disagreeable odors at milking time. This can be accomplished by having system in doing the stable work. Milkers' clothes and hands may be a source of contamination. In stables, where milk of a high marketed, the attendants are required to observe the law of administration. quired to observe the law of cleanliness in person and attire. There is a laxity in this regard in too many stables. Once milk is removed to a clean milk-house or to the open air there is less danger from dirt or disease organisms, if care is taken in keeping the utensils clean. It is impossible to have raw milk absolutely clean and free from harmful bacteria, but the extent of contamination can be reduced to the minimum. Milk at the temperature it is drawn is a medium in which organisms develop and multiply rapidly. Reducing the temperature to 60 degrees will retard development. The same holds good with cream. It should be produced from clean milk and handled in a sanitary manner.

In creameries the cream is pasteurized to destroy bacteria and harmful organisms, and so control the quality of butter manufactured from day to day. Patrons insist on whey and milk from factories and creameries being pasteurized before it is returned to the farm. They claim the feeding qualities are improved, and the danger of the stock contracting diseases by consuming these by-products is minimized. But, in the average home whole milk is consumed by young and old with seldom a thought given to its sanitary condition. Truly, the hogs and calves are more carefully guarded against infection than are children.

Heating milk to a certain degree of temperature is known to destroy most of the disease organisms commonly found in it. Pasteurization consists in heating the liquid to 145 degrees F. and holding it at that temperature from 20 to 30 minutes. This treatment is claimed to destroy about 99 per cent, of bacteria found in raw milk. The marketable properties of the product are also improved. A uniform flavor can be secured day after day. If the milk is cooled to 60 degrees or lower immediately after being pasteurized it will keep sweet and wholesome much longer than raw milk. The theory, sometimes advanced that pasteurized milk is not to be secured to the pasteurized milk in the content of the conten sometimes advanced, that pasteurized milk is not so easily digested and that the food value is inferior to raw milk is not borne out in practice. While epidemics of disease have been traced to the use of raw milk, none have been traced to the use of pasteurized milk. The use of pasteurized milk is increasing in the cities, but as yet this "safety-first" precaution has not become general in the farm homes.

There is a gradual improvement in the method of caring for milk on the farms. Stables are being kept fairly clean, and an effort is made to produce and market clean milk. That there is any relation between bovine and human diseases, or that it is possible for milk to be the medium through which disease

is spread, seldom comes to the average mind.

Milk at 8 cents a quart is the most economical food on the market. The consumption of whole milk might profitably be doubled. It would benefit both producer and consumer. But, many have a dislike for milk. A stable or grass flavor may sometimes be detected in raw milk, or the natural flavor may be impaired by development of certain bacteria. This turns many against drinking whole milk. Heating the milk to 145 degrees destroys these "off" flavors, and gives a uniformity of flavor throughout the season. It does not require special utensils or equipment to pasteurize milk. It can be done in the dishes found in every home. Bottles of milk may be placed in a kettle of cold water and gradually heated to the required temperature, or milk can easily be pasteurized in a double boiler. In order to bring the milk to the proper temperature every day it is necessary to use a thermometer. Too much heat will give a cooked flavor.

The dairyman may know his cows are healthy, and with every precaution taken to produce clean, sanitary milk may not think it necessary to go to the trouble of pasteurizing milk for use on the table. No dairyman knows whether or not the cows in his herd are free from tuberculosis unless they are tested. Appearances are deceiving. Only a bacteriologist can determine the kind and number of bacteria in a sample of milk, but anyone can make a sediment. test and note the cleanliness of it. In estimating the value of milk for human consumption the bacteria count should be taken into consideration as well as percentage of butter-fat. It is possible to produce clean milk on every farm, but from a safety standpoint it would appear to be good policy to pasteurize the whole milk for daily consumption.

Baby Beef from Dairy Cows.

EDITOR "THE FARMER'S ADVOCATE":

On June 17 we shipped to the Montreal market, five steers that were pronounced to be one of the best quality lots that ever went into that market, and it might be interesting to your readers to know how they were raised.

Three of these steers were out of cows that did not show any breeding whatever, the other two were from grade Holstein cows of fair quality. They were sired by a very good, thickly-fleshed bull, bred on the farm. The calves came in March and April so were 14 and 15 months old when sold. They were exchanged on to five of our pure-bred cows, whose calves were put on the grade cows, and were turned out to pasture with the cows in May and brought back to the stables in November, weaned and put into box stalls. They were fed a mixture of cut hay and roots with from 4 to 8 pounds crushed oats, and two pounds oil-cake each per day. The steers averaged in Montreal 925 pounds and sold for \$10.50 per cwt.

It seems to me when labour is scarce as at present on the farm, that the method, of using the dairy cows in raising baby beef would solve the labor problem to a great extent on farms that are at present sending milk to the creamery or cheese factory. To raise baby beef that would top the market, nothing but first quality bulls of the beef breeds would have to be used.

Russell Co., Ont. JAMES SMITH. [Note.—There are suggestions and valuable ex-perience embodied in this article but dairymen would probably not see their way clear to use a bull of beef type on a dairy herd unless they intended to purchase cows to renew the herd.-Editor.

POULTRY.

Feeding Hens for Early Moulting.

During late summer and early fall is the natural moulting season. Some birds shed their old feathers much earlier than others and it is generally believed that those that moult earliest are the first to commence laying in the fall, although this is not always borne out in practice. The moult usually lasts from sight to ten weeks and during that time arms are seldom. eight to ten weeks and during that time eggs are seldom eight to ten weeks and during that time eggs are seldom produced. An effort is frequently made to force moulting early and then feed for the quick production of feathers. During July birds have been placed on about half the usual grain rations for two or three weeks. Naturally this treatment stops egg production but it is claimed that it has the effect of loosening the feathers. At the end of this time full rations should be resumed and a little linseed meal added to the mash has proven beneficial. As a rule yearling hens moult earlier and more beneficial. As a rule yearling hens moult earlier and more quickly than older ones. Interfering with nature and hastening the moulting season by special feeding may give the birds a better show appearance in the fall, but it is doubtful if the number of eggs laid in a year is increased by this treatment.

HORTICULTURE.

Slug Invasion and Smaller Fruit Prospects.

A Middlesex, Ont., horticulturist writes: "One of A Middlesex, Ont., horticulturist writes: One of the worst pests invading the garden this season has been an army of slugs, which emerge from the soil early in the evening and proceed to work havor with the foliage of sweet corn and early beans. For a few days I did not detect what was stripping the corn leaves into muslin-like ribbons and riddling the tender have leaves and stalks but working after six o'clock. bean leaves and stalks, but working after six o'clock found them getting busy in scores at almost every step. Dusting the ground about the root and on the foliage freely with hydrated or slaked lime appeared to be effectual as their slimy bodies began to squirm and roll helplessly when it touched them. I presume fresh wood ashes would also be effectual.

"An examination of fruit trees indicates that the crop will hardly be in quantity more than one-third or one-quarter of what the extraordinary blossom promised. This is certainly true of plums and pears and some varieties, at least, of apples and small fruits; black currants and raspberries possibly excepted in my observation. Baldwin apples on trees I have examined have probably set more fruit than the Northern Spy. The persistent and heavy cold rains when the trees were in bloom, evidently washed the pollen almost completely out of a large properties. pollen almost completely out of the flowers and prevented the formation of fruit. Many gave up attempts at spraying for the same reason, though a few got one application on their plum trees. This may result unfavorably on the quality of the fruit, but from present appearances it will be large in size and fine:"

The Outlook for a Fruit Crop.

The almost incessant rainfall during the month of June in Ontario and Quebec has considerably decreased the visible fruit crop and the inability of many growers to spray, has permitted the development of scab to such an extent that it may be reduced still further by dropping. Such is the information supplied by the Dominion Fruit Commissioner, Donald Johnson, in the Fruit Crop Report, No. 2. The rapid development of scab in all sections of Ontario and Quebec, has caused an increase in the "June drop" over and above that anticipated earlier in the season, and this factor, following the cold damp weather during blossoms factor, following the cold damp weather during blossom time, is responsible for a smaller quantity and poorer quality in some instances than were at first expected. "Even now," The Report states, "it is impossible to say just how the ultimate crop will compare with that of last year, as it is quite possible that the presence of scab on the stems of the fruit will cause them to weaken and result in a still further falling off. In fact, in many parts of Ontario, such a condition is expected."

Heavy dropping has taken place in Lambton County, especially in unsprayed and insufficiently sprayed

orchards. Where spraying has been thorough there will be a good crop, but the prospects for the county are for a medium crop. In the Niagara Peninsula early and fall varieties give good promise but later varieties only medium. The fruit has generally set better below the mountain than above it. the last few days the development of fruit has been very rapid. A fair crop is expected in Norfolk County. Be-tween Toronto and Hamilton there will not be more than a fifty-per-cent crop. Spies and Greenings are light and Baldwins fair. In the counties on Lake Huron and inland to York County, the fruit set full but has dropped heavily. It is feared that there will be a large proportion of low-grade fruit in Western Ontario. Ontario. In the immediate vicinity of Oshawa the set of apples indicates an average crop. Spies are light but on the whole there will be a larger crop than last year. In Prince Edward County there has been very general spraying and the fruit is apparently setting well. In the Bowmanville district the prospects are fair to medium; a heavy second "drop" is expected. From the northern sections of Ontario very favorable

reports are being received. The fruit has set heavily and little dropping has yet taken place. Spraying has been much neglected. In the Fameuse and Mc-Intosh sections of Ontario, scab has developed to a remarkable extent, and has resulted in heavy dropping. Spraying has been fairly general. In the province of Quebec, Duchess and Wealthy will have a very heavy crop. Fameuse and McIntosh are a full crop where orchards have been cultivated. Considerable scab has developed. There is every prospect for a good crop in New Brunswick. Weather conditions during the blossoming period were excellent and the fruit has set well. General impressions are that there will be plenty of fruit after the "drop" has taken place. Apple of fruit after the "drop" has taken place. Apple trees bloomed very unevenly in the Annapolis Valley. The fruit, however, is setting well and there is promise of more than an average crop where the bloom was heavy. Taking the valley as a whole there should be at least two-thirds of an average crop, or slightly over one million barrels, and of good quality. Gravensteins and Nonpareils promise a very large crop; Wagener, Golden Russet and Ribston, good; Baldwins fair and Ben Davis light. The main bulk of the crop is in the well-cared-for orchards.

Conservative estimates made on June 26 placed the crop in the Lower Mainland of British Columbia, at

25 per cent. greater than last year. Crab apples will be an excellent crop.

In the Kootenay Valley there is promise of a large crop. Wealthies have set well and there has been little drawing in any variety. crop. Wealthies have set well and there has been little dropping in any variety. Latest reports state "Kootenay apple crop easily double that of last year." In the Okanagan Valley, McIntosh and Jonathan are still a heavy crop, though the latter are reported to be dropping heavily. Yellow Newtowns are not as heavy as was expected earlier in the year.

Weather conditions in most of the fruit-growing

Weather conditions in most of the fruit-growing districts of the United States have been similar to those experienced in Canada. Present indications are that the crop for the Western States will be somewhat larger and of better quality than last year. Aphids and powdery mildew however are quite prevalent and may alter the crop to some extent. In Michigan, early varieties promise a good crop, but fall and winter sorts not over 60 per cent. of normal. New York State, as a whole, now promises a crop materially in excess of last year but it is impossible to fix a percentage as much dropping may take place as a result of scab.

The peach crop of the Niagara Peninsula may be about 75 per cent. of that harvested last year. In the commercial peach-growing areas of British Columbia

commercial peach-growing areas of British Columbia, the crop is not expected to be any larger than that of last year. New York State has suffered from "leaf curl" and will not produce more than 50 to 60 per cent. of a full crop. In Michigan the output will barely

equal that of 1915. Georgia has a moderate crop of high-quality fruit. Small fruits promise a good crop this year, pears will be only fair and a light crop of plums is expected, cherries will run from 50 to 75 per cent. of a full crop taking the Dominion generally.

FARM BULLETIN.

A Disgusted Blackbird.

BY PETER MCARTHUR. I know it was a low-down thing to do, but I did it with the best of intentions—though I am afraid the blackbirds will never understand. They will probably think that after the good work they did in eating white grubs, cut-worms and other pests while I was preparing the corn ground, I should have treated them differently. But it was just because they did so much good work that I treated them so badly. I was so grateful to them that I did not want to treat them in the usual way when the corn came up. In past years it was the custom to loaf around with a double-barrelled shot-gun about the time the corn was coming through the ground, but this year the blackbirds were unusually plentiful, and as the season was late they probably had many broods of young to feed. Anyway they came to the corn field in flocks and followed the plow, disc and harrow, picking up every worm and bug that came in sight. They demonstrated the feet that the test that the feet strated the fact that they are true friends of the farmer. even though they may have faults. So when it came time to plant the corn we gave the seed grain a good coating of tar, and then rolled it in ashes to dry it. This used to be a common practice many years ago, though I haven't seen anyone doing it of late years. It certainly made the corn about as unappetizing as anything possibly could, so I was not surprised, when I went to the corn field a few mornings after the planting, to find a blackbird sitting on the fence, coughing and spitting and using unparliamentary language. But I will take part of that back. Some of the language used by parliamentarians during the past few months has been of a kind that makes me wonder if any kind of language can possibly be un-parliamentary. But to get back to the blackbird. He evidently thought I had played it low down on he evidently thought I had played it low down on him after the way he had helped me in the matter of grubs, and I had no way of telling him that like a lot of human beings who do disagreeable things to one another I had done it "for his own good." A little tor and agher in his heat was a greater bindness. little tar and ashes in his beak was a greater kindness to him than a charge of bird shot.

Now, I dare say there will be some scientific persons Now, I dare say there will be some scientinc persons who will sniff superior and say that my remarks about the blackbird coughing, spitting and cussing are only nonsensical romancing. That is the trouble with scientists. They observe things in nature in so matter-of-fact a way that they never get at the real truth. Moreover, I have long been convinced that only the observations we make about ourselves that only the observations we make about ourselves are of any use in trying to get at the feelings of others. For instance, I can remember a time when I would loaf along and observe a man digging in a ditch. Seeing him at so excellent and necessary a task I would imagine that he was full of fine ideas about the nobility of labor and the great virtue of the work he was doing, and I might even try to write a song of ditching to express what he felt but was unable to voice. Lately I did some ditching, and I know that my earlier observations were all wrong. If a man came along wearing summer flannels and paused to observe me and tried to understand my emotions and thoughts while doing a very necessary piece of ditching, my thoughts would have run somewhat as follows: wonder what that pop-eyed rabbit means by standing

I wonder if I couldn't acthere gawping at me. cidentally splash him with some of this mud." all the time I was doing a noble piece of work and knew it, but that was the way I felt about it. I am willing to bet a cookie that when I was doing my observing in comfort on the dry bank the thoughts of the man sloshing around in the ditch were much like those expressed above. And I am by no means inclined to confine this method of interpretation and observation to human beings. My dealings with birds and animals have convinced me that each of them has as distinct a character and personality as any human So when I try to imagine the emotions of a blackbird that has sampled a grain of tarred corn, that he has dug up with much labor, I merely try to imagine what I would do and say if someone whom I had helped with his work had put coal tar in my salad. I am afraid that having more capacity for spitting I would spit harder than the blackbird, and having command of a larger vocabulary I would use worse language and more of it. Making my observations in this way I have no compunctions about explaining the state of mind of the blackbird as I did, and I defy any scientist in the lot to prove that I am wrong. And the best of it all is that the blackbirds soon got wise and stopped trying to dig out my corn.

In the current issue of the Geographic Magazine there is a wonderful article on the farming operations of the ancient Peruvians by O. F. Cook, of the American Bureau of Plant Industry. He shows that the Peruvians, under the rule of the Incas, had brought agriculture to a high state of development thousands years ago, and that all the world is indebted to them for the domestication of the potato. He estimates that the potato of the Peruvians has meant more to the world than all the gold that has been dug from the earth. The treasure-seeking Spaniards probably thought it of little value compared with the gold trinkets they were able to wrest from a peaceful people, but potatoes are now so important a part of the food of mankind that the issue of the present war may be effected by the success or failure of the potato crop. Besides studying the ruins of this past vilization, Mr. Cook has drawn from the acounts left by the Spanish conquerors, and does not hesitate to assert that with the ancient Peruvians agriculture was "An ideal of existence." Even though they may have lacked the implements and the scientific knowledge that go with modern farming, they had a philosophy of farming beyond anything developed by any other civilization. This interests me particularly, because I have often maintained that the success of a farmer depends more on the quality of his philosophy than on the accuracy of his scientific knowledge. Science may teach him to prosper and make money, but philosophy would teach him to live, and he could be contented while enjoying the bounty of nature. The closing sentences of this interesting article are especially worth considering at the present

"What they were able to accomplish is a lesson in possibilities that our own race has still to learn. We are beginning to see that the agricultural ideal of human welfare, of living and letting others live around us, is higher than the military or savage ideal of killing all strangers through for a sizely and of killing all strangers through for a sizely and of killing all strangers. ing all strangers through fear or jealousy of competition. But our traditions, literature and social institutions are still so largely military or commercial that we have not seriously considered agriculture as an aim or ideal of existence. We have not sent forth our imaginations to grasp a wisdom of agricultural development, either for humanity as a whole or for our own European race in the new continent that we have overrun, but not yet occupied."

I oronto. Montreal. Buffalo, Leading

Toronto.

Receipts of live stock at the Union Stock Yards from Saturday, July 1, to Monday, July 3, numbered 166 cars, comprising 3,388 cattle, 162 calves, 561 hogs, and 341 sheep. The market was slow. Choice butchers' cattle were steady, at last week's prices. Best heavy cattle were easy. Other classes 10c. to 15c. lower. Hogs, fed and watered, \$11.40; weighed off cars \$11.60

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

	City	Union	Total
Cars	55	571	625
Cattle	612	4,909	5,521
Hogs	711	10,994	11,705
Sheep	518	1,765	2,283
Calves	169	1,250	1,419
Horses	114	3,236	3,350

The total receipts of live stock at the two markets for the corresponding week of 1915 were:

	City	Union	Total
Cars.	33	516	549
Cattle.	200	3,760	3,969
Hogs	586	8,339	8,925
Sheep.	533	2,014	2,547
Calves. Horses.	58	915	973
	48	4,087	4,135

The combined receipts of live stock at the two markets show an increase

market closed with a light run of all grades of cattle. Choice, heavy steers were in demand at steady prices, \$10 to \$10.75 being the rule. Farmers must remember, however, that only finished cattle bring this price. Too many of the common kind are being offered with the result that cows, steers and heifers of this class were from 75c. to \$1 lower than during the previous

Milkers and Springers.—Trade was slow in this class at from \$5 to \$10 less than for the previous week.

