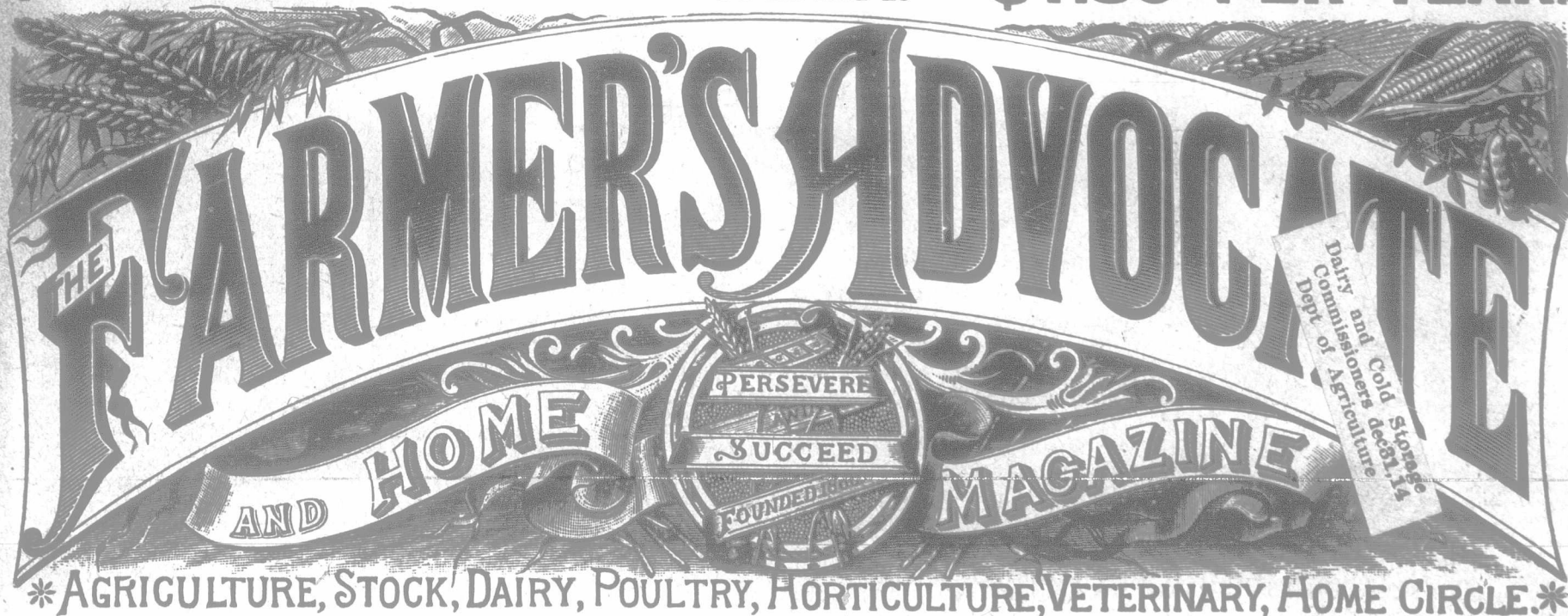


PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



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Vol. XLIX.

LONDON, ONTARIO, DECEMBER 31, 1914.

No. 1162

# Free

We will give absolutely free for the asking to any farmer, stock or poultry raiser one of our new, revised books. This book tells how to feed all kinds of farm stock and poultry, and gives the common diseases with symptoms, what treatment to be given, etc. Tells how to build poultry houses; how to avoid all manner of diseases of both stock and poultry; tells how to raise calves without using milk; explains fully all the high-class stock and poultry remedies and foods we manufacture. **FREE**

### Royal Purple Stock Specific

What we claim for our Royal Purple Stock Specific, the great farm animal conditioner and fattener:—

In conditioning and fattening horses you can do more in four weeks by using our Royal Purple Stock Specific than you could do in two months without it. You can fatten horses with this Stock Specific you have never been able to fatten before. Try it on the worst animal you have on your place.

A cow will gain from two to five lbs. of milk per day while in the stable by using our Stock Specific.

You can fatten steers a month earlier on the same feed by using this specific.

You can market pigs one month earlier and have larger and better pigs, thereby saving a month's labor and feed. One \$1.50 tin will be sufficient to develop six to eight pigs for market.

Use this Stock Specific with all your animals during the winter and early spring, as it will make them digest the hard winter food properly, and a great deal less food will do. After you have used this Stock Specific a short time you can keep your animals in just as good condition by using two-thirds the ordinary amount of fodder you would have to give them without it. A small quantity of this will keep your horses in first-class condition all during the winter season and bring them out fat and sleek for the farm work in the spring.

In our book we publish 400 testimonials from people all over Canada who have used our stock and poultry remedies and foods.

Mr. Geo. Mapes, of Bondhead, says, "After experimenting with a great many stock foods I was convinced there was very little virtue in any of them but your dealer insisted on my trying Royal Purple Stock Specific, saying it was different from the others. I keep ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner and it is the best I have ever used."

Mr. Norman C. Charlton, Scott, Sask., says, "I am from Ontario. I have fed your Stock Specific in Brownsville. My cows, while using it made the largest average and tested five points over average at C. M. P., at Brownsville. I know you make the highest class conditioner on the market."

Dan. McEwan, the veteran trainer of fast horses, says, "I have used your Royal Purple Stock Specific continually for five years and in all that time I have never had a horse in my stable sell for less. I consider it the greatest conditioner on the market."

Malcolm Grey, of Komoka, says, "In regards to the feeding of Royal Purple, I had two lots of hogs. To the first lot I fed Royal Purple Stock Specific as directed, and sold them when six months, seven days old. They averaged 496 pounds. To the second lot I did not use any Royal Purple and when the same age they averaged only 150 pounds. They were the same breed and one lot had as good a chance as the other."

We have fed Royal Purple Poultry Specific also with excellent results. I would not like to be without Royal Purple in the stable."

Put up in 50c. packages and \$1.50 tins. These tins contain four 50c. packages.

"It's a Hen's Business to Lay—  
It's Our Business to Make Her Lay."

### Royal Purple Poultry Specific

Is entirely different from our Stock Specific and will keep your birds healthy and vigorous. It will make them lay just as well in winter as in summer. We are safe in saying this Poultry Specific is now being used by 75 per cent. of the poultrymen in Canada who are in the poultry business to make it pay.

Jno. C. McKinley, of Kent Bridge, Ont., states, "Since using Royal Purple Poultry Specific my hens lay all winter, and in the spring are in fine condition. We are now fattening a bunch of chickens. They look to be much bigger, fatter and stronger than those we tried to fatten without the Specific. I cannot recommend it too highly."

Mr. Lyman A. Whitman, New Albany, N.S., states he has used three boxes of Poultry Specific commencing Jan. 15th. The egg production increased at once. He states he finds it of great value for young chickens and turkeys.

Mr. Paulds, of London, one of the largest "show bird" men in Canada, says, "While using Royal Purple Poultry Specific I have never had disease in my flock. I have cured absolutely at different times severe cases of roup with your Roup Cure on birds which I have imported."

### Royal Purple Sweat Liniment

Will cure all sorts of lameness, sprained tendons, etc. An excellent liniment for sore throats or rheumatism in people.

Mr. F. W. Moore, of Bradford, states, "I had a valuable horse go lame and tried several remedies, also engaged a clever veterinary but it did not improve. Your agent in Bradford advised me to try Royal Purple Liniment. To my surprise one bottle effected a permanent cure."

8 ounce bottle 50c., by mail 65c.

### Royal Purple Gall Cure

Will absolutely cure scratches, in four to five days, will cure all sorts of burn scalds and sores. You do not have to lay up your horse.

25c. and 50c. per tin, 30c. and 60c. by mail.

### Royal Purple Worm Specific

Destroys the worms and larvae, thereby eliminating the cause of the worms.

Mr. Alex. Corbett, of New Waterford, N.S., writes stating he received a tin of our Worm Specific and it entirely removed the worms, fulfilling our every claim for it.

25c. per tin, by mail 30c.

### Royal Purple Roup Specific

Will cure all the common diseases of poultry such as roup, pip, canker, swelled head, diphtheria and typhoid fever in fowl.

Mr. Gottfried Wein, of Crediton, Ont., states he had a large flock of turkeys last fall which commenced to die off three and four a day from roup and swelled head. He commenced using our Roup Cure and it not only saved the balance of his flock but it cured a great many of the birds that were already infected with the disease.

25c. per tin, by mail 30c.

### Royal Purple Lice Killer

Will entirely exterminate the lice on stock and poultry. It is entirely different from any other lice killer on the market. Our book tells all about its manufacture.

25c. and 50c. per tin, 30c. and 60c. by mail.

### Royal Purple Disinfectant

We give you at least 50 per cent. more for your money than any other disinfectant on the market. We guarantee it to be as good as the best. Use this in connection with our Lice Killer and you can exterminate the lice on the woodwork and litter in your pens as well as on the animals and poultry, 25c., 50c., and \$1.00 tins.

### Royal Purple Colic Cure

"The Farmer's Insurance." This is put up in large, long, necked bottles which contain the oil and other ingredients all ready to administer to the animal.

\$1.00 per bottle, by mail \$1.15.

**You Can Order Direct**—We will enclose enough extra goods free to pay charges on all orders amounting to \$6.00 or over to be shipped east of Winnipeg, and allow for charges west of Winnipeg on all orders amounting to \$10.00.

### Food For Thought

We manufacture pure, unadulterated foods. We do not use any cheap filler to make a large package. We guarantee everything we manufacture to give the desired results or refund the money.

Royal Purple Stock and Poultry Specifics  
Made in Canada by Canadian Capital

# Royal Purple

STOCK AND POULTRY SPECIFICS  
MADE IN CANADA BY CANADIAN CAPITAL

Royal Purple Poultry Specific is put up in 25c. and 50c. packages and \$1.50 tins. These tins contain four of the 50c. packages.

### Royal Purple Calf Meal

You can raise calves on this meal without using milk.

Mrs. J. Cornett, of Lansdowne, Ont., states, "I have used your Royal Purple Calf Meal and I am convinced it is the best I have ever tried for calves. I have had trouble with other meals not agreeing with my calves but your Royal Purple seems to be satisfactory in every way."

Mr. S. M. Osborne, of Maxwell, Ont., tells us on Aug. 17th, that he has a calf four months old which weighed over 400 pounds, raised entirely on our Calf Meal.

100 lbs. for \$4.25 prepaid to any place in Canada east of Winnipeg.

We also manufacture the following high-class stock and poultry remedies:

### Royal Purple Cough Cure

Will cure an ordinary cough in four days, break up and cure distemper in ten days.

Mr. Jno. Cartier, of Bothwell, writes us, "Last fall my father had a bad case of distemper in his stable. I bought a tin of Cough Cure and fed it according to directions. Inside of two weeks the distemper was completely cured. I am recommending it to my neighbors telling them what it has done for us."

50c. per tin, by mail 60c.

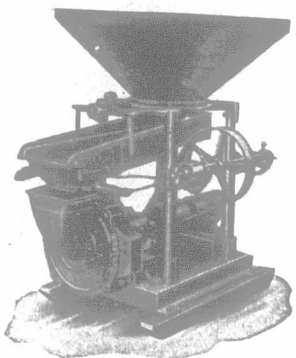
Made only by The W. A. Jenkins Mfg. Co., London, Ont.

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THE BEST IN THE WORLD

A MONEY SAVER

Highest awards wherever exhibited



Feed Grinder

Our feed grinder enables the practical farmer to do his grinding easily right in his own barn. Built in different sizes, suitable for farmers and millers.

We also manufacture an Oat Crusher. Write for catalogues. You will be interested.

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London, Ont.; Hamilton, Ont.; Ottawa, Ont.; Montreal, Que.; St. John, N. B.; Brandon, Man.; Winnipeg, Man.; Calgary, Alta.; Edmonton, Alta.; Regina, Sask.; Saskatoon, Sask.

### The Fairbanks-Morse Eclipse Engine

Made in Canada

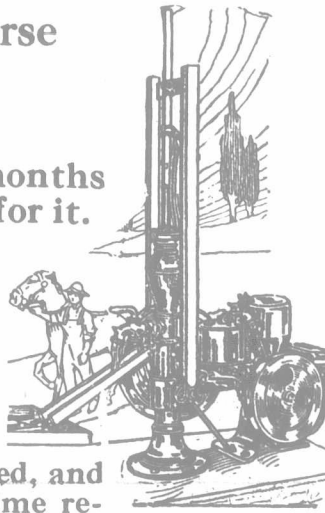
is not expensive — two months wages of one man will pay for it.

It will do more work than any man when attached to a pump, churn, cream separator, washing machine, feed mill, corn sheller or other light machine. It is less cumbersome and less expensive than a windmill.

It is always ready when wanted, and works every minute of the time regardless of wind or weather.

Costs only a few cents an hour to operate, and requires no experience.

Ask for catalogue and learn all about this little Canadian-made money-maker.



Scales, Grinders, Feed Mills, Tractors, Pumps, Water and Light Systems.

### The Canadian Fairbanks-Morse Co., Limited

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Millions of acres of virgin soil obtainable free, at a nominal cost, are calling for cultivation. Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you.

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Director of Colonization  
Parliament Buildings, TORONTO, ONT.

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Minister of Agriculture  
Parliament Buildings, TORONTO, ONT.

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<b>SINGLE FARE</b> Dec. 24, 25, good for return until Dec. 26; also Dec. 31, 1914, and Jan. 1, 1915, valid for return until Jan. 2, 1915.	<b>FARE &amp; ONE-THIRD</b> Dec. 22, 23, 24, 25, good for return until Dec. 28; also Dec. 30 and 31, 1914, and Jan. 1, 1915, valid for return until Jan. 4, 1915.
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C. E. HORNING, District Passenger Agent, Union Station, Toronto, Ont.



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Gentlemen: Kindly send me list of Farms & Fruit Lands you have for sale with full information in regard to same.  
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The Celebrated Heller-Aller Down-Draft Tank Heater  
The only thing on earth to supply warm water for your stock in cold weather. Every farmer should have one — and now is the time to buy, before cold weather comes. They will consume anything in the shape of fuel, and will never wear out. 24 inches in height, 155 pounds in weight, for any height tank, and will remain upon bottom without anchoring.  
The Heller-Aller Down-Draft Tank Heater is made of galvanized sheet iron, and is built upon a heavy base. It is a simple, reliable, and efficient heater, and will keep your stock warm and comfortable in the coldest weather.

THE HELLER-ALLER COMPANY, WINDSOR, ONTARIO

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"Johnny-on-the-Spot," on skids or on truck, will take care of all your chores — pumping, separating cream, pulping, churning, washing, etc.  
Stop wasting your time and energy in useless drudgery. Let "Johnny-on-the-Spot" do it — one of the famous Gilson "Goes Like Sixty" Line — a high quality engine at a low price. WRITE FOR CATALOGUE AND FULL PARTICULARS. ALL SIZES.  
**Gilson Manufacturing Co. Limited**  
2509 York St., Guelph, Ontario  
\$47.50

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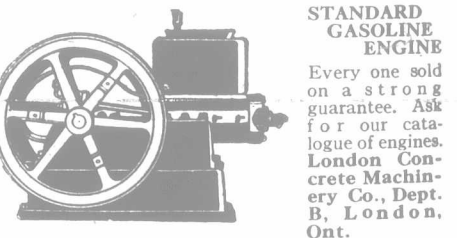
ONE-WAY FARE, good going December, 24 and 25, return limit, December 26th, 1914; also good going December 31, 1914, and January 1, 1915, return limit, January 2, 1915.  
FARE AND ONE-THIRD, good going December 22, 23, 24, 25, return limit, December 28, 1914; also good going December 30, 31, 1914, January 1, 1915, return limit, January 4, 1915. (Minimum charge 25c.)  
Particulars from C.P.R. Ticket Agents, or write M. G. Murphy, D.P.A., Toronto.

### Stone and Stump Pullers

Capable of lifting 18,000 lbs.  
**SNOW PLOWS**  
For Township roads — for lumber camp roads — for sidewalks.  
**BOB SLEIGHTS**  
A. LEMIRE, Proprietor Wotton, Que.

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**GEORGE KEITH & SONS**  
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Seed Merchants since 1866.



STANDARD GASOLINE ENGINE  
Every one sold on a strong guarantee. Ask for our catalogue of engines. London Concrete Machinery Co., Dept. B, London, Ont.  
Largest makers of Concrete Machinery in Canada

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Cut living expenses — increase your income — thousands make money this way with  
**SUCCESSFUL INCUBATORS SUCCESSFUL BROODERS**  
Life Producers — Life Preservers  
High-grade poultry — all leading varieties.  
Why don't you do the same? Learn how easy it is to start. Booklet "How to Raise 48 out of 60 Chicks" — 11c. Catalogue FREE. Write today. Address  
Des Moines Incubator Co., 608 Second St., Des Moines, Ia.

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SAVE TIME — SAVE LABOR — SAVE EXPENSE.  
Our new catalogue describes every kind of device for money-making and labor-saving on farms. Write to:  
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A Perfect Seed Bed is the Result of Using a  
**Bissell Disc Harrow**  
(In-Throw, Out Throw or Double Action)  
T. E. BISSELL CO., Limited, ELORA, ONT.

### Women and Children First

In the Empire's call to arms the order of selection is:

- First—Single men.
- Second—Married men without children.
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The Government recognizes that war is more tragic and its effects more serious when the killed are married men with families.

You may not be going to the front, but if death should call you tomorrow—and you must admit the possibility—what would happen to your wife and your little ones?

We'll tell you about an Imperial Life Policy that will protect them against such a calamity if you'll fill out and return the coupon below.

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 Address.....  
 Occupation..... Married?.....  
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### THE IMPERIAL LIFE Assurance Company of Canada

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## The experience others have had in feeding Wodehouse's Animal Invigorator

The famous conditioner and fattener for all kinds of stock

Mr. Schwartz, of Formosa, tells us that he has a customer who has three stallions who told him that it would pay him to buy the Invigorator and present it to his farmer customers.

Mr. McWilliams, of Dundalk, writes us that he had a customer who had fourteen pigs, fed seven of them our Invigorator, and they were ready for market two weeks earlier and weighed considerable more than the other seven.

Mr. Campbell, of Belmont, gives several instances where it has saved the lives of cows after calving, and also states he never had it fail to accomplish what was expected of it.

Mr. Lewis Smith, Lower Coverdale, N.B., writes, that he has fed to calves along with separated milk, and is more than satisfied with results.

Mr. Walter Biggar, of Winona, had a valuable cow that was not doing well, fed Invigorator and said results were astonishing.

Mr. S. B. Alton, Houghton Centre, writes us that he can recommend it to all stock raisers to be all that is claimed.

Mr. Jared Mansfield, Houghton Centre, writes that he had two entire horses, and is very much pleased with the results after feeding Invigorator.

Mr. Jas. Sheldrick, of Hagersville, writes that he has had wonderful success with all his many instances.

Mr. E. H. Ahens, Elmwood, sent in a further order, said that he has a big stock of horses that he wanted to fit for the fall shows.

Geo. Gilbertson Hagersville, writes for more, stating that he had two stallions, and his success has previously been so great that he wanted more of the goods.

Thos. Allan, Dundas, writes: "I have fed Wodehouse's Invigorator to young cow with first calf, the first five days she gave one quart more milk."

Wm. Moore, Hamilton, writes as follows: "As a Poultryman, I have used it for three years and would not be without it at any Season and especially at moulting time."

G. G. Henderson, Hamilton, writes: "that after two years experience with your Poultry Invigorator I must say that I am more than satisfied. It not only builds them up, but they continue in first class condition."

Frank Hils, Hamilton, writes: "We have been using your Invigorator for a number of years with the greatest satisfaction. Our pullets, though June hatched, were in A 1 condition for the show and it is to your Baby Chick Food and invigorator we attribute much of our success, as our birds have been remarkably healthy. The Chicks know what is good alright and the invigorator certainly helps to fill the egg basket."

W. H. Pringle, Hamilton, writes: "I have used your Poultry Invigorator on different occasions for particular purposes, such as bringing old birds through the molt and insuring their fitness for the show room, also for the development of young stock. I have some show birds from four to five years old and none have ever been sick owing, I believe, to the use of the Wodehouse Invigorator."

M. E. Gates, Houghton Centre, writes as follows: I received a package of your Invigorator and am delighted with it; fed nothing else to my chicks till they were two weeks old and also fed your invigorator to my hens with good results and can recommend it to all poultry keepers."

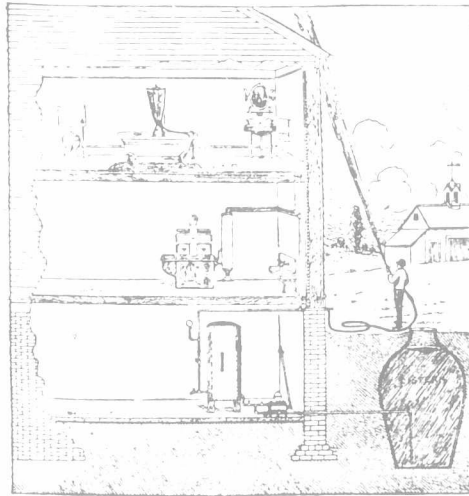
G. Copeland & Sons, of Midland and Penning writes as follows: "We have sold at least two tons of your Chick Food in Midland and it has given the best of satisfaction of any goods we have ever sold. The Invigorator is giving the same satisfaction."

We have a great many more testimonials all on the same strain, nothing but praise. For general all-round purposes there is nothing to compare with WODEHOUSE'S ANIMAL INVIGORATOR. Are you fattening stock for the market? Feed Invigorator. Are you selling milk or cream? Increase your supply by feeding Invigorator. Are you raising hogs? You must have Invigorator for best results.

Go to your nearest dealer, or write us for your supply.

### Wodehouse Invigorator, Limited

Hamilton, Ontario



### Water on Tap in Every Part of Your House or Barn!

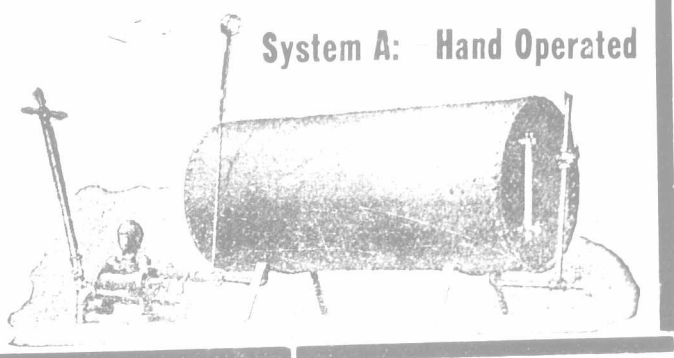
THAT gives you city convenience and city safety. Makes life better and healthier, gives you fire protection, simplifies stock watering and work in general. Our illustrated is our pneumatic water supply system. It has a powerful hand power pump that gives strong pressure to any part of the house. Connections to kitchen range give ample hot water supply. Is very moderate in price. We make the

### EMPIRE Water Supply System

in many sizes and sizes to operate by hand, windmill, gasoline or electricity. Will supply air and water, steam, or water alone or air alone.

We can furnish you with an apparatus at a price that will surprise you

Write us to-day and let us help you solve your water supply problem.



### System A: Hand Operated

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"KNOX SLEIGH" \$24.00

Norman S. Knox, 47 Wellington St., E., Toronto, Ont.

Papec Pneumatic Ensilage Cutters "The Wonderful Papec"

THE PAPEC  
"IT THROWS AND BLOWS"

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Run on Coal Oil—6c for 10 Hours

Ellis Engines develop more power on cheap lamp oil than other engines do on high priced gasoline. Will also operate successfully on distillate, petrol, alcohol or gasoline. Strongest, simplest, most powerful engines made, only three working parts. No cranking, no excessive weight, no carbonizing, less vibration, easy to operate.

## ELLIS ENGINES

Horizontal Engine Vertical Engine

Have patent throttle, giving three engines in one; force feed oiler; automobile type muffler, ball-bearing governor adjustable while running and other exclusive features. Every engine sent on 30 days approval with freight and duty paid. 10-year guarantee. Write for 1915 catalog, "Engine Facts," showing New Model's with special prices. Shipments made from Windsor, Ont. ELLIS ENGINE CO., 285 E. GRAND BLVD., DETROIT, MICH.

What We Claim For The PERKINS Engine

They are the simplest engine, with the least working parts. They are the easiest started engine on the market. They start without cranking. We guarantee the PERKINS ENGINE to do more work on fuel than any other engine made. As to working parts they are the best ever made. They are simple and rugged. You take no chances when you buy a PERKINS ENGINE. It is a simple, strong, reliable engine. Our 21 years' experience in the engine business has made us the most successful engine makers in the world. Perkins Windmill & Engine Company, Ltd., London, Ont.

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HIGH QUALITY AT USUAL LOW PRICES

See our Catalogue for Wire Fence and Gates, also Gasoline Engines, Cream Separators and other Farm Lines. Our prices will save you a nice amount on your purchase. **EATON Heavy Wire Farm Fence** is all full gauge No. 9 wire, properly and thoroughly galvanized, and it is high quality in every rod of it. Although the steel market has advanced, our Fence is selling at the same prices. Why should you pay more for your fence, gates, engines, cream separators, buggies, wagons, etc., when our lines are guaranteed to you in every way and with no exceptions? Thousands of satisfied Canadian farmers are using **EATON Fence** and have saved money by purchasing it. It is made from the best hard steel wire, full No. 9 gauge.

Do not buy your fence for Spring until you get our 1915 Spring Catalogue, which will be issued about February 15th, or make your selection from our present **Fall and Winter Catalogue**. Write us for any information you wish.

THE **T. EATON CO.** LIMITED  
TORONTO - CANADA



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SPECIAL FACILITIES  
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**North American Chemical Company, Limited**  
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In all styles and for all requirements. Also available for vineyards, crops or other uses. Write for particulars.  
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Don't Delay Buying a  
**DE LAVAL**  
Cream Separator  
a single day longer

IF YOU ARE SELLING cream or making butter and have no separator or are using an inferior machine, you are wasting cream every day you delay the purchase of a De Laval.  
THERE CAN BE ONLY two real reasons for putting off buying a De Laval; either you do not really appreciate how great your loss in dollars and cents actually is or else you do not believe the De Laval Cream Separator will make the savings claimed for it.  
IN EITHER CASE THERE is one sensible answer: "Let the De Laval agent set up a machine for you on your

place and SEE FOR YOURSELF what the De Laval will do."  
YOU HAVE NOTHING TO risk, and over a million other cow owners who have made this test have found they had much to gain.  
YOU CAN'T AFFORD TO wait till spring. Let the De Laval start saving cream for you **RIGHT NOW**.  
WHY NOT START 1915 right with a De Laval, and by spring it will have saved enough to go a long way toward paying for itself. Why not talk this over with the local De Laval agent? If you don't know him, write to our nearest office.