Stockers and Feeders.—Good stockers and feeders were in demand at steady prices, but the common grades were slow and hard to sell.

Sheep and Lambs.—Choice spring lambs were steady and in demand at from 13c. to 141/4c. per lb.; medium lambs, 9c. to 12c. per lb.; choice, light, handy butcher sheep were firm at from 7½c. to 8½c. per lb.; common and

heavy sheep were slow.
Calves.—The market for choice veal calves has been steady to strong at from 10c. to 12½c. per lb.; medium calves, 9½c. to 10½c. per lb.; common and eastern grassers were very slow at 51/2c.

to 6½c. per lb. Hogs.—The hog market was very un-

of 76 car loads; 1,552 cattle; 2,780 hogs; 1,446 calves, and a decrease of 264 sheep and 785 horses.

The week ending July 1st at the live-stock market closed with a light of the live-stock market clos said that prices would be much less this week. The general feeling is that if large shipments arrive farmers must be ready to accept quite a reduction

from the prices quoted above. Butchers' Cattle. — Choice Cattle. - Choice, steers, \$10.40 to \$10.75; good, \$10 to \$10.25; choice butchers' cattle, \$9.75 to \$10; good, \$9.40 to \$9.70; medium, \$8.90 to \$9.25; common, \$8.50 to \$9; cows, good, \$7.50 to \$8; medium, \$6.50 to \$6.75; common, \$5.25 to \$6; canners, and cutters, \$3.50 to \$4.75; best bulls, \$8.25 to \$8.50; good, \$7.50 to \$8; medium, \$6.75 to \$7; common, \$5.50 to \$6.50; stockers and feeders of choice quality sell at \$7 to \$8; common at \$6.75 to \$7. Milkers and springers, choice, \$75 to \$90; good cows, \$55 to \$75 each. Calves, choice veal calves 10c. to 12½c. per lb.; medium, 9½c. to 10½c.; eastern grass calves, 5½c. to 6½c. Sheep and lambs, choice spring lambs, 13c. to 141/4c. per lb.; medium, 9c. to 12c. per lb.; light, handy sheep, 7½c. to 8½c. per lb.; heavy, fat sheep, 5c. to 6c. per lb. Hogs, weighed off cars, \$11.65 to \$11.75; fed and watered, \$11.40 to \$11.55.

Breadstuffs.

Wheat.-Ontario, No. 1 commercial, | track, Toronto-

\$1.18; No. 2 northern, \$1.161/4; No. 3 northern, \$1.123/4.
Oats.—Ontario, No. 3 white, 48c.

to 49c. Manitoba oats (track, bay ports), No. 2 C. W., 52½c.; No. 3 C. W., 52c.; extra No. 1 feed, 51c.; No. 1 feed 50c.; No. 2 feed 49c.

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

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Peas.-According to freights outside, No. 2, \$1.75 to \$1.80; according to sample, \$1.25 to \$1.50.

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

Corn.—American (track Toronto), No. 3 yellow, 85c.; track, bay ports, 81½c. Flour.-Manitoba first patents, in jute bags, \$6.50; second patents, in jute bags, \$6.00; strong bakers' in jute bags, \$5.80. Ontario, winter, according to sample, \$4.05 to \$4.15, track, Toronto;

\$4.00 to \$4.10, bulk, seaboard. Hay and Millfeed.

Hay.—No. 2, per ton, best grade, \$17 to \$18; No. 2, per ton, low grade, \$14

to \$16. Straw.—Car lots, per ton, \$6 to \$7, er if I couldn't ac-of this mud." And

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THE ROYAL BANK OF CANADA

Capital Authorized - - \$ 25,000,000 Capital Paid up - - - Reserve Funds - - -11,785,000 13,236,000 Total Assets - - - 214,000,000

HEAD OFFICE: MONTREAL

Branches throughout every Province of the Dominion of Canada.

Accounts of Farmers Invited

Sale Notes Collected

Savings Department at all Branches

Bran.—Per ton, \$20 to \$21. Shorts.—Per ton, \$24 to \$25.
Middlings.—Per ton, \$25 to \$26.
Good Feed Flour.—Per bag, \$1.55 to \$1.60.

Country Produce.

Butter.—Butter remained about stationary on the wholesales during the past week. Creamery, fresh-made lb.

past week. Creamery, iresn-made ip, squares, 30c. to 31c. per lb.; creamery solids, 29c.; separator dairy, 25c. to 27c.; dairy, 23c. to 25c.

Eggs.—New-laid eggs are constantly firming, as the shrinkage is getting heavier, and the supply is falling off, the case lots are now selling at 28c. to 29c. per dozen, and cartons at 31c. to 32c. per dozen.

Cheese.-Old, 21c. to 22c. per lb.;

new, 18c. to 181/2c.

Poultry.—Spring chickens and Ducklings are coming in slowly, and have remained about stationary in price. The demand for fowl is falling off and it is slightly lower. Live weight-Spring

chickens, 35c. per lb.; spring ducks, 20c. per lb.; turkeys, young, 29. Fowl, 4 lbs. and over, 17c. per lb. Fowl, under 4 lbs. 16c. per lb.

Hides and Skins.

Wool is coming in very freely, but there is not much sale for it, as the mill people are sitting still and not buying. Lamb skins and pelts, 55c. to 70c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3.00; 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.; horse hides, per lb., 43c. to 45c.; horse hides No. 1, \$5 to \$6.00; horse hides, No. 2, \$4.50 to \$5.50; tallow, No. 1, 7c. to 8c.; wool, washed, 42c. to 46c.; wool rejections, 35c. to 38c.; wool, unwashed, 32c. to 35c.

Wholesale Fruits and Vegetables.

Home-grown strawberries came in very freely during the first part of last week, and declined very rapidly in price, opening at 14c. per box and closing as low as 7c. per box. Since then, how-ever, they have not been shipped in quantities, in price from 8c. to 12c. per box. They became of much better quality, although still quite watery.

Canadian cherries were beginning to come in, and were of choice quality; the sour ones selling at 65c. to \$1 per six-quart leno basket, and black, eating cherries at \$1.25 per six-quart, and \$2

to \$2.50 per 11-quart.

Gooseberries were coming in very freely and were beginning to drug the market, as there was not any demand for them, partly because of the extremely high price of sugar; the 6-quart baskets were selling at 25c. to 50c., and 11-qt. from 75c. to \$1.25.

California fruits were arriving freely and were of good quality, apricots selling at \$1.75 to \$2.25 per case; peaches at \$1.35 to \$1.75 per case; plums at \$2 to \$2.50 per case; pears at \$2.50 to \$3.50 per box. The imported cherries being scarce and selling at \$3.50 per

Oranges have declined slightly as the demand is falling off, and they were selling at \$4 to \$4.50 per case.

Lemons remained quite high, both the Californias and Verdill's selling at \$4.75 to \$5 per case.

quantities and have declined in price, now selling at 50c. to 75c. each.

Hot-house tomatoes (home-grown) rapidly increased in quantity and were a very draggy sale, the No. 1's going at 10c. to 12½c., and a very few at 15c. per lb. Imported, outside-grown to-matoes, were quite plentiful and of good quality, selling eat \$1.25 to \$1.35 per four-basket crate.

New vegetables, that is carrots, cabbage and beets were very scarce. The cabbage selling at \$3.50 to \$4 per case, and beets at \$3 to \$3.25 per crate of about five dozen bunches.

Asparagus shipments gradually decreased, and a large portion of those received were poor quality, being rather seedy; a very small quantity of the best was still bringing \$1.75 and \$2 per 11-qt. basket, the rest ranging from \$1.50 down to \$1 down to \$1.

Some of the best-quality, hot-house cukes received this season came in last week; the choicest ones bringing \$1.75 per 11-qt. basket, the bulk of the No. 's selling at \$1.25 to \$1.50 per 11-qt.

Canadian cauliflower is beginning to come in; some very good being received last week and selling at \$1.25 per 11-qt. basket, and \$2 to \$2.50 per case of about 18 small heads.

There are some fine green peas now being received—at the beginning of the week they brought \$1 to \$1.25 per 11-qt. pasket, but declined to 80c. to 90c. per

New potatoes were not coming in quite so freely, and were selling at \$4.90 to \$5 per bbl.

The New Brunswick Delawares will soon be used up for this season. They sold at \$2.05 to \$2.10 per bag. There was an odd lot of Ontarios still on sale, bringing \$2 per bag.

Onions continued to be exceptionally scarce, the Texas Bermudas selling at \$3 per crate of 50 lbs.

Montreal.

The local cattle market showed small enough change last week, although the price of common and medium quality stock was rather lower than it was the previous week, this being due to a slight increase in the supplies offering. Choice steers were scarce and prices were high. A few small lots sold at 10c. to 10½c. per lb., while good quality ranged from 9½c. to 9¾c. and mediums at around 8½c. to 8¾c., with lower grades down to 6¾c. and 7c. per lb. Butchers' cows ranged all the way from 6½c. to 8c. per lb., while bulls were 6½c. to 8½c. per lb. There was a good demand for small meats of all kinds and prices were steady. Sheep sold at 7c. to 7¾c. per lb., while spring lambs changed hands at around \$5 to \$7 each, the demand for the latter being somewhat improved. Calves were in liberal supply and choice stock were in liberal supply and choice stock sold at 10½c. to 11c. per lb., good being 9½c. to 10c., while lower grades sold at 7½c. to 8½c. per lb. As for the market for hogs, prices were firm. Demand for all qualities of stock was fairly active and selected lots sold at 11½c. to active, and selected lots sold at 11%c. to 12c. per lb., while rough hogs brought 11½c. to 11½c., weighed off cars.

Horses.—The theory was heard in some quarters that the demand for horses had increased considerably in the United States, owing to the prospects for war with Mexico, these having occasioned active purchasing by the Government for cavalry and battery purposes, as well as for transport, and it was declared that this might have a strengthening influence on the price of horses in Canada. Up to the present, however, this has not been the case. Prices continued 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, and fine saddle and carriage horses, \$200 to

\$250 each. Dressed Hogs.—The tone of the market for dressed hogs was very firm last week, and prices advanced fractionally. Small

lots of abattoir, fresh-killed hogs changed hands at 16½c. to 16½c. per lb.

Potatoes.—The growing crop is undoubtedly in bad shape, and, as a consequence, old potatoes were very firm in Green Mountains were quoted at \$1.95 to \$2 per bag of 90 lbs., ex-track, while Quebec potatoes were \$1.85 to \$1.95. In smaller lots, prices were 10c. Watermelons were arriving in large to 15c. per bag higher, ex-store.

Honey and Maple Syrup.—Prices continued steady for all these lines, and demand was only moderate, white clover lower, while milchers and springers, demand was only moderate, white clover comb being 16c. per lb. and extracted, 12c. to 12½c. Brown clover comb was 12½c. to 13c., and extracted, 10c. to 11c. per lb., while buckwheat honey was 9c. to 10c. Syrup was 85c. to 90c. for 8-lb. tins; \$1 to \$1.10 for 10 lbs., \$1.25 to \$1.50 for 13-lb. tins, according to quality. Maple syrup was 12c. to 14c. per lb.

Eggs.—The price of eggs showed a tendency to firmness and prices were higher than they were the previous week. Strictly new-laid eggs were quoted up to 35c. per doz. in a wholesale way, while No. 1 selected were 32c., No. 2 selected, 30c., No. 1 candled, 28c.; straight gathered stock, 27c., and No. 2 candled, 26c.

Butter.—Exporters were in the market for creamery, but supplies from country districts were liberal, and as a consequence prices showed little change. Finest was quoted at 29½c. to 30c. per lb., while fine ranged about ½c. less. Dairy butter continued at 22c. to 23c. per lb.

Cheese.—After an effort to hold prices up in spite of lower prices in country boards, dealers have had to come down in quotations. The tendency is rather firmer and quotations were higher than the lowest. Finest Western was quoted at 165%c. to 161%c., and finest Eastern at 16c. to 161%c., with fine goods obtainable at 1/4c. under these quotations all the way round.

Grain.—The market for oats was about 1/2c. down as compared with the previous week. No. 2 Canadian Westerns were 541/2c. per bushel, car lots, ex-store; No. 3 being 53c. and extra No. 1 feed, 531/sc. No. 1 feed were 52c.; No. 2 feed, 51c. Ontario and Quebec No. 2 white were 52½c., No. 3 being 51½c., and No. 4,

Flour.—The market showed no change and purchases were all of small quantities. Manitoba first patents were quoted at \$6.60 per barrel, seconds being \$6.10, and strong bakers' being \$5.90 per barrel, in bags. Ontario first patents brought \$6 to \$6.25, and choice 90 per cent. patents, \$5.40 to \$5.60, in wood, the latter being \$2.55 to \$2.65 per bag. Straight rollers were \$5.10 to \$5.30 per barrel, and \$2.40 to \$2.50 per bag.

to \$2.50 per bag.
Mill Feed.—There was no change in the market last week, but there was talk of price cutting. Most dealers quoted bran at \$21 per ton, in bags; shorts at \$24; middlings, \$25 to \$27; pure grain mouille, \$31 to \$32, and mixed, \$27 to \$29 per ton. It was stated in some quarters that sales of bran took place at a considerable

decline from the above, being \$2 less.
Hides.—Lamb skins were 65c. each. Calves' were 33c. and 31c. per lb.; beef hides, 20c., 21c. and 22c, per lb. Horse hides were \$2.50 to \$3.50 each, and rough tallow, 1½c. to 2½c. per lb., while rendered was 7c. to 7½c. per lb.

Buffalo.

Cattle.—Prices broke on all clauses of cattle at Buffalo last week. It was the weakest trade Buffalo has had within a year, but the market here was not any different from other marketing points, where prices went off all the way from a quarter to a dollar. Offerings here for the opening day of the week figured 4,000 head, about thirty cars of which were shipping steers. Steers generally showed a decline of from fifteen to forty cents, the least takeoff being on the prime steers, which sold up to \$11.10 to \$11.25, while a medium class of steers and a pretty good kind, were fully forty lower. Three loads of Canadian steers reached \$10.75, but they were very good. On handy butchering steers, best kinds ranged from \$9.00 to \$9.50, with yearlings ranging from \$8.75 to \$9.25. Values on all classes of females were off generally from a quarter to forty cents, in some cases as much as half a dollar on the medium and common grassers. A few fancy, strictly dry-fed cows sold up to \$8.00, but the bulk of the better kinds of butchering cows ranged from \$6.00 to \$7.50, a medium kind from \$5.25 to \$5.75, canners and cutters from \$3.50 to \$4.75. Bulls were given the hardest jolt of any class of cattle, the decline figuring in some cases as much as seventyfive cents under the previous week. few prime, dry-fed bulls sold up to \$7.80 to \$7.85, with others running from \$7.00 to \$7.50, but from \$6.25 to \$6.50 took a very decent class of bulls, and as low as \$5.00 to \$5.50 was paid for the light, commonish grassy grades. Stock-

which sold very strong the week before. lost the advance of \$2.50 a head. Now that the killers have succeeded in pounding down the inflated values on cattle, general belief is that with the grasses coming plentifully that there is not a strong likelihood that prices are going to come back as strong as they have been, especially in view of the fact that the great bulk of the prime, dry-fed cattle have moved to market. packers have been insisting all along that the price of the animal on the hoof was entirely too high, to enable the retailer to get a liberal outlet for the beef, and they seemed determined now to hold prices down, provided the receipts come in a way to justify it. Offerings last week were 3,850 head, as against 4,550 for the previous week and 4,075 head for the corresponding week last year. Quotations:

year. Quotations:
Shipping Steers.—Choice to prime natives, \$10.50 to \$11.25; fair to good. \$10.00 to \$10.50; plain, \$9.00 to \$9.25; very coarse and common, \$8.50 to \$9.00; best Canadians, \$10.25 to \$10.75; best Canadians, \$10.25 to \$10.75; fair to good, \$9.50 to \$10.00; common and plain, \$8.50 to \$9.25.

and plain, \$8.50 to \$9.25.

Butchering Steers.—Choice heavy, \$9.75 to \$10.25; fair to good, \$9.25 to \$9.50; best handy, \$9.25 to \$9.75; common to good, \$8.60 to \$9.25; light, thin, \$8.00 to \$8.40; yearlings, prime, \$9.75 to \$10.00; yearlings, common to good, \$8.25 to \$9.50.

Cows and Heifers.—Prime weighty heifers, \$8.50 to \$9.25; best handy butcher heifers, \$8.00 to \$8.50; common to good, \$7.00 to \$7.75; best heavy fat cows, \$7.50 to \$8.00; good butchering cows, \$6.50 to \$7.25; medium to fair, \$5.25 to \$6.00; cutters, \$4.50 to \$4.75; canners, \$3.25 to \$4.25.

Bulls.—Best heavy, \$7.50 to \$7.85; good butchering, \$6.25 to \$6.50.

Stockers and Feeders.—Best feeders, \$7.50 to \$7.75; common to good, \$7.75; common to good, \$6.75

Stockers and Feeders.— 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 \$7.00. Milchers and Springers.—Good to best, in small lots, \$80.00 to \$100.00; in car loads, \$70.00 to \$75.00. Hogs.—Market got a good start last week, Monday's market being active, with prices ten to fifteen cents higher than the previous week's close. On the pages

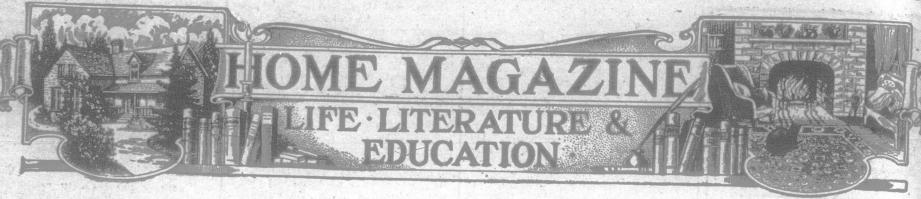
the previous week's close. On the open-ing day of the past week several decks of good hogs brought \$10.25, one deck made \$10.30, with a bunch selling at \$10.35, but the great bulk of the sales on mixed grades and York weights were made on a basis of \$10.20 and pigs landed mostly at \$9.75. Tuesday no sales were made above \$10.20, with some selling at \$10.15, with pigs generally \$9.75, Wednesday the best grades \$9.75, Wednesday the best grades ranged from \$10.15 to \$10.25, with pigs ranged from \$10.15 to \$10.25, with pigs selling up to \$10.00, Tuesday values were 10 to 15 cents lower, bulk of the sales being made at \$10.05 and \$10.10, with pigs dropping to \$9.85, and Friday a few good hogs again reached the \$10.25 mark but the bulk moved at \$10.15 and \$10.25. Pigs sold about like Monday, roughs ranged from \$8.60 to \$8.75 and stags \$7.25 down. Receipts last week were 27,200 head, as against 31,497 head for the week before and 32,300 head for the same week a year ago.

Sheep and Lambs.—Receipts continued to run light and prices were held steady

to run light and prices were held steady from day to day last week. Spring lambs on the toppy order sold from \$11.50 to \$12.00, with culls going from \$10.25 down and the top for yearling lambs on the dry-fed order was \$10.00. No wether sheep sold above \$8.10, 'though had the right kind been here they would have brought more, and while a few dry-fed ewes made \$7.75, the general ewe range was from \$7.00 to \$7.50. Last week the run figured around 3,800 head, as compared with 3,233 head for the week previous and 3,600 head for the

same week a year ago.

Calves.—Approximately 3,000 head were marketed last week. Offerings were against 3,413 head for the week previous and 2,825 head for the same week a year ago. Monday top veals sold mostly at \$12.50, Tuesday the bulk moved at \$12.00, Wednesday a few made \$12.25, Thursday tops again sold up to \$12.50 and Friday best lots moved at \$12.00 and \$12.25. Culls were steady all week, ranging from \$11.00 down. Heavy fat calves were discriminated against, and kinds weighing better than 200 pounds, as a rule, undersold the desirable ones by from \$2.00 to \$3.00 per cwt.



What is to Come?

W. E. HENLEY.

What is to come we know not. But
we know
That what has been was good—was
good to show,
Better to hide, and best of all to bear.

We are the masters of the days that were.
We have lived, we have loved, we have suffered

. . . even so.

Shall we not take the ebb who had the flow?

Life was our friend. Now, if it be our foe—

Dear, though it spoil and break us!—

need we care

What is to come?

Let the great winds their worst and wildest blow,
Or the gold weather round us mellow slow:
We have fulfilled ourselves, and we can

And we can conquer, though we may not share
In the rich quiet of the afterglow
What is to come?

Among the Books

"Child and Country."

"Town life had become a subtle persecution," says Will Levington Comfort in his new book, "Child and Country" (George H. Doran Pub. Co., New York, \$1.25 net). "We hadn't been wrecked exactly, but there had been times in which we were torn and been times in which we were torn and weary, understanding only vaguely that it was the manner of our days in the midst of the crowd that was dulling the edge of health and taking the bloom from life. I had long been troubled about the little children in school—the winter sicknesses, the amount of vitality required to resist contagions, mental and physical—the whole tendency of the school towards making an efficient and a uniform product, rather than to develop the intrinsic and inimitable gift of each child."—Thus it was that a certain restlessness and dissatisfaction with "things as they are" drove this family from the heart of the city to the quiet of the country. Upon the crest of a hill lapped at its foot by the waves of broad Lake Erie a house was built, after the fashion of an old Spanish house that Mr. Comfort had seen at Luzon. Rose bushes were planted, and There were problems of shoreconservation to be wrestled with, and all the incidentals attendant upon the creation of a new home. - Then planning and building shaded off into a new living and enjoying, and there more time to devote to other things. There were little children in the home, and Mr. Comfort had wished, as may be gathered from the quotation with which this review opens, to see them evolve according to the personality within them, escaping the dead level to which the cut-and-dried system of the schools has a tendency to grind the little ones who pass beneath it; and so it came about that he began to educate, first his own children, then some others of the neighborhood. Incidentally it is interesting to note that among these last he discovered—in a boy "still as a gull," who "seemed natural with the dusk upon him"—a genius in astronomy. One wonders if this boy would ever have found the "giant within him" had he not come

under the influence of Will Levington Comfort.

—So life at "Stonestudy."—And out of it all—the experimenting and the finding, and the Being—grew the book "Child and Country."

. . .

One is tempted to quote wholesale from "Child and Country"—the copy that lies on the desk before the writer of this is black with underlinings of gems that can scarcely be passed overhere a bit indicated for the sheer exquisiteness of its artistry, there another for its touch of delicate humor, and then scores and scores of passages for a richness of philosophy, a depth of insight, a gift of vision that grip alike heart and intellect. Will Levington Comfort not only sees but can make others see; not only possesses inspiration but can fill others with it. And so he finds his world's work, not only with the children who gather about him, and the young men who come from afar and rent cottages to be near him, but also with the great outside world, where souls are thrilled of those who can never look upon his face.

If there is a regret at all in reading the book, it is that the writer has been so unfortunate in the type of country-folk whom, in the days preceding the writing of this book, he had met. Quite possibly, by this time he has been able to touch men and women of the farms who are different, and has learned to know that in the country as in the city, egeneralizations cannot be made from any one, or two, or three sections. For one rural district may differ as radically from another as differs Maida Vale from the East End of Old London. Nor is it altogether unknown that the silent countryman in even an unprogressive district, has "long thoughts" which he expresses only to those who possess the key to

house can be prevented from closing upon the growing child; that the giant is eager to awake. . . I believe that an ordinary child thus awakened within, not only can but must become an extraordinary man or woman."

And all this arousing comes out of the eternal and is of the eternal. It is cosmic, not temporal. "A man must achieve that individuality which is not a three-score-ten proposition."

With the evolution of the soul comes, in direct ratio, the lovingness that makes men brothers. "All literature has overdone the dog-life fidelity of simple minds. The essence of loyalty of man to man is made of love-capacity and understanding—and these are qualities that come from evolution of the soul, just as every other fine thing comes. . . The rising workman in any art or craft learns by suffering that all good is ahead and not elsewhere; that he must dare to be himself even if forced to go hungry for that honor; that he must not lose his love for men, though he must lose his illusions."

To Will Levington Comfort, work is life and prayer. To dream a dream and make it come true; to dream of work that shall be for the good of the Many and make that dream come true—that is to live, that is to justify one's existence here on earth. "All excellence in human affairs," he says, "should be judged by the workmanship and not by the profits. I would inculcate in the educational ideal, first of all, that in every man there is a dream, just as there is a soul, and that to express the dream of the soul in matter is the perfect individual performance."

And so he would suppress, as far as possible, the cheap, unsubstantial machine-made article, and give every workman a chance to work out his thought in his own way.

who are gifted with vision become teachers. . . A man who has seen many campaigns, he is aghast at the present cataclysm in Europe. "War in this century," he declares, "is a confession, as suicide is a confession, as every act of blood and rage is a confession, of the triumph of the animal in the human mind." The patriot, the chauvinist, he holds, can have no part in the cleaning off of war from from the torn earth, but only he of the international mind, the humanitarian.—And in the great humanitarianism that will regenerate the earth, woman must bear her part, and will do that best when she becomes of such quality herself, and so mates, that her sons will be messiahs incarnated, "true world-men."

Lack of space precludes touching upon the author's observations on the competitive system, ruinous to all that is finest in human lives; on orthodoxy and other topics. Nor is it possible here to incorporate anything of his talk to women, or his delightful descriptions of the children, the "Abbot," the Dakotan, who lend the human interest to the book. Carried away with his philosophy, too, there has been a reluctant leaving out of the fine brush-strokes that give so keen a sense of pleasure in the reading of other portions.—Just a few of these last as a suggestion of what this artist can do:

"The smell of the woods in the moist air was a Presence."

"It has been like a prayer to ride through that lane."

"Jack (Miner) is an individual. He has time to plant roses as well as

Of Ireland—"Not a place, but a passion."

"Somewhere back of memory, most of us have strange relations with the wild things."

"I had gazed across the Lake, at one with it all, a friendly voyager of the skies, comrade of the yarrow and daisy."

"Rather it would seem that one must spend years to be worthy of communion with one hillside of dogwood."

And now, do you understand why one should want to quote wholesale from "Child and Country"?



BY SARAH K. BOLTON IN "OUR DUMB ANIMALS."

A child stood waiting before the gate, Poorly clad, and of humble mien; Worse than orphaned, a waif of fate, She asked from hands unseen.

The lady paused in the busy whirl Of a life of ease, from the book she read; "I cannot care for the little girl; She is not mine," she said.

A homeless puppy lay on the street, Tired and famished, and asked to live; A starving kitten was dropped at her feet, Because, she had wealth to give. "I have no room for the speechless throng; No time to see they are warmed and fed: My life is crowded with joy and song; They are not mine," she said.

Death came; the lady was called away Fromher beautiful home, and jewels rare; Thousands of voices bade her stay; "Too lovely she is too feer it?"

"Too lovely, she is, too fair."
She stood where we all will stand at last,
When the record of life is closely read:
The angel paused, as he scanned her past;
"She is not mine," he said.



A Fine Roadway. Residence of Mr. F. Hunter, Norval, Ont.

his confidence and an understanding of the world in which he moves.

* * * *

Just to touch upon a few of the more

striking points of the book:

Mr. Comfort makes much of the idea that we are all "better than we know" if we will but give the good a chance to develop itself and express itself. "Here we are upstanding," he exclaims, "half-gods asleep within us. Imagination alone—the seeing of the spirit of things—that can awaken us."

And again: "I believe . . . that there is a sleeping giant within every one of us. . . I believe, by true life and true education that the prison-

"Work and religion," he says again, are the same at the top. . . A man doing his own work for others, losing the sense of self in his work, is touching the very vitalities of religion and integrating the life that lasts."

And then he quotes from "Midstream" part of that magnificent chapter on "Labor" already given you in a previous issue, in "Among the Books."

Will Levington Comfort is an optimist. He believes in evolution, yet sometimes he becomes impatient—"The trouble is, the passage of the many from grade to grade is intolerably slow," and so he would have those

with vision become man who has seen he is aghast at the n Europe. "War in declares, "is a conis a confession, as and rage is a con-The patriot, the off of war from , but only he of the the humanitarian. umanitar anism that earth, woman must will do that best of such quality s, that her sons will ated, "true world-

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Mine.

IN "OUR DUMB

before the gate, f humble mien; waif of fate, s unseen.
le busy whirl
the book she read;

little girl; said.

on the street, nd asked to live; opped at her feet, ealth to give. peechless throng; warmed and fed: h joy and song; he said.

was called away e, and jewels rare; de her stay; too fair."

rill stand at last, e is closely read: canned her past; said.

JULY 6, 1916

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 ap-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. your name when ordering patterns. Many forget to do this.

When ordering, please use this form:

Send the following pattern to: Name.... Post Office.... Province.... Number of Pattern.... Age (if child or misses' pattern)..... Measurement—Waist.....Bust....



8908—Child's Bishop Dress; 1, 2 and 4 years.



8869-Middy Blouse, for Misses or Small Women; 16 and 18 years. 8628—Two or Three-piece Skirt for Misses and Small Women; 16 and 18 years.





8918-One-piece Dress, 34 to 42 bust.





8761—Child's Dress, 2 to 6 years.





8650-Ladies' Dressing Sacque.



8766 Over-Bodices, 34 to 42 bust.



8663-Boy's Suit, 4 to 8 years.

Hope's Quiet Hour.

Toronto Children's Freshair Mission—21st Annual Report.

In writing the 21st Annual Report of the Toronto Children's Fresh Air Mission; the story of thousands of boys and girls helped could be told but God alone knows the true story and lasting benefits that these outings have brought

The Mission was born and continued in prayer and simple faith—every need was supplied—difficulties were faced and surmounted and "To Him be the Glory"—"Oh, how sweet to trust in Jesus. As the work opened up each year everyone seemed to have a place—willing workers to seek out and prepare the children—homes in the country welcome them—generous assistance gives

welcome them—generous assistance given by the Railways (Grand Trunk, Canadian Pacific, Canadian Northern and Michigan Central)—with the Farmer's Advocate, (the children's friend) to interest their readers

Thousands of children benefited by the holiday and laid the foundation for a vigorous and healthy manhood and womanhood, but best of all were the lasting impressions made as they were received into the homes of God's children

living in the country.

It is with great regret the Committee
announce their decision to discontinue It is with great regret the Committee announce their decision to discontinue the Fresh Air Work, but as there are so many Churches and Societa in the city now interested in this line, we feel that the needy ones will be well taken care of. If any of our friends wish to continue their contributions we might say that Miss Barnum is still carrying on her work at Blink Bonnie Home Grafton, Ont., and any donations forwarded to Mr. W. R. Ledger, 128 Collier Street, Toronto, will be used to assist Miss Barnum and needy children. In closing the last report how fitting it is to refer to the late Miss Francis Esther How, who for nearly 40 years was a mother to needy and friendless children—it truly can be said that she loved them and gave her life for them. During her last illness when under great suffering in the hospital, she became burdened about two delicate lads and had one of the workers arrange a holiday for them, and what contentment it brought her when she was told they were placed out on a good farm.

told they were placed out on a good farm.

Much has been accomplished and not

the least has been that unspeakable joy that has come to all the workers associated in this service.
"He truly is faithful who has promised."

Sgd. CHAS. D. GORDON., Superintendent. Although she is no longer with us, the gentle and gracious influence of Miss How still abides, and we who were associated with her in the work she loved so well can truly say that it was a privilege and blessing to be associated with her. When Mr. Kelso organized the Children's Fresh Air Fund in June 1887, it was to Miss How he turned for the first party of children, and from that date she continued her active interest in this movement. It was her belief that happiness and goodness were very closely related, and in all her dealings with the children she endeavored to put that belief into practice.

Blink Bonnie Fresh Air Home, Grafton.

To the Members of the Toronto Children's Fresh Air Mission:

It is with deep sense of gratitude that I express my thanks to the members of this society for the assistance given to me in my fresh air work at Blink Bonnie, Grafton.

During the season of 1915 there were about 300 of the needy ones of the city who came to us, delicate children, and mothers direct from the hospitals, and with care, fresh air and good food we have restored them to health, and under the supervision of the Deaconess, Miss Kellogg, the time passed happily, and all too soon came the call to school and the children's return to the city. One of the most pleasant features

One of the most pleasant features of the work this year was the last party taken out, which included 40 of the small Italian children of the city. These little ones had suffered greatly during the past winter and many of them had never been out of the city before.

I wish to express my thanks particularly to Mr. Ledger and Mr. Love, who, as in previous years, kindly assisted me in arranging for the transportation, looking after tickets and cars and seeing us comfortably on our way. The officials of the Railways are most courteous and obliging. Very sincerely, (Sgd.) M. H. BARNUM.

(Sgd.) M. H. BARNUM The Blink Bonnie Boys' Home, 378 Victoria St., Toronto.

Sunshine.

"When it drizzles and drizzles,
If we cheerfully smile,
We can make the weather,
By working together,
As fair as we choose in a little while.
For who will notice that clouds are drear
If pleasant faces are always near?
And who will remember that skies are
grey
If he carries a happy heart all day."

You will find my text in Hab. 3:17, 18, and a wonderful text it is. The prophet declares that if all his crops fail and his flocks and herds be destroyed, "Yet I will rejoice in the LORD, I will joy in the God of my salvation." You notice he finds his joy "in the Lord," no other joy can stand such a tremendous test. If we find our joy in earthly things, of course the joy will vanish when the source of supply is cut off. But those who are really rejoicing "in the Lord" can't be cut off from their source of gladness.

We have had heavy clouds hanging over us this year—clouds which poured down more rain than we wanted in the sodden fields, and clouds which threatened to blot out the sunshine of many a home. We can't reach the clouds, so it is useless to grumble and complain about them, but we can obey St. Paul's counsel and "rejoice in the Lord always."

It has often been said that good temper is nine-tenths of Christianity. Whether that be true or not, it certainly goes a long way in making home life attractive. And it isn't only the comfort of other people that may be endangered by our fits of bad temper, our crossness or sulkiness. We may do them deep and lasting injury, driving them away from our Master instead of attracting them to Him. Worldly people are watching professed Christians, eager to find out whether they really do possess a pearl of great price. If they see a joyful spirit, rising triumphant over the little vexations of every day life, and able to "rejoice in the Lord" when all earthly light is cut off —shining always because always reflecting the light of the Sun of Righteousness—they are sure to be attracted by it.

Some people—especially semi-invalids—seem to think they have a right to be as irritable and unreasonable as they choose, when there are no visitors about. They are always pleasant and amiable before visitors.

It is well worth while to win the victory over each temptation to be glum or downhearted, for every soldier of Christ is pledged to accept his Master's will not only patiently but joyously, is called to be a conqueror in all things, large or small. To look like a thunder-cloud, to speak crossly, to show temper by impatient words or movements, is to lose the chance of a victory. To be worried, anxious, impatient, and afraid that things may go wrong, is to prove that we have no confidence in our Leader.

Clouds hide the glorious sun from our sight, let us refuse to let any clouds shut out the face of God. Then we may still "rejoice in the Lord," though life be dark, and may brighten the lives of others by reflecting the Sun of Righteousness.

Whittier says:

"Well to suffer is divine;
Pass the watchword down the line;
Pass the countersign, 'Endure!'
Not to him who rashly dares,
But to him who nobly bears,
Is the victor's garland sure."

DORA FARNCOMB.

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.

(Concluded)

To the great majority of who have spent their childhood in the country, whatever they may have drifted into later, there comes, sooner or later, a compelling desire to drift back to the Thus it is that we see so many successful business men and professional men eventually taking up farming, or, at least, purchasing farms. "His hobby," say their friends, but it is hobby," say their friends, but it is more than a hobby; it is the satisfying of an elemental longing for "the land" itself, a trying to win back the golden glow that hung over childhood's years, vanished so long since. The same craving seldom calls to men from other spheres; the man who has won away from machine-shop seldom wants to go back to it; the one who has spent his early life in any sort of mercantile office has no such drawings. But the workshop and the office have no beauty to hang over the years. theirs the sunrises and sunsets, clouds, fleeting shadows, green of fields and of trees, gossamer of spider webs on the grass, gold of dandelion and buttercup, ripple of meadow-brook and rustle of wind in the corn. When the country calls, it is beauty's own self that calls.