**DE LAVAL DAIRY SUPPLY CO., Limited**  
MONTREAL PETERBORO WINNIPEG VANCOUVER  
50,000 Branches and Local Agencies the World Over

**JOHN D. SAYS:**  
"As soon as you have saved even fifty dollars, invest it! Make your money work for you!" This is sound advice.  
But how can a man who does not make a study of financial problems, know that he is choosing a proposition that is at once remunerative and safe? Write to—  
"I have followed your policy with us and thereby share in the prosperity of the Mutual Life of Canada. Its endowments combine household protection with a safe and satisfactory investment."  
**MUTUAL LIFE ASSURANCE COMPANY**  
OF CANADA  
TORONTO, ONTARIO



For Your WINTER DRIVING  
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Agents for "The Farmer's Advocate and Home Journal,"  
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of the sale upwards of twenty head of females in milk were living up to the standard, and some giving as high as 12,000 lbs. of milk in the year. But this is not what we started out to prove, viz., that it pays well to make pure-bred stock breeding the main operation on the farm, and also to set a high standard for the stock and cull out all those which in form and performance fall below that standard. These cows with such high production to their credit surely paid their way and more besides. Place the milk at \$1.00 per cwt., surely low enough, and each cow's yearly production would be \$100. Then there would be male calves for sale besides surplus females and those which could not measure up to the standard. Most assuredly such a herd would pay its way and leave the owner wages and a nest egg besides. But suppose it only paid its way and made a living for the owner each year, it is no bad record to roll up \$3,400 for the breeder in a few years and leave the farm richer in plant food than the foundation cows found it, and also leave a number of calves and young things ready to go on and duplicate their dam's performance. There is no getting away from the fact that the money for the stockman is in good stock. It makes little difference as to class or breed, provided they are adapted to soil, climate and local conditions. What is true of pure-bred dairy cattle is true of beef cattle, horses, sheep and swine. The man who sets a high standard of individuality, pedigree and performance, and uses good judgment in his breeding, chooses those which enables him to reach his goal in the way who is paid for his pains. Think, you farmer, will your scrub stock keep your farm in the red, your bank account from year to year, and at the end of five or ten years sell for \$3,400? Can you a good foundation upon which to build your herd? No, it is impossible. The money is in the good stock, and what one young cow accomplishes another can. Get the right foundation stock, set a standard and see that the cows live up to it, and reap a sure and rich reward.

## A Worthy Deliverance.

The address of Sir Robert Borden before the Canadian Club of Halifax upon the relation of Canada to the war was a deliverance worthy of these perilous times, of the first Minister of the Dominion, and of the sturdy old city that stands on the eastern sea front of our country.

We may excuse, if we do not concur with the tenor of discussions elsewhere on like occasions, where the burden of thought contributed has been—how shall our town or our country profit materially by the war? Corner grocery politics have their places but not on the house top of statesmen in dealing with "the appalling conflict" which, as Sir Robert declared, "has been forced upon our empire." Brought suddenly face to face with the greatest military power in the world, dominated by a military oligarchy, imbued with the religion of valor and the doctrine that might is right and the only right, a new and wonderful spirit of self sacrifice and devotion has awakened Canada in showing that when the time of searching came Canadians were able to remember that there is something greater than materialism or even life itself.

The reference of Sir Robert to the dissolving of prejudice and the curbing of discord we trust will continue to be generally deserved, and recalls the spectacle in the Old Land of the leaders of the Opposition actively working hand in hand with the Government in carrying out the policies of the administration. The mad disturber of the world's peace and prosperity had calculated evidently upon a discordant India, only to find the swarthy eastern man arrayed on the fields of France with the Allies against him; Ireland rent with dissention but to-day, as the press reports, sending a greater proportion of her sons to the front than England itself and Canada, unfettered and autonomous, making a response from ocean to ocean in men and means that has excited the admiration of the American press, and the wonderment of men who could not grasp the genius of the British Empire. They looked for weakness and dissention and decadence, but as Sir Robt. Borden pointed out, found them not, "because the unity and strength of the Empire are founded securely upon the liberties of a peace-loving people." The condition of the Empire's existence made its naval supremacy necessary.

Upon other occasions lately men have been nervously wondering, how shall we consolidate the Empire for the future and set this forth as the crucial issue of the present hour? For the reason given, the Empire is already consolidated and the world knows it. Canada will do her share in common with the other dominions in seeing that the task forced upon the Empire is properly and thoroughly performed. The Prime Minister expresses the worthy conviction that this country has no lasting quarrel with the German people, to whose great qualities and achievements he bore testimony, but the Germans were temporarily misled by a Prussian militarist oligarchy with ideals of force and violence which must be resisted to the death. Right thinking people everywhere may well concur with the noble sentiments expressed by Sir Robert Borden in the following passage of his memorable address:

"And all the horror and welter of this world-wide contest we may yet discern hope for the future. It will arouse, I hope, the conscience of all the nations to bring about concerted action for the reduction of armaments, and for the placing of the whole world upon what one might term a peace footing. Upon this continent there is a boundary line of nearly four thousand miles between this country and the great kindred nation to the south. That boundary is unguarded and undefended as between the two nations, and we sleep peacefully without thought of war or invasion. The proposal to commemorate our centennial year has commanded the approval of the people and Government of Canada, and I trust, that it will be wisely realized."

It is a sad and a fact that we are told that we have had sufficient field root and clover seeds for 1915, we would advise early planting of the best varieties, and the newest and best clover seeds for \$1,000,000 lbs. of seed should be available. First come first served. Now even \$1.00.

## Nature's Diary.

A. B. Klugh, M.A.

There is a bird which is of much interest to the farmer and the sportsman, and which is growing scarcer and scarcer in Canada. I refer to the Bob-white or, as it is often erroneously termed, quail. At one time the Bob-white was fairly common in south-western Ontario, and ranged as far east as Port Hope, but it has long since disappeared from a large part of this territory. I should be very glad to hear from readers of "The Farmer's Advocate" who live in localities once inhabited by this species, as to its abundance there to-day, and also if it has disappeared—how long ago and the probable reason for its extermination.

The name Bob-white has been given to this species because of the resemblance which its call bears to these words. It has been called Quail in the north and west, and Partridge in the southern states, but the name Quail properly belongs to a smaller migratory bird found in the Old World, and the term Partridge also belongs to an Old World bird. This species ranges from southern Maine and Ontario south to Florida and Texas and west to South Dakota and eastern Colorado. The Bob-white is of economic importance in three ways—as a destroyer of noxious insects and weeds, as a delicate and nutritious article of diet, and as an object of sport. These are the economic reasons, the dollars and cents reasons why the Bob-white should be given protection, but there is another reason, which weighs more strongly than any of these with a large (and happily a rapidly increasing) class of people, and that is the aesthetic value. The delight which many people derive from the presence of this wild bird near their homes and from its mellow whistle cannot be expressed in terms of coin of the realm, but is none the less real.

In food habits the Bob-white is practically omnivorous, consuming large quantities of weed-seed and destroying many of the worst insect pests with which the farmer has to contend. At the same time it does not injure grain, fruit or any other crop. The examination of stomach contents of this species by the United States Biological Survey shows that of its food for the whole year seeds constitute fifty and three-quarters per cent., and include those of many different plants. The bulk of this seed diet consists of the seeds of weeds. Sixty different species of weeds are represented, and constitute more than a third of the food for the year. Some idea of the value of this bird as a weed-destroyer may be gathered from the number of seeds taken at a meal. Thirty buttonwood seeds, three hundred smartweed seeds, five hundred seeds of Sheep Sorrel, and seven hundred seeds of the Three-seeded Mercury have been taken at one feeding. Crops and stomachs are frequently crammed with nothing but the seeds of Ragweed, and one stomach contained a thousand seeds of this weed. Another stomach contained ten thousand seeds of the Pigweed.

From May to August, when insects are abundant, they make up thirty-one per cent. of the food of the Bob-white. The variety of insect food taken is wide, and the large proportion of injurious insects eaten by this species makes its services as a destroyer of insects more valuable than those of many birds whose percentage of insect food is greater but contains a smaller proportion of injurious forms. Conspicuous among the pests which are eaten by the Bob-white are the Potato Beetle, Cucumber Beetle, the Bean Leaf Beetle, Wire-worms, May-beetles, Cutworms, the Red-legged Locust, and the Rocky Mountain Locust. By far the greatest insect destruction by the Bob-white occurs during the breeding season. Not only does a third of the food of the adults at that season consist of insects, but their growing broods consume insects in enormous numbers. The food of the young of practically all land birds contains a much greater percentage of insects than that of mature birds, and the amount of food which the young require is immense in proportion to their size. An impression prevails among sportsmen who have bagged most of their birds in the stubble fields that the Bob-white eats little else than grain. An examination of stomachs shows however that grain forms only about one-fourth of the food, and it has been shown that practically all this grain was picked up on the ground after harvest. This habit of gleaning waste grain after harvest is beneficial to the farm as the germination of volunteer grain is not desirable, especially where insect pests or parasitic fungi are to be combated. As scattered kernels are often the first to be gathered for domestic poultry to gather, the Bob-white's services in this respect are especially useful. Fruit makes up eight and a half per cent. of the food, and it is practically all wild fruit. It sometimes eats the leaves of Yellow Birch, Sheep Sorrel and Cinquefoil.

Thus we see that the Bob-white is in every respect a bird worthy of protection and encouragement, and if a little grain scattered in the stubble fields in the winter will help it to survive it should be liberally given.

# THE HORSE.

## The World's Horses.

Men who have seen anything of war tell us that its havoc among horses is awful. It is said that already the original horses that went into the European war have been entirely replaced by a new draft, and that many of these have gone. It is said that the armies of France and Germany are drawing upon every horse they can secure and are rushing them to the war zone. Britain is also monthly taking a larger draft of horses. The German army requires nearly 800,000 horses for a complete mobilization. The French army requires 250,000 for its cavalry alone, and it is estimated that at the losses in horses alone to the present date in the present war will run well into a million. Perhaps the most tragic feature of the war in regard to horses, is the sacrifice of such a great percentage of the Belgian horses whose home is along the Meuse valley in Belgium. All told, the horses in Belgium before the war numbered but 263,000.

The other countries engaged in the war had the following numbers of horses before the war: Great Britain, 2,230,000; France, 3,222,000; Russia in Europe, 24,652,000; Russia in Asia, 10,000,000; Germany, 4,523,000; and Austria-Hungary, 4,374,000.

Canada has 2,947,738 horses, and other parts of the Empire probably 3,000,000 more. United States has, according to latest statistics, about 24,000,000 horses.

Already shiploads of horses have gone from Canada to fill places in the British army. More have gone from the United States to both the British and French armies. Should the war continue for any length of time horses will be the most expensive thing about the farm.

When the war has drawn on some millions more of horses to be blotted out, what will be the position of Canada in the horse world? Instead of America going to Europe for horses, Europe will be coming to America not only for horses to carry on the work on the farms, streets and roads, but also for pure-bred breeding stock to continue the improvement of the noted breeds of draft horses. Will Canadian horsemen be in a position to take advantage of the demand for better pure-bred horses that the war will create?

## The Future of Horse Breeding as Seen in England.

It is to be hoped that the European war has at last brought home to the public what every thinking person must have known for years, that the size of our army is totally inadequate for what is required of it, and that the number of light horses needful for that army is rapidly diminishing. The use of motor cars by private persons and also for trade purposes has increased to such an extent that the farmer can no longer afford to breed light horses for the limited and underpaid market which alone is open to him. Horses are now needed for:—1, Racing; 2, Farm work; 3, Cavalry; 4, Hunting; and the few, very few, needed for harness work can be supplied from the misfits of 3 and 4.

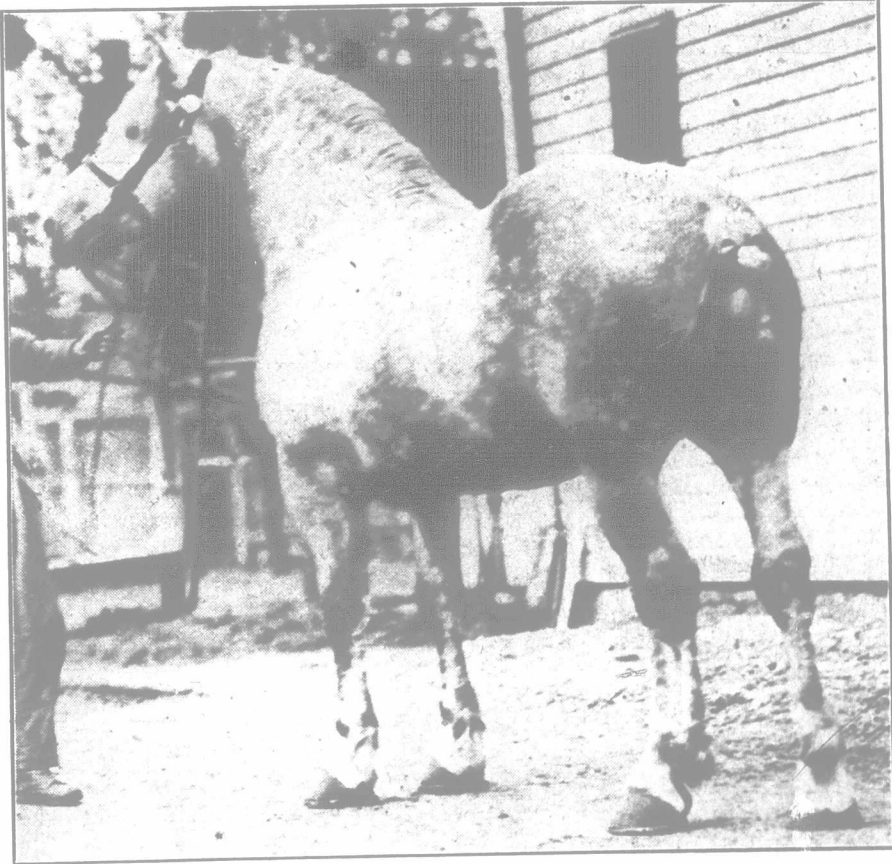
Owing to the initial expenses race horses are mostly bred by wealthy owners; moreover they begin work, and possibly gain their living, at two years old, and the enormous prizes open to them and amount of enjoyment they afford to a large class of people in the form of gambling will always make it worth while to many people to breed them. Farm horses can start work at two years old, they require less care and attention than any other horse, and invariably fetch a reasonable price even at public auctions. It pays farmers to breed them, especially those farmers who are fortunate enough to live in a neighborhood where the best stallions are at their service at a reasonable rate, and where the foals are often bought at prices far beyond the expectation of their fortunate owners. Even if it be desirable to keep a gelding destined for town work till five or six years old, when the jar of hard roads will less affect his joints, he can still be used from two years old on soft ground, greatly to his benefit and that of the farmer. The best proof that breeding of Shire horses is the small farmer's trade is that the majority of prizes won at the Shire Shows are by animals bred by tenant farmers which have been bought as foals by big landowners.

Now as to cavalry horses, these are not fit for hard work before the age of five or six; a farmer cannot possibly afford to keep them till that age if he will only get £40 for the best when they reach that age. The whole matter is a money question. If the Government would give £10, or £50, or even £60 for a two-year-old horse, many farmers would breed them. Stallions at disposal of farmers should be absolutely sound, fee not exceed £2, and they should be easily reached; that means that there should be a very great many of them scattered all over the country. At the

present time, even if a fee be low, the farmer has great difficulty and great expense for sending the mares, maybe three or four times. The Government could keep the horses from two years old to four years old in the big parks at Windsor, Richmond and Bushey Park instead of the useless deer. At four years old the different cavalry regiments should take them up for training, but should not do regular hard work before reaching five or six years of age.

As long as the breaking up of estates and the division of land into small properties does not stop hunting altogether, there will be plenty of money to buy hunters. Farmers will breed them too if they can be sold at two years old, but must demand a high price if they are to be kept longer. It is not the fee for service that stops the farmer; it is the expense of keeping the young horses, the amount of care and attention they need, and the skill required to train them that frightens the farmers.

The French Government has large breeding establishments in Algeria, and I believe the German and Austrian Governments have also large studs. There has been some question of starting a horse-breeding organization in Canada; the sooner the Government makes up its mind about it, the better for this country. South Africa also would afford splendid breeding grounds. Undoubtedly the best horses of all come from Ireland; surely it would be easy enough to organize studs there, and also to make it worth while for the farmers there to breed on a large scale.—Sir E. D. Stern, in the Live Stock Journal Almanac 1915.



Liquide (Imp.).

First-prize two-year-old at Canadian National Exhibition, Toronto, 1913. Exhibited by T. H. Hassard, Markham, Ont.

## Drafting of Horses for War.

During the past few months a very large number of horses have been bought for war purposes. The allied armies of Europe who find themselves in need of remounts for their cavalry squadrons, have turned to America, and have for some time past had their agents buying in practically all parts of the continent. Train loads have been shipped from Texas points for the British; larger numbers have been secured in the Chicago markets; agents of the French Government are purchasing in Montana, and many more have been secured from the Pacific coast states. In Canada, practically every province has been drawn upon either by the Provincial, Dominion or British Governments, and large numbers of horses have already been purchased and forwarded to Europe.

An example of provincial purchasing is found in the province of Saskatchewan, the Government of which donated some 1,300 cavalry and artillery horses to the British Government, all of these horses being secured from the farmers of the province. The Dominion Government has bought horses in various parts of Canada to furnish remounts for the cavalrymen being sent to the front in the various contingents. The British Government is also buying for the purpose of replenishing the stock of remounts which are continually being depleted in the various engagements in the war zone.

The life of the army horse is short—it can often be reckoned in days, sometimes weeks or months, but it is invariably short. Consequent-

ly, large numbers must be held in readiness in reserve, so that they can be utilized on short notice. Before the opening of the present European war there were many military experts who claimed that owing to the improved machine guns now in use, the cavalry would not be apt to play a very important part in war, but we find that they still are invaluable. In fact, they have proved in the present conflict that they are just as dependable as of old, and have done most effective work in checking the enemies' advances on numerous occasions.

Men can stand up against rifle fire, can endure continuous shelling while entrenched, but to stand up and face a squadron of cavalry, charging at a thundering gallop, requires a different kind of courage. They are not up against a mere machine, as in the first instance, but face to face with an irresistible living force against which bayonets, rifles or anything less than machine guns are of little avail. Not only does the horse play a prominent part in warfare from the standpoint of a cavalry animal, but he is also an essential part of the artillery batteries. Without him it would be well nigh impossible to move the huge field pieces and siege guns that have played such an important part in the present war. We also find him used for transport work, more of which is done by motor truck than formerly, but still the horses are largely used in this service.

It is readily seen from the various uses to which horses are put during war that various types of animals would be required. For instance, an animal suitable for a remount for a cavalryman would not be the best sort to use on a gun carriage or a transport wagon.

Several types are required, in fact they include nearly all the classes of horses usually found on the average Canadian farm. The type probably in greatest demand is the "rider" or cavalry horse. This horse should stand from 15 to 15.3 hands high, weigh from 1,000 to 1,150 pounds, be sound, strongly muscled, compactly built and possess a set of clean-cut limbs properly placed. Horses of this kind are desirable because they are of good size, usually have considerable speed and can carry a maximum load under saddle.

Another class is of the same type as the above except in point of size. There are a great many that might be termed "big little horses" in demand for mounted infantry. These animals are only used for carrying a man and his equipment from place to place. They enable the infantryman to advance

rapidly or to fall back quickly as the case may be. They are, however, too small to carry the heavy equipment of the regular cavalryman, nor would they be able to stand the strain demanded of the heavier cavalry horse in charging at full speed over rough or uneven ground. These are usually a cheaper class, but none the less useful in their place.

The two next desirable types are the heavy and light artillery, commonly called "gunners." These horses are of a slightly different type, have more weight, ranging from 1,200 to 1,300 pounds, and are from 15.1 to 16 hands high. Besides the weight there are several other qualifications required in a good artillery horse. He must be well built, a little on the order of a draft animal, with good sloping shoulders, short, well muscled back and quarters and possess plenty of spirit, together with ability, to not only draw a good load, but to draw it at a gallop if required. The horses commonly used by fire departments are a good example of this type. These horses are usually used in fours and sixes, driven tandem and the lighter types used for leaders, while the heavier, slower animals will be hitched next to the gun carriage and be termed as wheelers.

Still another distinct type is found suitable for certain work. It is the horse that is of draft breeding, has plenty of size but lacks the ambition, courage and activity necessary for artillery purposes. He is used on the transports, or ammunition wagons, in the rear of the lines,

and is perhaps a useful in his place as any of the others.

Now what is to be the result of the drafting of thousands of horses from the Canadian farms for war purposes? Representing, as they do, animals of various types, one can readily see that it will have an effect on the horse industry of Canada. But what will this effect be? Will it be beneficial or the reverse? In the judgment of the writer, it will be entirely beneficial. Although the remount buyers in times of peace are extremely critical and require all horses to be of a high standard, in times of war many minor points are overlooked and the general standard is lowered. The reason for this is primarily that war horse prices are comparatively low, and the animals of a high standard can not be secured in anything like sufficient numbers. The prices paid for war horses, except for an occasional one such as would do for an officer's mount, are invariably too low to secure the best animals of any of our recognized types.

Consequently, few horses that would be of use to the breeder in the constructive policy he should pursue in the building up of big drafters, showy harness horses, gaited saddlers or speedy roadsters, are taken. On the other hand, the farmer in his endeavor to breed the big drafters invariably finds that a large per cent. of his colts do not come up to a standard in size possibly, or perhaps they are lacking in quality and can not be readily disposed of as drafters. They are, in some instances, classed as farm chunks, and never under any circumstances do they command a high price. Large numbers of this kind can be disposed of during war times for fair prices, and the farmers who "turn them loose" at this time are showing good judgment. They are an undesirable class, and the more of them we can get rid of at this time the better it will be for the horse industry of Canada.

The same applies to horses of all other types. The horseman working to produce high-class saddlers or roadsters finds that large numbers never come up to expectations. They have neither sufficient speed, style nor perhaps size to make them valuable for commercial purposes. These animals make good war material. They are not particularly valuable, can only be used for ordinary drivers or for working on farms. They have no particular value for breeding purposes, they are simply a clog to the progress of breeding, and should be let go at such times as this when a fair cash price can be obtained. Such horses are a drag on the market in times of peace, so seize the opportunity, even though the price seems small and let them go.

It is useless for the farmers to mark up or ask exorbitant prices for this class of horse, as they are plentiful, in fact there are very large numbers of these misfits or horses just a trifle off type, a trifle inferior, horses that do not quite come up to the market classifications, and, consequently, are more or less unsaleable through the usual channels. This kind of horse accumulates during times of peace, and because he is unsaleable is often retained on the farm and used as a slave, often to the detriment of the horse-breeding industry of that particular district, because he is taking the place of better horses that would do the same kind of work, do more of it and do it better and at the same time command a ready sale at all times. The keeping of the latter kind of a horse, because of his usefulness and saleability, stimulates the horse-breeding industry in that particular district by inducing the farmer or breeder to use greater care and consideration in selection in an endeavor to produce a better class of horse of the desired type.

On the other hand, the man who has a lot of the farm chunk kind, finding them unsaleable under ordinary conditions, loses interest in the horse business. Consequently, the more of this kind that can be unloaded at this time the better it will be in the end for the horse business in general.

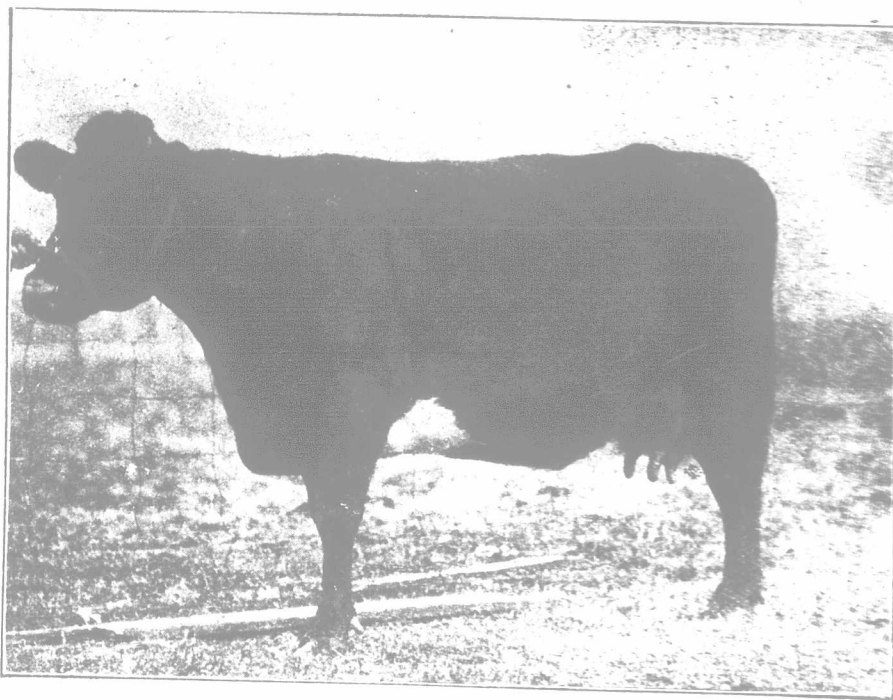
There are always some men who are carried away by any new departure in the regular routine, and from time to time we hear of persons, usually military men, advocating strongly that the farmers should breed horses of a type suitable for army remounts. Thoroughbred sires are advocated to be used on the common farms of the country with this end in view. The farmer should consider carefully before engaging in an enterprise of this kind. He must remember that the same rule that applies in the breeding of the draft and agricultural types also holds good in connection with the breeding of horses suitable for cavalry purposes. Only a certain percentage of his colts will come up to the requirements, many more of them will be too small, and being too small for saddle animals they are practically worthless for any other purpose. They can not be used profitably on the farm and must be handled at a loss in every case. He must also remember that for the good specimens he produces during the course of his breeding operations he can only get a very ordinary price as

compared with good specimens of several of the other types. Therefore, it is questionable if the breeding of remounts can be carried on successfully except under exceptional circumstances, such as raising the animals under range conditions. The average farmer should certainly not attempt to alter his principles of breeding, should not lose sight of the market classifications just because there happens to be a great demand for horses for war purposes at any particular time.

Thousands of horses have been sold as remounts, thousands more will no doubt be sold if the war continues. The effect of this will not be detrimental. It will prove to be a boon to the country. The fact that certain districts may have a shortage of work horses for next spring is entirely offset by the removal of these thousands of what may be termed undesirables, which, simply by their presence in large numbers, constitute a hindrance to the rapid advancement of the horse-breeding industry.

By the removal of these we will find that the demand for good horses of the various types will increase, and the breeders who continue to strive, as many of them have been striving in the past, to produce the good ones of the various market types, particularly the great big, quality drafters, will undoubtedly reap a rich reward. We will always have a large supply of animals suitable for war purposes, good, tough, hardy horses, capable of standing a lot of hardship and furnishing a target for shot and shell, without trying to breed them.

Now is an opportune time to increase the business of breeding good horses. Use care in the selection of your brood mares. Breed them preferably to a draft stallion, the best to be found in your district; use common sense in the management of your business, and let the war horse take care of himself.—A. M. Shaw, B.S.A., in "Farmer's Advocate and Home Journal," Winnipeg, Man.



Gipsy Lady 2nd =52080=.

Milking Shorthorn cow which gave in 11 months and 14 days 11,578 lbs. milk, 530 lbs. fat; average per cent. fat, 4.57. Owned by Miss C. South, Maple Lodge, Ont.

## LIVE STOCK.

### A Way to More Live Stock.

A peculiar circumstance relative to the shortage of live stock in Canada compared with the United States is the inability of some farmers to raise more cattle, sheep or swine as they increase their help. The amount of stock the average farm will maintain does not depend upon the soil at all. This statement is made understanding the farm in question to be similar in character and soil fertility to the average Ontario or Canadian farm. With this premise it may further be said that the number of live stock reared and finished on the one-hundred or one-hundred-and-fifty acres depends upon the labor expended on that area. In passing it should be admitted that the supply of farm labor has decreased in the last ten years, but there are farms withal that have been well-manned. Farmers have secured help, while others have been assisted by husky, growing boys. The onus of increasing Canada's visible supply of meat products should not be cast upon the shoulders of the growing lads, but when they are given some interest in the stock and made to feel that it is increasing in quality and numbers, they will become attached to it in such a way that they will be more valuable assistants than the hired man. There is something about animals that appeals to youth, and the work connected with them will not

be burdensome to the boy. We first require a live-stock enthusiasm and then there will be advances made in the greatest of agricultural pursuits, namely, live stock husbandry.

Some farms will, house and feed between twenty-five and thirty head of cattle, while others of similar size will winter nearer fifty. The man not the farm is the explanation of the difference. Large areas cannot be devoted to old, run-out, dried-up pasture. Legumes must be grown for hay instead of timothy or wire grass. Corn must form an important part of the field crop, and roots must not be neglected. If we wish to intensify still further the stock may be confined to the stable or paddock during the greater part of the time, and fed from small areas of soiling crops augmented by a summer silo. This spells labor, but it means one-third more cattle on the farm if it is carried to the extent of its possibilities. Complete soilage is still a radical move and most farmers are loath to adopt it, while on the other hand partial soilage could and should be practiced on every farm. It would tide the milking herd over the dry period in summer, it would augment the grass of the store or feeder steers, in fact it would serve to stretch out the grain and grass with all kinds of stock, yet when all has been said about its advantages there is the labor to be considered.

In one respect partial soilage is superior to a complete housing of the stock. When the animals are allowed access to the open air and fields at night or in the cool of the day, they will be superior in health and vigor to those permanently confined. Theoretically a stable may be kept sanitary and the stock free from disease, yet it is born in animal kind to be out of doors and there they will thrive best and enjoy most immunity from infection of all kinds.

We are not recommending that stockmen should soil their cattle. True, it is a commendable practice, yet we cite it here only to show the possibilities in live stock husbandry, and that the cattle, sheep and swine upon a farm depends not so much upon the size of the holding as upon the labor expended on it.

The difference in food constituents between a crop of corn and a crop of wheat is about equal to the food constituents contained in one ton of timothy hay. One thousand bushel of turnips, which might be grown on one acre of land, would contain as much protein as is found in 197 bushels of oats, as much carbohydrates as would be found in 290 bushels of oats and as much fats as are contained in 82 bushels. This is an indication of how the food supply might be increased and more stock maintained on the farm. There is also a great saving when the hay is from legumes

rather than from timothy or common grasses. Putting all these differences side by side and by choosing the crop that returns the greatest amount of fodder stockmen can increase their own herd and Canada's live stock to a very large extent.

### English Live Stock News.

The milk records of the Shorthorn and Jersey herds belonging to Lord Rothschild, at Tring Park, show that during the year the high level of production of former years was maintained in the case of the Shorthorns, though there was a slight reduction in the Jersey average. The average for the eighteen Jerseys that were in the herd throughout the year was 5,637 lbs., compared with 7,060 for seventeen in the previous year. The animals sold yielded an estimated average of 4,749 lbs., and those brought in an estimated average of 7,442 lbs. of milk. The average for the seventy-one Shorthorns in the herd the full year was 6,259 lbs.; and the newcomers are credited with an estimated average of 7,518 lbs., against 3,447 lbs. by those they superseded. The highest individual yield by a Shorthorn was 10,711 lbs. in 342 days, and three others exceeded 10,000 lbs. The best Jersey record was 9,993 lbs.

John Evens, Burton, Lincoln, has published the milk records of the cows in his herd of Lincolnshire Red Shorthorns that calved during 1913. The average for fifty three head was 8-



560 lbs. The milking periods varied from 140 days to 560 days.

The executors of the late Sir Walter Gilbey, Bart., will sell all the horses from the Elsenham Stud, on Wednesday, January 13th, 1915. The catalogue will comprise eighty horses, including the well-known Thoroughbred stallion, Stortford and the pony stallion Shooting Star, twenty-four choicely bred Shire horses, fifty Thoroughbred and Hunter brood mares and young stock, and four Polo ponies. The dispersal of this famous stud will no doubt interest breeders and buyers at home and abroad.

The Shorthorn bull, Earl of Kingston, which was first at the Royal, first and champion at the Notts Show, and first at the great Yorkshire shows, and was bred by Earl Manvers, has been sold to the Edgcote Shorthorn Company for £3,000.

At the Shrewsbury Royal Show, where Earl of Kingston was first in his class, Messrs. Wallace and Gresson realized that here was a bull of extraordinary merit, and they did all in their power to persuade Earl Manvers to sell him there and then.

Earl of Kingston is a great bull, both as regards conformation and breeding. He is a grand roan, with wonderful back, ribs, loin and quarters, all covered with that quality of flesh and mellowness to touch so highly prized but rarely met with. He stands very close to the ground, and in spite of his size and weight is marvellously alert and active. A study of his breeding is interesting, combining as it does the Scotch, Bates and Booth blood in such a degree as should ensure a full measure of success at his new home.

The Shrewsbury Royal Show resulted in a loss of £3,616. It is not expected that as large a local fund will be forthcoming for the Nottingham Show of 1915 as has been the case in past years from the districts visited, and in consequence the schedule and the scope of the Show will be reduced. Classes for driving horses and for the usual leaping competitions will be omitted, but should favorable conditions prevail nearer the date of the show the council will consider the advisability of offering prizes for these sections, in which case particulars will be instantly issued. The usual breed classes will, however, be provided for as in the past.

London, England. G. T. BURROWS.

**Live Stock Meetings.**

The following is a list of the annual meetings of the various live-stock associations to be held in Toronto during the first week in February, 1915:

**MONDAY, FEBRUARY 1st.**

- 2 p.m.—Board of Directors, Dominion Cattle Breeders' Association.
- 2.30 p.m.—Board of Directors, Canadian Thoroughbred Horse Society.
- 3 p.m.—Annual Meeting Dominion Cattle Breeders' Association.
- 3.30 p.m.—Annual Meeting Canadian Thoroughbred Horse Society.
- 8 p.m.—Board of Directors, Dominion Shorthorn Breeders' Association.
- 8 p.m.—Board of Directors, Canadian Standard-Bred Horse Society.
- 8.30 p.m.—Board of Directors, Dominion Swine Breeders' Association.

**TUESDAY, FEBRUARY 2ND.**

- 9 a.m.—Annual Meeting Ontario Berkshire Society.
- 11 a.m.—Annual Meeting Ontario Yorkshire Society.
- 11 a.m.—Annual Meeting Dominion Shorthorn Breeders' Association.
- 2 p.m.—Annual Meeting Dominion Swine Breeders' Association.
- 2 p.m.—Annual Meeting Canadian Standard-bred Horse Society.
- 4.30 p.m.—Board of Directors, Ontario Horse Breeders' Association.

**WEDNESDAY, FEBRUARY 3rd.**

- 10 a.m.—Board of Directors, Canadian Hereford Breeders' Association.
- 10.30 a.m.—Annual Meeting Ontario Horse Breeders' Association.
- 11 a.m.—Annual Meeting Canadian Hereford Breeders' Association.
- 3 p.m.—Board of Directors, Canadian Hackney Horse Society.
- 7 p.m.—Annual Meeting Canadian Hackney Horse Society.
- 8 p.m.—Board of Directors, Canadian Jersey Cattle Club.

**THURSDAY, FEBRUARY 4th.**

- 9.30 a.m.—Board of Directors, Canadian Shire Horse Breeders' Association.
- 10 a.m.—Board of Directors, Clydesdale Horse Association of Canada.
- 10 a.m.—Annual Meeting Canadian Shire Horse Breeders' Association.
- 11 a.m.—Annual Meeting Canadian Jersey Cattle Club.

1.30 p.m.—Board of Directors Dominion Sheep Breeders' Association.

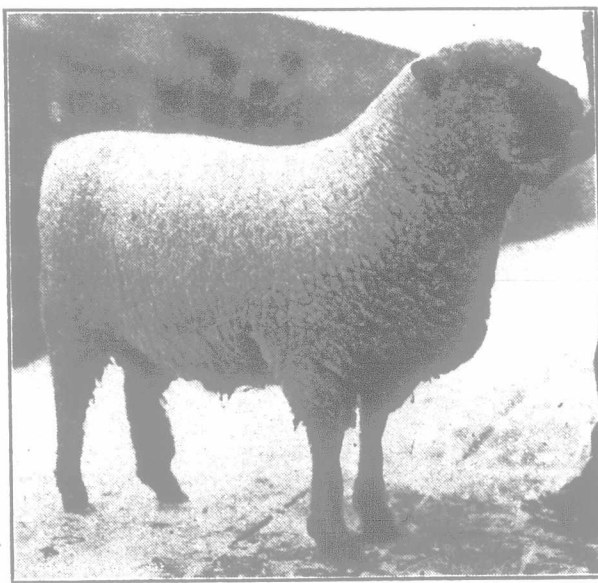
1.30 p.m.—Annual Meeting Clydesdale Horse Association of Canada.

4 p.m.—Board of Directors, Ontario Sheep Breeders' Association.

4 p.m.—Board of Directors, Canadian Pony Society.

7 p.m.—Annual Meeting Canadian Pony Society.

8 p.m.—Annual Meeting Ontario Sheep Breeders' Association.



**A Winning Wether.**

Grand champion wether at the Guelph Winter Fair, 1914. Shown by John Kelly & Son, Shakespeare, Ont.

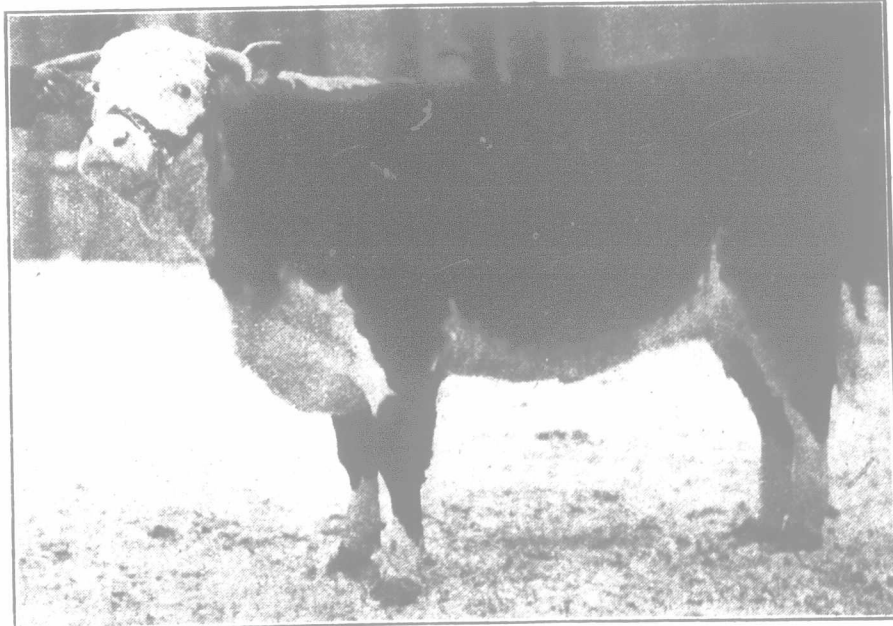
**FRIDAY, FEBRUARY 5th.**

9 a.m.—Annual Meeting Dominion Sheep Breeders' Association.

2 p.m.—Annual Meeting Canadian National Record Board.

**The Ram and the Ewes in Winter.**

Winter is advancing. The ewe flock, bred early last fall will begin to show signs of pregnancy. Now is the time they require good feed, care and attention. In the first place, remove the ram from the flock. If it so happens that one or two of the very fat ewes or others have not yet conceived, remove them and keep them with the ram. This is far better than leaving the ram in the flock with all the pregnant ewes just because one or two are not yet with lamb. Many are careless or rather, perhaps, thoughtless, and leave the ram with the ewe flock right up till lambs begin to arrive. This is, to say the least, not a commendable practice.



**Miss Brae 50th.**

Champion Hereford at the Guelph Winter Fair, 1914. Exhibited by James Page, Wallacestown, Ont.

Just observe a ram in such conditions and see if his actions in continually teasing and disturbing ewes are not sufficient reason why he should under no circumstances be permitted to remain with the flock of in-lamb ewes. Often the ram gets excited under such conditions and may do harm to the ewes through butting, so serious in fact that abortions may occur. No ram, however, should be removed from the flock where he has been permitted to take regular and sufficient exercise and shut in a small improvised pen just large enough for him to turn around in and there fed heavily in his imprisonment.

If he must be penned in such a small enclosure, he should be turned out in a yard separate from the flock for daily exercise. First, then, separate the ram or rams from the flock.

For feed for the ram, use liberally, well-cured alfalfa or clover hay. There was a time when flail-threshed pea straw was abundant and it was almost as good as clover hay, but peas are now little grown and where a few are harvested, the threshing is generally done by the machine which cuts the straw up badly and makes it dusty, rendering it of much less value as a sheep feed. Given good clover or alfalfa hay and plenty of good Swede turnips, the ram will not suffer much. If low in condition, a few oats might be added to the ration, but it is better to underfeed than to overfeed. Be careful in feeding rams mangels and sugar beets.

For the ewes, we would emphasize exercise first, last and always. Many a flock has been a poor success, yes, even a failure because of lack of exercise. The best feed, and general care in close confinement will not suffice. It is a good plan to get the in-lamb ewes outdoors every day and some go so far as to place feeding troughs in different places at considerable distances from each other so as to compel the ewes to take exercise in getting their feed. Be careful also of crowding through narrow doorways as these are dangerous.

Feeding breeding ewes is not a difficult task to the experienced feeder, but it may give the novice trouble for a ewe off her feed is a puzzling proposition. Exercise aids in keeping the sheep hearty. As a basis in the ration use clover and alfalfa hay, all they will eat up clean, a few oats and a fair feed of pulped roots, preferably Swede turnips. Too many roots cause lambing troubles, big, flabby lambs resulting, but if plenty of exercise is given there is less danger. We have often fed a heaped-up bushel basket of sliced turnips three times daily to a flock of between twenty-five and thirty breeding ewes without untoward results. Feed lightly on grain and as lambing time approaches add a little bran. Keep them all dry and little attention to temperature, provided the pens are not too warm, is needed.

**THE FARM.**

**Capital in Farming.**

Editor "The Farmer's Advocate":

The chief problem affecting the farming community to-day is the financial problem. It is a maxim of political economy that those forms of wealth which we designate as "capital" are, other things being equal, employed in those directions which promise the greatest reward arising out of such employment. It is natural to assume that a man with money to invest, and having a free choice between investments in several industries, will prefer to select that which will produce the greatest profits at the least risk.

It can be taken for granted by those who read these lines that the returns from an investment in farm property to-day, whether the property be either worked by the investor himself, rented or merely supervised, are not as large as they should be when compared with other industries. If I were writing for different readers I might stop to argue this out, but the vast majority of farmers will, I believe, confirm my statement. Assuming this to be true, then, in what direction are we to look for a remedy?

In the columns of "The Farmer's Advocate" have appeared numerous articles criticizing loaning institutions, banks, loan and insurance companies, for their failure to respond to the calls upon them. The fact that the farmer has been unable to obtain capital from them

in a sufficient large volume to meet his needs has often been mentioned as the principal reason for the lack of interest in farming operations throughout the country. The real causes, however, go deeper, and to obtain a glimpse at them we must return to our original starting point, that capital follows the line of greatest returns. It must not be forgotten that the farming industry is not the only industry affected by lack of sufficient capital. All industries are in a similar position at the present time and in fact at all times. Very few people ever have sufficient capital for

their real or imagined needs. The farming industry indeed is in a better position than most others, for it has more avenues of credit open to it than other industries, and, moreover, the farmer himself is not required to invest as much of his own capital before credit can be obtained as is a mercantile or manufacturing borrower. This may be made up for, however, by the demand for such loans by farmers exceeding the available supply of capital and by the imposition of more onerous terms of repayment, etc., upon those who do borrow, but on the whole the farmer having invested a certain sum of money in his farm, stock and buildings, can obtain a larger amount of credit for a longer time than almost any other person engaged in a different line of business who has invested an equal amount of capital in it. Also he can do this at a lower interest cost.

These statements may seem strange to most of you who read them, and I must confess that I am expecting a fusillade of hot-shot in reply, yet I am not only prepared but able to give chapter and verse for each statement, and am in a position to know whereof I speak. The farming industry is so intrinsically sound, it is the basis on which all other industries depend for their very existence, that it would be strange indeed if the above statements had no foundation in fact.

The means of obtaining credit are not perfect and could undeniably be improved. For instance, it is very hard for a farmer to obtain a loan of around \$500 for a period of five to ten years without prejudicing his financial position. He is unwilling to give a mortgage for such a comparatively small sum, because if a larger amount were actually needed at any time he would have difficulty in raising it upon a second mortgage. Moreover, he cannot obtain such a comparatively large sum from a bank for a lengthy period, because the economic functions of a bank, as banks are at present constituted, do not permit such transactions to be carried on with safety. Why this is so I may explain in another letter. The fact, however, remains, to overcome the difficulty two methods can be suggested. The first is that municipalities should obtain power from Parliament to issue debentures for purposes of improving farms in the same manner and on the same terms that drainage debentures are now issued. Being myself engaged in the business of selling such municipal debentures, I do not think there would be any difficulty in disposing of this new form of obligation under normal conditions at a moderate rate of interest. A second plan would be the revision of the Bank Act to allow banks to take deposits which could only be withdrawn after a lengthy period of notice. In order to attract such deposits a higher rate of interest would be allowed than the current rate for ordinary savings deposits which are practically available on demand, and the funds thus acquired could not then with reason be denied to the class of borrower I write of. In some other countries such deposits are received by the banks, but in Canada there has not yet arisen a demand for these facilities. The capital of the country is in such a floating condition that the granting of a higher rate for term deposits would not result in any appreciable increase in the amount of deposits. That is because we are young and have not settled down into steady business habits.

But we must not get away from the main point that on the whole the farming community has at its command a more available supply of credit than almost any other class. In order, therefore, to discover why the return from farming operations is not commensurate with the amount of capital invested and labor performed, we must go farther. During the last fifty years there has actually been a decrease in the population of rural Ontario, a most serious thing when we consider the situation facing the Empire just now. The causes contributing to this result have frequently been discussed in the columns of "The Farmer's Advocate," but it may be laid down as a fact that if the monetary return from the farms had been sufficiently attractive the rural population would have increased in the same proportion as the population of our towns and cities. Remember this, that whatever effect the war will exert by temporarily increasing the prices of farm produce and stimulating the "Back-to-the-land" movement, that effect will not be lasting, and as soon as the causes which brought it into being are removed it will slowly disappear, and the conditions which prevailed up to mid-summer of this year will re-assert themselves with all their former strength. There are some people so constituted that they would suffer poverty in a city rather than affluence on a farm. There are other people who are constituted the other way round, but the average man, following the laws of political economy, will go where he gets the best returns for his money and labor.

Therefore, the problem may be stated as follows: how are we to increase permanently the ratio of returns from an investment in farm property so as to raise farming to the level of other occupations? Are we forever to consider

that farmers and their help must needs be regarded as drudges condemned to poverty and toil from their earliest days until their journey's end is reached, provided they have no other resources such as inherited wealth to help them out? I do not regard this problem as entirely hopeless, though at first sight it may appear so. But the solution demands decisive action by farmers themselves, and what form that action should take I trust to be able to explain in a future issue.

Leeds Co.

W. J. FLETCHER.

### Fertilizer Experiments.

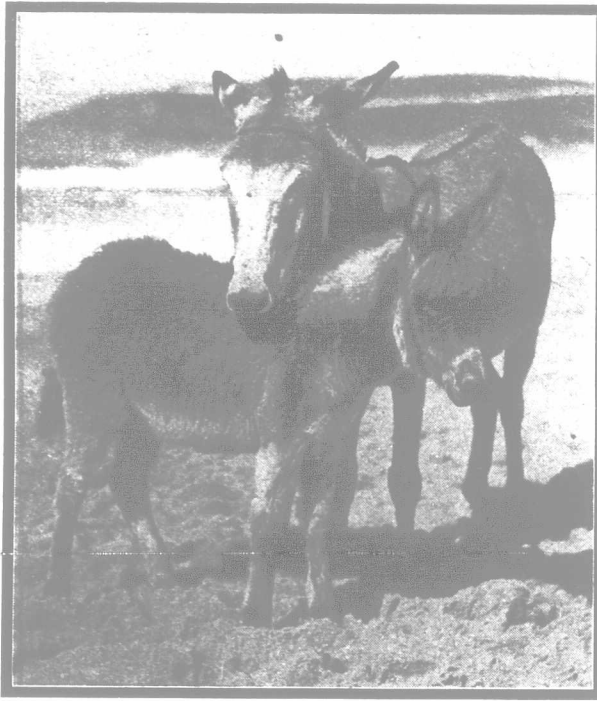
Editor "The Farmer's Advocate":

In regard to my article in the December 3rd issue, re fertilizer experiments I would say that in answer to the editor's question as to distance between the rows, that they were 34 inches apart. The rows were all 40 rods long. The test rows were not side by side, as only every third row was used for these experiments. Plots are no doubt better but this method was not convenient so the rows had to be used. The soil varied somewhat in character, as all the best rows had practically three kinds of soil. At one end of the field it was a nice mellow black loam. Through the centre of the field there was a sandy knoll, and the opposite end was an average clay loam. So it will be seen that this gives a very fair test. Of course no two seasons are alike and the results may differ somewhat another season. This year it was very dry and not conducive to best results with chemicals.

I might say in conclusion that on a test plot from the Experimental Union, ready mixed fertilizer and manure gave the best results. This was also the case with mangels.

York Co., Ont.

C. H. R.



Find the Third One.

## THE DAIRY.

### Principles and Methods of Creaming Milk.

#### I. PRINCIPLES.

Editor "The Farmer's Advocate":

If we understand the principles underlying any practical operation, we can go about our work more intelligently, and should be able to get better practical results. The creaming, or what is commonly known as the "skimming of milk," is a very old process, but the explanation of the process was not at all understood, until physical science had made considerable advance. In fact, it was not until the early part of the 18th century, when the microscope was invented or discovered, and it was found that the cream or fat of milk consists of tiny globules so small that on the average it requires 10,000 to make a line an inch long—this discovery gave us the most light on the question. We know that these tiny balls of fat float in a liquid heavier than themselves, known technically, as milk serum or milk plasma, but for all practical purposes, the term skim-milk may be applied. The difference between serum and skim-milk is that the former has no fat present, whereas the latter always contains more or less fat not removed by the creaming process.

The specific gravity (weight compared with water) of milk serum is about 1.036; that is, it is about 36 thousandths heavier than water. Or, we may say that a vessel which will hold 1,000 grams, ounces, or pounds of water, would hold 1,036 grams, ounces, or pounds of milk serum.

The milk-fat is lighter than either skim-milk or water. It has a specific gravity of about .9, or is one-tenth lighter than water. The difference in gravity of milk-fat and water is about .136, which is sufficient to drive the fat globules to the top of milk set in an ordinary shallow pan in one second of time, if there were no friction on the fat as the balls tend to rise. If the friction were overcome, a pan would rival any cream separator ever made.

If any of my readers are teachers and wish to illustrate this point, get a common milk pan and fill it about two-thirds full of water. On top of the water place a small rubber ball. Press the ball to the bottom of the pan, remove the fingers and note how quickly the ball will come to the top. This shows the natural tendency of the cream or fat globules to rise.

What we do in the case of a cream separator or centrifuge is to increase the difference between the gravity of the fat and the serum; or, we give an extra pull outward on the skim-milk by means of centrifugal force, and an extra pull inward on the milk-fat or cream by means of the centripetal force. Both these forces are made use of in the creaming of milk and both are produced by any rapidly rotating body such as a separator bowl.

In the creaming of milk we make use of three forces in nature, which forces have been in existence since the world was created; but only one of these was made use of, namely, force of gravity, up till about 1876, when the modern cream separator began to be evolved, the other two forces, centrifugal and centripetal, were utilized.

We may say that these so-called forces are theories or hypotheses to explain certain things we observe or experience. No one ever saw, felt or smelt force of gravity, centrifugal or centripetal force, but we assume they are present as the best explanation we can give as to why certain results are produced when we set milk in a pan or can, or allow it to pass through a rapidly revolving bowl.

Force of gravity was discovered, or the theory was assumed, according to the story, by Sir Isaac Newton, as he sat under an apple tree, and sought to explain why the apples fell to the ground. He theorized or reasoned that there must be some force at work causing the apple to fall to the ground, and he said, that force I will call "Gravity"—a force which tends to draw all bodies towards the centre of the earth. When we set milk in a pan or can all parts of the milk—skim-milk, cream, dirt and everything in the pan tends to go to the ground, but the bottom and side of the pan or can prevent this. We know the foregoing to be true, because a tiny hole in the bottom or side of can or pan "leaks out the milk" and if we do not stop the hole with solder, or a piece of clean cloth, the milk will be on the floor, or in the water box and if there be a hole in floor or box it will get through into the ground, as Newton said, and it will keep going down into the earth until it is absorbed, or turned from its natural course. It is seeking the centre of the earth.

But if the bottom and sides of pan or can are sound the milk finds it cannot get out and away, so the process of creaming takes place by the skim-milk, which is heavier, settling to the bottom and sides, or as near the earth as it can get, while the lighter particles, the milk-fat, or what is commonly called cream, are pushed and crowded upward to make room for the heavier serum or skim-milk. This pushing upward process goes on until all the fat globules which can be forced upward, are on the top, but some are so small, or may be so entangled in curdy and other matters that they cannot get up, hence we always find from .2 to .5 per cent. fat in the skim-milk from shallow pans and deep cans. This usually consists of the tiniest globules which have not sufficient buoyancy to rise and overcome the friction of the undissolved casein, and possibly also some albumen, and other solid particles which prevent the cream rising. We thus see that the raising of cream on pans or cans is quite a complicated process under the best of conditions. But to make matters worse or more complicated, what are called bacteria or germs get into the milk, and are present when drawn from the cow, and these begin to feed on the various parts of the milk. Chief among these are those known as lactic acid bacteria, which are supposed to split a molecule of milk sugar into four molecules of lactic acid, thus causing what we know as milk souring. (Lloyd of England says of the foregoing: "It is a very pretty theory but quite erroneous." We shall not take time to go into the matter more fully at present.)

The lactic or milk acid neutralizes or makes of no effect, the lime compounds of milk which hold the casein in solution or semi-solution; or, what some call colloidal or jellylike form—neither a liquid nor a solid, but something between these two. When the lime becomes neutralized the casein is thrown out of its colloidal condition and appears as a solid, or what we call curd. As soon as curd is formed, the fat globules are no

able to force their way through, hence the practical dairyman tries to prevent this for at least twelve or twenty-four hours, in order to give the cream time to rise, as he finds by experience this is the length of time necessary in order to get all, or nearly all the cream. He has also learned by experience that keeping the milk cold, keeps the milk sweet for a longer time, and he is enabled to get more cream. If he were asked why he cools the milk for good results in gravity creaming he might not be able to explain it, but we have seen that what he really does by cooling the milk is to make an unfavorable condition for the lactic acid bacteria to grow in, and thus prevents souring and curdling, thus allowing the fat to rise before the curdling. Quite a complicated and intricate process when we look a little more deeply into the question!