John Burroughs was born on a farm, and spent his boyhood in the very heart of the Catskills, within hearing, almost, of the Pepacton, the Neversink and the Beaverkill. Almost all of his ancestors were farmers, and so it was little wonder that the instinct of "the country" was so strong in him that, after wanderings out in the world, during which he spent some years in the Currency Bureau at Washington, he should go back with glad heart to the woods and fields that he loved. At present he owns, quite away from cities, in addition to his woods-cabin, "Slabsides," a beautiful home "Riverby," on the bank of the Hudson, near West Park, N. Y., and a third haunt, "Woodchuck Lodge," near the old farm on which he was born.

cities, in addition to his woods-cadin, "Slabsides," a beautiful home "Riverby," on the bank of the Hudson, near West Park, N. Y., and a third haunt, "Woodchuck Lodge," near the old farm on which he was born.

"Riverby," a fine stone house with a "parcel of land" adjoined, was the first venture, and almost his first act after going there was to plough in the vineyard. "How I soaked up the sunshine to-day?" he wrote, at the end of the first ploughing. "At night I glowed all over; my whole being had had an earth bath; such a feeling of freshly-ploughed land in every cell of my brain. The furrow had struck in; the sunshine had photographed

it upon my soul."—Perhaps no one could write with such fervor as this but a poet and naturalist long chained to the Currency benches in a city government building.

One feels the touch of the pathetic in the account that Mr. Burroughs gives, simply and truthfully as is his wont, of his early life. He was the "odd" one in a large family, the only one who loved books, the only one who dreamed dreams. Little sympathy did he ever receive from his own people, and yet how he loved every stick and stone connected with that early life on the farm. "Oh the old farm days!" he writes, more than half a century later, "How the fragrance of them still lingers in my heart! the spring with its sugar-making and the general awakening about the farm, the returning birds, and the full, lucid trout streams; the summer with its wild berries, its haying, its cool, fragrant woods!"

It was, however, from his mother, he thinks, that he derived the disposition which made him a nature-writer. Comparing her with his father, "she had more of the stuff of poetry in her soul," he says, "and a deeper, if more obscure background to her nature. That which makes a man a hunter or a fisherman simply sent her forth in quest of wild berries. What a berry-picker she was! How she would work to get the churning out of the way so she could go out to the berry lot! It seemed to heal and refresh her to go forth in the hill meadows for strawberries, or in the old bushy bark-peelings for raspberries. I am as fond of going forth for berries as my mother was, even to this day. Every June I must still make one or two excursions to distant fields for wild strawberries, or along the borders of the woods for black raspberries, and I never go without thinking of mother. You could not see all that I bring home with me in my pail on such occasions;

you could, you would see the traces of

daisies and buttercups and bobolinks,

and the blue skies, with thoughts of Mother and Old Home, that date from my youth."

Like many another famous man, Mr Burroughs used school-teaching as a stepping-stone in early life—not a very happy experience to one of his temperament. "I 'boarded round' " he tells, "going home with the children as they invited me. I was always put in the spare room, and usually treated to warm biscuits and pie for suppers. A few families were very poor, and there I was lucky to get bread and potatoes." The teaching, however, only lasted during the winter; the summers he

still spent working at home on the farm.

At first, by selling maple sugar, he earned enough to buy some books; later the proceeds of his teaching amounted to enough to send him away to school, and he tells of going there, late in November, "riding the thirty miles with Father, atop a load of butter."

When the winter was over he reached home again in the 20th of May, "with an empty pocket and an empty stomach, but with a bagful of books." It was during one of his teaching periods that he met Ursula North who, later, became his wife.—"I wrote her a poem on reaching home," he tells, with delightful candor.

One by one he encountered the books that, more than anything else, influenced his life. "It was at this time," he writes, "that I took my first bite into Emerson, and it was like tasting a green apple—not that he was unripe, but I wasn't ripe for him. But a year later I tasted him again, and said, 'Why, this tastes good,' and took a bigger bite; then soon devoured everything of his I could find."

It was not, however, until he came upon Audubon that the course for his own life became mapped out. "Ever since the time when in my boyhood I saw the strange bird in the woods of which I have told you," he says, "the thought had frequently occurred to me, 'I shall know the birds some day.' But nothing came of the thought and wish till the spring of '63, when I was teaching school near West Point. In the library of the Military Academy, which I frequently visited of a Saturday, I chanced upon the works of Audubon.

I took fire at once. It was like bringing together fire and powder! I was ripe for the adventure; I had leisure, I was in a good bird country, and I had Audubon to stimulate me. . . How eagerly and joyously I took up the study! It gave to my walks a new delight, I could go fishing, or camping or picknicking now with my resources for enjoyment doubled. . At once I was moved to write about the birds, and I began my first paper. 'The Return of the Birds,' that fall, and finished it in Washington, whither I went in October, and where I lived for ten years."

From that time evolved quickly the "John Burroughs" whom we know, student and lover not only of the birds but of the bees, and the frogs, and the plants and little wild animals. His first magazine article about birds appeared in the "Atlantic" in the spring of 1865. During 1864, while in Washington, he wrote "Wake-Robin," based on his memories of the country, but his first published book was "Walt Whitman as Poet and Person" (1867), re-written, years later, as "Whitman, A Study."

A Study."

—"Wake-Robin," "Winter Sunshine,"

"Locusts and Wild Honey,"

"Pepacton," "Birch Browsings," "A

Bunch of Herbs," "The Long Road,"—

do titles such as these awaken a thrill
in you, Nature Lover? If so they are a
recommendation to the works of John
Burroughs; not one of which should be
missing from the literary section of the
farm library.

John Burroughs is now seventynine years old, but he still writes,
usually in the study at Slabsides,
but often in the hay-mow of the barn
at Woodchuck Lodge near the Pepacton,
whence he can look out towards "Old
Clump" over the beloved old fields
which had once known his bare boyhood feet. It was Mr. Burroughs,
the "odd" one, indeed, who was able
to pay the mortgage off the old farm
and secure it for the family, and it
seems almost pathetically strange that
not one of that family has ever taken
enough interest in his writings to read
them. One cannot but feel a bit sorry for
him when he tells, not in the least
complainingly, of bringing one of his
books to his brother Hiram, who lived
with him for a time at Slabsides, with
the remark that this was the first off
the press after his work of four years.
"Is it?" said Hiram, and went on
drumming on the table with his fingers.

But Mr. Burroughs does not want for friends and admirers, among them such kindred souls as John Muir, who was one of the party on the trip to Alaska of which Mr. Burroughs tells in "Far and Near." Wherever the English language is read his books are known—not only because he writes of beautiful things, but because he writes about them beautifully. And everywhere he is limpidly, unaffectedly honest—never writing for effect, but as naturally and musically as a brook flows. As has been said he "re-creates for each of us our own youth, with our own childhood scenes and expereinces invested with a glamour for us, however, prosy they seem to others."

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What better recommendation, for pure joy, could be given to the work of any writer?

JUNIA.

John Burroughs' Books: "Locusts and Wild Honey," "Pepacton," "Wake-Robin," "Leaf and Tendril," "Winter Sunshine," "Birds and Poets," "Riverby," "Signs and Seasons," "Time and Change," "Ways of Nature," "Far and Near," "Squirrels and Other Fur-Bearers," "In the Catskills."

Wedding Queries.

Dear Junia.—As my father has taken this paper for some time, I read the Ingle Nook every week. I find it very interesting indeed, also find it a great help for getting good recipes. It teaches one a great many things. I now come to ask a few questions about a July wedding. What kind of flowers would you suggest? And do you think that to have the arch and tables in the orchard would be out of the way? How many courses would be suitable for an inexpensive wedding dinner? I would like to have it cold, as it will likely be warm weather by that time, and one does not care to be over a hot fire. I intend to be married in the evening, so would you prefer a dinner or

It was like bringing powder! I was ripe e; I had leisure, d country, and I had ate me. . . How usly I took up the to my walks a new o fishing, or camping w with my resources ubled. At once rite about the birds. first paper. 'The irds,' that fall, and shington, whither I

he evolved quickly hs" whom we know, not only of the birds d the frogs, and the wild animals. His cle about birds apantic" in the spring 864, while in Wash-Wake-Robin," based of the country, but book was "Walt book was "Walt and Person" (1867), ter, as "Whitman,

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supper? Please give some suggestions on setting the table. Should the bride or the bridesmaid cut the cake? And should it be passed around by itself? What kind of fruit would be suitable? Bruce Co., Ont. SILVER BELL.

You may, of course, call upon any flowers and fruits that are "in" at the time, but as both are plentiful in July there will be no trouble about that. It is better to use one-or at most twokinds of flowers rather than a variety.

The effect is better.

It would be very nice, indeed, to have the ceremony in the orchard—provided it does not rain—also to set the tables there.

Why not do with just two courses? -first, sandwiches, salads, pickles, cold meat, salted almonds, olives; then cakes, ice-cream or fruit-salad, and bonbons Set the tables as prettily as possible with flowers in the center of each, and white flowers only on the bride's table. Remove all the eatables except the almonds and olives after the first course before bringing on anything for the second.

As a rule the bride puts a knife with a white ribbon bow tied on the handle into the cake, or cuts the first piece from it. Anyone else may finish the cutting. No other cake is placed on the plates of bride's cake.

I could not send you a private reply, "Silver Bell," because you did not sign your name. Anyhow, it is against our rules to send private replies unless in unusual circumstances. I hope your wedding will be very delightful, and wish you the best of weather.

Re Sunday Knitting.

For Ingle Nook Friends.—This is my first visit to your corner. In a recent issue of "The Farmer's Advocate" I read the enquiry, Re Knitting on Sunday. Also a request for opinions. As I am interested, and, have thought so much along this line, I have ventured to give my humble opinion.

In the first place I note that this is a "question which everyone must settle with her own conscience." Is it wise to always trust one's conscience? I do not think it is. We might compare our conscience with a compass which is to be found on all vessels travelling on the ocean. The pilot consults the compass from time to time, but does not trust it entirely, knowing that some very little attraction may put it wrong. What does he do? He seeks something higher. We may call it heavenly consultation; the stars are a more sure guide. May it not be equally true with oneself? Conscience is a good monitor, but for the safe guidance we need to consult the only rule given us, and that is the Bible. If one faithfully searches the scriptures it is surprising how much is written in regard to keeping holy the Sabbath day, and our Saviour taught that only the works of necessity and mercy should be done on that day.

I do not understand why it is necessary to knit socks on the Sabbath day. If we have our knitting conveniently near and whenever we have a little time, if only five minutes to knit, it is surprising how much may be accomplished. There are so many ways of conserving time if one tries, perhaps a little less reading or some of our work which we think necessary may, in a time like the present, be left off and no one will suffer, and that time used for knitting or other work to help the soldiers. Perhaps at the beginning of the war there was need, but now the Red Cross and different other organizations have gotten the work well under way, and lots of factories are turning out hundreds of pairs every day, so I do not think our boys are suffering for the want of socks. I do not think the work of doctors or nurses is a parallel case at all. I fear there is a danger of our drifting from the good old law of keeping the Sabbath.

One great lesson we learn from Bible history is that so long as the people walked with God and obeyed His commands they were blessed, and in time of war they conquered. Another is that their defeats came when they forsook Him. How did they forsake Him? They forgot His day, His house, His tithes. As a country, an empire we must plead guilty along these lines. If by disobedience to the law of Sabbath keeping the war is prolonged, causing

the slaughter of so many useful men, where will rest the responsibility? Knitting is one act of disobedience, there are many others. One call of the war is to each one to examine how far there has been a forgetting of God, and to get back to Him. Then may we pray with clean hands and true hearts for victory, and truly our prayers will be answered, and the time of suffering and sacrifice of our brave boys at the front will be shortened.

Port Perry, Ont. MRS. BAIRD.

Laundering in Summer.

With July usually comes the "hardest" laundering season. Not only are more clothes soiled during the hot



Laundering at Porto Rico. The women rub the clothes on the round stones of the river bed and dry them on the bank.

weather, but the clothes seem to become dirtier than at any other season. Add to this the difficulty of doing hard work during boiling July days, and the necessity for simplifying methods

is at once apparent.

In the first place, if the clothes are not too much soiled, it is not absolutely necessary to boil them every Sunlight is the best disinfector in the world, and in bright weather the white articles will bleach perfectly well without boiling, and become sweet as need be, too. Just soak them over night in soapy water to which you may add a little ammonia, rubbing plenty of soap on the most soiled portions.

Next day wash, using a little brush, when necessary, rinse through two waters, blue as usual, and hang out,not a drop of hot water for the whole process, except when making the boiled starch. This should be quite thick for underwaists, but very much thinned out for waists, table-linen and under-

When boiling must be done, the following is recommended as a good method: Soak the clothes over night in soapy water. In the morning wring them out and put them in the boiler, which is half full of water to which a quarter of a bar of good soap dissolved in boiling water and about 2 tablespoonfuls of washing powder have been added. Boil the clothes 20 minutes, then wash out a little, rinse through

two waters and finish as usual. A small brush will always be found of great use in saving strength.

Laundering colored clothes presents more difficulty. In the first place it is well to "set" the color each time. The easiest way to do this is to keep some turpentine on hand. Add one tea-spoonful of it to each half gallon of water; wet the goods in this before washing, and dry in the shade. If the odor of the turpentine is unbearable use salty water instead, soaking the articles in it for 20 minutes. Afterwards, when rinsing green, lavender and pink materials, add a cupful of vinegar to the water.

Strong soap should never be used for colored articles; use a mild, white soap. Also remember that it should not be rubbed on; the better way is to shave it into a little boiling water and let it dissolve, then add to the washing water and make a lather. Never leave colored things long in water, and be sure to dry them quickly in a shaded place where the wind blows. While they are still a little damp bring them in and iron at once.

White starch is ruinous to the appearance of black or navy wash goods. For a stiffener use the following: Dissolve 1 oz. gum arabic in cold water and pour over it 1 quart of boiling water. Dip the articles and iron them if possible while still slightdamp, ironing on the wrong side with an iron that is not too hot.

A few wrinkles that may be of use are the following:

To iron a rough, dry garment at once, as is sometimes necessary, dampen the garment, roll it tightly in an old clean cloth, then in paper, and put in the oven while the

irons are heating. At any time using hot water rather than cold for sprinkling will make the clothes ready in less

If a linen suit or dress is crushed but not soiled, it may be made to look perfectly crisp. Moisten a little starch with water, dip a cloth in this and squeeze it out, then rub on the wrong side and iron.

Black cotton and lisle stockings are much nicer when washed in bran water. The bran should be tied in a cheesecloth bag.

If white clothes have become yellowed with age add a little coal-oil to the rinsing water.

To dry clean a thin, white silk blouse rub it with a mixture of ¾ starch and ¼ fine salt. Shake out, rub in some pure starch, leave 24 hours, then shake out again.

Fruit and tea stains should always be removed before laundering, and many methods are recommended. Often it is sufficient to pour clear, cold water through a stain just as soon as possible, using plenty of water in a steady stream. Hot water should never be used as it sometimes "sets" the stain. Fruit and tea stains often succumb to a good rubbing with butter. Leave for a while, then launder as usual. Or glycerine mixed with egg-yolk may be rubbed on tea stains. For coffee stains rub on pure glycerine. Another method for fruit stains on table linen is to rub as soon as possible with a little methylated spirits.

To remove rust soak the article a day, or two or three days in buttermilk. Ink stains succumb to the same treat-

Always boil a new clothes-line before using. This will keep it from shrinking and sagging.

Hot Weather Complexion Hints.

It is much harder to keep the skin in order in very hot weather than at any other time of the year—March, per-

haps, excepted.

In the first place, there is dust everywhere, and dust is hard on the complexion. But the skin must be kept perfectly clean, or a certain griminess is very soon evident, especially when the pores are large. All the beauty specialists say, however, that soap and water should never be used immediately after coming in from the sun and wind. The better way is to smear the face first with cold cream, leave it for about ten minutes, then wash with warm, soft water and good soap, rinsing finally with cold, soft water.

Every day a bath should be taken,

and every night all the year round the face should be washed with warm, soft water and a pure soap, scrubbed on with a wash-rag or came s hair face brush. Afterwards all the soap should be rinsed off with clear, soft water and face-cream may be applied. In the morning it is not necessary to use soap at all. Some people who have very finegrained skin scarcely ever use soap at all; but for the majority it is absolutely

During summer one of the best face-bleaches known, "cucumber milk," may be very easily made, as follows: Cut up a large cucumber and cover with water. Let it simmer, then strain and water. Let it simmer, then strain and add enough water to make a pint. Finally add 1/2 teaspoon boracic acid and 10 drops tincture of benzoin. If the skin is very dry use less boracic acid. . . . Lemon juice, or lemon juice mixed with glycerine, is also a very good face bleach. So also is buttermilk let dry on the face. Some mix milk let dry on the face. Some mix it with grated horse-radish.

Some "Frozen" Delicacies.

The following rules will be found of use in making frozen dishes success-

Have the mixture to be frozen thoroughly cold before placing it in the freezer-can.

Have the ice and salt in proper pro-portions—one part salt, three parts ice and let them be thoroughly mixed.

Do not draw off the salt water from

the freezer until the work is completed, as the brine formed by the melting ice and salt assists the freezing process.

If fresh fruit is to be added to the ice-

cream, partly freeze the cream, then add the fruit, and see that this is finely crushed before being added to the frozen mixture; otherwise it will become so hard as to be almost uneatable.

See that the most scrupulous attention is given to the freezer after use, that it may be in perfect condition next time it is needed.

Plain Ice-Cream.—There is no ice-cream better than that made with pure, rich, sweet cream, slightly sweetened and flavored with a dash of salt and a little vanilla. Any kind of fruit may be added during the freezing, or a little cooked fruit may be served on the dish with the ice-cream.



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The accurate weight of LANTIC SUGAR in original packages is a great help in preserving as it enables the work to be done without weighing the sugar. For strawberry preserves in light syrup use 4 quarts of berries to a 2-lb. carton of LANTIC SUGAR. For richer preserves increase the proportion of sugar according to taste.

PRESERVING LABELS FREE—Send us a red ball trade mark cut from a bag or carton and we will send you a book of 54 ready gummed printed labels containing 6 for each of the following fruits: strawberries, raspberries, blackberries, currants, grapes, cherries, plums, peaches and pears. Address



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Ontario Variegated No. 3,
No. 2 for purity, per bus....\$19,00
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MILLET, ETC. German or Golden Millet..... Japanese Barnyard, lb..... Potato Onions, lb.... Rape (Dwarf Essex), lb... 1,000 Headed Kale, lb... Silver-hulled Buckwheat.... 1.15

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J. W. H. MILNE, B.A., D.D., President Jas. W. Robertson, LL, D., C., M.G., Chairman of Board Maple Ice-Cream.—Take 1 cup milk, 34 cup maple syrup, 2 eggs and 1 cup cream. First scald the milk in a double boiler, then add the syrup and pour over the well-beaten eggs. Return all to the boiler and cook until thick, add the cream and freeze

the cream and freeze.