We have a peculiar condition to explain in the creaming of milk by gravity and mechanical forces. In the former, milk must be cold for good results; in the latter it must be warm—at least 80 degrees to 100 degrees F. Why in the one case must the milk be cold during the time creaming takes place, and why in the other must it be warm? Various explanations have been offered. Arnold, one of the early American dairy scientists, explained the need for cooling in the gravity method by saying the serum cooled more rapidly than did the fat, hence this cooling increased the difference in specific gravity between the two parts. When the separator came into practical use this theory had to be abandoned, as it was found that the separator gave better results by having the milk warm, hence in all probability the difference, if any, is greatest between the gravity of serum and fat, when the milk is warm. If this is not the case, the plasma is less viscous when warm as compared with being cold, and it does not take so hard a pull to force the fat through to the centre of the bowl.

The probable explanation is the one already referred to—cooling prevents the growth of lactic organisms, which would otherwise cause the milk to sour and curdle before the cream could rise on milk set in pans and cans, because the force of gravity is a comparatively slow-acting force—slow but sure. But in these modern, hustling times when we do things with a great rush, a method requiring 12 to 36 hours is too slow if we can get a machine that will do the work in half an hour. The only drawback is that the machine for producing centrifugal and centripetal forces costs money to buy in the first place, and costs for labor or power to operate, whereas gravity force is free and found everywhere. In spite of these drawbacks farmers are purchasing separators by hundreds and discarding the pan and can.

**THE THEORY OF A CREAM SEPARATOR.**

The bowl is the essential part of any cream separator. When revolving at 6,000 revolutions per minute, it generates two forces, centrifugal, meaning to fly from the centre, and centripetal, meaning to seek the centre. These forces are produced in varying proportions according to speed and diameter of bowl. The general law is, double the diameter of the bowl, speed constant, and the force is doubled; double the speed, diameter constant, and the force is increased four times. It is because of this law that separator manufacturers tend to speed their machines to the limit, and to reduce the diameter of bowls, as a large bowl is more expensive to manufacture and more expensive to operate.

In addition to speed and diameter of bowl, another factor enters into the question of complete separation of cream from milk, and also is a factor in the capacity of the machine, which latter is usually reckoned in, pounds of milk per hour. This other factor is the one of contrivances on the inside of the bowl for dividing the milk into sheets, layers, or smaller portions, so that the forces may act on small bodies of the milk instead of on a bulk, thus increasing efficiency and capacity. Practically all the manufacturers have some such device in the bowl, or else run the machine at very high speed.

What goes on inside a separator bowl when the whole milk enters the swift running drum, is rather difficult to describe, and the action varies with different types of machines, but generally speaking we may say that the milk quickly takes the speed of the bowl, and as soon as sufficient force has been applied the milk divides into two distinct layers or parts—the heavier or skim-milk travels in the same direction as the centrifugal force is working, namely, outward and continues until it reaches the outer ring of the inside of the bowl when it can get no farther, just the same as does the milk in a pan or can when it reaches the bottom; but owing to the pressure of the incoming milk and the force of the bowl to some extent, it begins to rise on the inside, unless there be an outlet at the bottom of the bowl as in some types of machines, and continues rising until it reaches the skim-milk outlets, which are placed near the centre of the bowl to reduce driving power, but always slightly farther from the centre than the cream outlet. From the

bowl outlets the skim-milk is discharged into a suitable cover or spout and caught in a pail or can.

Meanwhile the cream has been gradually driven nearer the centre of the bowl until it can get no farther when it is led to a suitable outlet near the centre, whence it also is discharged into a cover or spout and from there into a pail or dish. Should the cream be too thin, a screw is used to push the cream wall nearer the centre of the bowl where the separation is more complete; or, the opening is made smaller so less skim-milk can get out and thus the cream is made richer because it contains less skim-milk. All cream contains more or less serum or skim-milk. "High" or "low"-testing cream depends on the relative amounts of serum and milk-fat in the substance called cream.

In the foregoing we have covered the main points on the theory or principles of creaming. The next article will deal with the practical application of the theory or principles.

O. A. C. H. H. DEAN.

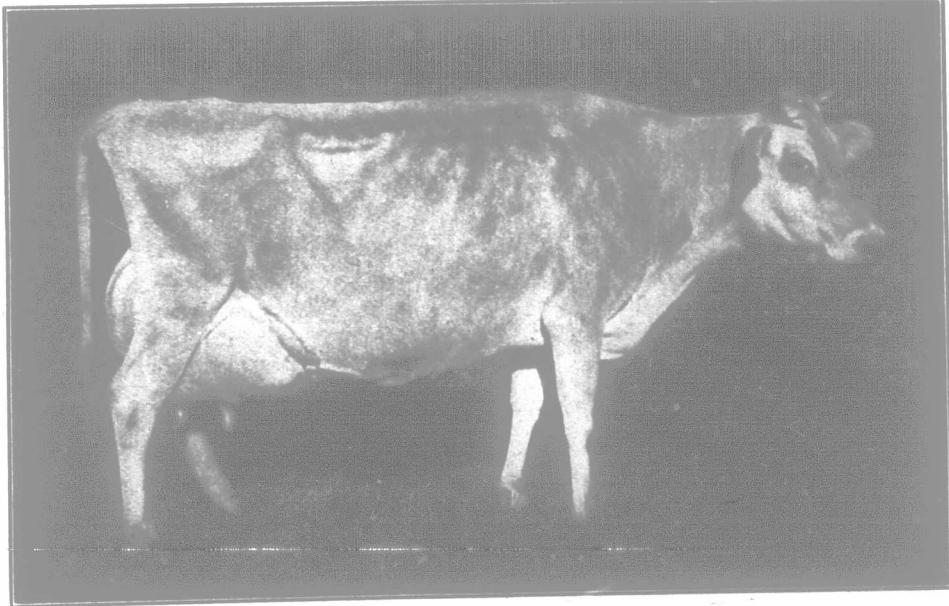
**Fill Your Milk Cans in the Fall.**

Editor "The Farmer's Advocate":

Milk producers for city trade are almost invariably short of milk during the fall months. Now is the time to prepare to fill your cans next fall. Breed more cows from December 1st to March 15th than you have done in the past. But someone says, "I can't get my cows to breed during these months!" The answer is, "Others have made a success of this, why can't you? You can at least improve."

The question is, "How"?

Carefully watch your herd to see that every cow is bred when she comes in heat. Record the date and watch her carefully in three week's time and each succeeding three weeks during the months of January, February and March.



A Jersey Cow in Her Home Land.

In addition to keeping these records in your herd book it is a good plan to put the date of breeding on a card and tack it up in front of each cow, this will be a constant reminder every time you feed, when to watch each cow.

I approve of turning out all dairy cows for exercise, from fifteen minutes to an hour each day, according to the weather. When this method is followed, you can almost invariably detect a cow, when in heat, whereas when kept in the stable constantly, as some do, it is more difficult to catch them in heat.

Do not be afraid of having too many cows from September to December, for there is always a good demand for your milk during these months. You can sell all you can produce, over and above your contract, at contract prices and sometimes at a premium, whereas when you have surplus during spring and summer months you will likely get only butter prices, which will be 7 to 10 cents per gallon less than you would get in the fall, it is, therefore, worth the effort to have plenty of milk in the fall.

Now is the time to put forth every effort to breed as many cows as possible. This is not always easy, but the financial returns warrant extra effort. The producer who keeps his cans full during the fall is highly appreciated by the milk dealer and will never have any trouble selling his milk in the spring, but the man who is always short of milk in the fall is seldom wanted as a shipper by any dealer in the spring, and if he should lose the sale of a summer's milk, it is a serious financial loss. The way to make yourself solid with your milk dealer is to produce a reasonably even quantity of milk the year round, handled in a clean sanitary way, well cooled before shipping.

Wentworth Co., Ont. W. H. FOSTER.

**POULTRY.**

**How to Raise Ducks.**

With a good many people the idea of raising ducks is associated with an enormous consumption of food and small returns for it. This idea is probably correct in so far as the ordinary method of raising ducks is concerned, but when duck culture is carried on as a straight commercial enterprise, with economic production as its foundation, then it will be one of the most profitable branches of poultry farming.

The one thing absolutely necessary to make raising market ducks profitable is to get them off your hands at the right time. A duck will make very economic gains in weight up to about ten or twelve weeks of age, and after that the rate of increase per pound of feed consumed decreases week after week at such a rapid rate that the profit made up to this age will be consumed in the course of three or four weeks. A duck is practically full feathered at about ten weeks of age, and will then go into its first moult which means that the food consumed after this age will have to go to produce feathers and repair waste tissue instead of producing meat. Ducks should weigh from eight to twelve pounds per pair at ten to twelve weeks of age.

The cost of producing a pound of duck is comparatively low, since three to four pounds of grain is all that is required. Chickens require about the same amount of grain, but it takes almost double the time for a chicken to grow to the same weight as a duck. From the standpoint of economic production, ducks are far more profitable than chickens. All successful duck plants had to develop a market for their product first, before they could go into large scale production. The tastes of the buying public need more or less cultivation because people do not take to eating duck as readily as chicken, and hence,

if a duck plant is to be successful, the market has to be developed by starting in on a small scale first, and then gradually increasing the annual output at such a rate as to keep abreast of the market demands. Some of our most successful American duck farms of the present day started in twenty-five years ago with a setting or two of eggs and gradually increased their output until it amounts to thousands of dollars annually. Some idea of the magnitude of the enterprise can be

formed when we note that one firm alone, is marketing forty thousand ducks annually, besides selling thousands of day-old ducklings to people all over the country. This farm is situated in close proximity to Buffalo markets. A good many duck farms, both large and small, are situated around Boston, New York and on Long Island, where there is a large demand for market ducks.

The equipment required to raise ducks on the farm is smaller than that required to raise chickens. Expensive, elaborate buildings are unnecessary, and very little is required in the way of wire fencing. Ordinary poultry netting, two feet high, will yard ducks of any age. The houses need not be expensive, the main thing being to keep them dry and clean. No water is needed, except as a drink, as ducks will grow quicker if they have no access to water to swim in. Very few diseases affect ducks and it is very seldom that they are troubled with vermin of any kind.

In raising ducks on a small scale the same principles must be observed as in large scale production. Although the ducks are somewhat filthy in their habits, yet they require clean conditions if they are to do well. Shade of some kind is absolutely necessary. Some idea of the value of shade, for growing ducks, can be formed when we note that the cost of erecting a shed five hundred feet long and forty feet wide, paid for itself in increased returns in one single season.

Under farm conditions the method of hatching and raising ducks is governed more or less by the conditions under which chickens are raised. That is to say, if the natural method of incubation and brooding is followed in handling chickens, the same is followed in raising ducks.

Twenty-five to one hundred ducks could easily be raised on the average farm without going to

any great expense. Hatching with hens and raising them the same way would be the most profitable. Their first feed should consist of a soft mash made out of equal parts of corn meal, low grade flour, and shorts or middlings, with five per cent. of beef scrap in it and a little grit. Moisten it sufficiently to make it a crumbly mass, and add some green lettuce leaves cut up fine. Provide clean water to drink and arrange pans so that the ducklings cannot get into the water. Feed five times a day for the first few weeks; after that three times a day will be often enough. Change the mash a little at the end of three weeks and use a little more corn meal and beef scrap, and make half the bulk of green food, say green clover, alfalfa, oats, wheat, rye or even finely cut green corn will answer the purpose. This bulky food is given to fill up and all the grain should be finely ground in order that it may be digested readily. The green food gives succulence also. At nine or ten weeks of age, or about two weeks before they are marketed, the amount of corn meal and beef scrap should again be increased in order to finish them off properly. Always furnish plenty of grit, as it aids digestion. Keep the pens or yards clean and also as dry as possible. A small patch of alfalfa or clover forms an ideal place to raise ducks, and then enclose them in a wire run or pen, large enough to give room for some exercise. Be sure to provide shade of some kind.

Ducks intended for next season's breeders should not be fed so heavily or forced so rapidly. They should get a certain amount of whole grain in their rations. Those intended for breeders should be separated from the rest of the flock just before they are put on the fattening rations.

A good way to select the breeders is to drive a certain number of ducks, at a moderate gait, for a few hundred yards. Any that fall down exhausted should be returned to the fattening pens, and those that stand the strain have sufficient vigor and vitality to go into the breeding pens for next season. This method of selection is followed on a good many of our most successful duck farms.

Where ducks are kept in orchards or groves, their presence kills a good many of the trees, the excrement, mud, etc. collecting on the surface of the ground forms practically an air-tight mat which excludes the air necessary for the root growth of the trees, and in this way tree after tree dies off. Under climatic conditions in this province, a small patch of corn or sunflowers would give about the best natural shade.

Ducks are subject to very few diseases, and hence they are able to withstand neglect better than any other kind of poultry. They are not troubled with vermin. But from this it must not be argued that ducks will thrive under adverse conditions. In order to make them most profitable they require clean, dry houses and pens just the same as chickens do.

There are three popular breeds—the Pekin, Rouen and the Indian Runner. The Pekin is probably best adapted for Western conditions. It is a hardy breed, vigorous and quick maturing, and a good layer. They have white feathers and dress out a neat, plump, and well-finished carcass at ten to twelve weeks of age. The Rouen duck has black feathers; it is a fair layer, vigorous and fairly quick maturing, but usually does best crossed with some other breed. The Indian Runner is the heaviest layer of the three breeds, but does not make quite as heavy and economic gains as the other breeds. This breed is the heaviest layer in the duck family.

Manitoba Agricultural College Bulletin No. 6, by Prof. M. C. Herner.

## HORTICULTURE.

### Apply Principles to Your Own Conditions.

The best work experimenters can do is to promulgate doctrines and principles and leave the application of them to those for whom they were established. Climate, soil and conditions render a law true or the very reverse of the same law correct, but the principle underlying that law is the same under any circumstances. For instance in the case of tillage and cover crops, versus sod orchards there is a dispute, and on the opposite side we find good arguments, with the opponent's arguments based upon the same principle. It is understood that the trees require moisture enough to encourage growth of wood and foliage and to produce large, crisp and juicy fruit. Again the trees must be hardened or the wood must be matured before winter sets in to prevent winter injury. This is the principle underlying tillage and cover crops, and if all these accrue when an orchard is in sod the owner is justified from a pecuniary standpoint of leaving it so. The circumstances and character of the soil are responsible for this. In such a case the soil would probably be a deep, friable loam with abundant

humus and power to conserve moisture. In many cases orchards on such a soil have done well while yet in sod, but where the soil is shallow or very light in character there is no doubt about it but what tillage and cover crops are a necessity. With this point decided yet another difference arises, namely what cover crops to use. In the Maritime Provinces some orchardists have been successful with crimson clover, in southern Ontario red clover has given good results, while in eastern Ontario growers are obliged to resort to vetches and rape. This is recommended by experimenters for that section, yet there have been years, specially dry seasons, when the rape which requires a liberal amount of water in order to thrive takes up such quantities of moisture from the soil that the fruit has suffered in consequence. This occurred even as late as the season of 1914. All these conditions and circumstances must be considered by the individual grower when outlining his methods of orcharding. Thus the experiments carried on under certain climatic conditions and upon certain soils are valuable in so far as they can be applied to other soils and similar climatic conditions.

Ten years ago the New York Agricultural Experiment Station leased a ten-acre orchard upon which to try out practical and field experiments. One-half of this orchard was left in sod, while the other was subjected to tillage and cover crops. In a bulletin recently issued by that department the following paragraph appears:

"The average yield on the plot left in sod for ten years was 69.16 barrels per acre. On the plot tilled for ten years 116.8 barrels, a difference in favor of the tilled plot of 47.64 barrels per acre. These apples were sold at varying prices but averaged \$2.60 for barreled stock and 72 cents for evaporator and cider stock, from which sales there was secured an average annual return average acre-cost of growing the apples on sod and of \$224.15 from those under tillage. The average acre-cost of growing the apples on sod was \$51.73, and under tillage \$83.48. Subtracting these figures from the gross return we have a "balance" per acre for the sodded plots of \$74.31 and for the tilled plots of \$140.67, an increase in favor of tillage of \$66.36. For every dollar taken from the sodded trees, after deducting growing and harvesting expenses, the tilled trees gave one dollar and eighty-nine cents."

This report is outstandingly in favor of tilled orchards accompanied by the usually necessary cover crops, yet the same bulletin admits that deep, rich soil will produce profitable crops of apples when untilled, and every orchardist knows that the color of fruit grown upon sod is superior to that grown in tilled orchards. In spite of this, however, it is generally conceded that the quality is better from tilled land. Investigators base their argument upon the crispness and juiciness of the apple, yet most anyone will pick for the highly-colored apple, whether it be grown on sod or tilled orchards. The apples from cultivated land may keep better owing to the early maturity of apples from sod orchards, but if the quality is better from cultivated plantations there is only left the one virtue for the sod-grown apples, and that is color.

It is a matter for each grower to figure out for himself. We must have healthy foliage, a moderate amount of growth each year, and large-sized, well-colored, crisp and juicy apples.

### Factors in Fruit Growing.

A short time ago we listened to an address to fruit growers by F. M. Clement, B. S. A., of the Jordan Harbor Experiment Station. Mr. Clement, in his opening address, pointed out that forty years ago fruit growers were talking over-production just as strongly as they are to-day; and that as a general thing in orchard work there are two good years to one bad year, even better than this, the bad years do not come much more frequently than one to three or four good seasons. Taking an average since 1896 good prices have prevailed throughout, and the average returns from well-cared-for orchards have been satisfactory.

Taking up the subject in general the speaker dealt with three sets of factors which govern the success or failure of fruit growers; namely, fundamental factors, production factors, and economic factors. First and foremost of the fundamental factors is the man himself; the individual is directly responsible for the success or failure of the venture, and the dividends on a man's work are almost invariably in proportion to the size of the man himself. Next to the individual comes the location, meaning the particular section of country; then the situation, referring to the distance from railway station or market centre. The statement was made that a man with a large orchard fifteen miles from a railway station is fourteen miles too far from his shipping point. It is also important that a fruit grower have good neighbors, men interested in the same business in which he is engaged, and the whole working together for the good of the in-

dustry. After situation comes site, meaning slope, or particular field on the farm; a northern slope is preferred where there is danger of trees budding too early in the spring, south slope where earliness is desired, an east slope for protection from westerly winds and so on. After site comes soil, the most important consideration with which is drainage. It is utterly impossible to grow an orchard satisfactorily on land which has a cold, wet bottom, and as a result is sour in nature. Two other points coming under the head of fundamental factors are varieties of fruit and definiteness of plans. In variety of apples Mr. Clement pins his faith pretty much to the Spy, especially for inland counties like Middlesex. He especially mentioned Northern Spy, McIntosh Red, and Fameuse, but it is not in all localities that the latter two do their best. For general planting under present conditions he favors the Northern Spy.

Of production factors there are several, and the following table is one of the best we have seen to show their relation.

Pruning.....	Color
Fertilizing.....	Size
Spraying.....	Blemishes (Freedom From)
Cultivation.....	Quality
Thinning.....	Uniformity
Picking.....	
Grading.....	
Packing.....	

A little study of this table will show what effect the various operations in growing the fruit have on the fruit itself. It was pointed out that pruning is done more particularly to get good color, it also aids in increasing size, in producing fruit free from blemishes, in raising the quality and increasing the uniformity, but the main consideration is color and the other four are subsidiary benefits. Likewise, the direct benefit from fertilizing is an increase in size, it may also help in quality and uniformity, but fertilizing is done to increase the size of fruit. Spraying is practiced with a view to producing clean fruit, and so the direct advantage is in freedom from blemishes. This also has an effect on quality and uniformity. Cultivation, means quality, and indirectly, uniformity; and thinning is practiced particularly to get uniformity in size and color. This table is worthy of the study of fruit growers. It is well arranged, and means a great deal when one stops to study it. Picking, grading and packing are big factors toward the success which the fruit grower attains in his work. Too much care cannot be taken in handling the fruit to prevent bruising, in packing so the packages will not "go slack," and in grading as to size, color and quality. Very often barrels are pressed too much, with the result that bruises are formed, rot ensues and the apples, if kept, slacken in the barrels with disastrous results.

From the production factors the speaker went to the economic factors, most important of which is transportation. The successful fruit grower must have a more efficient means of transporting his fruit to the consumer. Next to transportation comes competition, and it was pointed out that it is not wise for the various fruit-growers' associations to enter into direct competition with one another. The man who undersells his neighbor or the association which undersells its sister organization is simply reducing the price of the fruit and the profits of the grower. There must also be organization for the distribution of the fruit, and lastly, the sale of the product must be well handled, the salvation of the grower being co-operative methods.

### How An Acre of Tomatoes Was Grown.

Editor "The Farmer's Advocate":

During the past few years we have come to the conclusion that the ground between our rows of trees in the orchard, should be producing us something up to the time when the trees shall be able to make use of all the land and giving us a satisfactory return, and we decided to go into truck farming on an experimental plan. Our experiences may be suggestive and some may find in our methods a few ideas that could help next season.

We put up a small cold frame, fitted so we could use it as a green-house, with the intention of building another later on, and then using the first as a cold frame only. This cold frame is 55 feet by 10 feet. A ditch 2 feet wide (Fig. 1) was dug before we started to build, which was to serve as a path up the centre of the cold frame. The path was about 2 feet deep, and was walled by planks held up by being nailed to posts sunk very deep. The posts were not put in the path as they would be in the way. By this plan the ground on either side of the path formed two beds. At one end on one side we dug a pit 4 feet deep and about 8 feet long in which we put a stove, and above the pit we made a bench to use as a starting place for our seedlings. (Fig. 1.) The starting place for seedlings requires

bottom heat, and this served admirably. Our heating system is merely an air-tight heater under the bench near the end of the pit, with just room between it and the end wall for wood. This allowed us to run the pipe from the stove under the bench to where it goes outside, giving us plenty of bottom heat to start the seedlings.

We have grown cucumbers, egg plants, and tomatoes, but since we specialized more on tomatoes our experiences with them will probably be the most interesting. This year we tried one acre, using 2,600 plants. In February we mixed up three flats of earth. These we filled by mixing 1 part of leaf mold, 3 parts of surface soil from the garden with 1 part of well-rotted manure. This was sifted fine, because when transplanting is done we do not want to break off the roots, and in ground that is full of stones and sticks that is sure to happen. When the ground was sifted we filled the trays three-quarters full and levelled them. The levelling is an important point, because if hollows and an uneven surface occur the water will lodge in these after sprinkling, causing "damping off" or rotting of the roots and stems.

With the trays ready we put our seed in a saucer to be handy for planting, and our seed was good, Langden's No. 2, which is sold at \$3.00 per ounce. This tomato is a very even, early, and fleshy tomato. Evidently it has been very carefully and thoughtfully selected, at any rate it is ideal for us. We had two other varieties, Stoke's Bonny Best and Sunny Brook Earliann. The Bonny Best blighted very readily and many of them were hollow, the seeds forming a ball in the centre, leaving quite a space between them and the flesh wall. They were a good cannery tomato, but far too large for table trade. Sunny Brook was early, but very irregular in shape. The majority were pointed and thus hard to wrap. From this it will be seen that Langden's is what we shall plant this year.

We cut off a strip of lath the width of the tray and made little trenches about 1 inch apart by pressing the edge of this down into the soil and moving it back and forward, giving us a V-shaped trench about one-half inch deep. Into these trenches we sprinkled the seed with our thumb and finger, and with a match or toothpick we spread them along the trench so as not to have the seeds overlapping, Fig. 2. This may be unnecessary, but it gives every seed a chance and every seedling a chance to get a good root hold, and the more encouragement we give the plant from the start to finish and the less hindrance the better they will do. Piling seeds one upon the other is going to cause a struggle, and one will be weakened and stay weak right through its life. Having spread the seed we cover them lightly with earth to near the top of the trench, and then we press down the whole surface with a brick or block, Fig. 2, because no seedling can get a foothold for its roots in loose ground. Of course too much pressure may be given. Over the surface we then spread a shallow layer of shore-sand for the purpose of preventing the soil from baking, which would perhaps hinder the seed leaves pushing through, and also to keep the seed bed warmer, for sand holds heat. The sprinkling can is then filled with warm water and the tray sprinkled many times—little at a time till the soil is damp enough to promote germination. We like to have the soil wet the day before we intend to set the seeds, so that it will all be evenly moist. It is right when a handful, if squeezed will just hold together without crumbling, and no more.

Each succeeding watering we did in the same way and our first failure occurred right here, after going over the trays a few times the surface seemed to be thoroughly saturated, and we took it for granted they were quite wet. That is one part of green-house or hot-bed work that needs to be carefully done, many green-housemen say that when you can water correctly you have mastered green-house work. The more roots the plants have, the more particular one must be to "try out" the trays after sprinkling. We generally go over the trays six times with the sprinkler, or when the plants are old we use the hose and do the same, then pick out trays here and there all along the benches, and stick a finger down to the bottom along the edge as well as in the centre of the trays and see if we can find dry soil at the bottom. If we can, we go over them again. The first time we watered we just soaked the trays, but this is wrong for it acts just like a field under a puddle and the plants came up in a hard shell and were smothered out, but by light sprinkling and watching the trays to see that no puddle forms we give the trays over the plants a few times, get them well supplied. They want a good drink and then left till pretty well dried out, even if a tray here and there should droop a little it does no harm apparently. It is better to water early in the morning, then the trays have all day to warm up, whereas if watered at night the temperature would fall and the roots would be too cold during the night or else extra fuel must be

burned to bring the temperature up, and that is an unnecessary expense.

When the seedlings are up and showing their first true leaves they are ready for their first transplanting. Late in the afternoon we go over the trays and give them a thorough watering, and we make sure they are wet right to the very bottom of the tray. By morning they will have stored up enough moisture to keep them till they have established their roots in the new soil. If the seeds have been put in in rows as referred to before, then by cutting between the rows with an old table knife the roots are easily parted and a handful of plants grasped gently by their stems. While lifting we slip a table fork under them to help raise them, and still holding the plants in the air we tap them gently with the fork till all the adhering soil drops off. We

does reduce the temperature for the night the plants get less of a shock, the roots take right hold of the soil, and we seldom notice any wilting.

For the second transplanting we prepare the plants by watering the night before just as we did the first transplanting. This time our earth is sifted as it was the first time, and if the plants are not too far advanced we use another dibble this time with a holder the length of the tray, having 6 fingers, with this we make 4 rows of holes or room for 24 plants. Last season our plants got ahead of us in the rush with outdoor work, and we did not get at them till it was too late to plant 24, and we had to let that planting go and treat as we would for the third time. At the third transplanting we cut the soil both ways between the plants with a

knife. We mixed our soil this time without sifting, but made sure there were no lumps or large sticks in it. This seems to give the plants a better rooting chance, and they develop more roots. The plants are taken from the tray in which they are laid down with the stems parallel to the bottom of the tray, with the sides of the root bunch up, and what was the bottom of the root bunch, towards the end of the new tray, 6 rows of 3 each or 18 to a tray. We then scoop up soil to cover the roots and pack it in well, then bend the tops up at right angles to the roots, or erect, one plant at a time and pack soil enough around the root and stem to keep the root firm and the stem erect. This again cracks

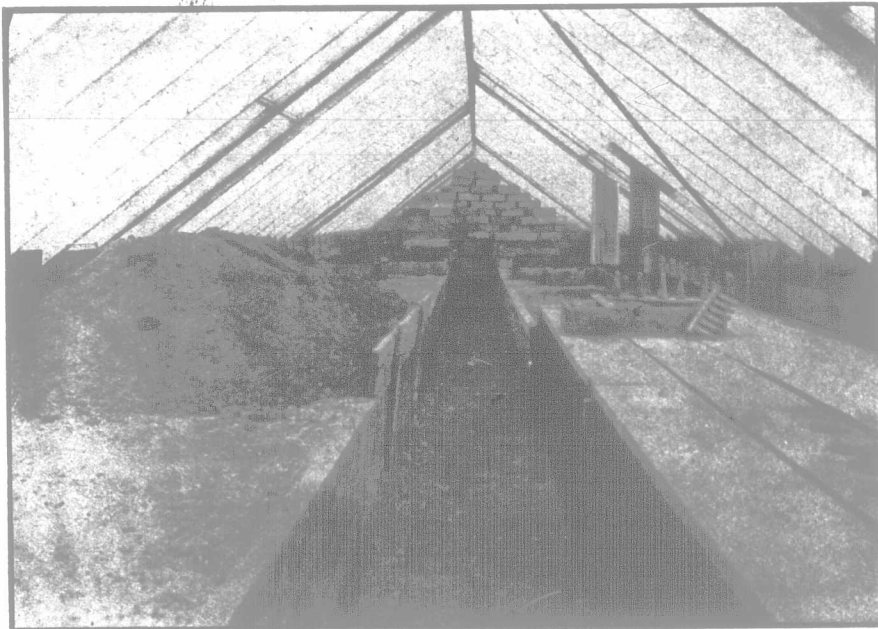


Fig. 1—The Inside of the House.

then fill a tray with soil, mixed and sifted as referred to before and level it, getting the box about two-thirds full. Some growers claim that in boxes with a small amount of soil the plants make more root, but just what there is in this claim is hard to say. Our next step is to use a stick with 6 dibbles attached equal distances apart. By pressing this set of dibbles into the soil we make 9 rows of six holes or room for 54 plants. We then pick out the seedlings and place them across the holes. Notice the process in Fig. 3, where you can see the small stems lying across the holes in front of the planter's fingers. The planter on the right is going through the first motion, he is pushing the tomato seedling down far enough so the seed leaves will be just at the surface. The planter

the bark on the stem and starts another set of feeding roots at the cracks, and the old ones undisturbed, except the ends of those the knife cut, with fresh soil about them make those stems just jump. At this stage the blossoms begin to appear, and we religiously pick them off. We also take off any fruit that may show, for it weakens the plant too much to be transplanted while it is carrying fruit. The extra vigorous ones we again transplant to 6 in a box, though this is seldom done, but we do not bend the stems after we have 18 in a tray.

At this stage we commence to harden up the plants by leaving the green-house open during the day, and if mild nights we go without a fire. After they have been without a fire a couple of nights we put our cotton cold frames up. These

are simply big boxes with no top or bottom, running east and west. The ends of the boxes are about 24 inches high at the back of the frame, and 12 to 18 inches at the front end. Over this we stretch a sheet of canvas and fasten it down around the sides. The slope of the canvas, caused by the frame being lower on the south side than on the north, causes the sun to strike the cotton more directly, thus catching the heat rays better. After a couple of days in this we tack the cotton to a pole like a curtain rod and roll the cotton off by winding it around this pole, thus we have the plants virtually outside during the day, and later we leave it off day and night. If a



Fig. 2—Sowing the Seed.

on the left has gone through that part and is packing the earth tightly around the plant, for no root can take hold unless the ground is firm about it. The right hand end of the tray shows two rows finished, the left end shows three rows of holes ready for plants. One planter handles a tray. The two are working at this merely to show the operation. After the tray is filled with plants the fork is again used to loosen the surface, but not deeply. If the tray is uneven soil is filled in to make it level, for hollows must be avoided, as they become lodging places for puddles. The illustration also shows the thickness of wood in the trays. After planting we give a good watering. The cool water on the leaves seems to brace the plant, and even if it

frost threatens we simply spray the cotton and it forms a sheet of ice all over the canvas which is a splendid protection, but we take care to have straps of wood all across the top to prevent the canvas sagging down onto the plants. We are also careful when wetting against frost, not to put on too much and form big puddles on the cotton.

All these steps are quite applicable to the hot-bed, only it is more difficult to control the heat there. In both the green-house and hot-bed a thermometer should be hung. We hang ours in a small frame to protect it from the sun, in other words we believe in keeping it in the shade and close to the plants, then we know the temperature of the air at the point where it interests us.

We like to keep it at 70 degrees at night and '85 to 90 in the day time.

One thing that is making itself felt among growers, and it proved so with us last year, is that you can plant late, use rich soil and force the plants like a three-coach-train with a hogg engine behind it; even using a lot of nitrate of soda, and the check of hardening off seems to throw them into profuse early bloom, which, if timed so as to be on just as the plants go to the field, will place the grower on the earliest market and not hurt him for the late crop. Our plants last spring after their forcing with nitrate of soda were watery stemmed as a Balsam plant. We haven't tried pinching out the centres, for the reason that the plants get too many branches carrying a great number of fruits. This condition demands the spreading over to too many points the energy of the vine. They also ripen later, whereas a few early fruits ripen quickly, and the plant can and does push on a new crop which again ripens up quickly. Some growers who pinch centres overcome this objection by seeding earlier, but it seems to us too expensive a proposition, necessitating another transplanting, more cold-frame or cotton-frame space and a slow planting in the field, where careless help often causes a lot of damage and loss because of the large size of the plants.

Before we take our plants to the field we cut the soil between them. This gives each plant a small square of soil, and permits of the plant being lifted from its tray without disturbing the soil.

Our field for the plants was prepared by spring ploughing. No fertilizer was used. It was then harrowed, and as this is an irrigation country we levelled down with a plank to get it in good shape to avoid flooding when the water was turned on. On account of the irrigation we plant one row, the next  $4\frac{1}{2}$  feet from it, the third  $3\frac{1}{2}$  from the second, and so on across the field. This gives us two rows close together, so that after we stop cultivation we can get the water closer to the roots than we could by having the rows all  $4\frac{1}{2}$  feet apart. We marked our field out in this fashion. Then on one-half the field one man with a spade went down the marks and dug holes for the plants 4 feet apart. On the other half we ran out furrows with a plow and we found it much quicker, and as far as results were concerned we could see no difference hence this season we will put them all in with the plow. One thing we made sure of that the earth was pressed down tightly around every plant. Towards the end of the job one of the planters got tired and careless at that, and we changed him off to another job, and we had to go over quite a few of his rows to see that we had missed none. We made a few mistakes last year. We did not leave head-ridge enough, and a short head-ridge wastes more time than the fruit we can produce on it is worth, so wide head-ridges will be in force next year. Also it is going to be practical for us to cross cultivate next season and thus save hoeing. So we shall run our furrows out first and then run the marker across the field to show the cross line in which to place the plants. We distribute the plants in the trays along these furrows, taking them from the back of the wagon and leaving them in rows down the field. To lift them from the tray we use a small shovel something like the garden digger. It is a piece of metal about 4 inches by 3 inches, cut from an old spade, and the blacksmith attached a handle to it. This we slip under the plant and lift it from the tray. Some men are very indifferent about this part of the work, and it is no job for a careless hand. The plant should be disturbed as little as possible. Flopping them into the furrow from a distance of two or three feet will not do. They should be placed on the ground before the digger is pulled from under them. After the plants are set the furrow has to be thrown back. We did it with a hoe as we were afraid the plough would loosen the soil about the roots which would be a mistake. We never plant on wet land, it always packs.

After planting we immediately ran out our furrows and irrigated. The next day we cultivated and hoed. In cultivating we use attachments which come with the cultivator, called weeders. We had a blacksmith flatten them so that they would slip just under the surface of the soil and not do any hilling. We do not approve of hilling as it is no warmer and allows a greater evaporation, hence we always turn our tooth holders on the cultivator so that they will face and throw the soil away from the plants or into the space, this tends to keep the surface almost level. The nearer to level we can keep the surface and yet disturb every square inch the better job we consider we have done. In hoeing we are careful to get right into the plant stem, but do not go deep, and we use a turnip hoe so that the surface of dust will not be in little piles but a perfect, even-depth blanket all over. We cultivated and hoed twelve times last season, and up to August had only irrigated three times, although we had no rain from the first of May. We

figure it cost us \$30 for this part of the season's work.

We pick every morning, and try to get the fruit off the vines and into the packing shed as early as possible so as not to have the fruit too warm. We used the old Ontario fruit baskets for picking, but will use pails instead another year, as the baskets are too expensive.

As soon as the fruit show pink on the blossom end it is picked and taken for shipment. All our fruit we shipped through the Okanagan United Growers, a co-operative society. We packed for the high-class trade; No. 1's we put up in plum crates; and No. 2's in peach boxes. All No. 1's are smooth, clean, free from cracks or blemishes, well shaped, no freaks. They are wrapped in a white paper and packed in plum baskets, four baskets to a crate. The bottom of

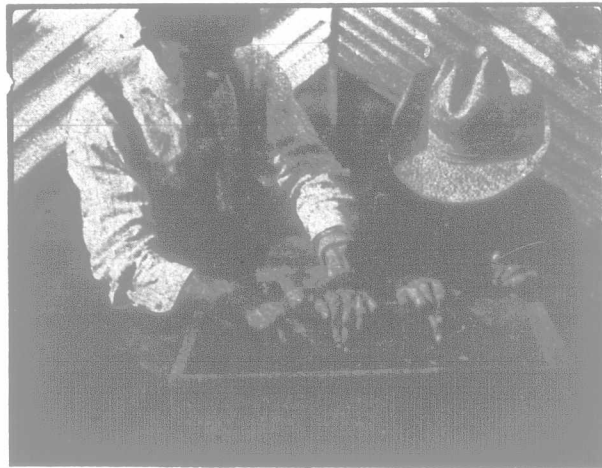


Fig. 3—Transplanting.

the basket is always packed two-three-two (see Figure 4 right). Sometimes we run one size smaller and put three-two-three, i. e., three in a row, then two in next row, then three in the next giving 8 on the bottom, but it is not a safe pack for that brings the two on the top rows directly on the tomatoes in the bottom of the basket. Even though you pack three-two on top it will not avoid this. Then there are almost sure to be some smashed fruits. The three-two on top and two-three on the bottom is the safest pack, though it may not look as good as some other arrangements. The tomatoes are all put in on their sides, except on top in the 3 square pack the top there goes stem down with a little tilt of the top side toward the packer, and the bottom side away from him. The cases shown were not put up specially for the picture, in fact are not as good in appearance as those placed on the early market, because they were put up on a rush day late in the season just at shipping time. Wrapped fruit ripens more evenly. If one is smashed it will not stain the rest of the package. A broken one can be gathered up in its own wrapper and thrown out. It sells better because the buyer knows you will not take that trouble with inferior stuff.

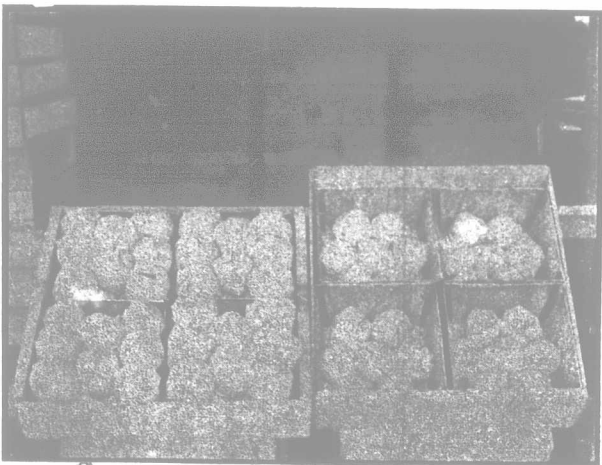


Fig. 4—The B. C. Basket and Tomato Pack.

The packers stand on a plank the ends of which rest on two blocks, thus making it springy and less weari-some. The packers stand in front of the windows. One mistake that is often made here is having the windows down too low or if they are low not having some white canvas tacked over them to keep the glare of the light from interfering with the packer's sight.

To the left of the packer the paper holder is placed.

We use a home-made affair but necessary when the wind is blowing. It is a stick tacked to a box which has no top and has an end and a side off. A couple of screw eyes are attached to this stick about four inches apart, and about four inches from the bottom of the box. Over the bottom eye a rubber band is slipped and drawn up past the upper eye then dropped on top of a

stick about the size of a pencil that passes through the eyes and has a needle in the bottom to pierce the paper.

We also use a packing finger. It is a rubber finger which the packers place on the first finger to assist them in picking up the paper. The paper is pulled from the needle and picked up so that the centre of it will be over the palm. The tomato is placed in this, blossom end towards the palm, and the paper folded over by a quick motion of the right hand. Never allow the fruit to leave the left hand till the paper is folded else a slow wrap is the result.

When the crates are packed we put stamps on the end. On the top at the left side TOMATOES, on the right side No. 1. If it is 2's we are packing we put No. 2 on the right side. The lids are then put on, the cases delivered to the Union and our work is done.

At the end of the season just before the frosts, we go to the field and pull up the vines, shake the tomatoes off onto a pile of old vines, and sort the colored from the greens. The greens we put into pear boxes and sold for pickling; while the colored ones are allowed to ripen for the cannery.

Many people are very wasteful in regard to available fertilizers. They burn all the old stalks to get rid of them, but vines are really concentrated nitrogen and we haul them off the field to a compost heap in which we put all the melon, and cucumber vines, old egg plants and spoiled corn stalks, old sunflower stems and potato shaws. In fact every thing, weeds and all are put into the heap and we let them rot with soil thrown in. This leaves our soil as we found it ready for the next crop. Tomatoes do well year after year on the same ground and all they seem to need is the ploughing in of a green crop.

We sold from one acre 311 cases of No. 1's, 252 cases No. 2's, 105 cases greens in No. 2 cases, 75 cases in pear boxes and four tons to the cannery at \$12.50 per ton. We received \$3.50 for the earliest No. 1's and around \$2.75 for the first part of the season. These dropped as the war came on. No. 2's \$1.75 and down. Pear boxes of greens 40c and down. Our final statement is not at hand yet so we cannot give a fuller account.

British Columbia. WALTER M. WRIGHT.

## FARM BULLETIN.

How fast she can go and how far she can shoot are the measures of value of a battle cruiser; how much she gives and long she can give it are the tests of value of the dairy cow.

If it should happen that after the war Europe will buy Canadian breeding stock, the man who has held fast to his good stock will almost find himself in the "get-rich-quick" class, only it will be real.

In the bombardment of English coast towns by German raiders women and children were the chief sufferers. The innocent and unprotected are forced to submit to the dangers and death in so-called civilized warfare.

Geo. A. Putnam, Superintendent of Farmers' Institutes in Ontario, has sent out announcements of meetings for this winter. The number of meetings to be held has been considerably reduced as compared with former years. However, short courses in stock judging and special meetings will be increased. The District Representatives are also holding Short Courses in agriculture in most of the counties, so that altogether the field is well covered. At the Farmers' Institute meetings it is intended to emphasize the importance of increased output both in grain and animal products, and officers and directors are requested to advertise their meetings over a wider territory than usual, in the hope that while the meetings are fewer in number the attendance may be greatly increased.

Hides and skins of cattle, sheep and other ruminants, which have received ante-mortem and post-mortem Federal inspection of the Bureau of Animal Industry of the United States may be admitted into Canada in car lots consigned to tanners or tanning companies, when accompanied by a certificate signed by an officer of the Bureau of Animal Industry that the said hides or skins are from animals submitted to inspection as aforesaid.

Cars containing shipments of hides under this order must be disinfected under the supervision of an officer of the Health of Animals Branch of the Department of Agriculture before being used for other purposes.

Dated at Ottawa, this twenty-first day of December, 1914.

(Sgd.) GEO. F. O'HALLORAN,  
Deputy Minister of Agriculture.

## London's Smithfield Show.

Editor "The Farmer's Advocate":

The English Smithfield Club, whose 116th annual show was held at the Agricultural Hall, Islington, in the second week in December, was established when England was engaged in a great war. Though we are now taking part in a still greater war it would have been a mistake to abandon this year's show for the food supply of the country is especially important at a time like this, and the exhibition, therefore, all the more valuable. The holding of the show was thoroughly justified, for though the entries were a little below the large figures of last year, they came very near the average, while breeding and quality were quite up to the highest Smithfield standard. The championship was an open question for a long time. A Shorthorn was the champion at Norwich; a Hereford at Birmingham; and an Aberdeen-Angus at Edinburgh. All three were here, but it was outside this trio that the real champion was found, and it was an Aberdeen-Angus that gained the distinction. J. J. Cridlan, Maisemore Park, Gloucestershire, was the lucky breeder. Estelle of Maisemore, his successful animal, is only about two years and eight months old, but she is clearly well developed, scaling 14 cwt. 3 qrs. 18 lbs., carrying deep flesh evenly distributed, and showing signs of good breeding. The victory was all the greater and sweeter, because she avenged her defeats at both Norwich and Birmingham. The Norwich champion, too, W. M. Cazlet's Shorthorn Newtonian, here reserved for the chief trophy, likewise secured his revenge upon the Birmingham champion, which was a Hereford.

His Majesty was not able to visit the Show, but his interest in the Club was shown by an entry of thirty-one head in the cattle, sheep, and pig sections. The King was very successful, winning many prizes.

A typical lot of Herefords were seen out. The breed prize was captured by the Birmingham champion and a last year's London winner, i.e., Sir J. R. G. Cotterell's unnamed two-year-old son of Royal Ringer, combining great width, depth and length, and having good firm flesh.

The best of the Aberdeen-Angus cattle, of course, was J. J. Cridlan's Estelle of Maisemore, the champion, and also winner of the Maisemore Cup at Birmingham, and a reserve female champion at Norwich. Her rich flesh is evenly and firmly distributed, and is excellent on parade. Second to her in the two to three-year-old-horn class was Major Spencer F. Chichester's Bertha of Swayslands, from Hampshire.

Not only picturesque in appearance, but very serviceable as butcher's beasts, were the Highland cattle, of which there was a capital show. The breed cup fell to the North, being won by a massive steer weighing 17 cwt., 0 qrs., 14 lbs., at three years, ten months and two weeks.

The value of judicious crossing in the production of good edible meat was once more demonstrated, and as at other shows, the excellence of the cross of the Shorthorn and the Aberdeen-Angus was reflected in the prize list. Every prize-winner in the first cross was of this blend of blood, with two exceptions, and in these the crosses were Shorthorns and Galloways. The winner of a special silver cup for grades had an Aberdeen-Angus sire, and, as dam, an Aberdeen-Angus and Shorthorn cross. It was the Birmingham winner, i.e., Sir Richard Cooper's Elita, an animal of very fine quality and carrying a good allowance of meat.

In Leicester or Border Leicester Sheep, Mr. Jordan's pen that got the cup was the heaviest sheep he has ever shown, being only 13 lbs. short of 9 cwt. They were also reserved for the long-wooled champion cup (after a referee had been called in).

Cheviots were sent by well-known breeders, among them Lord Rosebery, who got the silver cup. The King was, as usual, an exhibitor of Southdowns, but he got nothing more than a second prize, Capt. Dermot McCalmont being awarded the breed cup.

The champion plate for longwools was awarded to the representatives of the late Thomas Russell, of Fife, for a fine, evenly fleshed pen of black faces, the reserve being Mr. Jordan's Leicesters. Herbert Smith, of Felixstowe, Suffolk, took the champion plate for short-wooled sheep (with Suffolk's), Capt. Dermot McCalmont's Southdowns were reserved, this being also the order of the awards for the Prince of Wales' Perpetual Challenge Cup.

In Pigs, best of the Middle White breeds was shown by John Chivers, of Cambridge, who got the cup. The corresponding trophy for Large Whites fell to Sir Gilbert Greenall, the Royal Showyard Director. Arthur Hiscock won the Prince of Wales' Challenge Cup and the champion plate for the best pen of two pigs in the cross-breeds, and the King was awarded the Champion Plate for the best pig in the single pig classes, for a Berkshire.

Since the institution of the cattle championships forty-six years ago, it has been won nineteen

times by Shorthorns; sixteen times by Aberdeen-Angus; five times by Crosses; and three times each by Devons and Herefords. By the way, J. J. Cridlan has now "lited" the King's Gold Cup for good, he having won it three times within the last five years!

At Edinburgh Fat Stock Show, for the fourth time since its resuscitation in 1897, the championship has fallen to a yearling. At all the other fourteen shows, the champion has been a two-year-old. The heroine this time was Burn Kathie, sent by Colonel McInroy, and a beautiful yearling Aberdeen-Angus, which, at a month short of two years gave a return of 1,272 pounds, but she also displays quality and a picturesque outline as well as the fair weight quoted. Col. McInroy has had a good run with Pan of the Burn, Burn Bellona, and other famous beasts he has prepared of late years. The gate receipts at Edinburgh showed a falling off of £138 on the 1913 figures, while Birmingham receipts were £500 less than last year.

Yet, one must praise the determination of British Live Stock Show authorities in keeping the game alive at a time when—well, when they couldn't hold such things in or near Berlin. Could they? G. T. BURROWS.

## Apple Sales at Liverpool.

According to reports from Liverpool apples sold well there for the Christmas trade and receipts were fairly heavy, but not up to the requirements for the season's demands. At the conclusion of the week ending December 5th arrivals at that port to date were 394,926 barrels, the latter is to be compared with 350,460 barrels for the corresponding period one year ago. During the two weeks previous to that date 54,694 barrels arrived against 61,890 during the same two weeks last year. The chief arrivals were from Maine and Canada, the Canadian apples usually out-selling those from the neighboring State. No. 1 Baldwins sold for 17s. 6d.; Russets 20s. 23s.; Spys, 17s. to 21s. 6d.; Greenings, 18s. 3d. to 23s.; Kings, 20s. to 20s. 6d., and Starks, 19s. These were for firsts all through, and considering the hardship with which fruit growers disposed of their apples during the early part of the season these prices were favorable indeed.

## An Important Shorthorn Deal.

One of the most important deals in cattle was consummated last week when Yule & Bowes, of Calgary, purchased 120 head of Shorthorn cattle, comprising H. L. Emmert's herd at Oak Bluff, Man. This herd of Shorthorns is well known throughout America, and comprises some of the best breeding and show-ring stock on this continent. One of the number being Gainford Marquis, the champion bull of America and Winnipeg champion in 1914. As a three-year-old, two years ago, this animal was bought for \$7,000. Ontario breeders will know him as the sire of the grand champion, Gainford Perfection, at the Canadian National this past year.

## Ontario Cabinet Changes

Hon. W. H. Hearst, Prime Minister of Ontario, has added two new men to his cabinet. Hon. T. W. McGarry, member for South Renfrew, succeeds Hon. I. B. Lucas as Provincial Treasurer, and Hon. G. Howard Ferguson, member for Grenville takes over the portfolio of Lands, Forests and Mines, held by Hon. Mr. Hearst since 1911. Hon. J. J. Foy, former Attorney General, relinquishes his portfolio and is succeeded by Hon. I. B. Lucas. Only two of the original Whitney cabinet now remain, viz. Hon. W. J. Hanna, Provincial Secretary and Hon. Dr. Pyne, Minister of Education.

## Holstein and Ayrshire Breeders Meet.

The executive committee of the Holstein-Friesian Association will meet in the Carls-Rite Hotel, Toronto, on February 3, 1915, at 9.30 a.m., and the general meeting will be held on February 4, at 9.30 a.m. in the Canadian Forrester's Hall, Toronto.

The Canadian Ayrshire Breeders' Association will hold their annual meeting in Montreal this year, and it will take place on February 10th. Further mention will be made of this meeting.

## Taking the College to the Farm

Hon. Geo. Lawrence, Minister of Agriculture for Manitoba, has announced that early next spring his department will distribute over the Province fifteen inspectors who will go directly to the farms and give help to those on the soil in solving all agricultural problems. This is carrying agricultural education to the farmer in a practical manner.

It is to be hoped that the War Lords will have done with their slaughter before the next festive season rolls around and peace will once more reign over the earth.

## Answers to Correspondents.

Peter McArthur.

Editor "The Farmer's Advocate":

Of course it is very flattering to be asked all kinds of questions about all manner of subjects. It implies that I know a great deal, and if I wanted to pose as an authority on everything under the sun the readers of "The Farmer's Advocate" would give me the opportunity. But if I knew enough to answer half of the questions that are asked I would give up writing, and, like one of Bob Burdette's characters, have myself "bound up with a leather back and cloth sides and published as an encyclopedia." But do not make any mistake about it. I have not established a corner in knowledge or put through a merger in the arts and sciences. Why, I cannot begin to answer half of the questions asked by a growing family, let alone those that are asked by a large public hungering for knowledge. But occasionally someone comes along and asks a simple question that is entirely within my capacity and experience, and it is a real pleasure to give the information required. This week a correspondent writes:

"I wish you would tell us how to mend bags. We are going to ship our wheat." Feeling that this matter will be of interest to the whole farming community, because everyone uses bags, I hasten to give the results of my experience. I have found that when the hole is not too big the cloth can be drawn up in a pucker and tied with binder twine. When binder twine is scarce and hard to find by pawing over the straw where the chickens have been fed oats in the sheaf, I have managed by sewing up the hole with a wire nail, giving the nail a twist and forcing the point through the cloth in such a way that it cannot untwist. I should really have illustrations to show how this kind of mending is done, but I am not much of an artist, and I have not arranged with the editor to have pictures with my articles. As all real farmers know these methods of mending bags are useful only for small holes. When you have a real hole the popular remedy is to stuff it with hay or corn husks and let the grain hold the wad in place. The chief danger about this method is that when you are in line at the grist-mill or elevator the team behind you may begin eating the hay out of your bags, and in that way cause a spill. Of course there are people who get their bags mended by turning them over to the person who puts the patches on overalls, but methodical people of that kind are out of our class. They farm for profits, and are so business-like that they squeeze all the romance out of farming. Moreover, they are not likely to have holes in their bags, because they usually maintain a lean cat directly descended from the cat that caught the rat that cut the sack that held the malt that lay in the house that Jack built. Our milk-fed cats do not take any chances on plague breeding rats, so our bags get cut and must be mended. I hope that my correspondent will be satisfied with these few rambling hints on the subject of mending bags.

Another correspondent asks how to distinguish the male guinea fowl from the female. There is a poser for you. From my personal observations I should say that these birds enjoy equality of the sexes. One can make just as infernal a racket as the other, and the only sure way of telling them apart is to watch them in the laying season and see which one lays the eggs. I know of one man who kept a couple of these fowl in the hope of raising a flock, but they turned out to be both males or both females—he cannot tell which. Since having this enquiry forwarded to me I have asked everyone who ought to know, and I am going to pass on the second hand information I have gathered. I am assured that the male bird has longer wattles than the female, but even with that hint "all guinea fowl look alike to me." All of them seem to have wattles of the "Piccadilly Weeper" or Dundreary whisker variety. When young they all seem to have mutton-chop whiskers that make them look like successful business men or politicians, but when they get older their appearance inspires less confidence. All theatre-goers know that in the regulation society drama the man who wears Piccadilly Weepers is a pious villain, and seeing many plays of this kind has bred in me a distrust of all men and birds who have their whiskers cut in this fashion. I know this is wrong, for there are doubtless many estimable men who reap their chips and upper lips and let their side whiskers trail solemnly down on their chests. Nevertheless I am glad it is the male and not the female guinea fowl that develops Piccadillies, for I always like to think well of the ladies. Now, if my correspondent cannot distinguish his birds after reading this he may know more about whiskers than he did, and in that way his time will not be entirely wasted in reading my reply. I aim to please, and if I cannot give what is asked for I try to give something "just as good."