Coffee Parfait.—Take 1 cup water, 1 cup sugar, 1 cup coffee, whites of 2 eggs, 1½ cups whipped cream. Let the sugar and water boil together for 5 minutes; then, having beaten the whites of the eggs until stiff, pour the boiling syrup over them, stirring constantly When cold add the coffee and the whip ped cream. Blend all very thoroughly turn into a mould, cover closely, and bury in ice. Parfaits, when freezing, do not need to be stirred or "turned."

Private Jones was hauled up before the Captain with whom was an angry

"Jones, this gentleman accuses you of killing his dog," said the officer,

sharply.

"A cruel thing to do," snorted the bereaved owner. "You have done to death a defenceless animal, who never

death a detenceless animal, who never harmed anyone in his life."

"Dunno about 'armless," said Private Jones, heatedly. "E bit pretty deep into my leg when I was on sentry go, so I ran my bayonet into him."

"Rubbish," retorted the dog's master."
"Hawas such a gentle little animal. Why

He was such a gentle little animal. Why didn't you drive him off with the buttend of your rifle?"
"Why didn't 'e bite me with 'is tail?"

countered Jones, with suspicious meek-ness.—The Maple Leaf.

More Lbs. Butter

From Less Milk

That's the work of Ayrshire blood. Your first purebred should be an Ayrshire. Full information from

W. F. Stephen, Secretary Huntingdon, Que.

Can. Ayrshire Breeders' Assn.



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C. Wilson & Son 45 Esplanade E. Toronto

The Beaver Circle

OUR SENIOR BEAVERS.

[For all Beavers from Senior Third to Continuation Classes, inclusive.]

Competition Results. Competition Results.

Competition Results.

To-day we have the results of two competitions, Beavers. The subject "What I should like to do when I grow up," was given a long time ago, but so few answered it that (don't tell anybody!) the letters were quite overlooked in the bottom of a drawer. However they came to light to-day, and the prizewinners are as follows:—Louida Bauman, R. R. 1, Elmira, Ont.; Lilian Franklin, Cape Rich, Ont.; Lorence Gosnell, R. R. 1, Highgate, Ont.; Evelyn Lyons, R. R. 2, Dundas, Ont.

Ont.; Everyn Lyons, Ont.

Ont.

The prizewinners in the Competition
"A Fishing Trip" are Annie Randall,
Randall Corners, N. B.; Melvin Carter,
Port Lock, Ont.; Dorothy Schwalm,
Mildmay, Ont.; Amy C. Prince, R. R. 1.
Petrolia, Ont.; Roy Pierce, Eganville,
Ont.

Ont.
Honor Roll.—Reuben Wettlaufer,
New Hanbury, Ont.; Edna Brunton,
Marvelville, Ont.; Charlotte Potter, R.
R. 6, Goderich, Ont.; Alice Paterson,
Rodney, Ont.; Agnes Murray, Downeyville, Ont.; Marjorie Erwin, R. 8, Peterboro, Ont.; Albert Weber, Palmerston,
Ont.; Hilda Berg, Hickson, Ont.
There is not space for all of the prize
letters to be published to-day, so some
will have to wait over for another time.

Some Prize Letters.

"What I Want to do When I grow up."

Dear Puck and Beavers.-I am sendmay you a composition, "What I would like to do when I grow older and why." Most people do not wish to be idle. Lazy people have no real pleasure in doing nothing. I would not like to follow that example, but be industrious and have enough most like to the state of and have enough money to make myself comfortable.

Some people have not the talent to study and sing. Some people like farming and such things. I would like to make use of my talents and get a good

I would go to Public School till I'd be through, then I would take a few months rest from studying and learn housework. When fall term of High School begins I'd start and go till I'm through. Then I'd go to Normal school, after which I'd teach. I'd try to have my work a success so that others might learn too. It is very good to have an education. an education.

I would like to have people love me.
I would try to make poor people happy,
for it is "better to give than to receive."
I wouldn't like to have troubles, so I
could sleep at night and wake feeling
fresh and happy.

In the support balidage I would like

In the summer holidays I would like to go home and have a good time. would go to the woods and see birds and think of the time when I was younger

and used to run about.

After holidays I would go back and In winter I would go skating. I would like to have sleigh rides several miles every week. I would take a walk every morning and evening.

I would like to travel to many places, such as the old country, (if there'd be no war), and see the ways to which people are used. I would also like to see the catacombs, the pyramids and many other places which are still

like they were many years ago.

When I'd be old I'd sit in my armchair, and go back to days of my childhood, with memory's ship. I would like to be content and satisfied with my lot until I die.

LOUIDA BAUMAN. Care Mrs. Silas Bauman, R. R. No. 1, Elmira, Ont.

A Fishing Trip.

What is more delightful than to go on a "Fishing Trip" in the spring.

Let me tell you what a delightful time I had while visiting at my uncle's farm two years are. We were all sitting farm two years ago. We were all sitting around the table one spring evening and my uncle was telling of some exciting events that happened while fishing

erCircle

BEAVERS. om Senior Third to inclusive.

n Results. Results.

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A BAUMAN. in,

l than to go the spring. a delightful at my uncle's vere all sitting pring evening some exciting while fishing

when he was a little boy. Just then my cousin Harold exclaimed, "Why daddy couldn't we take a trip like that some day? There is a river only eight miles away." "Why certainly you may if you like," said my uncle. "You may take old Ned and the carriage and go to-morrow if the weather is fine."

What an excitement followed. The what an excitement followed. The girls were planning what they should take along for lunch and the boys were getting their rods and tackle ready for the expedition. At last everything was ready except the lunch which was to be prepared in the morning. So we all went to bed with the expectation of an eventful morrow.

The next morning we were up at six o'clock and took a hasty breakfast, after which aunty filled the lunch box good thigs hungry youngsters would enjoy.

Then we all drove away in the fresh morning air. The drive was very pleasant the clover fields were sparkling with the dew, and the birds had just begun their morning songs. It reminded me of one of Browing's poems-

'The year's at the spring, The day's at the morn; Morning at seven;
The hillside's dew pearled;
The lark's on the wing;
The snail's on the thorn;
God's in His heaven— All's right with the world."

We passed farm houses unknown to us, where the women had just finished milking and were taking the milk to the

At last we arrived at the river. How beautiful it looked! We unhitched Ned from the carriage and tied him to the fence where he could eat contentedly. But now the fishing was to begin. It was not easy for us girls to bait the hooks, but we managed at last. We then dropped our lines in the river, but it seemed of no use, the fish would not bite nor could we see any. Just then my cousin Harold said that he was going to take the raft that was lying near the edge and go to the centre of the river. So we all got on and rowed out to try our luck. I had barely dropped my line when there came a swift dash from aside and gave my arm a fearful jerk. It all happened in a moment, I jerked up quickly and here was a fine trout on the hook struggling for his life. But he could not escape as he was soon safely secured in the pail. My cousins

were now having better luck also.
We then rowed to a different part of the river where Harold caught a trout that measured eleven inches. We then began to get tired of fishing, so we rowed ashore and began picking buttercups. Just as my cousin Mary had stooped down for her first flower a large black snake scurried away in the grass beneath her feet. She gave a scream of fear and Harold came running with a stone and was going to kill it, but it escaped to the water.

After we had picked a large bunch of buttercups we were very hungry, so we took the lunch from the carriage and seated ourselves on the bank to eat it. How good it tasted and how swiftly the sandwiches disappeared! We were almost tempted to go into the water with bare feet, but it was yet too early in the cooper. in the season.

We saw that the sun was beginning to set and we knew that it was time for us to start for home, so we gathered up our belongings, hitched Ned to the carriage and started for home, feeling very tired, yet happy after our eventful "Fishing Trip."
DOROTHY SCHWALM, age 13, class IV.

Mildmay, Ont.

A True Experience.

Dear Puck and Beavers.—I am going to write my essay on "A Fishing Trip."
One fine day a chum of mine and I went out fishing. We get into our boot and out fishing. We got into our boat and went out where we thought there would be plenty of fish. I threw in my troll and caught a pike. It weighed twelve pounds. It had been caught in a net before because some of its scales were off and and it was bleeding. After a while we saw some fish jumping out of the water to get flies to eat. We rowed over where we saw the fish, but they did not bite the hook. My chum said to me "let us go over in the bay." As soon as w got there something

bit my hook. I pulled in my line and I saw that it was a mud turtle. We brought him into the boat and then threw him out again. Then I rowed the boat and my chum fished. He put in his troll but he didn't catch any thing till we got near our landing place; then he pulled in a pike and he was very

much pleased. We went to the shore and thought we would fish with a line from the shore for some bass. I caught a bass and so did he. We then went home and showed mother our fish. She told us that we were very lucky to get that many. One other day we went out to fish but we did not get as many fish as the other day. I will

close, your loving Beaver.
MELVIN CARTER, age 13. Port Lock, Ont.

A Schoolboy's Thoughts.

What's the use of these silly exams, Which masters compel us to take? One swots and one grinds, and one crams; But to do so is quite a mistake.

Where is Venice? I'm sure I don't know! You can always look up on a map; There's no need to worry me so— It's really rough luck on a chap.

Who was Simon de Montfort? Indeed I know not, nor do I care. If they asked me the best place to feed, I could answer-but this isn't fair.

If you don't know the source of the Rhone, An atlas will tell you at once; Yet, because a few things are not known, Those masters declare I'm a dunce!

Look at Latin! Why, what is the use Of learning a language that's dead?
Of brains 'tis a shocking abuse To keep all that stuff in one's head.

At Arithmetic, now, take a look; Why learn every measure and weight? They're all written down in a book. Tis a subject I thoroughly hate.

As for French, I would sooner be dead Than to rubbish like that be a slave, If the French all learnt English instead, Just look at the time it would save.

There are Science and Algebra, too-They don't seem the least bit of good; There's far too much writing to do; I'd abolish them all, if I could!

And now, I've a plan I may say
(Not, of course, that I'm anxious to shirk)

By which I can quite do away With the need of the least bit of work.

It is simply that, if all the men In the world gave up working at once; If no one knew anything, then They couldn't say I was a dunce!

The House of Too Much Trouble.

In the House of Too Much Trouble, Lived a lonely little boy: He was eager for a playmate, He was hungry for a toy, But 'twas always too much bother, Too much dirt and too much noise For the House of Too Much Trouble Wasn't meant for little boys.

And sometimes the little fellow Left a book upon the floor, Or forgot and laughed too loudly, Or he failed to close the door. In the House of Too Much Trouble Things must be precise and trim— In the House of Too Much Trouble There was little room for him.

He must never scatter playthings, He must never romp and play; Every room must be in order, And keep quiet all the day. He had never had companions, He had never owned a pet— In the House of Too Much Trouble It is trim and quiet yet.

Every room is set in order— Every book is in its place. And the lonely little fellow Wears a smile upon his face. In the House of Too Much Trouble He is silent and at rest-

In the House of Too Much Trouble With a lily on his breast.

-Albert Bigelow Payne.

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Seven short appeals to "horse sense"

ANY man can make money by judicious saving. "A penny saved is a penny A carned." Think it over. There are certain things you ought to have for farm maintenance. But don't buy the wrong thing at any price or the right thing at the wrong price. Perhaps right now you are in need of a timber preservative, a lice or fly killer, a durable paint for metal and exposed wood surfaces, a satisfactory cement for quick everyday repairs, a ready roofing that is wear-proof, easy to lay and cheap.

We can fit you out perfectly in these things. The Barrett Money Savers have no superiors. Just glance over the products shown

AMATITE-Many people object to "rubber roofings" because they are not attractive in appearance. So we made Amatite. We put a mineral surface on Amatite so that it sparkles like crystal in the sun. It won instant popularity. Then, users of Amatite discovered that the mineral surface made it wear well. And when we showed them that Amatite did not need painting, the conquest of Amatite was complete. Users agree that it has no rival in ready roofings.



CREONOID—Then there's Creonoid, lice destroyer and cow spray. It's one of the first requisites to the possession of happy, healthy live stock, because vermin-infested stock are only half efficient. Creonoid positively destroys vermin flies, insects and mittes. And it's cheap too, because it's so

powerful that a little goes a great way. Spray your cattle and horses with Creonoid. Simply let a fine vapor touch them by spraying. And spray some around the hennery, the stable and the piggery. You'll have more milk from your cows, more salable porkers, and more eggs from your chickens.

EVERJET—Every farmer should have a good carbon paint on hand. Here's the best ever mixed—Everjet Elastic Paint. Wonderful as a roof paint. It keeps water out, and defies the weather. All over the farm, wherever you have exposed surfaces, you need Everjet. Splendid on farm implements and iron surfaces too, because it expands and contracts to meet weather conditions. Never peels or cracks. Always a spark-ling, permanent, protective, black covering. Try some and see for yourself.



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EVERLASTIC ROOFING—You ought to get acquainted with Everlastic Roofing. The best ready roofing value you can get. It is easily laid without skilled labor. It is inexpensive. And it wears as many a higher priced roofing doesn't KUUFING know how to wear. This is because every foot of it is honestly and strongly made. Don't have leaky roofs. Use Everlastic on your steep roofed buildings

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and keep the water on the outside. ELASTIGUM—The best way to fix little things is to fix them right at first. They never get hig then. For the little everyday repairs around the farm, you should have Elastigum. It is a tough, adhesive, elastic cement that fixes leaks, joins or relines gutters, stuffs cornices, reflashes chimneys. And it does all these things "for baces". This wonderful waterproof cament will save things "for keeps". This wonderful waterproof cement will save you money by keeping the small things small. Have it on hand! A hundred uses,

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DEPT. 101

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d of all wheat flour. Try it, and prove it. Get a package of BENSON'S at your grocer's, and write to our Montreal Office for copy of our new recipe book, "Desserts and Candies" that

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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 23rd to

June 30th:
"Toronto," \$2.00; M. C. F., \$1.00;
"Margaret," Durham Co., Ont., \$3.00;
Geo. Sherriffs, Preston, Ont., \$1.00; A.
Bell, St. Mary's, Ont., \$5.00.

Amount previously acknowledged. ...\$2,561.70

Total to June 30th.....\$2,573.70 IF YOU CAN'T GO TO THE FRONT, GIVE.

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

Letter of Thanks.

Dear Sir: I have been laid aside from illness, or I should have sent you sooner a few words of acknowledgement of the further generous contribution of \$25 towards our Belgian Relief Fund from your Dollar Chain givers. I shall need a new alphabet or maybe an en-larged dictionary if I am to find new words wherein to clothe our gratitude for the help and encouragement, as well as for the money itself. Again we are half-way to still another £50, the last having only gone about 10 days ago. Your readers have helped us with each, and we appreciate more and more their practical sympathy. Thank them, please, in the name of the Local Council of Women and of yours very gratefully.

H. A. BOOMER. Pres. L. C. W., London, Ont. Note. — The declaration by Mr. Asquith that the "relief food reaches the Belgians and French, and reaches them alone," will be reassuring to those who are contributing to this fund.

Current Events.

Liquor and gambling are prohibited at Camp Borden.

It has been announced that the Duke of Devonshire will be Canada's next Governor-General.

All the soldiers at Exhibition Camp, Toronto, are being sent to Camp Borden.

The city of Berlin, Ont. is to be renamed "Kitchener."

The only munitions factory Roumania has been destroyed by fire. Germans and Bulgars are blamed.

Sir Roger Casement has been found guilty of high treason and sentenced

Dr. Karl Liebknecht, the famous German socialist, has been sentenced to 30 months penal servitude. He was accused of arranging the May Day demonstration against the war.

The announcement that the drink bill of the United Kingdom increased during the past year by \$87,000,000 has brought all the churches in Scotland together in a demand for prohibition.

At time of going to press the Allies are everywhere making gains, having made notable advance along abou. 25 miles of the Somme River. They are now supplied with plenty of guns and ammunition, and great reservoirs of gas. Along the British lines everywhere our men have taken the initiative — English, Highlanders, Australians, Irish nadians all fighting—and the German first-line trenches have been penetrated at many points. Beiore this reaches our and Careaders there may be much more to tell. THOMAS GRAHAM, R.R. 3, Port Perry, Ont. In the meantime German troop-trains

are being rushed eastward to meet Brusiloff's tremendous advance, and particularly to try to hold the city of Lemberg. A feature of the week has been a great victory near Kolomea, won by the Russian General Letchitzky. The total number of prisoners captured by Brusiloff's men is now placed at 210,000. At Verdun, for the present, there is a comparative lull, although the artillery bombardment still goes on. In Italy the Latins again have things in their own hands, and are steadily driving the Austrians back over the ground that they captured during the winter and spring. . . Some sharp skirm-ishes have also been reported from the Balkans. The Allies, who have occupied the town of Kavala, are steadily applying the blockade pressure to Greece, and are trying to force the disbanding of the Greek army.

The Windrow.

"If nations had to pay for their wars before they fought them, how few there would be!"—Wall Street Journal.

Many of the knapsacks carried by German soldiers are made of a sort of paper webbing, very light and durable.

Sarah Bernhardt, "all mutilated as she is"-for she had a leg amputated a year ago-has been at the front giving recitals for the French soldiers. At one time she was within a quarter of a mile from the trenches.

The Salvation Army of the United States and Canada are contemplating a scheme for the re-marrying of many of Europe's war widows when the war is over. The plan is to have them meet eligible mates in other lands.

The "Girl Guides" of Thamesville, Ont., are growing potatoes to sell for the Patriotic Func.

By a bazaar held in New York last week to aid sufferers from the war the countries of the Allies, over \$1,500,000 was realized.

Prof. Ramsay Wright, well known to ex-students of Toronto University, has spent some time working at munitions at Newcastle-upon-Tyne. His wife is serving in a military hospital.

The two barristers who undertook the case of Sir Roger Casement, are both Welshmen,—Mr. T. Arthur Jones of Denbigh, and Prof. J. H. Morgan of Ystrad Rhondda.

The Indian tribes of Canada have responded splendidly to the call to arms and have given the best of their young braves to fight alongside their "white brothers" as well as giving "white brothers" as well as giving of the money to aid the Patriotic and other funds. Over 800 men are with the forces and they have contributed less than \$24,634 through the Indian Department officially as well as contributing to local funds.