# Toronto, Montreal, Buffalo, and Other Leading Markets.

## Toronto.

Receipts at the Union Stock-yards, West Toronto, on Monday, December 28, numbered 16 carloads, comprising 227 cattle, 422 hogs, and 20 horses. One load of good heifers sold at \$7.25, but the bulk of sales were canners and cutters, which sold at firm prices, ranging from \$3.50 to \$4.50. Hogs sold at \$7.25 fed and watered; \$6.90 f. o. b., and \$7.50 weighed off cars.

### REVIEW OF LAST WEEK'S MARKETS

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

	City.	Union.	Total.
Cars	13	142	155
Cattle	68	1,205	1,273
Hogs	520	5,142	5,662
Sheep	200	1,131	1,331
Calves	3	97	100
Horses	—	142	142

The total receipts of live stock at the two markets for the corresponding week of 1913 were:

	City.	Union.	Total.
Cars	6	154	160
Cattle	186	2,571	2,757
Hogs	20	2,569	2,589
Sheep	—	707	707
Calves	—	214	214
Horses	—	3	3

The combined receipts of live stock at the two markets for the past week show a decrease of 5 carloads, 1,484 cattle, and 114 calves; but an increase of 3,073 hogs, 624 sheep and lambs, and 139 horses, compared with the corresponding week of 1913.

As usual on Christmas week, the receipts of live stock were very light. The cattle for the past week were generally of the common and medium classes, the bulk being of the canner and cutter class. These sold readily at steady prices. A very few good cattle came forward, and the top price paid for them was \$7.60. A limited number of stockers and feeders, as well as milkers and springers, sold at steady values, especially for the good ones. Veal calves, sheep and lambs, and hogs, have ruled about steady all week.

**Butchers' Cattle.**—Good to choice steers, \$7.25 to \$7.60; medium to good, \$6.75 to \$7; common to medium, \$6 to \$6.25; common, light, Eastern, butchers' steers and heifers, \$5 to \$5.75; choice cows, \$6.25 to \$6.50; good cows, \$5.50 to \$5.75; medium cows, \$5 to \$5.25; common cows, \$4.50 to \$5; canners and cutters, \$3.50 to \$4.25; hogs, \$4.50 to \$6.50.

**Stockers and Feeders.**—Choice steers, 800 to 900 lbs., \$6.25 to \$6.50, but few at latter price; good steers, same weights, \$5.75 to \$6.25; stockers, \$4 to \$5.75.

**Milkers and Springers.**—Receipts of milkers and springers were light all week, but quite equal to the demand. Prices ranged from \$65 to \$90 for good to choice milkers and forward springers. Late springers sold from \$10 to \$55 each.

**Veal Calves.**—Receipts of calves were light all week, but equal to demand. Choice veal calves, \$9 to \$10, good, \$8 to \$9; medium, \$7 to \$8; common, \$6 to \$7; inferior, rough, Eastern calves, \$4 to \$5.50.

**Sheep and Lambs.**—Sheep, light ewes, \$4.75 to \$5.50; heavy ewes, \$3.50 to \$4; culls and rams, \$2 to \$4; choice light lambs, \$8 to \$8.25; heavy lambs, \$7 to \$7.50; cull lambs, \$6 to \$6.50.

**Hogs.**—Receipts of hogs were moderate and prices generally firm. Selects, fed and watered, sold at \$7.25; \$6.90 to drovers at country points f. o. b. cars, and \$7.50 weighed off cars at the market.

**Horses.**—The Imperial Army Inspectors on Tuesday, December 22nd, bought quite a large number of horses, the majority being for artillery purposes.

### BREADSTUFFS.

Wheat.—Ontario, No. 2, \$1.10 to \$1.12, outside; Manitoba, at bay ports, No. 1 northern, \$1.26; No. 2, \$1.23; No. 3 northern, \$1.18; new crop.

Oats.—Ontario, No. 2 new, white, 50c. to 51c., outside; Canadian Western oats,

No. 2 new, 59c.; No. 3 new, 56c., track, bay ports.  
 Rye.—88c., outside.  
 Buckwheat.—71c. to 72c., outside.  
 Barley.—Ontario, No. 2, 68c. to 70c., outside. Manitoba barley, 66c. to 70c., lake ports.  
 Corn.—No. 3 yellow, old, 80c., Toronto; new No. 2 yellow, 70c.; Canadian corn, 81c., Toronto.  
 Peas.—No. 3, \$1.65 to \$1.69, car lots, outside.  
 Rolled oats.—Per bag of 90 lbs., \$3.10 to \$3.25.

Flour.—Ontario winter wheat, 90 per cent., \$4.60 to \$4.65, seaboard, Montreal or Toronto freights. Manitoba flour.—Prices at Toronto were: First patents, \$6.70 in cotton, and \$6.60 in jute; strong bakers', in cotton, \$6.20; in jute, \$6.10.

### HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$16 to \$17; No. 2, \$14 to \$14.50. Straw.—Baled, car lots, \$8.50 to \$9. Bran.—Manitoba, \$24 to \$25, in bags, track, Toronto; shorts, \$26 to \$27; middlings, \$28 to \$29.

### COUNTRY PRODUCE.

Butter.—Receipts have remained about steady; prices steady. Creamery prints 28c. to 31c.; creamery solids, 28c. to 29c.; separator dairy, 27c. to 28c.  
 Cheese.—New, 16c. for large, and 16 1/2c. for twins.  
 Eggs.—New-laid, 50c. per dozen, by the case; cold-storage eggs, 28c. to 29c.  
 Honey.—Extracted, 11c. to 12c. per lb.; combs, per dozen sections, \$2.50 to \$3.  
 Beans.—Primes, \$2.60 to \$2.75; hand-picked, \$2.75 to \$2.90.  
 Potatoes.—Canadian, car lots, per bag, track, Toronto, 60c. to 65c.; New Brunswick, 70c. per bag, track, Toronto.  
 Poultry.—Live-weight prices: Turkeys, 12c.; ducks, 10c.; hens, 7c. to 10c. per lb.; spring chickens, 8c. to 11c.; geese, 8c. per lb.

### HIDES AND SKINS.

City hides, flat 16c.; country hides, cured, 15c. to 16c.; country hides, part cured, 15c. to 16c.; calf skins, 17c.; kip skins, 15c.; lamb skins and pelts, 90c. to \$1.25; horse hair, per lb., 40c. to 45c.; horse hides, No. 1, \$3.50 to \$4.50; wool unwashed, coarse, 17c.; wool unwashed, fine, 28c.; wool washed, coarse, 26c.; wool washed, fine, 28c.; tallow, No. 1, per lb., 5 1/2c. to 7c.

### FRUITS AND VEGETABLES.

Apples.—Spy, \$1.25 per box, \$3.25 to \$3.50 per barrel; Russets, 85c. per box, \$2.50 per barrel; Tolman Sweets, 75c. per box, \$2.75 per barrel; Baldwins, 90c. per box, \$2.50 to \$2.75 per barrel; Ben Davis, 75c. per box, \$2.25 per barrel; Snows, \$1.50 per box, \$3.50 per barrel; Bananas, \$1.50 to \$1.75 per bunch; cranberries, \$5.50 to \$7.50 per barrel; grape fruit, \$2.25 to \$3.25 per case; limes, \$1.25 per hundred; lemons, Messina, \$2.75 to \$3 per box; California, \$3.75 per box of 300; oranges, Florida, \$2 to \$2.75 per box; California navels, \$2.75 to \$3 per box; Mexican, \$2 per box; pineapples, \$3 per case; strawberries, 75c. per box; beans, \$3.50 per hamper; beets, 60c. per bag; Brussels sprouts, Canadian, 35c. per 11-quart basket; cabbages, 25c. to 40c. per dozen, 85c. to \$1 per barrel; carrots, 50c. per bag; celery, Canadian, \$3.50 to \$3.75 per box of 5 1/2 to 6 dozen; Cauliflower, \$3.25 per case; onions, Canadian Yellow Danvers, \$1.25 per bag; parsnips, 60c. per bag; turnips, 30c. to 35c. per bag.

### Montreal.

Live Stock.—Supplies of live stock were liberal last week, owing no doubt to the active demand from butchers for Christmas trade. The quality of the offerings was very fair, and some nice stock was offered. It is doubtful, however, if a large number of cattle were on the market this year, as is usual during Christmas week. There is no doubt very largely due to the recognition of financial conditions and the reduced buying power of the public. Even so it was a considerable quantity of stock was held over until the following week in the hope that higher prices would be obtained. The top price on Thursday seemed to be in the vicinity of 27c. for the top stock

being about 7 1/2c., and good, 6 1/2c. to 7c., while medium ranged from 6c. to 6 1/2c. Common stock sold down to about 5 1/2c. per lb., while canning cows and bulls ranged from 4c. to 5c. Earlier in the week as high as 9c. was paid for some fancy steers, the general range of prices for this quality being from 8 1/2c. to 9c. There was a very good demand for lambs, and best Ontario stock sold at 8 1/2c. to 8 1/4c. per lb., while Quebec lambs sold at 7 1/2c. to 8c. Sheep were steady, at about 4 1/2c. to 5 1/4c. Calves were in moderate demand, and prices for ordinary stock ranged from \$5 to \$7 each, and for best stock up to \$15 each. Hogs showed little enough change, and prices ranged from 7 1/2c. to 8c. per lb. for selects, weighed off cars.

Horses.—Dealers reported an absence of demand even for ordinary horses, at \$150 to \$200 each. Heavy draft horses, weighing from 1,500 to 1,700 lbs., were quoted at \$225 to \$300 each, and light draft, weighing from 1,400 to 1,500 lbs., at \$150 to \$200 each. Broken-down, old animals, were quoted at \$75 to \$100 each, and fancy saddle and carriage animals sold at \$300 to \$400 each.

Dressed Hogs.—Abattoir-dressed, fresh-killed hogs were again quoted at 10 1/2c. to 11c. per lb., while country-dressed ranged from 9 1/2c. to 10c. per lb. for light, and 9c. to 9 1/2c. for heavy.

Poultry.—It is some years since turkeys were available at such low prices as prevail this year. Some retail grocers sold what appeared like very nice stock at 18c. per lb., while other poultry was obtainable at moderate rates also. In a wholesale way, turkeys were quoted at 15c. to 17c., and best chickens at 14c. to 16c., with some as low as 12c.; ducks sold at 13c. to 15c., and geese at 11c. to 13c., while fowl ranged from 10c. to 12c. per lb. These prices were slightly firmer than for the previous week, but the Christmas trade had a less strengthening effect than usual.

Potatoes.—Supplies continued liberal, and prices were unchanged, at 60c. per lb. for Green Mountains, in car lots, ex track, single bags being 70c. to 75c.

Honey and Syrup.—The market was steady. Maple syrup was quoted at 60c. in small tins, and up to 80c. in 11-lb. tins. Sugar was 9c. to 10c. per lb. White-clover comb honey was 16 1/2c. to 17 1/2c. per lb.; extracted, 12c. to 13c.; dark comb, 14c. to 15c., and strained, 7c. to 8c. per lb.

Eggs.—New-laid eggs were ticketed in groceries at 70c. per dozen on Christmas eve, but these were not to be had wholesale, although some dealers had "fresh" eggs at 55c. Selected cold-storage were quoted at 31c. to 32c. per dozen. No. 1 cold-storage stock was 29c. to 30c., and No. 2 was 25c. to 26c. per dozen.

Butter.—The Christmas trade had a somewhat firming effect on creamery, and prices went to 28 1/2c. to 29c. per lb. for best, and 1c. under for fine. Seconds were 26 1/2c. to 27c. Ontario dairy was 24c. to 24 1/2c., and Manitoba was 23c. to 23 1/2c.

Cheese.—There was no change in this market. September Ontario cheese was 15 1/2c. to 15 1/4c. per lb. for either white or colored, and October makes were 1c. below these figures. September Eastern cheese was 15 1/2c. to 15 1/4c., and October's were a fraction under.

Grain.—The market for oats was steady, but not very active. No. 2 white were quoted at 53 1/2c.; No. 3 at 52 1/2c., and No. 4 at 51c. per bushel, ex store. Holders of Canadian Western were asking 60c. to 60 1/2c. for No. 2; 59 1/2c. for No. 3, and 58 1/2c. for No. 4 feed, and 57 1/2c. for No. 2 feed.

Flour.—Ontario patents were \$6 per barrel in wood, and straight rollers were \$5.50 to \$5.60, bags being \$2.70. Manitoba first patents were \$6.70; seconds being \$6.20, and strong bakers', \$6 in face.

Millfeed.—The market was firm, but unchanged. Bran was \$25 per ton in bags; shorts, \$27; middlings, \$30, including bags. Mouille sold at \$35 to \$36 per ton for pure, and \$31 to \$32 for mixed.

Hides.—Beef hides advanced 1c. at 16 1/2c., 17 1/2c., and 18 1/2c. for Nos. 3, 2 and 1, respectively. Calf skins were 16c. and 18c. for Nos. 2 and 1, respectively. Sheep skins were \$1.20 each, and horse hides \$1.50 for No. 2, to \$2.50 each for No. 1. Tallow was 6c. per lb. for refined, and 2c. to 2 1/2c. for crude.

## Buffalo.

Cattle.—Receipts were light the past week, and prices ruled mostly a quarter higher than for the previous week. Canadian steers sold up to \$8.75, with a load of prime Indiana steers making \$9. Market was quite in contrast to the previous week, when, with heavy offerings at all markets, prices were the worst for many months past, Chicago showing as much as \$1.50 to \$2 per hundred decline on some steer stuff. Choice, handy steers and heifers are selling well here, and not enough of these grades are moving. A medium kind of both shipping and handy steers, continue to sell weak, and these find about the last outlet. Bulls are selling at about steady prices, tops the past week reaching up to \$7.25, and full demand for bulls was not met the past week. A class of little, common stock, heifer stuff, is selling badly, bringing from \$4.25 to \$5.25. Receipts the past week were 3,350 head, as against 2,900 the week before, and 2,675 head for the corresponding week last year. The past week more cattle came in after Monday than usual. General outlook for the trade appears favorable. Beef demand is expected to show improvement after the Christmas holidays. Of late, with a strongly declining market on hogs, consumption has strengthened up on pork, and the result was that the wholesalers had quite an accumulation of beef in the coolers and it was during this situation last week that conditions of the trade were very bad for the seller. There is a general belief among sellers that the next few weeks will show recovery of a large portion of the loss of late weeks. It is not expected that all of the decline will be put back on at one time, but the belief is almost general among salesmen that there are not enough good cattle in this country, and Canada, to allow a continued weakness, such as characterized the trade last week. Quotations:

Shipping Steers.—Choice to prime, \$8.75 to \$9; fair to good, \$8.25 to \$8.60. Butcher steers.—Choice heavy, \$8.25 to \$8.50; fair to good, \$7.75 to \$8; best handy, \$8 to \$8.50; common to good, \$7 to \$7.50. Cows and heifers.—Prime weighty heifers, \$7.75 to \$8; best handy butcher heifers, \$7.25 to \$7.50; common to good, \$6 to \$7; best heavy fat cows, \$6.50 to \$7; good butchering cows, \$5.75 to \$6.25; canners, fair to best, \$3.50 to \$3.80.

Bulls.—Best heavy, \$7 to \$7.25; good butchering, \$6.25 to \$6.75.

Hogs.—Exceptionally large run of hogs here the past week, over 50,500 being marketed for the first four days, as compared with 25,318 the previous week for the first four days, and 24,800 for the same period a year ago. Prices were on the lowest level of the year, Monday packers' weights selling at \$7, with pigs reaching \$7.50; Tuesday, best grades ranged from \$7.10 to \$7.25, pigs touching \$7.60; Wednesday, bulk moved at \$7.10, lights and pigs \$7.25 to \$7.35, and Thursday, general price for weighty hogs was \$7.05, with lights and pigs \$7.25 to \$7.35. Roughs, \$6 to \$6.25, stags, \$6 down.

Sheep and lambs.—Prices showed a bad break the past week, Monday's lamb market being off fully forty cents from last week's close, tops selling generally at \$8.35, with culls \$7 down. Tuesday market was still lower, nothing bringing above \$8.25, and the trade for the next two days showed a reaction; Wednesday's top being \$8.35, with Thursday's range \$8.50 to \$8.65. Sheep were about steady. Best wethers \$5.50 to \$5.75, and ewes \$4.50 to \$5.25, heavy ones \$4.50 to \$4.75. Receipts for four days 22,106, last week 19,251, year ago 15,890 head.

Calves.—Top veals past week ranged from \$9 to \$10; culls, \$6 to \$8, and grassers down to \$4 to \$4.50. Receipts the past week for four days 1,375, previous week 1,418, year ago 800.

Eggs.—Trade light, firm. White, large,



50c.; State, fancy, mixed, 46c. to 48c.  
 Dressed Poultry—Active and steady.  
 Turkeys, choice, per lb., 22c. to 23c.;  
 fowls, choice, per lb., 15c.; fowls, fair to  
 good, per lb., 12c. to 14c.; chickens,  
 fancy, 16c. to 17c.; chickens, fair to  
 good, 12c. to 14c.; old roosters, 11c. to  
 12c.; ducks, per lb., 16c. to 17c.; geese,  
 per lb., 13c. to 14c.

Chicago.

Chicago.—Cattle—Beeves, \$5.50 to \$10;  
 western steers, \$5.20 to \$8.10; cows and  
 heifers, \$3.20 to \$8.30; calves, \$7.50 to  
 \$10.

Hogs—Light, \$6.70 to \$7.20; mixed,  
 \$6.80 to \$7.25; heavy, \$6.80 to \$7.25;  
 rough, \$6.80 to \$6.95; pigs, \$5.50 to  
 \$7.20; bulk of sales, \$7.05 to \$7.20.

Sheep.—Native, \$5.65 to \$6.60; year-  
 lings, \$6.70 to \$7.85. Lambs, native,  
 \$6.75 to \$8.75.

Gossip.

In the class for Canadian-bred Clydes-  
 dale stallions, two years old, at the  
 Provincial Winter Fair, the fifth prize  
 went to Jas. Speir, Brussels, on Drum-  
 burle's Best, instead of to R. M. Holtby,  
 Port Perry, as intimated in our report  
 of the Fair.

J. POLLARD'S CHESTER WHITES.

In another column will be found the  
 advertisement of John Pollard, of Nor-  
 wich, Ont., in which he is offering several  
 young sows bred to farrow in March.  
 Also, to prevent in-breeding, he is offer-  
 ing his senior stock boar, Nimble Sam,  
 bred by W. E. Wright & Son, from their  
 well-known show herd. Mr. Pollard's  
 brood sows are descendants of sows pur-  
 chased from the noted herd of Mr. Fergu-  
 son, of St. Catharines. His stock boars  
 have for a number of years been from  
 the herds of W. E. Wright and D. De  
 Coursey, which ensures Mr. Pollard's  
 Chester Whites to be the best of the  
 breed. Write him for prices.

John Miller, of Ashburn, Ont., writes  
 "The Farmer's Advocate" that the Short-  
 horns he is offering are of such families  
 as Rosewood, Augustas, Duchess of  
 Gloucesters, Nonpareils, Lavenders,  
 Minas, Lady Madras, Campbell Charlets,  
 Mysies, Bruce Mayflowers, Cruickshank  
 secrets, Village Girls, etc. This makes  
 a very choice selection of familiar and  
 famous families from which to choose.  
 In bulls, there is a roan fourteen-  
 months-old of the Mysie family. He is  
 bred right, and is a good beast. Also  
 an Augusta bull, fourteen months old,  
 bred, and bred so any person can use  
 him. A bull from a dam and sire like  
 he has could not help but produce the  
 right sort. There are also three red  
 bulls just past the twelve-month period.  
 In females, there are cows with calves  
 by side, heifers in calf, and young heif-  
 ers. All these are for sale.

DISPERSON OF THE WOODBINE HOLSTEINS.

For thirty years A. Kennedy & Sons,  
 on their noted Woodbine Farm, have been  
 using their best endeavors, first by al-  
 ways using as breeding sire the best bulls  
 obtainable in the leading herds of the  
 United States, backed up by generations  
 of high official records, secondly, by a  
 careful selection of their get, retaining  
 only those that measured up to the high  
 standard of individual excellence, and  
 proved their ability to produce the fluid  
 that raises the mortgage, to get to-  
 gether a herd of Holstein cattle that  
 combined the ideal in showing type and  
 quality, and were able to have a sub-  
 stantial balance on the right side of the  
 ledger. That their work has not been  
 in vain will be seen at a glance over the  
 large herd of sixty head now grazing the  
 well-arranged stables. Sudden changes  
 of times upset all our life plans. This  
 has happened to Mr. Kennedy, and at  
 his farm, midway between W. C. P. R.,  
 and Paris, G. T. R., where conveyances  
 will meet all morning trains on Wednes-  
 day, January 20th, 1915, the splendid  
 cattle bred herd will all go under the  
 hammer at exactly the place people  
 choose to give them. For full par-  
 ticulars, write for catalogue to A. Ken-  
 nedy & Sons, Paris, Ont., P. O. No. 2.

A Half-Yearly Pleasure

May we tell you about a pleasant event to which a  
 great many people look forward—in fact, many  
 eagerly await the day?

Each six months over eighteen hundred persons in  
 the city and surrounding country tear coupons from  
 Huron & Erie debentures, step into our office and  
 draw the cash for them or deposit the coupons at our  
 teller's wicket. A large portion of the money thus drawn  
 or deposited is EXTRA money, that is, money these  
 eighteen hundred people would not have received if  
 they had been content to leave their savings at the  
 savings rate of interest.

Huron & Erie depositors and debenture holders  
 have unsurpassed security behind their dollars. Why  
 not have the pleasure yourself of having a "coupon  
 day" each six months?

Call in and find out all about it.

The Huron & Erie Loan and Savings Company

Incorporated 1864

Main Office: 442 Richmond Street, London  
Market Office: 4-5, Market Square, London

T. G. MEREDITH, K.C.  
President

HUME CRONYN  
General Manager

At the auction sale of Christmas cat-  
 tle held at Union Stock-yards, Toronto,  
 Saturday, December 12th, 1914, 261  
 offerings—average value, \$349.20 each—  
 consisting of 1,694 head of cattle, sheep  
 and hogs, were sold in seven hours and  
 thirty minutes, an average of 1 1/2 min-  
 utes for each lot in auction ring. Tran-  
 sactions at the auction amounted to  
 \$91,143.60, or at the rate of \$202.54  
 per minute.

LIST OF SALE DATES CLAIMED.

Jan. 20, 1915.—A. Kennedy & Sons, Paris, Ont.; Holsteins.

Jan. 27, 1915.—Brant District Holstein-breeders' Club, N. P. Sager, St. George, Ont., Sec.-Treas.

Feb. 3, 1915.—The great Canadian Shorthorn sale, Union Stock-yards, Toronto, Robt. Miller, Stouffville, Ont., Manager.

Feb. 9, 1915.—Southern Ontario Consignment sale, 80 head of Holsteins, at Tillsonburg, R. J. Kelly, Culloden, Ont., Secretary.

Feb. 10, 1915.—East Elgin Holstein-breeders' Consignment sale, at Aylmer, Gordon Newell, Springfield, Secretary.

Feb. 11, 1915.—Annual Norfolk Holstein-breeders' Club sale, W. H. Cherry, Hagersville, Secretary.

Feb. 12.—P. D. McArthur, North George-town, Que.; Ayrshires.

March 24, 1915.—Oxford District Holstein-breeders' Club, W. E. Thomson, Sec.-Treas., Woodstock, Ont.

SOUTH-DOWNS IN THE SHOW-RING.

Robt. McEwen, of Alloway Lodge Stock Farm, Byron, Ont., when sending a change of copy for their advertisement, writes us that their success with South-down sheep in the show-ring has been phenomenal during the season of 1914. The flock which covered the Western Show Circuit was made up chiefly of home-bred individuals, and won every first and championship at the five shows at which they were exhibited, and at Brandon they won the gold medal for the best fat sheep in the show. During the fall fairs two flocks were sent out, one of these to the Eastern States, starting at Syracuse, N. Y., and the other to Toronto and London. The two silver medals offered at Toronto, and both championships at London, came to Alloway Lodge, while out of the twelve championships competed for on the American circuit, this flock won ten, and in every instance the flock prize. "The Farmer's Advocate" report of the Guelph Winter Fair reveals their winnings there, which are indeed commendable including the Drummond Cup, the Prince of Wales prize, and the Ontario Sheep-breeders' Association special award to all breeds.

MORE SHIRE MEDALS FOR CANADA.

The English Shire Horse Society has decided to give the following medals, etc., for Canadian shows in 1915: Cal-gary, two gold cups; Toronto, two gold medals; Brandon, one gold medal; Winni-peg, two gold medals; St. John, one gold medal; Regina, two silver medals, and McLeod, two silver medals. To the Panama-Pacific Show two gold cups have been allotted, and Chicago, too, has that compliment.—G. T. B.

GOOD SALES OF HOLSTEINS.

In requesting a change in their adver-tisement, Messrs. R. Honey & Son, Brickley, Ont., write us that their cows are doing exceedingly well, considering that they have no silo. May Snowflake de Kol, a six-year-old cow, promises to give 16,000 pounds of milk. A four-year-old will give nearly 14,000 pounds, and a pair, one three-year-old and a two-year-old, daughters of Lakeview Burke Fayne, are milking 55 pounds and 48 pounds of milk a day, respectively. Sales were never better than this fall. They have sold four bulls, a three-year-old R. O. P. heifer, and two daughters of R. O. P. cows, one R. O. P. cow that made 14,753 pounds of milk in one year as a four-year-old, and a four-weeks-old calf sired by Ourvillia Sir Abbekerk. They can still supply bulls fit for service in the spring; also September bulls from tested dams. In females they can supply calves from three months to cows six years old, sired by or in calf to Ourvillia Sir Abbekerk, the only bull in Can-ada closely related to Molly of Bayham, grand champion cow at Winnipeg, To-ronto and London, in 1914, and the grand champion bull at Toronto, 1914, Honestead Colantha Prince Canary. In Yorkshires they are making a special offering of sows due to farrow in April, and a seven-months-old boar.

Trade Topic.

A BRIGHTER HOME.

As a general thing the farm home is not so well equipped with necessary ap-pliance as the farm itself is with ma-chinery and conveniences. The farmer must have drills, manure spreaders and all, while the woman of the house and children must do without many conven-iences that are considered absolutely necessary. The lighting of the farm home is one incident where the advance-ment in domestic comfort has lagged re-grettably, and while things are going smoothly on the farm, the young folks are lulled by permanently unimproved

eyes by studying under the flickering, yellow flame of a poor lamp. To be consistent, farmers should furnish their home with lights that are white, and that will furnish the most steady light obtainable. It will add to the cheerfulness, pleasure and comfort of the home. It encourages the children to do more reading and home study; it enables parents to keep better posted on the affairs of the world through their paper or magazine, and it is such a satisfaction when company calls or any function is being carried on in the home. There is a difference between the ordinary oil lamp and the new type of "kerosene-mantle lamps" now upon the market. Beside giving a far better illumination and a more persistent light, they are cheaper to operate. They use oil similar to other lamps, yet the white mantle and the fumes from the oil and the air being obliged to combine, give a splen-did light and are a great improvement over former illuminators. When 94 per cent. of air mixes with 6 per cent. of vapor from the oil, a blue flame heats the mantle to a white glow, and al-though a greater illumination is effected less oil is consumed. Consistent living demands improvement in the illumination of the home, and in order to bring the standard of the life within the home up to that prevailing upon the farm, it is necessary for rural people to pay more attention to that department of home economics. The Mantle Lamp Co. of America, who are offering their Aladdin Mantle Lamp, have an article worthy of the closest consideration, and we advise our readers to study the matter of home lighting and confer with these manufac-turers, who are advertising in these columns.

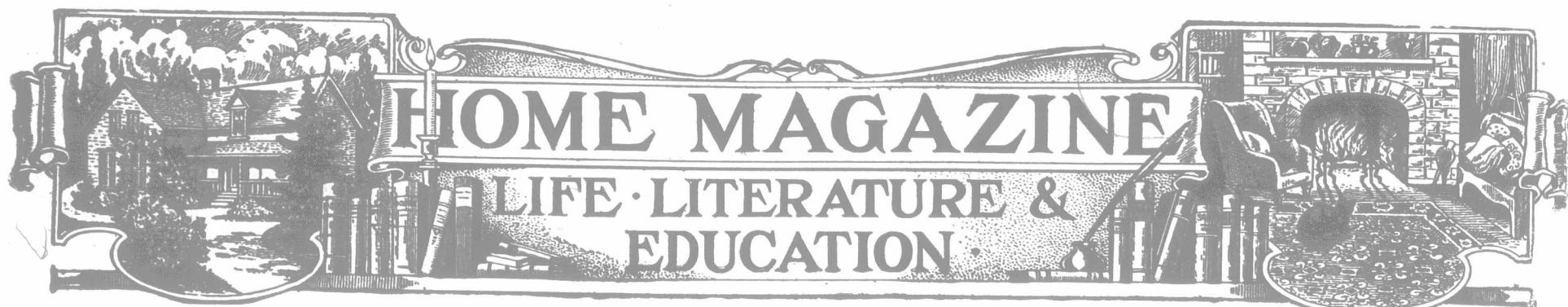
New Herd Books in Circulation.

Volume 1 of the Canadian Thorough-bred Stud Book is just fresh from the press, and is now in circulation. A volume has been received at this office in which are recorded 691 stallions and 934 mares. Besides the 1,625 pedigrees published there is a list of members and extended pedigrees of 46 celebrated horses. The style of registration and publication departs from that of any other Thoroughbred Stud Book in the world. It is customary in other books to record animals as progeny of their dams, and then re-enter them with full pedigrees when they in turn produce. The Canadian practice is to record the animals in full with name and breeding in the first instance, and show how many crosses to Importation or American Foundation Stock. This book is distributed free to members of 1914 in good standing, to others the price is \$5.00. A copy may be procured by writing to the Accountant National Live Stock Records, Ottawa.

Volume 83 of the American Short-horn Herd Book, containing pedigrees of animals calved before December 25, 1913, has been published by the Ameri-can Shorthorn Breeders' Association, Chicago, Illinois, 1914, and a copy re-ceived at this office. This volume con-tains pedigrees of animals calved before December 25, 1913; bulls being numbered from 385601 to 394000, and cows num-bered 149001 to 160000. A general index to breeders and owners and to animals is included. Officers of the as-sociation are: President, F. W. Hard-ing, Waukesha, Wis.; Secretary, Roy G. Groves, Chicago, Ill.; Treasurer, C. D. Bellows, Maryville, Mo.; General Manager, Abram Renck, Winchester, Ky.

Volume 32 of the Holstein-Friesian Herd Book of America, compiled and edited up to May 1, 1914, is now in circulation. The copy received at this office, through the courtesy of the Sec-retary and Editor, Frederick L. Hough-ton, Battleboro, Vt., contains the num-bers of bulls between 111,600 and 132,-639, also cows from 205,897 to 239,-851. Like other issues of this Herd Book, Volume 32 is well compiled.

The thirteenth volume of the Ameri-can Shetland Stud Book, containing numbers between 14,105 and 15,391, is now in circulation. It is well printed and well illustrated, and may be pro-cured through J. M. Wade, Secretary, La Fayette, Ind.



### The Peace-Pact.

They were foes as they fell in that frontier fight,  
 They were friends as they lay with their wounds unbound,  
 Waiting the dawn of their last morning-light,  
 It was silence all, save a shuddering sound  
 From the souls of the dying that rose around;  
 And the heart of the one to the other cried,  
 As closer they drew, and their arms enwound,  
 "There will be no war on the Other Side!"

As the souls of the dying mounted high  
 It seemed they could hear the long farewell!  
 Then together they spake, and they questioned why—  
 Since they hated not—why this evil befell?  
 And neither the Frank nor the German could tell  
 Wherefore themselves and their countrymen died,  
 But they said that Hereafter in peace they should dwell—  
 "There will be no war on the Other Side!"

As they languished there on that field accurst,  
 With their wounds unbound, in their mortal pain,  
 Spake one to the other, "I faint from thirst!"  
 And the other made answer, "What drops remain—  
 In my water-flask thou shalt surely drain!"  
 As he lifted the flask the other replied,  
 "I pledge thee in this till we meet again—  
 There will be no war on the Other Side!"

And it came to pass as the night wore deep  
 That fever through all their veins was fanned,  
 So that visions were theirs (yet not from sleep),  
 And each was flown to his own loved land,  
 But, rousing again, one murmured,  
 "Thy hand!  
 Thou art my brother—naught shall divide;  
 Something went wrong . . . but understand,  
 There will be no war on the Other Side."

### ENVOL.

Comrades of peace, we can give but our tears  
 As we look on the waste of the human tide . . .  
 Yet forever one cry so haunts my ears—  
 "There will be no war on the Other Side!"  
 —Edith M. Thomas, in New York Times.

### Russia and Her Writers.

[The following interesting essay, written by Mrs. James Venning for a meeting of the Harrietsville branch of the Women's Institute, has been sent us by the Secretary, with a note expressing hope that it "may be of interest to the Institutes which are taking up the study of those countries engaged in the war." We are sure it will be much appreciated.—Ed.]

The Russian Empire embraces one-sixth of the land surface of the earth. I will not go into detail in regard to its history, as time and circumstances will not permit at this time. The Government of Russia is an absolute hereditary

monarchy. There is neither a written constitution nor a representative body. The whole legislative, executive and judicial power is vested in the Czar alone. He bears the title of Autocrat of all the Russias, and as the title indicates, there are no legal limitations whatever upon his authority. He is assisted by a Council appointed by and responsible to himself alone. A very few years ago the present Czar modified his title of "Autocrat of all the Russias" to simply "Czar," but by every right and act continues to be Autocrat.

The peoples of Russia are many, speaking different languages, not understandable to each other. As a whole, they are divided into three distinct classes, the aristocracy, the common people, and the lower class. The army and navy of to-day are composed of all classes. It is said of the aristocracy that there is none more aristocratic in all Europe. Great writers have been "discovered" comparatively recently, not because they have not written before, but because their works have not been translated. By many they are ranked as giants in comparison with other European writers. I will speak of some of them.

### TOLSTOI.

The most prominent, or perhaps the one many of us know most about, is Count Lyof Nicolayevitch Tolstoi. Beyond the reign of Peter the Great, nothing is definitely known of the origin of the Tolstoi family. The name itself signifies "stout." In all countries epithets based on personal characteristics at first used as nicknames, become accepted, and are then handed down as surnames, often dignified with titles of nobility. Whether the epithet "stout" came from a German ancestor call Dick or Dickinan, or was jocosely applied by the Grand Duke Vasily of Moscow to a descendant of a mythical German named Idris who emigrated to Tchernigof in the middle of the fourteenth century, is a matter of choice between legends.

Far from the great busy world, the village of Yasnaya Polyana was a little community in itself, and Tolstoi's childhood days spent there were the soil from which sprang the strangely contradictory characteristics of his whole life. He was orphaned at an early age, and was brought up by an aunt, who was very religious. He himself tells what books had a predominating influence over him. The story of Joseph from the Bible, and certain Russian popular legends, he records as "powerful"; certain stories from the "Arabian Nights," and some of Ruskin's poems, notably "Napoleon," were "great," while Pogarefski's "Black Fowl" was "very great."

After he had become famous, persons who remembered him as a student told how he was present at all the balls given by aristocratic people, how he was everywhere a welcome guest, but distinguished by a strange awkwardness and timidity. This was due to self-consciousness, and the self-consciousness arose from a lack of good looks. Frequent mention is made of such remarks in both "Childhood" and "Boyhood." The first of "Youth" is probably autobiographical. It refers to the time when he entered the University, when he says:

"Not only was I convinced that my appearance was plain, but I was unable to solace myself with the usual reflections; I could not say that my face was expressive, intellectual, and noble.

"There was something expressive about it; the features were of the coarsest, homeliest, and most ordinary description. My small, gray eyes were stupid, particularly when I looked into the mirror, rather than intelligent. There was

still less of manliness about me. Though I was not so very diminutive in stature, and was strong for my age, all my features were soft, flabby, and unformed. There was nothing aristocratic about them; on the contrary, my face was exactly like a common muzhik's, and I had just such big hands and feet; and all this seemed to me at that time particularly disgraceful."

His dress was that of the common people. It was simplicity itself. His own apartments in Yasnaya Polyana were simple and bare in contrast to those of the Countess, which were fitting to her station.

I think no better resume of his character can be given than that by Professor Ludwig Stein, of Berlin. He declared that humanity had lost in Tolstoi, at his death, an apostle, a saint, whom in days to come the church would canonize, and predicted that Nietzsche, Bjornson, and Ibsen, would shine pallid in the bright image of the greatest of their contemporaries.

Leopold Von Schroder, Professor of Philosophy at Vienna, called him the Russian Buddha. He was the "Prometheus Bound," the great martyr, and at the same time the marvelous conqueror enlightening the world; notwithstanding his lack of success in the practical accomplishment of his ideals, Tolstoi gave a great impulse to the world. Only Philistines can regard him as visionary. Such a visionary was Christ.

Perhaps the most obvious and striking likeness that one can find among men of the past with whom to compare Tolstoi is Jean Jacques Rousseau, and one cannot avoid the thought that the impulse to many of the great Russian writer's idiosyncrasies must have come from the author of "Emile," whom Tolstoi so adored in his early youth.

If the comparison be only superficial, it is certainly remarkable. As children, both Rousseau and Tolstoi were left to be brought up by relatives. Both taught, and not having the right training for teachers, both failed, recognizing their failure and its cause. Both in their early days lived immoral lives, and described their evil deeds with vivid details in their journals. Both were interested in music. Rousseau wrote a hymn tune, "Rousseau's Dream"; Tolstoi composed a waltz. Rousseau, in his "Discourse on Arts and Sciences," denounced all culture, literary, scientific, musical or graphic, as directly leading to corruption; Tolstoi's views on Progress, on Literature, Painting, and Music, are not dissimilar.

In nearly all these particulars there is a parallel in Tolstoi's life. Rousseau made lace; Tolstoi made boots. Rousseau's later views on education were revolutionary; so were Tolstoi's.

The story of Tolstoi's struggles to conquer his passions, his failures, the undoubted truths that he inculcated aside from the extremes to which he went, his clear summons to do the right thing, his courage in upholding his views, his unbounded generosity, the love that he manifested to humanity at large, all combine to make him a tremendous influence in the world. He caused millions of men to think for themselves, and awake them from complacent, selfish dreams, to realize their responsibilities. The good that he advocated was so good that it cannot fail to better the world. One may not be able to accept all his teachings, and it would be undoubtedly a misfortune if many should follow him to the full length, but the gold in the sand is distinct and precious, and it is easy to sift it out, and add it to the riches of human thought.

### GRIBOYADOFF.

Gribovadoff was a dramatic poet and statesman, born at Moscow. His mother gave him the best obtainable education, preparing him for a diplomatic career, and by the time he entered Moscow University he knew French, German, English and Italian, and had studied music, both practically and theoretically. On leaving the University, he entered military service when Napoleon invaded Russia, but he never got to the fighting line, and, becoming tired of inaction, resigned in 1816.

His comedy, "Misfortune of Being Too Clever," was read to his friends in 1824, but the censor found the play too pointed, and did not permit its publication, with the result that the comedy circulated in thousands of manuscript copies.

He was commissioned by General Paskevitch to carry peace negotiations to Turkey and Persia, and for this service Emperor Nicholas I. made him Minister Plenipotentiary at Teheran, Persia.

Here, with thirty-six others, he was slain, sword in hand, defending the embassy against an unruly mob during an uprising at the Persian Capitol.

The singular merit of his only original comedy, "Being Too Clever," seemed to give sufficient ground to believe that death cut short the career of one of Russia's greatest poets.

### SUMARAKOFF.

Sumarakoff was born in Finland of humble parents, but had the opportunity of a finished education. He entered the military service, and rendered such brilliant service that he was made Count Rumyantsev's adjutant, and later reached a high rank.

When the first permanent theater was established at St. Petersburg in 1756, he was made director. He also wrote plays for production at the theater.

Although having reached so high a position, he was petty of character, quarrelsome, delighted in nothing better than to enter into some low quarrel which might end in fisticuffs. He was over-ambitious. He left the Capitol incensed at the insufficient recognition he had received, and began to stage his works at Moscow. After a while he got into disputes with the management of the theater there, and in despair took to drink, dying in obscurity. Although clumsy and ineffective, his tragedies played an important part in the history of Russian morals.

### PUSHKIN.

Pushkin, who was born in 1799, and died in 1838, was the founder of Russian literature, and it is difficult to over-estimate his influence. He was the first, and is still the most generally beloved, of all their national poets. The wild enthusiasm that greeted his verse has never passed away, and he has generally been regarded in Russia as one of the great poets of the world. He was for a time a "Romantic," largely influenced, as all the world was then, by Byron. He is full of sentiment, smiles and tears, and passionate enthusiasms; he therefore struck out in a path in which he has had no great followers; for the big men in Russian literature are all realists. What is peculiarly Slavonic about Pushkin is his simplicity—his naïveté. Though affected by foreign models, he was close to the soil. This is shown particularly in his prose tales, and it is here that his title, "Founder of Russian Literature," is most clearly demonstrated. He took Russia away from the artificiality of the eighteenth century, and exhibited the possibilities of native material in the native tongue.

### GOGOL.

The founder of the mighty school of

Russian Realism was Gogol. Filled with enthusiasm for Pushkin, he nevertheless took a different course, and became Russia's first great novelist.

Furthermore, although a melancholy man, he is the only Russian humorist who has made the world laugh aloud. Humor is not a salient quality in Russian fiction.

TURGENEV.

Then came the brilliant follower of Gogol, Ivan Turgenev. In him, Russian literary art reached a climax, and the art of the modern novel as well. He is not only the greatest master of prose style that Russia has ever produced; he is the only Russian who has shown genius in construction. Perhaps no novels in any language have shown the unspeakable beauty of form attained in the works of Turgenev. George Moore queries, "Is not Turgenev the greatest artist that has existed since antiquity?"

DOSTOEVSKI.

Dostoevski, seven years older than Tolstoi, and three years younger than Turgenev, was not so much a Realist as a Naturalist; his chief interest was in the psychological processes of the unclass. His foreign fame is constantly growing brighter, for his works have extraordinary vitality. It has been said by Professor William Lyon Phelps, of Yale,—"In the novels of Gogol, Turgenev, Dostoevski and Tolstoi, we ought to find all the prominent traits in the Russian character."

ARTSYBASHEV.

Anarchism posing as self-assertion is the note in most recent Russian literature, as indeed it is in Russian life. The most powerful among this school of writers, and the only one who can perhaps be called a man of genius, is Michael Artsybashev. He came honestly by his hot, impulsive temperament, being, like Gogol, a man of the South. He was born in 1878.

He says of himself: "I am a Tartar in name and in origin, but not a pure-blooded one. In my veins runs Russian, French, Georgian, and Polish blood."

"I am glad to name as one of my ancestors, the famous Pole, Kosciusko, who was my maternal great-grandfather."

"My father, a retired officer, was a landed proprietor with very little income. I was only three years old when my mother died. As a legacy, she be-

queathed me tuberculosis. I am now living in the Crimea trying to get well, but with little faith in my recovery."

His great work is the book "Sanin."

ANDREEV AND GORKI.

Leonid Andreev is at this moment regarded by many Russians as the foremost literary artist among the younger school of writers. He was born at Orel, the birthplace of Turgenev, in 1871, and is thus only two years younger than Gorki. He began life as a lawyer at Moscow, but according to his own statement he had only one case, and lost that. He very soon abandoned law for literature, as so many writers have done, and his rise has been exceedingly rapid. He was appointed police-court reporter on the Moscow Courier, where he went through the daily drudgery without attracting any attention. But when he published in this newspaper a short story, Gorki sent a telegram to the office demanding to know the real name of the writer who signed himself "Leonid Andreev." He was informed that the signature was no pseudonym. This notice from Gorki gave the young man immediate prominence.

Not long after, he published another story in the Russian periodical "Life." Into the editor's room dashed the famous critic, Mevezhkovski, who enquired whether it was Chekhov or Gorki that had selected this assumed name.

Andreev himself says he learned much from Tolstoi, the great Tolstoi of the sixties and seventies; also from Nietzsche, whom he reads with enthusiasm. He has read Poe with profit, but he testified that his greatest teacher in composition is the Bible. In a letter to a young admirer, he wrote, "I thank you for your kind dedication. I note that in one place you write about the Bible. Yes, that is the best teacher of all—the Bible."

Gorki went up like a sky-rocket, and seems to have had the traditional descent. From 1900 to 1906, everybody was talking about him; since 1906 one scarcely hears mention of his name. He was ridiculously overpraised, but he ought not to be forgotten. As an artist, he will not bear a moment's comparison with Andreev. Just at the moment when Chekhov appeared to stand at the head of young Russian writers, Gorki appeared, and his fame swept from one end of the world to the other. In Russia, his public was second in num-

bers only to Tolstoi's. Kuprin and Andreev both dedicated books to him; in Germany, France, England, and America, he became literally a household word. It is probable that there were a thousand foreigners who knew his name, to one who had heard of Chekhov. His true name, which few have ever heard, is Alexei Maximovich Peshkof. "This name," said M. de Vogue, will remain forever buried in the parish register." He was born in 1869, at Nizhni Novgorod, in a dyer's shop. He was orphaned when a child, and was then apprenticed to a shoemaker, but ran away, as he did from a subsequent employer. By a curious irony of fate, this Atheist learned to read out of a prayer-book, and this iconoclast was for a time engaged in the manufacture of icons—holy images.

The aristocrat, Turgenev, learned Russian from a house servant. Gorki obtained his love for literature from a cook. This happened on a steamer on the great river, where Gorki was employed as an assistant in the galley. The cook was a rough giant, who spent all his spare moments reading, having an old trunk full of books. It was a miscellaneous assortment containing lives of saints, stories by Dumas "Pere," and fortunately some works by Gogol.

This literature gave him a taste, or thirst, for learning, and when he was sixteen he went to Kazan, where Tolstoi had studied at the University.

He had a notion that literature and learning were there distributed free to the famished, like bread in times of famine. He was quickly undeceived, and instead of receiving intellectual food, was forced to work in a baker's shop for a miserable pittance. In one of his powerful stories, he has reflected the wretched daily and nightly toil in the bakery.

Then he went on the road and became a tramp, doing all kinds of odd jobs, from peddling, to hard manual labor on wharves and railways. At the age of nineteen he shot himself, but recovered; then he followed the Volga to the Black Sea, unconsciously collecting the materials that in a very few years he was to give to the world in his books. In 1892, when 23 years old, he succeeded in getting some of his sketches printed in newspapers.

The next year he had the good fortune to meet at Nizhni Novgorod the famous Russian author, Korolenko. Korolenko

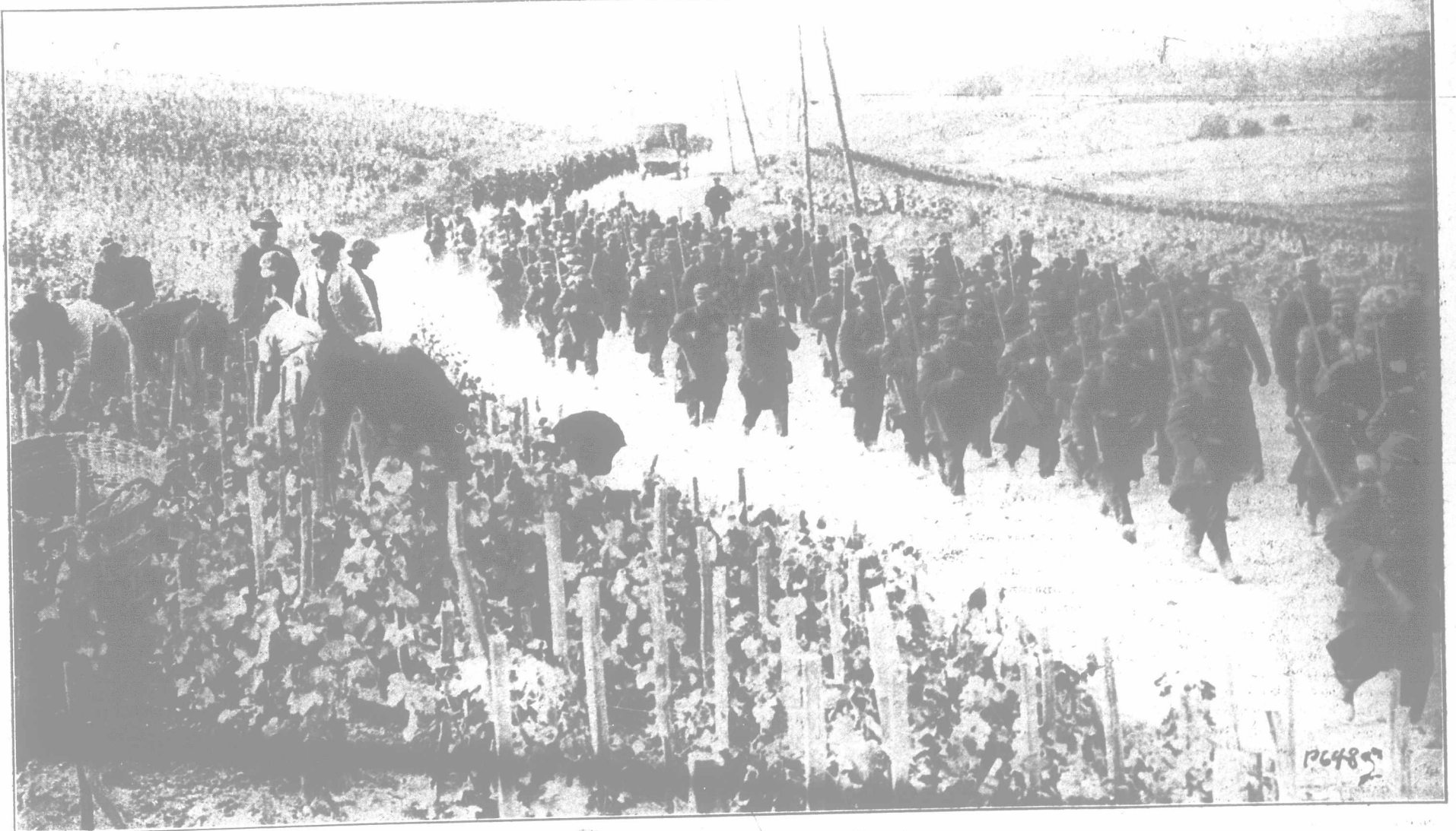
was greatly impressed by the young vagabond, believed in his powers, and gave timely and valuable help. With the older man's influence, Gorki succeeded in obtaining the entree to the St. Petersburg magazines, and while the Russian critics were at a loss how to regard the new genius, the public went wild. He visited the capital in 1899, and there was intense curiosity to see and hear him. A great hall was engaged, and when he mounted the platform to read, the young people in the audience went into a frenzy.

Gorki has been repeatedly imprisoned for his revolutionary ideas and efforts. In 1900, at the very apex of his fame, he came to the United States to collect funds for the cause. The whole country was eager to receive and give, and his advent in New York was a notable occasion. A literary dinner was prepared for him, among the distinguished guests being "Mark Twain." Felicitations were his from all quarters. He expressed himself pleased with country, city, and people. He was entertained in royal fashion, but the morning after the bubble burst. Russian traditions were not American. His beautiful, accomplished, travelling companion was not his wife. His own wife was in far-away Russia, and the Hotel Astor was no longer open to him. In fact, the doors of every hotel in the city were closed against him. He and his paramour fled to Italy, and since then very little has been heard of him.

A Wet Sheet and a Flowing Sea.

A wet sheet and a flowing sea,  
A wind that follows fast,  
And fills the white and rustling sail,  
And bends the gallant mast,  
And bends the gallant mast, my boys,  
While, like the eagle free,  
Away the good ship flies, and leaves  
Old England on the lee.  
Oh, for a soft and gentle wind!  
I heard a fair one cry:  
But give to me the swelling breeze,  
And white waves heaving high,  
The white waves heaving high, my lads,  
The good ship tight and free,—  
The world of waters is our home,  
And merry men are we.

Allan Cunningham.  
Korolenko



Peace and War in the Champagne Country.

French soldiers marching through a vineyard where the peasants are picking grapes in the famous champagne country of France. Copyright, Underwood & Underwood.

## Hope's Quiet Hour.

### Be of Good Cheer.

Be of good cheer: rise, He calleth thee.—St. Mark x.: 50 (R. V.).

"Why cry so many voices, choked with tears,  
"The year is dead!" It rather seems to me  
Full of such rich and boundless life to be,  
It is a presage of the eternal years.  
Must it not live in us while we, too, live?  
Part of ourselves are now the joys brought;  
Part of ourselves is, too, the good it wrought  
In days of darkness. Years to come may give  
Less conflict, less pain, less doubt, dismay,  
A larger share of brightness, than this last;  
But victory won in darkness that is past  
Is a possession that will far outweigh  
All that we have lost. So let us rather cry,  
"This year of grace still lives; it cannot die!"

One day a poor blind man was sitting beside a public road. He had often sat there before and begged from the passers-by. Why should this day be different from the dreary days of the past?

Suddenly his quick ears caught an unusual sound—the tramp of many feet. A great multitude of people had come from Jericho, along the road to Jerusalem. Something unusual was happening, and the blind man eagerly demanded what it meant, as he heard men passing the spot where he sat. The answer was carelessly given: "Jesus of Nazareth passeth by." The blind man had heard of Jesus of Nazareth, and at once the dull despair and apathy with which he had endured his blindness vanished. Which one of this tramping multitude might be the great Healer he did not know, but he was determined not to lose the opportunity. "Jesus, Thou Son of David, have mercy on me!" he cried as loudly as he could. It was an interruption to the orderly procession, and many—who thought they were helping the cause of peace and order—told him to be quiet. "Be quiet!" Would you be quiet if you were blind and helpless, and your one chance of cure had arrived? Another moment and it might be too late. Perhaps the Master would be kinder than His followers. At least the blind man's cry should be heard by Him. Opposition only made the beggar more resolute, and louder still his cry rang out: "Thou Son of David, have mercy on me!"