We want a Europe free not only from the domination of one nationality by another, but from hectoring diplomacy and the peril of war; free from the constant rattling of the sword in the scabbard, from perpetual talk of shining armour and war-lords.

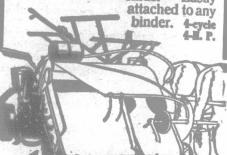
SIR EDWARD GREY. * * * *

The swift progress of the Russian drive is believed to be due to the fact that Japan has supplied her with enormous stocks of ammunition and other military supplies. There are grounds for believing that Japan and Russia are entering into an alliance, by which Japan secures certain railway and other commercial privileges in Manchuria and Mongolia in return for her assistance during the war. * * * *

Fifteen women, thirteen of them married, were among the delegates to

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the Democratic convention at St. Louis. They were there as accredited delegates, backed up by women whose ballots are to be a factor in the choice of the next president of the United States. Half a dozen years ago or less the possibility of the possibility of the control of the state of the possibility of the control of the state of the possibility of the control of the state of the possibility of the possibi of such an event would have been derided as the dream of some visionary suffragette. To-day it is regarded as something ordinary in the natural course of events.

And why not? If the war has done anything more decisively than to smash the whole structure of sophistry and prejudice against giving women equal rights of citizenship with men, we are in ignorance of what it is. Probably not until the history of the present comes to be written with clearness and authority shall we be able to sufficiently appreciate how much the whole British Empire in this time of storm and stress owes to its women.—Ottawa Valley

Summer Longings.

Oh, to be out in the wilderness! Far from the haunts of man, Alone completely and utterly, Just for one brief span.

Away from the fret and worry, Away from carking care, From the things that tease and flurry, And the man-polluted air.

Out in the virgin forest. Or in meadows with unturned sod, Where the seedlings are scattered by angels, And the husbandman is God.

Where the cataracts leap for the glory of it, With never a turning wheel,
And the glassy calm of river or lake
Lies unruffled by plowing keel.

Where the pine trees gossip in whispers With the rustling bracken and fern,— Of deadly axe and rending saw In blissful unconcern.

Where the noise and tumult of commerce Are things unknown, unheard, And the spoils of nature are garnered alone By beast, or insect, or bird.

Where, from impish chatter of squirrel To hymn of the hermit thrush, All sounds with the background of silence Blend in one harmonious hush.

Just to wander unpurposeful, To linger or run at will, And eye, and ear, and lungs and heart With the beauties of God to fill.

Then, should the All-wise will it, Back to the struggle and strife, But laden with treasures no man can And that last till the close of life.

Some Layer-cake Fillings.

Some of the best cooks have but one layer-cake recipe, one that they can carry out well, a "tried and true friend," always likely to be up to the standard. Variety is secured by a number of filling and income which come ber of fillings and icings, which completely change the character of the cake; also by baking the cake itself, now and again, in a loaf, adding to the batter chopped nuts or melted chocolate.

The very nicest layer-cakes are baked in two thick layers; each of these, then, is split in two, and the filling is put in the three places thus left for it. One of the best fillings is a boiled custard flavored with vanilla or almond. custard flavored with vanilla or almond, or mixed with grated cocoanut or mashed banana. A lemon custard, also, is delicious. After a cake is filled in this way the top may be iced in any way one chooses, or may be covered with stiff whipped cream, very slightly sweetened and flavored, or left quite unsweetened, if preferred. if preferred.

Orange Filling.—Take 2 cubes loaf sugar, juice of 1 lemon, 1 orange, 2 tablespoons water, icing sugar. Rub the cubes briskly over the rind of the orange to extract the flavoring oil, then dissolve the sugar in the juice of the lemon and the water. Add enough of the icing sugar to make a thick filling.
Put sliced orange with the filling between the layers of the cake. Sift pulverized sugar over the top of the cake and decorate with slices of orange

dipped in candy-syrup so as to glaze

Fig Filling.—One lb. figs, 2 tablespoons sugar, 1 cup water, juice of 1 lemon. Put the figs through the medium

cutter of a food chopper, add the water and sugar and cook to a pulp. When cool add the lemon juice and beat well.

Hasty Filling.—Beat 4 tablespoons preserves or jelly until smooth. Add a tablespoonful of lemon juice, then enough pulverized sugar to make as enough pulverized sugar to make as thick as cream. Put between the layers, and dust sifted sugar over the

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. Serial Rights Reserved.

II. 15

Yuan had waited for me in Washington as a sprinter awaits the pistol. Within three hours after my arrival, a train left for the west—the last that would connect with the steamer for China, it was almost necessary for him to catch. Missing this train meant the loss of a week in Peking. We did some quick thinking. I encountered a really surprising pressure of disinclination to leave him.

Huntoon wanted some of my South America, as he stated it. Yuan and I desired him to have it. The interest of the Chinese in this intrepid and impossible boy, because their heart-interests converged at the same point, has always been a nice bit of human delicacy to me. "Huntoon," said I, "it will make only a difference of ten days or two weeks, if we sail for Guayaquil from San Erancisco—instead of going down Atlantic. Francisco-instead of going down Atlantic

He licked his lips and looked distressed. I expected Yuan to command me not to break the original order; and when he did not instantly-my decision formed.

decision formed.

"I've got a ship sailing from Baltimore to-morrow night," Huntoon said with effort. "My bag's packed. I'd better get it. I don't feel juicy enough to cross the States again—past St. Louis. I'll wait for you in Guayaquil—and we'll go down to—what's this mining we'll go down to—what's this mining

town—?"
"Libertad," said I.
"Together," said he.

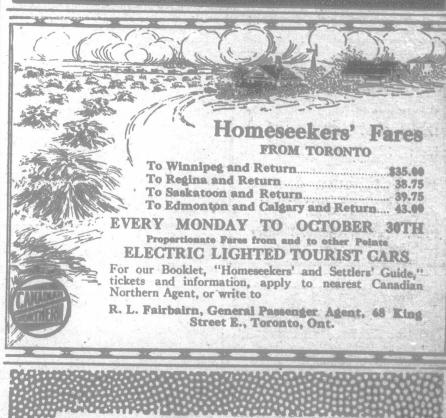
I was too rushed to realize that he was suffering, as he told me afterward, from "dry-rot." The incorrigible wings of conduct, clipped to the bone for the St. Louis return, had grown again. He was sick for a ship under his feet and a smoking-room that never closed. I hesitated a second for Yuan to speak, and vaguely understood how he wanted me-when he did not. And so arranged-Huntoon to wait for me at Guayaquil.

Exactly fifteen hours after I had left Mary Romany in Covent, a train pulled out of Washington for the west, Yuan and I in one of the night coaches. Huntoon and his bag had left for Baltimore twenty minutes earlier from the same station. . . Fifteen hours of the Year gone—I remembered the morning—the rain, the cold and the rending. The next night it was Chicago we were leaving, and Huntoon was at

sea again. That second night, departing from Dearborn Street, Yuan asked me to tell him once more of my call at the Charity House in Philadelphia. The long evening was before us, and I began as one would tell a story to a child—a story that the child had heard often and approved, all the details, all the

The strong elements of the man were whipped and cowering. He lit a cigarette, and it burned to his fingers without touching his lips again. He did not seem to hate China nor to blame the Ambassador. It was his utter acceptance of the fate of Yuan Kang Su which tortured me. The vigorous human nature, repressed so long, had risen with all its accumulated might to protect and treasure this woman. Yet he had not gone to Philadelphia to see her, even for an hour. I think Jane Forbes understood this better than I—as she









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loved the Orient better than I. We smoked late in the buffet, and then back to our sleeper. Yuan was just across the aisle, After his curtain was drawn, I imagined something like the rigor of death behind it. I did not the rigor wall. I had my thoughte but sleep, well. I had my thoughts-but there seemed a mælstrom in that intense silence opposite. It drew me out of myself, to China, to the Ambassador's chambers again, the Graham House, and all the places where I had known Yuan Kang Su.

In the morning for an hour, the fields, rivers and sleepy little towns formed a blurred composite in my mind, before the first call to breakfast. Yuan smiled, as he passed on to the wash-room. I could see no trace of the fancied ravages of the night, when he returned. The diner, met at Omaha, was forward. We were passing through the second of a pair of tourist coaches, when Yuan halted and caught my arm, as if to keep from falling. I followed his eyes. Five or six sections ahead to the right, was the sloping shoulder I knew so well. The same contour; the same brown hair in its plain doing. I gazed breathlessly, but not so unreasonably as to hope. Something out of the past warned me not to hope. hope. Just then the figure turned to some invisible being at her side. and to Yuan the coach became a celestial habitation. Speed, sounds, landscape, were lost to my eyes. I had heard her voice, and I knew there was a child beside her—hidden by the caneback of the tourist seat. And so I followed Yuan down the aisle. His face was immobile, his heart raging.

"Jane Forbes," he said, as if with mighty effort.

She started, paled, and cried his name. "Oh, why did—how did you come on this train?"

He had caught up the little one and was sitting beside her. "To catch the Doric," he answered.

She raised her hand over his shoulder to me, and smiled, the color rising faintly to her white cheeks.

"And that's why I hurried," she said. . "I couldn't stay there. I wanted to get back to China. Mr. Ryerson told me you were returning—but not so soon. I wanted to return with you, but I thought if we journeyed across the continent together and across the Pacific-it would be all the harder for us to remember our work. I didn't think it possible for you to try for the

"It must have been managed for us," Yuan said,

I was awed by the same thought. It was some moments before we turned to the child, who had been frightened at first by Yuan, but only for a moment. A bleak little face—pinched and harried soul of a little girl of six.

And now I was remembering the sets of twos, and the frail haunting face—that one bit of loveliness so tragically out of place, the one that had not blundered into the world. Jane Forbes remembered

"But I could not have taken her for mine," she said.

"That is exactly what I want to know-why not?" I asked

"Why, she is radiant—exquisite to the finger nails."

"All the more—why not?"

"Don't you see? A beautiful child like that? There are beautiful homes for her. There are plenty to take the perfect children. Always in China —until that day—" (I knew she meant the day on the Liu chuan cliffs) "—I intended to go back to Philadelphia and take a little girl for my own. When it proved best for Yuan's work, you know—I thought of the little girl again. But, of course, I wouldn't take one that it would be easy to find a home for. This dear little Ellen—would have to take potluck, and she is really very sweet—to me."

Those few sentences are the blood and bone and spirit of Jane Forbes. Nothing had ever made me see the youth of my soul as this. Millenniums

evolution stretched between the Roman hyacinth and this little face. She face. She could have had the other just as well, . .

Before she would go to breakfast,

"I have not bought my passage. Seven or eight days would make little difference to me. If you think it best, I can change at Granger—go up to Portland and Vancouver. There's an Empress steamer from there in a week, you know-'

"After Providence has intervened against your iron-willed decrees—" I exclaimed, and mentally withdrew with a look of apology to Yuan.

"I beg of you not to think of it. These days—our dispensation. I shall be a very strong man in Peking," he said.

She settled back in the cane-seat and ressed the child close to her. "It pressed the child close to her. "It seemed—as if I had to say it," she murmured. Then she agreed to transfer to our coach.

I remained apart, as much as they would let me—for were they not beginning upon their Covent—these two? But many times in the next three days I was third of a committee of arrangements-to found a Mission for Chinese little girls up the river.
This was a dream of Yuan Kang Su's,
though I love to think it came from the mother, so queer, so incredibly little. Yuan had a private fortune for this work, and I have always been grateful that he permitted me to assist in the easy way of a man with money.

Though it was a sacred thing-there was one night in which I told them of Covent and our Year. It more and more impressive to the woman as the hours passed, the inner potentialities unfolding. . . They were marvel-lously restored, the two, and the little child was always near them—and the dream of the Mission up the river, the work of her heart of hearts to Jane Forbes, her Mission. The happy hours are hard to write about now—when

And so I saw them over the plains and mountains. December joined us en route, and I walked with them on nameless platforms, in the brisk air of the new winter. . . It was only when the last visitors were ordered ashore in the heart of the night, that I left the ship. . . In the dawn from Sutro Heights, I watched the old Doric slip forth from the Gate (I followed three days afterward, but sheered away to the southward), and white she was, swinging off in the mists toward the Farallones. . . Less than a week of the Year was gone.

III LOST VALLEY.

If you have a map of the Americas on your wall, drive a pin into New York City, and drop a string from it. Falling naturally the string will cut off a small, extremely western strip of South America that bulges out into the Pacific.

This little strip contains all the properties which made that year wonderful to me; The highest mountains of the hemisphere; mountain-lakes that only the mid-day sun finds, and which live in a sort of dim enchantment mornings and afternoons; rivers that rush and leap and cut deep silent ways to the sea; a rocky serrated coast overlooking the Pacific; torrid, temperate and frigid climate all in a day's climb; one river, the Rio Calderon, which the devil baited with gold to catch men; a ruined city and the radiant valley, Tropicania. To this valley, through which runs the golden Calderon, came war, strategy, a complicated system of espionage, friends, foes, fortunes, beggary, ambition dissolution, love. . . For me in every-

thing and everywhere in the nights and mornings, in the heights and gorges, by river and shore—was present the vision of a woman. And it is true that certain women came to the settlement.

Nicholas Romany had named the valley Tropicania, and the name meant war and mining projects even in Guayaquil, where Romany was also known. There was a certain thrill in the first mention of his name— "the old Master," he was designated by the miners.

The Guayaquil reports on the situation in Tropicania were conflicting. One report detailed how the government of Ecuador had finally whipped Romany, who had fled to the sea, leaving a million dollars worth of mining-machinery in the valley on the banks of the Calderon. Later, word came that this alleged flight was merely a coup of the old Master's. A prospector remarked that he'd rather contract to get the Ark of the Covenant away from the Children of Israel, than this river property away from Romany. Also, I heard that Romany was a fiend and a friend, fire-eater, fool, king and wizard. Out of it all, I discerned that I must find out for myself.

Huntoon had not waited, the pull of action being too strong toward Libertad. I found his note at Guayaquil, dated two weeks before, that all was exactly as it should be (the pressure on this point vaguely troubled me), and that he would be waiting at the rim of things, which was Libertad, a seven days journey, generally southward by pack-train. Libertad is in from the sea, some twelve miles, and clings high on the slope of Mount Moloch, one of the hugest masses of the Andes, and the northern seal of Tropicania valley. The packers gossiped about Nick Romany -how he had promoted gold-wars around the world, and once had tried to sell a brood of torpedo-destroyers to Japan. There were men from the States among the mule-riders. Libertad was as bad a town, they intimated, as ever our West or Far North knew, but more quiet about it, as befits a place where sin is of age.

We rode the last miles in the dusk and night. The impression of confusion and alarm might have come from a more lawful settlement entered in the darkness; but more than ever before, I was sensitive to subtle under-currents which clothed all action and matter with unreality. There were moments since the Covent parting in which I seemed to dangle between those matters which can actually be touched and felt and seen, and other ranges of creation quite as tangible to finer estates of consciousness. Libertad sat in the night upon her mountain-side, and Moloch's glacier was white with the early moon. heard the restless voices of the miners, as I had heard them in the North with terrible gales beating about little shacks, whose every crevice was red with firelight. And here, from the valley of Tropicania, came a soft warm wind, fragrant as from fruit groves.

It was romance to me, that wind. Emotions crowded in, which made child's hunger and thrist. Mary Romany's father was down in that valley, with an army barking around him for all I knew, or tearing at his flanks. I felt it would be a good thing to serve the old Master,-even with

I was a trifle disappointed that Huntoon did not meet the pack-train at the Libertad corral. Following my peon through the narrow streets, the shrill laugh of a woman reached me, with a man's oath before and afterward. It made me think with an ache that all men and women were not so charged with romance as I; also, that if I wished to be reckoned with among these people, I must meet them on their own ground close-clipped speech, and back up what I said, hard-handedly. knew that end of it, but Mary Romany seemed to have softened me for

The gold-fever lay upon everything. I felt it in my veins, as a man who has become a sponge to malaria, knows every stage of the germ's life-cycle in his blood, by the symptoms of his own

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at the hotel. He had given up his room several days before. Yes, he had spoken of Senor Ryerson's arrival. No more was to be learned.

The hotel at Libertad was a broad low stucco affair, an ancient Spanish setting, for a life as new and raw as the tented wilderness of North American eldoradoes. The faces I passed, the smell of the lamp-lit halls, the garlic that rose from the kitchen, the clink of glasses and the voices that go with them, and the soft night-wind that blurred the lamp in the servant's hand—all of these made evil and memorable the arrival. It was not unlike the early shifting part of an evil dream. Matters like this had never affected me so strongly before. Loving a woman surely spoils a man for coping with old familiar devils.

The balcony saved the situation—the only feature not named in the price-lists, and the most desirable. Old leisurely Spain had built it, Spanish soldiers and their women had sung there. . . I tried to shake off all encroachments of memory and aspiration so commandingly out of place. Black, hasting figures moved about in the street below, and the voice of a man that filled me with detestation, talked and talked from beneath. There was a partition in the balcony, but I heard occasionally the voices of a woman and a man in the room to the right.

At supper there was one face I seemed to have seen before. The man noted that I studied him, and arose before I had finished. I strolled below for an hour, in the vain hope that Huntoon might come in.

Plainly one couldn't join Nicholas Romany simply by walking down into the valley. Orion, a native leader, had cut off the gold-seeker from Libertad. Orion was gathering to strike again, it was said, while Romany was spread out over the ten miles between his head-quarters and the sea. Why is he spread out? It also became clear that I must not ask questions too freely. Orion sympathizers were strong in Libertad. Their sympathy was based on the conviction that Orion would whip Romany in the end. Wherever sentiment entered, it was for the gold-king, whose failures around the world had not been the result of wit-lack nor gamelessness, but rather because of the tremendous size of the affairs he undertook. Romany's history challenged the adventurous heart, and the ebb and flow of his fortunes had altered the great money-centers. When Romany was whipped, it took an army or a parliament. The lesser powers all knew him—but no individual, I was informed, had ever been able to declare, "Romany ruined me."

These large sayings held my thought as I went upstairs, and roamed to the balcony to finish a cigar. Voices murmured in the next room, words occasionally reaching me around or over the wooden partition of the balcony. The woman's voice seemed somehow good. She must have drawn nearer the balcony door, for at length I heard, in a pleading but good-natured tone:

"But I know he was an American, and he looked well-bred—"

The man's tones from deeper in the room were humorous, but the words did not reach me.

"He may have made a mistake," she went on. "He looked lonely and sad and New Yorkish. Really, dear, we should see some one else—or we'll tire of each other. Don't let me ever get tired of you, Melton. A pair of saints could exhaust each other shut up in one room forever. . I'm used to a big family. I don't want to get so that I know what you'll say next. That's fatal."

Again the man talked laughingly. I went in, not caring for the novelty further. There was a tap at my door The man I had noted at supper was there. His figure was small and slender, his voice dep and desirable. He invited me to come in and smoke a cigar with him.

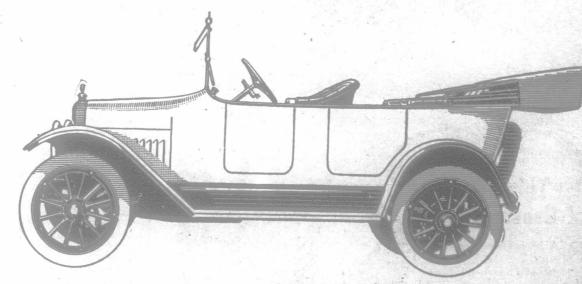
"We're in the next room," he explained, "and have been shut up for several days. Mrs. Yarbin wants to see an American—"

I followed.

The woman was smiling within. "This is a little girl, Mr. Ryerson," he said lightly, "who declared she never would tire of me."

tire of me."
"I don't want to," she broke in.
"I'm used—I'm used to a big family...
She moved to and fro in the lamp-

Maxwell \$850



An Engineer's Opinion

This letter from an eminent engineer is typical of the experience of thousands of Maxwell owners. It covers the vital points of the Maxwell car—the points in which you, as an automobile buyer, should be interested.

"When I heard about the wonderful value in the 1916 Maxwell car I commenced to investigate, with the result that I sold the roadster I used to own to buy what I consider a more efficient car, the Maxwell.

"I placed my order and was fortunate in receiving through your live wire agent, Mr. Lustbaum, of this city, the first 1916 runabout in this section of the country. I was favorably impressed and pleased with my car from the start, and now after several months of service I am entirely convinced that my judgment was right in replacing my other car with a Maxwell for a business car.

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"The self-starter equipment throughout on my Maxwell is apparently well-constructed and to date has given me no trouble at all, and yet I see every day other cars laid up with starting and ignition trouble.

"The points that appeal to me more strongly as I continue to drive my Maxwell are: The ease of operation; low maintenance cost; the advantage of demountable rims and one man top; the cool effect derived on warm days in the driving compartment due to the double ventilating windshield; the high tension magneto entirely separate from the lighting and starting system; the truly irreversible steering wheel, a great asset in sandy and muddy roads, and most important, the high efficiency in the consumption of gasoline and oil.

"In my opinion the 1916 Maxwell car is by far the best buy and greatest value for the money, of any make of automobile made in the United States this year, when the matter is carefully considered from every standpoint. I remain

"Yours very truly,

"HAROLD W. DANSER.

"Long Branch, N. J."

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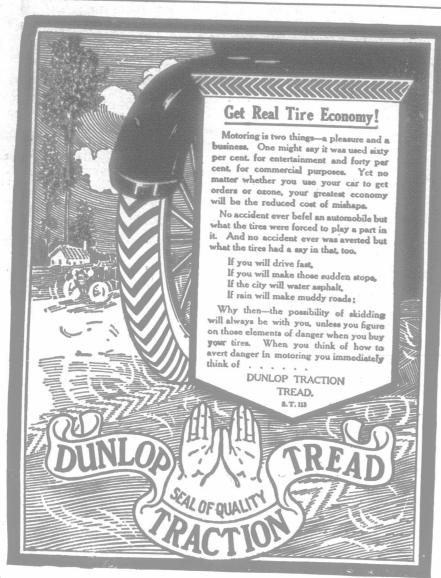
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rays—a bright frank face, a blond woman with wide blue eyes and full lips; a fine and quickening influence, but physically paramount. I could not imagine her lying. She confided at once that she liked the company of men better than women; that she understood few women. Here is a natural outlaw, thought I,—not a destroyer, but a woman who needs big ranges, who could not keep her health in any sort of corral,—a woman dangerous when shut up.

My first idea of Yarbin had been

My first idea of Yarbin had been that he was somewhat insignificant to carry such an elegant manner. His voice was out of proportion to his weight, a deep cultured utterance which made the eye look over his head. My mind continually strove to trace where I had seen him. A face is always harder to discern in a dim light than dead objects.

They knew nothing of Huntoon. This room was more livable than mine-a touch of a feminine hand here and there. Many things of their own were about objects of more richness than taste. The woman seemed aching with eagerness to tell long-pent matters. She started with a new freshness, the lyric of Mary Romany in my brain. Perhaps she felt, in some vague way, that she recalled another to me. I like them both and wondered if they were quite happy together.

He lit a cigarette, and I turned with the flare. His face was deeply, tensely lined; small, but not paltry; it was not exactly a gamester's face, but a gentleman's, in the sense of being well-bred. The whole had come forth with strange vividness in the slow flame of the match. He had met his rights and wrongs, and had found trouble in getting them straight with the rights and wrongs of the world. The old worry of mine about having seen him somewhere kept up an obtrusive activity in my memory, that spoiled either connected talk or thinking.

A queer evening, altogether: the old

A queer evening, altogether: the old sweet song humming in my mind; the open-hearted, unfenced creature, serving cakes and wine; the mystery of Yarbin; talk of the West, Ohio, New York—and at last, the flash that I had seen Yarbin's face in a newspaper, associated with the loss of a great sum of money—one of the wanted. The San Franscisco papers had been filled with it the day I arrived from China with Jane Forbes and Yuan. I remembered nothing of the story, nor the man's name (it wasn't Melton, certainly not Yarbin),—only that it was big game and a clever get-away. This was just the mental process. I did not definitely affix the man before me to the robbery. . I heard their voices vaguely for a moment; saw Yarbin regarding me with keenness. His affair was none of mine; but I saw that if guilty, he had no way of being sure I had not come for him.

Talk waned after that, except from the woman. The wine made her delightfully communicative, but Yarbin again and again interposed in his gentle humorous way. They were waiting in Libertad for a chance to get down into the valley of Tropicania. The danger of a battle daily between Orion and Romany's defenders was responsible for their delay in Libertad. Yarbin remarked that the settlement of Tropicania was worth trying if a man wanted to make a fortune.

"It's just my kind of an adventure, if we can only get there," the woman said.

"Are there other women there in the valley?" I inquired.

She shrugged her shoulders. "They say so, but of course they went down before this Orion whistled up his army."

"If Romany were whipped," Yarbin explained, "the valley would be open again, but there wouldn't be a chance for a fortune. The natives would swarm over this enterprising stranger's

machinery." " "What if Orion were whipped?" I asked.

"That's hardly possible," said Yarbin.
"Reinforcements are unlimited. Romany's got the position, but the best he can do is to hold off the jackals and wash gold. After that he's got to escape with it. But they say he's the man for the job.—"

I had heard much of this sort of thing about Nichelas Power Larges to

I had heard much of this sort of thing about Nicholas Romany. I arose to retire. Yarbin seemed dismayed at my passing from his sight. There appeared to be no way to make him see that I was without pecuniary interest in his past.

To be continued.

Is This Your Kitchen?



He was going to clean our the soot next week, but his wife had an extra big fire to-day. That is the story of fire after fire.

Here is the result, ending in ruination, perhaps, in the home that is not insured. The only safe way is to take out a policy in the London Mutual Fire Insurance Co.—the widest and most liberal policy in force to-day for farm-

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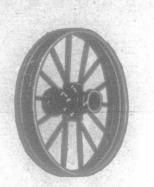
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G. B. Muma, R.R. 3, Ayr, Ont. Paris, G.T.R. Ayr, C.P.R., Telephone 55 R 2, Ayr Rural. Questions and Answers.

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

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

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

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

Miscellaneous.

White Cockle—Castrating Ruptured Pigs.

I am enclosing some weeds which I found in my clover. I got them through sowing alfalfa, some few years ago. They grow about one and one-half feet in height. What is the name? Are they very troublesome? What means should be taken to eradicate them?

2. I read in a recent issue of The Advocate, that the government had passed an act to allow full value for sheep destroyed by dogs. Is the act in force yet? Our township clerk says he has not been notified of it.

I noticed in a recent issue an inquiry re castrating ruptured pigs. Having six among mine, a few years ago, I sent for a neighbor who was considered good at the work. Instead of cutting open and sewing up he had an attendant hold and sewing up he had an attendant hold the pig up, then he caught hold of testicle in one hand, and with the other slipped a clamp on over and wired the end tightly. In five or six days it healed, clamp dropped off and rupture was healed. All six pigs lived and did well. I consider this a much better way than using the knife. I had previously removed the other testicle and allowed it to heal. The operation should be done when the pig is about six weeks old. done when the pig is about six weeks old.

The clamp should be made of hard wood about five inches long and each side ¾ inches square, the sticks placed together and one end firmly wired with small wire, then drawn over testicle, held with a pair of pinchers, while the other end is wired.

A. P.

Ans.—The weed enclosed was a specimen of white cockle which is a biennial or short-lived perennial. It occurs in grain crops and meadows and is difficult to eradicate once it becomes established. The rootstock of this plant is thick and sends up a few long, branching, flowering stems. The flowers are white and the send is held in a capsule. The great seed is held in a capsule. The roots are hard to kill unless dragged to the surface of the soil. If spudded below the surface they will continue to grow, but do not produce seed that season. Short rotation of crops will keep it in check, but a bare summer-fallow with thorough cultivation is necessary to suppress it. Care should be taken to sow clean clover and grass seeds. Where the weed occurs in pastures the mower should be run over the field in August to prevent any seed maturing.

2. The act came into force the latter part of April. Copies of the act relating to tax on dogs and protection of sheep may be secured by writing W. Bert Roadhouse, Deputy Minister of Agriculture, Toronto.

Forty Shorthorns for \$44,430.

Bellows Bros.' thirteenth annual auction sale at Maryville, Mo., on June 14 was another event adding lustre to the Shorthorn breed. Forty animals were sold for \$44,430 and 34 females averaged \$1,140 each. The top price was \$2,250 which was paid by MacMillan and MacMillan for Outen of Beauty 27th MacMillan, for Queen of Beauty 27th. The same buyers also took Lavender goods at \$2,100 and Parkdale Clipper 2nd for \$2,000. Choice Beauty by Good Choice realized \$1,500. The top price for a bull was \$1,330, the amount required to buy Parkdale Radium. The average for the total was \$1,110.

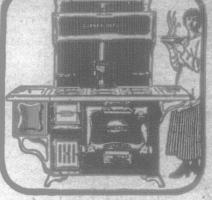
Desirable, Anyway.—"Can any girl tell me the three foods required to keep the body in health?"

There was silence till one maiden held up her hand and replied:
"Yer breakfast, yer dinner, and yer supper."

Before Investing You should see that your judgment regarding the security is backed by facts. According to Canadian Government Statistics, never a Dollar has been lost in Canadian Mortgage Corporation Debentures The Debentures of the Standard Reliance Mortgage Corporation yield 5% interest payable half yearly. One thousand dollars invested in Standard Reliance Mortgage Debentures at 5% (compounded) for 5 years amounts to \$1280.28. A gain of \$280 or 28%. Invest your surplus funds in Mortgage Debentures. No worry—No trouble—Absolute safety. 4% allowed on Savings deposits. Subject to cheque withdrawal. An interesting booklet about Profits from Savings, which gives some very valuable financial advice, will be sent free on request. Write for it today. Address Dept.: 4011 STANDARD RELIANCE MORTGAGE CORPORATION
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A few young cows and heifers. Come and see them. R. R. No. 3, OSHAWA, ONTARIO
2½ miles from Brooklin, G.T.R. 4 miles from Myrtle, C.P.R. 4 miles from Brooklin, C.N.R.

Spring Valley Shorthorns Herd headed by the two great breeding bulls, (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, Nonparell, Butterflys, 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.

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Special this month: Southdown Prize Rams

ROBT. McEWEN, R.R.4, London, Ont. For Sale—The Clydesdale Stallion, Grandus First (16633); also the Clydesdale mares, Ruby Gartley (33717), and Scotland's Charm (32525), and her colt foal, Scotland's Charmer. The above are all first-class horses and all prize-winners. Scotland's Charm won the championship at Guelph Winter Fair last horses and all prize-winners. Scotland's Charm won the championship at Guelph Winter Fair last December. Apply to GEORGE MILLER, R.R. No 1, Caledonia, Ont.

The Glengore Angus We have couple of nice yearling males, sired by Middle Brook Prince 3rd, for sale at reasonable prices. Particulars on application.

Particulars on application.
GEO. DAVIS & SON, R.R. No. 1, Erin, Ont. Beaver Hill Aberdeen-Angus Males and females, all ages. Also one Ayrshire bull, 2 months old, for sale. Prices reasonable. ALEX. McKINNEY, R. R. No. I, Erin, Ont. Erin, C. P. R., Cheltenham, G. T. R.

Questions and Answers. Veterinary.

Umbilical Hernia.

At castrating time one of my pigs (now 4 months old) appeared to have a rupture near the sheath. Now it is about the size of my two fists. Some of the other males and one female are getting the same way.

Ans.—This is navel or umbilical rupture. We can give no cause for it, The umbilical opening fails to close, but we cannot say why. An operation by a veterinarian will, in most cases effect a cure. In many cases the animal fatttens and becomes ready for the butcher without treatment. When the hernia becomes as large as you state, it should be treated. A truss could be arranged to support the rupture, but probably it would be wise to slaughter those that are badly affected. V.

Lumps on Legs.

Last winter I noticed two lumps on Last winter I noticed two lumps on my pregnant heifers hind leg. After a few weeks a few more lumps formed on the leg. I was told that when she was turned out on grass, they would disappear, but the condition has become worse. Now there is a perfect mass of lumps about the size of markles. The lumps, about the size of marbles. The leg, near the foot is badly swollen, and there is a lump the size of a hen's egg on the fleshy part of the hip. I poulticed this and it broke and a little matter escaped. I noticed two very small escaped. I noticed two lumps on the front leg to-day.

R. J. L.

Ans.—These lumps are either tumors or tubercular nodules. Some cattle are or tubercular nodules. Some cattle are predisposed to the growth of tumors on their legs. We cannot explain why. When the growths are of a fibrous nature they do no harm. Local applications do no good. They can be carefully dissected out and the wounds then treated as ordinary wounds. Of course, where the growths are so numerous course, where the growths are so numerouas on your heifer, the operation of dis-section would leave a very sore leg. In rare cases we find a form of tuber-culosis in which the nodules or tumors appear in the muscles and under the skin on the legs. The fact that the large growth burst and discharged a little rather indicates this trouble. A bacteriologist would be able to tell, by examining some of the discharge, whether or not it is tubercular. A veterinarian might be able to tell by cutting out and examining the large tumor, but the surest means of diagnosis is to have her tested with tuberculin.

Miscellaneous.

Weighing Milk.

Re the article on weighing and testing milk in issue of June 1. What kind of scales are ordinarily used in the stables? Can you tell me where I could purchase a spring balance or other scale?

Explain the use of preservative tablets which are used in warm weather when milk or cream is not tested daily A. B.

Ans.-1. The circular dial spring balance scale which weighs to a tenth of a pound is generally used, although the ordinary spring balance is satisfactory for weighing the milk. If scales cannot be purchased locally write one of the dairy supply houses for a catalogue. Richardsons of St. Mary's, or Drummonds of Toronto, would no doubt mail one on request.

2. The preservative commonly used is three parts bichromate of potash to one of corrosive sublimate. This material is poisonous, but it turns the milk yellow so no one is apt to drink it. Put about as much of this powder as can be lifted on a ten cent piece into each sample bottle. This will keep the sample good for from two to four weeks according on the weather. If the sample of milk or cream does not appear to be keeping add a little more preservative. preservative tablets are more convenient to use and are equally as effective as the powder. The sample of milk or cream is kept from curdling so that a satisfactory test can be made monthly instead of daily if it is so desired.

The Government call to every loyal Canadian engaged in Agriculture is for "Increased Production"—an important factor in the present titanic struggle. With the call to arms never was labor so scarce. Labor-saving devices have saved the day in many cases. Take Dairying: The Sharples Milker does the work of milking in onethird the time at less cost. Any man that owns 15 cows or more should get one. The fact that one man can milk 30 cows an hour is worth thinking over. But the one

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head and shoulders above any other is the patented "Upward Squeeze," which eliminates any possibility of inflamed teats and soothes the cow during milking. The Sharples Milker is a vital factor in the production of Clean Milk. The milk flows from teats to sealed silver buckets through rubber tubes. No stable dust, no stable air, no hands can touch it. Clean milk means more dairy dollars. Increased milk production follows its use in almost every case. Over 300,000 cows milked twice daily by the Sharples is abundant proof of satisfactory service. Our free booklet, "Dairying for Dollars Without Drudgery," contains valuable dairy hints.

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Two good young bulls for sale, one fourteen and one seventeen months old, also a couple younger. Intending purchasers met at station on request

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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, some younger still; heifers ready to breed and younger, 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.

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 sal., 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.

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 GEO. AMOS & SONS, Moffat, Ont. Sta., C.P.R. 11 miles east of Guelph

Willowbank Stock Farm Shorthorn Herd Established 1855 This large and oldestablished herd has at the head the two great bulls: Imported Roan Chief =60865 = , a Butterfly, and the prize-winning bull, Browndale =80112 = , a Mina. An extra good lot of young stock to offer families of both milking strain and beef. JAMES DOUGLAS, Caledonia, Ont.

Meadow Lawn Shorthorns We are offering a choice lot of bulls at very sired by Clan Alpine 2nd, No. 88387, G. D. Donside Alexandra (imp.) No. 59513, and any one wanting a right good herd header would do well to secure this bull, as he is a smooth, well proportioned fellow that attracts attention at first sight that attracts attention at first sight.

NG.

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Questions and Answers. Miscellaneous.

Carbon Bisulphide did the Work.

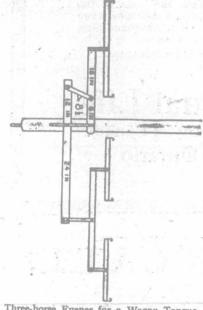
Many thanks for the recipe for killing ground hogs. The carbon bisulphide does all you claimed it would. I used it two weeks ago and the ground hogs are still in their holes. W. L. KELL. Simcoe Co.

Green Corn for Stock Bull - Three horse Evener.

I had planned to plant corn to be cut green for my stock bull but have been advised that a bull fed green corn will not leave any stock for a considerable time. I have no silo and was taking this plan for securing early Is there anything wrong with it? What are the measurements for

a three-horse evener on a wagon?

Ans.—1. Where the bull was judiciously fed we have never heard of green corn affecting him. Planting corn to supply green feed is a customary plan with many stock men.



Three-horse Evener for a Wagon Tongue.

accompanying illustration shows a three-horse evener on a tongue and gives the required measurements.

Ensiling Clover—Concrete Refrigerator.

In case of continued wet weather would it be advisable to fill a silo with hay such as alfalfa, red top, clover and

2. In boiling concentrated lime sulphur this spring the mixture, after it was boiled, settled into a dark jelly-like mass. Could

you tell us what was wrong?

3. Will wheat that is bad with smut be all right for seed if treated with formalin?

4. Would it be all right to build a cement refrigerator inside an ice house and pack ice on three sides and on top?

Ans.—1. Very little definite information relating to ensiling these crops is available. The legumes have been ensiled and the silage made good feed. The hay should be cut and put in the silo while still green and fresh. Cured hay like dry corn would not keep very well unless water was added at time of filling the silo.

2. It is difficult to state definitely what was the cause, but poor lime and unsatisfactory boiling are generally blamed for the mud forming in the solution. Even under the most favorable conditions there will be a certain amount of the mud in home-boiled

lime sulphur.
3. Formalin is supposed to destroy the smut spores on the wheat kernels therefore properly treated seed should

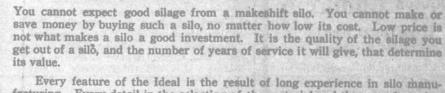
be satisfactory for sowing. 4. The ice surrounding a cement refrigerator would no doubt keep the temperature low. However the principle of refrigeration is to have a circulation of air from the ice chamber to the refrigerator and back to the ice. The temperature and humidity are controled by regulating the amount of air in circulation. It is doubtful if an ice house built as suggested would prove satisfactory. It would lack circulation of air and taints or molds would possibly develop on anything

Order Your Silo Now and Get Extra Profit at Every Milking

Don't try to go through another winter without silage. You cannot afford to. Feed is too high priced, and dairy products are too valuable. Order your Ideal Green Feed Silo now, and be prepared to get 25 per cent more milk from your cows and at the same time reduce your feed costs

15 to 20 per cent. There is no time to waste now. Get your order in at once, so that you will have plenty of time to erect your silo without rush or extra expense.

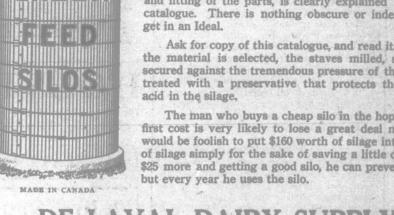




Every feature of the Ideal is the result of long experience in silo manufacturing. Every detail in the selecting of the material and the manufacturing and fitting of the parts, is clearly explained and illustrated in our large silo catalogue. There is nothing obscure or indefinite about the extra value you

Ask for copy of this catalogue, and read it. You will then see how carefully the material is selected, the staves milled, splined and fitted together, and secured against the tremendous pressure of the silage; and how the staves are treated with a preservative that protects them most effectually against the acid in the silage.

The man who buys a cheap silo in the hope of saving a little money on the first cost is very likely to lose a great deal more than he hopes to save. It would be foolish to put \$160 worth of silage into a \$175 silo, and lose \$75 worth of silage simply for the sake of saving a little on the first cost, when, by paying \$25 more and getting a good silo, he can prevent the loss of \$75 not only once.



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Two young bulls, Weldwood Roan Revelation, a dark roan out of Mina Gem, a big, strong cow with an official record of 10,840 lbs. of milk, 388 lbs. butter-fat, and Weldwood Red Victor, out of Lena of Northlynd, 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.

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

GLENGOW SHORTHORNS AND COTSWOLDS Pure Scotch in breeding, we have an exceptionally choice lot of buils 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. J. A. WATT, ELORA. ONT. G.T.R.

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 heliers bred. All registered and priced to live and let live.

Jno. Elder & Sons, 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.

J. A. & H. M. Pettit,

Burlington Jct., G. T. R., half mile from farm.

Shorthorns and Shropshires—T. L. MERCER. Markdale, Ontarioyoung 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,
Fames, 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.

Five high-class bulls, from 10 to 15 months, eired by Real Sultan, others just as good. A pricing them low, as it is getting late in the season. A few helfers and young cows to offer, some mil-ing families. F.eight paid.

Stewart M. Graham, Lindsay, Ont.

Fletcher's SHORTHORNS — 3 choice bulls of scryiceable age; also feeding for sale. Write before buying before buying.

Geo. D. Flatcher, R. R. 1, Erin, Ont.
L.-D. Phone Erin Sta., C.P.R.

Shorthorns "Pail Fillers"—Our Shorthorns are bred and developed for big milk production. It you want a stock bull bred that way, we have several; also Clyde. stallion rising 3, won 2nd at Guelph the other day in a big class. P. Christie & Son, Manchestes, Ont.

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Burnfoot Stock Farm—Breeders of dual-purpose Shorthorns, with a splendid conformation for beef. Visitors welcome. S. A. MOORE, Prop., Caledonia, Ont

Ontario

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ready for service. 1 black dam 16.3 lbs. butter 7 days, 63 lbs. milk 1 day. At 2 years her dam 1,007 lbs. butter, and 25,000 lbs. milk in 1 year: 3 bull calves 4 to 6 mos.

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Questions and Answers, Miscellaneous

Leaky Teats.

I would like to know if there is any remedy for a cow that loses her milk?

Ans.—The trouble is caused by either too large an opening or a weak muscle. When the cow is dry a veterinarian may be able to operate on the teat and stitch the edges of the point of the milk duct to make a smaller opening. Nothing can be done while the cow is in full flow of n ilk.

Spittle Insects.

In a hay field which is three years in grass there are small blades of grass which in the center look as if someone had spit on them but when examined there are worms of a creamy color with a black spot on each side of back near the head. What can be done for it? I. L.

Ans.-It is the work of spittle in-Ans.—It is the work of spittle insects. The froth is supposed to consist of sap, which the insect has drawn from the plant and passed through its alimentary canal. Nothing practical can be done to destroy it.

Cow Bloating.

I am enclosing a receipt for bloating, one which I had occasion to use last week. It gave the cow relief in a few iminutes. Half cup of water and ½ cup coal oil, given as a drench. The cow had been in the same pasture since turning out in the spring. What do you think would be the cause of her bloating? Do you think weeds of any kind might cause it? kind might cause it? G. M.

Ans.-White frost, fresh, wet clover, or a slight derangement of the digestive organs might cause bloating. In a regular pasture field where the stock have been feeding for some time it is not likely that the trouble would be caused by the animal eating a particular weed. When taken in time 2 to 4 ounces of oil of turpentine in a pint of raw linseed oil usually gives relief. Coal oil is not generally recommended, although it proved effective in our correspondents case.

Orchard Grass.

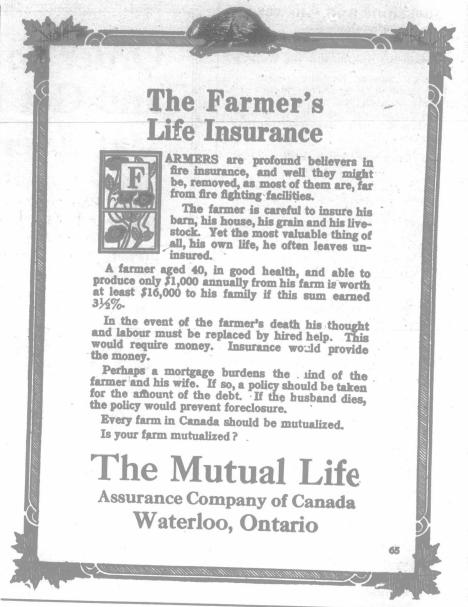
I herewith enclose two grasses. would be pleased if you could identify these and advise me what they are, and what their food value is for cattle.

Ans.—The grass with the spreading head is known as orchard grass which is usually a persistent deep rooted plant which withstands summer droughts and produces an abundance of early and late feed. It makes splendid pasture although stock prefer blue grass. If cut in early bloom it makes hay equal to the best hay grasses and contains a little more protein than timothy. When allowed to mature it becomes woody and is not readily eaten by stock either as hay or pasture. The other grass is one of the millets. Millets are grown chiefly as a catch crop. They thrive remarkably well in hot weather When cut as soon as the blossoms appear make very good hay for cattle and sheep, but are sometimes injurious to horses. It is not as valuable as timothy hay for cattle.

Ensiling Clover.

Owing to the continued rain I am seeking information in regards to putting hay in the silo. Describe through the columns of your paper the best method of procedure. Would it be advisable to mix with straw when putting in, if so about what proportion? Should the hay be well matured on the stalk? Is a mixture of red clover and timothy A. G.

Ans.—There is very little definite data regarding ensiling clovers or grasses However, several have saved their crop in catchy weather by storing it in the silo. As a rule it can be cut after the dew is off and ensiled the same day. If it is allowed to dry too much there might not be sufficient moisture to prevent molding of the feed in the silo. Of course if it were ensiled when wet or too fresh there would be danger of producing sour silage. The principle is similar to that of corn. We doubt the advisability of mixing straw with the clover unless the clover should be very fresh. A mixture of timothy and clover should be all right.



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 always welcome. Long-distance Phone.

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R. R. 2,

Hamilton, Ont.

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Hospital for Insane, Hamilton, Ont. For Sale—Holstein bulls, varying in age from 1 to 11 months, from Record of Performance or Record of Lakeview Dutchland Le Strange, a grandson of Count Hengerveld Fayne De Kol. Prices right.

Apply to Superintendent 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 brid to freshen next fall and early winter.

All bred in the purple and priced right. R. R. No. 1, Mossley, 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's dam average 25 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.

Norwich, Ont.

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A splendid 14-mos-old son of Minnie Paladin Wayne, who 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.

R. R. No. 3, Stratford, Ont.

Lakeview Farm, Bronte, Ont., Offer for sale sons and grandsons of 100-lb. daughter of Lakeview 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-year old.

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Questions and Answers Miscellaneous.

Clover Silage.

I have a good crop of clover this year, and if wet weather continues it will be impossible to make hay. Could you tell me at what stage to cut it. Also how to prepare it and get it ready for the silo?

P. S.

Ans.—Cut at the same stage as for hay. It may be cut as soon as the dew is off and ensiled the same day. If allowed to dry too much there will not be sufficient moisture to start fermentation and make good silage. If put in too wet, sour silage may result. The natural sap in fresh cut clover should furnish about the right quantity of moisture. With partly cured hay a little water could be added at the time of ensiling, in a similar way as it is done when putting dry corn in the silo.

Skin Trouble-Bloody Milk.

1. A year ago a calf seemed to have a sun-burned nose. The skin peeled off, the lips swelled and the trouble spread all over the face to forehead and the calmal is not doing well. It does the animal is not doing well. It does not thrive.

Cow that calved 5 days ago gives dy milk. C. A. B.

2. Cow that calved 5 days ago gives bloody milk. C. A. B. Ans.—1. This evidently is not due to sun-burn. It is a form of eczema. Isolate the calf and dress the parts 3 time daily with 1 part carbolic acid to 35 parts sweet oil.

2. This is not unusual shortly after

This is not unusual shortly after calving. It is very probable that the milk will become normal in a few days. If not, bathe the udder frequently with cold water, and give the cow 1 ounce tincture of iron in a pint of cold water as a drench twice daily until the trouble ceases.

Stray Dogs.

We have several dogs straying around here. They come within about 50 feet of the house some times, and we have sheep, but we have no dogs. I cannot understand why they should continually keep coming around. I have shot at a couple of them to scare them, but it does not seem to do any good as they come back again in the course of a day or so. I would like to know if there is any law against shooting them, or could owners claim damages, if I shot and killed them?

Ans.—Any person may kill any dog which he sees pursuing, worrying or wounding any sheep, or a person may kill any dog which he finds straying between sunset and sunrise on any farm whereon sheep are kept. If the dog is muzzled or is in the care of some person it cannot be lawfully killed unless there is reason to believe that such dog, if not killed, is likely to pursue, worry or terrify sheep on such farm.

Ensiling Alfalfa.

Could you give us some information about filling silo with alfalfa? With the about filling silo with alfalfa? With the rospepcts for corn not bright and no hay weather in sight, what would you advise doing? Should it be put in wet or partly dried? Any ideas you could give us on this matter would be much appreciated. With the conditions now existing things are beginning to look existing things are beginning to look serious.

Ans.—There is very little information available regarding the ensiling of legumes, although both alfalfa and legumes, clover have been stored this way. While the fodder, cured properly would pro-bably have higher feeding value as hay, yet when the weather is unsatisfactory for making hay the silo is a means of saving the feed. The digestibility of legumes is somewhat lower when made into silage than that of green feed. One difficulty is to get the silage to go together solid enough to exclude air and prevent molding. However, legumes have been ensiled and the feed came out in first-class condition. The crop could be cut after the dew is off and ensiled while still green. The sap would supply sufficient moisture. Too much dew or rain on it at time of ensiling might have a tendency to produce sour silage. It should be thoroughly tramped at time of filling. We have known of second crop of alfalfa or clover being ensiled with corn, layer about, making excellent feed. If the weather continues catchy there will no doubt be considerable clover and alfalfa ensiled. Thorough tramping and sufficient moisture to prevent dry mold, and yet not make

sour silage, are necessary.

Gets All the Cream Long After Other Separators Have Worn Out

Every Magnet is sturdily built from the soundest materials—finest castings, steel, bronze—it must be so built to stand the strain of the high-speed bowl. Look at the Magnet design—weight low down so that it steadles itself. Bowl has double-support and spins at top and bottom on bronze cushion bearings. No device that skims clean and is open so that it never clogs. It will save many hours of your time that would be spent in cleaning with a cheap disc-skimmer machine.

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The Magnet runs on square gears—that is why it
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square gears are suited for high-speed work. Easier
to turn too, and just as easy after twenty years, as
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The only how that gives perfect skimming all the time is the bow! that has double support. This patent is found in the Magnet alone. The Magnet bow! is supported at top and bottom and so can't wobble. It runs on bronze bearings. And you can operate the magnet on rough ground and uneven floors without fastening it down—because of that simule double support.

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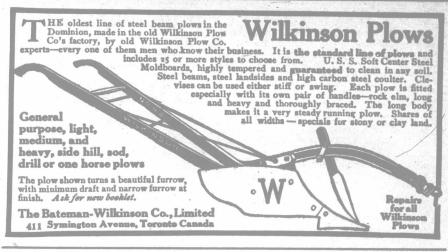
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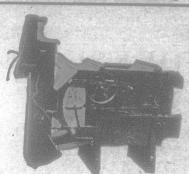
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Wayne, who 545 lbs. milk e. Also her tford, Ont. ns of 100-lb. . 3-year-old outter cow 8 enior 3-year

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Six 2-yr-old early winter.

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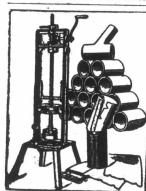


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Questions and Answers. Miscellaneous.

Landlord and Tenant.

A lets B a farm for 1 year. Can B hold the farm any longer than the 1

2. Has A got to notify B before his time is up that he can't have farm any longer, and how long before?

Ans.-1. Not without a renewal lease from A, or at least some agreement on his part to an extension of the term of tenancy. 2. No.

Mortgage and Deed.

1. If there is a mortgage against a piece of property can there be a deed drawn up and registered free from all encumbrances without mentioning the mortgage? 2. And, if so, would mortgage still be good? Ontario.

Ans.-1. Yes. 2. Yes. It would not be correct conveyancing, but the validity of the mortgage (which we assume was registered prior to the registration of the deed) would not be affected thereby.

Tall Buttercup.

I am enclosing a sample of a weed which grows in my pasture field. What is the best means of eradicating it? D.

Ans.—The weed enclosed is a specimen of a tall buttercup or crowfoot. It is a perennial weed quite common in pastures and meadows. It does not usually give much trouble in welldrained soils where a systematic short rotation of crops is followed. Summer or autumn cultivation when the land is dry will usually suppress it. On permanent pasture land that cannot be cultivated, the plants should be cut close to the ground two or three times each year, first when in early bloom and again in July or August. If this is followed up for a couple of years the weed may be brought under control.

Orange Rust on Blackberry Leaves. Enclosed find a blackberry leaf. I

do not know whether it is a blight, a disease or insect trouble. What is the trouble with the leaf? I have three rows of blackberries—with red raspberries each side. Have noticed this trouble for 3 years on only one or two bushes. Last week I dug up 3 dozen bushes only two stalks in the lot had blossoms on.

Ans.—The leaves received at this office were affected with a disease known as orange rust. The mycelium of the fungus when once established in the cane lives in it from year to year, spreading throughout the plant. Spraying is useless. The only successful way of combating this disease is to remove and burn all affected plants as they are valueless and a menace to healthy plants.

An Old Lane.

Some fifty years ago A divided his farm to his sons A, B, C, and D, making a plan of said lots—which are numbered and the deeds refer you to the plan for the different courses of the lines. B and C made a lane for their own personal use on a part of their divisional line. Since then both places have been sold a number of times, but B owned his for twenty-five years. Five years ago the owner of C's farm took down his fence on the lane but continued to use the lane as a road. The owner of B's farm now wants to have the line run and a fence put up on it. The owner of C's farm objects saying that the fence cannot be moved as it has been there too long. Can the owner of B's farm have the line run and a fence erected thereon, and what are the necessary steps to be taken to have it done?

Ans. - The case is not very fully or explicitly stated, but taking it as it is, and drawing such inferences as seem reasonable, we are inclined to think that the objection on the part of the owner of the C farm is legally valid and that the lane must accordingly be continued as such unless the parties can come to an agreement to do away with

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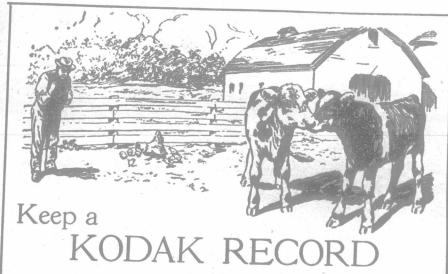
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