He notices a change in the sound of trampling feet, and hope crowds out despair. The procession is at a standstill—the Saviour cannot pass by when one soul in pain is crying out for His help. Expectantly the beggar listens, and is thrilled by the wonderful message: "Be of good cheer: rise, He calleth thee." Little fear that he should hesitate to obey that call. Ready hands directed his eager, stumbling steps into the Presence of the Good Physician.

"What wilt thou that I shall do unto thee?" asked a quiet voice; and there was no room for hesitation in the heart of the beggar.

"Lord, that I might receive my sight!" he exclaimed, in humble faith that this great gift could really be bestowed by his unseen Friend.

Little wonder that when his prayer was answered he fell into the ranks of the procession, following as close to his Saviour as possible, and glorifying God for the gift which he knew only Divine power could have bestowed.

We, also, are sitting by the public road, catching confused sounds which speak of a great multitude passing by. Hour after hour many souls in that great multitude pass out of reach of our voices, out of sight of our eyes. "What does it all mean?" we ask in our blindness. In our case the sounds which come to us are not of a peaceful proces-

sion, but the trampling feet are treading down men under them, and the hoarse voices speak of rage and awful fear.

We cannot see what is coming. The Old Year, which seemed so commonplace in its beginning, is leaving us in a horror of great darkness, and we are almost afraid to give the New Year a friendly greeting. Does it come as friend or foe?

Let us hold fast to our faith in our unseen Friend, lifting our hearts to Him many times every day. Let us pray on, unheeding the rebukes of many who say: "Millions of prayers for peace have gone up, yet the war goes on."

We cannot see that JESUS is in our midst, but we walk by faith, not by sight. Even now, in the darkness, we can—if we are listening—hear His voice, saying: "Be of good cheer; it is I; be not afraid."

Long ago I heard of a picture which someone had painted. The Church was represented in the form of a fair woman, trembling before One Who held a mask before His face—a mask which resembled a death's head. The hidden face was beautiful, full of tenderest affection; but only one who walked by faith, not sight, could understand. When the disciples were tossed on a stormy sea, fighting against winds and waves, they were afraid and cried out for fear when their Master walked over the tossing waves to their assistance. He had left them alone so long—or apparently alone—and at first they did not believe in His Presence when He showed Himself to them. They were afraid of their best Friend.

Do we really believe that strange beatitude: "Blessed are they that mourn: for they shall be comforted?" Do we believe that the revelation of our Lord's Presence—the opening of our blind eyes—is worth infinitely more than any worldly prosperity? If we do, then—even in this time of national and individual mourning—we can be of good cheer. Let us rise, throwing aside all earthly weights which might distract our hearts from the calling Christ, and follow Him in humble faith. Let us pray that His will—not ours—may be done. Let us hold out our hands for the gift of the New Year, trusting the Ruler of all things to bring light out of darkness, order out of chaos, life out of death.

We are not given the New Year in one piece. It comes to us hour by hour, and the needed strength is not given in January to carry the burdens of next December. Christ is calling each of us to rise and do some special work for Him to-day, and to do it cheerily. He wants us to enjoy our work and it must disappoint Him when we drag through a day cheerlessly. He may not be calling us to any act of marvellous heroism—today. The time for that will come, and the strength for it, too, if we form the habit of living every day in the quickening consciousness of our Master's Presence. The great opportunities are few and far between. It is the little opportunities—grasped or neglected—which really make or mar character.

Oliver Wendell Holmes says quaintly: "One can't be all the time trying to do the best of one's best; if a company works a steam fire-engine, the firemen needn't be straining themselves all day to squirt over the top of the flagstaff. Let them wash some of those lower-story windows a little."

Are there any lower-story windows which our Master is calling us to wash, any little despised tasks which may let more of sunshine and good cheer into the darkened lives of other people? A general needs cooks as well as soldiers, if his army is to win in a protracted campaign—and cooks are useless without farmers behind them. Shoemakers, saddlers, tailors, and a host of other men—not to speak of women—must do their part, at a distance from the great conflict, to strengthen the hands and cheer the hearts of those at the front. Our Commander is calling each of us to do our allotted task, in cheerful faith. The issue of this War, and of all our struggles, is in His hands, and of all our obeying God's orders must be on the winning side, whether he be in England or in Germany,—for real victory is a matter to be decided in eternity, not time. Our side may win, and yet we may be losers, if we have been faithless, selfish, or cow-

ardly in the time of testing, if our cry has been only for personal ease and prosperity.

"Who are these that, linking hand in hand,  
Transmit across the twilight waste of years  
The dying brightness of a kindled hour?  
Not always, nor alone, the lives that search  
How they may snatch a glory out of heaven,  
Or add a height to Babel, oftener they  
That in the still fulfilment of each day's  
Pacific order hold great deeds in leash,  
That in the sober sheath of tranquil tasks  
Hide the attempered blade of high emprise,  
And leap like lightning to the clasp of fate."

DORA FARNCOMB.

### Readers of the Quiet Hour.

One of our readers has sent five dollars to bring good cheer into some needy homes at Christmas-time. She says it is a thank-offering for recovery from illness, and a way of passing on to others kindness shown to herself. I will gladly do my part in carrying out the wishes of the cheerful giver, who says she is "bubbling over with joy."

I am indebted to another reader for the information that the sermon from which I quoted largely in the Quiet Hour for Nov. 26, was originally taken from an English publication—"The Witness."

HOPE.

## The Ingle Nook.

[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper communications. (2) Always send name and address with 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.]

### Farming in Winter.

Dear Ingle Nook Friends,—It is not often that we touch upon actual farming in this department, is it? Yet to-day it seems impossible to get away from it, for out of the topic-drawer has tumbled, insistently, as though demanding its "place in the sun," the following clipping, evidently from some agricultural magazine:

"A barren soil that responds but feebly to the farmers' efforts is no place to look for a happy, cultured farming community. The discouragement of half-fed crops that struggle hopelessly through the season, gets into the blood of the farmer and his family. It is reflected in their lives. Life for them, as with the crops, is a succession of half-realized hopes. Their sensibilities become dulled through long wrestling with a stubborn soil. Something more than moral uplift is needed here."

Not a bad text, is it? for a bit of reflecting, for you and me,—for I always think of you as reflecting with me, and when I write down the words they seem to be yours as much as mine. A text, too, peculiarly fitted to the sympathy of the great many women in our country who are struggling with the problems of farming alone. Perhaps there are none in your neighborhood, but they exist, for all that. You would wonder if you knew how many private letters come to the Ingle Nook from just such women, some seeking for sympathy, some writing just for the relief of "telling someone," some asking for advice,—would that I were always able to give just the help needed!

Most of these women have been left in charge of a farm through the death of husband or brother, and, instead of breaking up the old home with all its precious associations, have chosen to keep on "somehow." "Why don't you retire to town?" say well-meaning friends; "Why don't you keep boarders?" "Why don't you start a small business and get away from the farm-work?" But the woman thinks better of it. It may be that she has always loved the quiet and the independence of the farm. It may be that she recognizes the dignity and worth of agriculture. It may

be that she appreciates its infinite variety, and sees very clearly the real brain-work required to manage even a small farm in a scientific way. No one needs to tell her how much more mental ability and effort are required to understand soils and plants and animals than to sell cloth over a counter, or cook meals for boarders, or even to run a banking business, for that matter. And the more intellectual she is the more does this appeal. The intellectual effort appeals to her, as well as the old associations. She knows that she must become, to some extent, chemist, botanist, biologist, and business-woman, and so she resolves to make the brave effort.

Sometimes she succeeds, even financially; personally I know two families of girls who have kept on making a good living from the farm, although left quite dependent upon their own efforts, and I know at least one woman who has made a marked success of the very farm on which her husband had conspicuously failed. But, of course, there is the other side, too, to be considered. There are the women who have also failed, this one perhaps because left with a mortgage too heavy for one frail woman's shoulders to bear, that one because of a farm half-starved to begin with, and yet another because of utter incompetence in herself. Discouragement comes; the farm has to be abandoned in the end, and the small boarding-house or the little corner store follows. For the women who incline to that sort of thing, and who want people about her all the time, the change may be all right,—but there is still the one who loves the farm and cannot be contented anywhere else, to be considered.

For one so constituted, it seems to me,—and if she be "brainy" enough—the great effort, to stay right on, must be worth while. Of course, without having had actual experience it is impossible to dogmatize, but I have just been thinking of the Belgians, the Portuguese, the Chinese and the Japanese, the Danes, who succeed in wresting a living for a whole family from a handkerchief-plot of ground that would scarcely be depended upon to keep a cow alive in this country. You know, in our excessive national arrogance, we sometimes think we can teach these "foreigners" everything; the truth is that very often they can teach us.

If you have read Jack London's "Valley of the Moon," you will remember his account of the teeming vegetation of the tiny farms of the Portuguese in California—their owners becoming rich where men before them had only become poor. In China, as you will remember, every inch of ground is cultivated, even to cliff-faces, which would be considered quite inaccessible for such purposes in our country. Denmark, in dairying and small-farming, has been a shining example to the world,—nowhere else dairy products so uniformly delicious in flavor, so invariably excellent in quality.

In Belgium, again, families lived well and happily, before the War, on tiny farms of from one to twenty acres; indeed, as Mr. C. C. James tells us in his report on that country, about ninety per cent. of the farmers, up to the present year, worked from one to ten acres.

And, mark this, "Belgium originally was a country of poor soil."—Now, does not this bring us back to our text, the discouragement of living upon "a barren soil that responds but feebly to the farmer's efforts. . . . the discouragement of half-fed crops." Does it not seem rather evident that in that word "half-fed" lies the whole crux of the matter? Soil that is half-fed simply can't give returns; every country that has resorted to intensive culture has found that out. If a man is half-fed, what do you do with him to bring him back to strength and usefulness?—Why, feed him. If a plot of ground is half-fed, what must you do with it?—What but feed it. There is absolutely no difference. To quote Mr. C. C. James again: "The three most striking facts in connection with Belgian agriculture at the present time are:—Firstly, its intensiveness; secondly, the marked decline in the cultivation of cereals for human consumption, notably wheat; and thirdly, the great development of cattle-breeding."

You, dear woman farmer, if you look about you, must recognize the import-

tance of the last phrase in the above sentence. You must see that the farmer who has few cattle, and who is careless about conserving stable-fertilizer, the only kind that is of much use, never has other than a half-starved, scantily-producing farm. Wherever you see a manure-pile leaching in sun and rain, you may be sure that poor farming is going on. There is an excruciatingly funny chapter in Mark Twain's "A Tramp Abroad," that tells about the manure-piles in a certain section of agricultural Germany. A man's wealth was estimated by the size of the manure-pile on his farm: when a young man went to "see" the daughter of the family he took a mental inventory of the manure-pile—and so on, in Mark Twain's own ridiculous way. But perhaps even the great American humorist, with the shrewdness of his nationality, recognized that there was some foundation for such basis of wealth. Probably the rich fields of vegetables and grain, no more than the manure-piles, were lost upon him.

If these foreign countries have long since found out the absolute necessity of feeding the land, if Belgium, in comparatively few years, has developed "a rich agriculture out of a poor soil," why should not the discouraged farmer, or woman-farmer of Canada take hope? And why should not the woman-farmer, especially, seize upon the principle of soil-feeding as a solution of her difficulties? Intensive farming—making every square foot of soil yield the very most possible—is surely for her if for anyone, and there are books and articles enough to tell how it is done. If she can induce ten acres, or twenty, to yield a good living with a little to spare, why should she worry over keeping seventy-five acres, or one hundred, under cultivation? Of course, she must be sure of her operations. She can't farm without brain-work any more than a man can. She must know exactly what to grow to command the best market in her locality; she must know how to prepare all products for market in such a way that will cause them to be marked "Excellent" wherever they go; she must know how to manage workmen to get their intelligent and cheerful co-operation; and she must know just how to keep enough cattle or how to purchase enough fertilizer to feed her land. If she cannot do all these things her experiment in intensive cultivation is likely to prove a failure, and she will end by—blaming the system.

Most women who have to fare forth in any such way, find it safest and best to tread warily, beginning in a small way and working up. I remember reading a little pamphlet published some years ago, which excellently illustrated this point,— "The Poor Man's Cow," written by a Mrs. Jones who, at that time, figured in dairy circles in Ontario,—a woman who began in a very small way, with one cow, and ended by having a fine dairy stable in which were individual cattle valued at thousands of dollars. She had mental ability, and common sense, and perseverance,—and she used them all.

Another example—a man this time—is Mr. Lewis Clarke, of Port Hope,—a civil engineer ("a gentleman with ten generations of gentlemen behind him," one who knows him has told me) who, a few years ago came to Canada, broken in health, and "started" with thirty chickens in the poultry business. To-day he has the largest poultry plant in the Dominion, and has regained his health besides.

But success in any of these things demands that all conditions be right. The dairy business where any detail of cleanliness and good feeding is overlooked, cannot pay; the hen-business where health conditions in the pens are disregarded, or where skunks or weasels are permitted to break through and take toll, must be only a failure; and so it is in regard to other things.

This is a very business-like screed, isn't it? But business must be touched upon sometimes. A certain degree of material prosperity is needed by the most of us to keep us cheerful and hopeful. Sensibilities do become "dulled" through too much failure after incessant struggle. More than "moral uplift" is sometimes necessary. We need a little extra over mere necessities to procure the books and other advantages that our mental welfare requires.

I have not written all this by way of instruction;—how can one instruct where one has not had personal experience? But the achievements of the peoples and individuals whom I have mentioned seemed suggestive. Most of all I have talked on in the hope of inducing some of our women-farmers who have "made good" with the experiment, to write us. Do you know anything of intensive farming or gardening which a woman can do or manage? Have you seen any of the famous "French" gardens, managed by women, in England? If so, write and tell us all about it, won't you? There are so many who need help just along these very lines. JUNIA.

Pickling Queries.

J. L. Grey Co., Ont., asks some questions that are scarcely seasonable, but whose answers will "keep" until they are. (1) How to pickle corn, green tomatoes, and beans. (2) How to make mustard cucumbers. (3) How to cure pork in spring. (4) How to remove hair from the face.

I have no receipt for pickling corn, but here is one for canning it; I should imagine that canned corn could be made into pickles any time by adding vinegar and spices. Husk the tender corn, cut half the kernel into one basin with a very sharp knife and scrape the pulp into another. When you have enough, cook the first part until the corn is nearly done, then add the pulp and finish cooking. Just before filling the jars, which have been thoroughly sterilized, add tartaric acid, a tablespoonful to a gallon of corn. Pack the corn into the sealers while very hot, until full to overflowing, and seal at once, using two rubber rings dipped in boiling water. When cool enough to handle, wrap in paper and set away in a cool, dark, dry place. Before using, put a pinch of soda into the corn and skim off the foam. About a quart of water to a gallon of corn will be needed to keep it from burning.

Green Tomato Pickle.—Slice the tomatoes, sprinkle lightly with salt, weight, and leave over night. In the morning, drain, mix with sliced onion, and cook in spiced vinegar.

Green Beans, Canned.—One gallon of beans, strung and broken, 1 pint pure vinegar, ½ cup white sugar. Boil one-half hour in one gallon of water, reckoning the time after the water begins to boil. Seal in sterilized jars.

Cucumber Mustard Pickles.—One-half peck small cucumbers, 2 quarts small, silverskin onions, 2 heads cauliflower picked apart, all soaked over night in salty water. In the morning mix 1 dessertspoonful of turmeric powder, and ¼ lb. best mustard with sufficient vinegar (from three quarts) to make a smooth paste. To the rest of the vinegar, heated, add 1 lb. brown sugar, ½ ounce each celery seed and white mustard seed, 1 teaspoonful each of cinnamon and cloves, and five cents' worth mixed spices for pickling.—Carefully add the mustard paste and let it boil well, then add the mixed vegetables, with two red peppers finely chopped, and after it begins to bubble, allow it to boil well until just cooked.

To Cure Hams, Beef, Pork, etc.—Take 9 lbs. salt, 3 lbs. sugar, 1 pint molasses, 3 ounces saltpetre, 1 ounce soda, 5 to 6 gallons water. Heat slowly until the salt is dissolved; boil and skim, and cover meat with the liquid. Leave for 5 or 6 weeks, then smoke every day for a week. . . . Another, which does not require smoking, is as follows: To salt pork dry, take a mixture of 4 lbs. good fine salt, 1½ lbs. brown sugar, and 2 ounces saltpetre for each 100 lbs. meat. Apply three times for hams and shoulders, and twice for bacon, rubbing in well, at intervals of perhaps a week.

Hair can only be removed from the face by electrolysis. Better write to the Hiscott Institute, College St., Toronto.

Midwinter Cookery.

Parsnips a la Mode.—Scrape and boil the parsnips, then mash smooth and pick out the fibres. Season with pepper and salt. Add 4 spoonfuls of cream and 1 of butter, heat to boiling point, and serve.

Celery in Sauce.—Cut three heads of celery into finger lengths, parboil in

boiling water, then drain and put to cook in a cupful of stock. Cover with a brown butter sauce, and serve. White cream sauce may be used instead if liked.

Canelon of Beef.—Two cups cold roast beef seasoned with salt, pepper, and a dash of nutmeg. Stir in one beaten egg. Roll some pie pastry into an oblong sheet, moisten the beef with thickened gravy and place in the middle of the sheet, and roll up and press down the ends. Bake to a good brown, and serve hot.

Cranberry Shortcake.—Make a good biscuit dough and roll into two layers ½ inch thick. Spread the first with butter, lay the second on top, and bake quickly. Remove from the oven, separate the crusts, and put together again with a thick layer of stewed and sweetened cranberries. Spread more of the fruit on top, and serve very hot.

Boston Baked Beans.—Soak three pints of beans in cold water over night. Parboil them in fresh water the next morning. When they begin to soften, drain them in the bean-pot with one-half pound salt pork in the bottom and another similar piece on top. The pork should be streaked with fat and lean, the rind side, which has been scored in squares, uppermost. Mix one large tablespoonful of dry mustard in one-half cup molasses, and pour over the contents of the pot, fill with boiling water and put on the lid. Bake slowly for eight or ten hours, adding more boiling water as that over the beans cooks away. This will be enough for several meals. May be served with catsup. As beans are very nutritious when cooked in this way, they may take the place of meat occasionally.

Corn-meal Pancakes.—For 2 cups sour milk, use 1 even teaspoon soda, ½ teaspoon salt. Dissolve salt and soda in ¼ cup hot water, add to milk, also 2 eggs beaten light, and 1 sifted heaping cup cornmeal and ½ cup flour. These are very light when cooked quickly. Serve with butter and syrup.

The Scrap Bag.

TESTING OVEN. Use a bit of white paper to test the oven. If it turns brown the oven is too hot.

GREASE ON FLOOR. To remove grease spilled on a floor, cover thickly with salt, and rub with your foot or something heavy, then sweep up the salt.

CARE OF LINEN. A linen cupboard is essential, and if possible one with deep, wide shelves, should be selected; the shelves must be covered with clean white paper, and it will be found an excellent plan to write a list of all contained in the cupboard, and fasten it on the door.

At least twice a year the contents of the cupboard should be carefully looked through, in order to see what articles need renewing, and what may be done with those that show signs of wear and tear.

Tablecloths should be neatly darned on the very first sign of even a tiny hole making its appearance—linen thread is the best to use for this purpose. When quite unfit for use, tablecloths may be cut into tray-cloths, and lace may be sewn around the edges to make them more ornamental.

Sheets usually show signs of wear first in the middle, and can easily be repaired by sewing the edges together, then cutting the sheet up the center and hemming the sides down neatly.

Pillow-cases should be inspected every time they return from the laundry, to see they possess all their buttons or tapes. When it is needful to make a patch, every care should be taken that it may be neat and serviceable; the patch should not be of material much stronger than the linen on which it is laid. It must be sewn on by a thread, and must be large enough to cover all the thin part it is intended to strengthen.

ON THE COOKING OF MEAT.

When preparing a roast for the oven, wipe it with a wet cloth and trim off any superfluous ends. If the meat is lamb or mutton, look it over carefully

for hairs or bits of wool which would impart a strong, disagreeable odor to the meat. As salt tends to draw out the juices, it should not be used until the meat is ready to go in the oven—some prefer to wait until it is half-done. Dredge well with flour, then place the meat on a rack in the dripping-pan; this allows the heat to reach it from all sides. Place at once in the oven, which is, of course, at the proper roasting heat. It is well to place some of the trimmings of fat in the bottom of the pan to give an abundance for basting. In fifteen minutes, draw the pan toward the oven door, and with a large, long-handled spoon, dip up some of the liquid fat in the pan and ladle or "baste" it over the meat until top and sides are moistened. Do this as quickly as possible, push back the pan, and close the oven. Repeat the basting process every fifteen minutes at least, as such frequent basting makes the meat more juicy. Should the oven be so hot that the fat in the pan is in danger of burning, a little boiling water may be added to avert trouble, and the heat may then be reduced slightly. Should meat or a projecting bone seem likely to burn, cover with a twist or flat piece of paper.

The time required for roasting varies slightly according to the meat. In all cases, ten minutes for heating through at first is allowed. Beef needs from twelve to sixteen minutes to the pound, according as it is desired, rare or well done; mutton, fourteen to eighteen minutes. Lard and pork must always be well done, and from twenty to twenty-five minutes a pound is necessary.

When the meat is done, transfer it to a hot platter. Pour off and put aside (for other cooking) all but a couple of tablespoonfuls of the fat in the pan. To what remains, add two tablespoonfuls of dry flour and place the pan over the fire, stirring until it is well browned. Gradually add a pint of boiling water, stirring until smoothly thickened. Add seasoning to taste, boil up once, and strain into a boat. This is a good every-day gravy, not a fine sauce.—Selected.

Old Year Memories.

- "Let us forget the things that vexed and tried us,
- The worrying things that caused our souls to fret;
- The hope that, cherished long, were still denied us
- Let us forget.
- "Let us forget the little slights that pained us,
- The greater wrongs that rankle sometimes yet;
- The scorn with which some lofty one disdain us
- Let us forget.
- "Let us forget our comrade's fault and failing,
- The yielding to temptation that beset. That they perchance, though grief be un-availing,
- Can not forget.
- "But blessings manifold, past all deserving,
- Kind words and helpful deeds, a countless throng,
- The fault overcome, the rectitude un-servicing,
- Let us remember long.
- "The sacrifice of love, the generous giving,
- When friends were few and handclasp warm and strong,
- The fragrance of each life of holy living,
- Let us remember long.
- "Whatever things were good and true and gracious,
- Whatever of right has triumphed over wrong,
- What love of God or man has rendered precious,
- Let us remember long.
- "So pondering well the lessons it has taught us,
- We tenderly may bid the year "Good-bye,"
- Holding in memory the good it brought us,
- Letting the evil die."—Selected.

### A Christmas Wedding.

By T. H. Bosnor.

Be it known unto all men, that I was due to marry the sweetest, prettiest, dearest, etc., etc., girl in the whole world on Christmas Day 1909.

It seemed like a sufficiently simple proposition to come from Western Canada to a town in Nova Scotia, get the loveliest darling on earth and start for our future home.

Had I known the difficulties that were to beset my path I would probably be buying "bachelor's" buttons yet; but the immediate future was kindly hidden from my eyes.

Everything went smoothly at first. There was snow, that necessary adjunct to a perfect Canadian Christmas, and the weather was as bright as my spirits. I was to reach the "most perfect's" home at eleven a. m. The wedding was to be at four p. m., and we were to take the eight o'clock train for Happiness. Bliss County, Forever-After Province. This was all to happen on Christmas Day.

The day before, something,—the god of Chance or some imp—put it into my "dearest love's" head to go down the line to meet me. She wired me to that effect, but with the up-sidedness of things at that season of the year I missed the wire, and our telepathic apparatus must have been out of gear for no whisper of her plans reached me; therefore I did not leave the car at the place of her appointed meeting.

The train only waited there a minute or two, and while my "own and only" was in a state of indecision because of my non-appearance, the train vanished from her sight and she, like Lord Ullin of ancient fame, was "left lamenting."

She had, however, given a hurried sketch of my personal appearance to the conductor and he, being sharp as those fellows are, spotted me in a few minutes.

It was his turn then at trying his hand at describing personal appearance, and I had no trouble whatever in recognizing my "heart's joy."

Then, what to do was the question. The conductor, although no doubt consumed with inward mirth, was outwardly sympathetic and full of suggestions.

"I could stop at the next station, wait for an up train, take it and all would be well. We would still be in time, etc., etc."

I took his advice. At least, I took part of it. I got off at the station all right, and I make a special note of this as it seemed about the only thing I did do right. As soon as I got off I began to make enquiries about trains and found that there was a freight about ready to leave. "Why," thought I, cannot I go back on this freight and join my soul's desire before her train starts?"

Having found that the train (freight) was due to arrive at Codfish Creek—which was the dearest spot on earth to me just then—in time with twenty minutes to spare, I boarded it. I trusted that train man and his twenty minutes, and my heart almost fails me as I write what happened. We were hauled up at a siding when a train rushed past us. It was next to the side of the car on which I was sitting, and as I was idly looking out my startled gaze rested for a second on the one face that had been enshrined in my heart for many days. What kind of a trick was Old Father Christmas playing on us? I had always understood that he was supposed to rule things at this season of the year, and up to now he had always had my sincere respect; but what was I now to think?

I jumped off the car. I argued with and questioned everybody who would listen to me, but without result, except to give people the idea that I was drunk.

At last I found a man who was not so filled up with his own affairs but that he would listen to mine.

"When was the next train going east?" I asked.

"Not for two hours," was the discouraging answer.

"How long did the Maritime stop at?" I didn't know where to say. Where

was my love most likely to stop? I couldn't tell and while I hesitated, my friend broke in,—"Oh that's a fast train. She don't stop nowhere hardly. But if you took a team you might catch her at Matt's Dam. The railroad takes curves but you could go straight. And you could wire the girl,—it is a case of girl, I take it—to wait for you there."

For the first time in nearly two hours—or was it two years?—that struck me as being the only sensible suggestion that I had heard and I felt like falling on my benefactor's neck but refrained, not knowing exactly how he would take it.

I told him to "bring forth the horse and be quick about it." He replied he "hoped I would be as quick with the dollars to pay for it," and departed; but soon returned with what he called a horse. I was about to make some remarks; but he cut me short. "Don't be scared, this horse is like a singed cat, better'n he looks. I brought you an umbrella," and he handed me what I would have named a piebald tent, if he had asked me, which he didn't. My mind had been in such a state that I hadn't thought about the weather, and now I observed that it was raining and had every look of keeping on.

"I calculate we won't have much snow in an hour or so. It's going to be blamed dark too."

It was indeed. In fact it was about "blamed dark" now. Well, we started and we got there. I dug up the required ducats and my friend departed with his umbrella. When I thought of how I could have "sported" on those self same ducats, I wondered if it was an occasion like this that had given the place the name of "Matt's Dam."

I won't go into the details of the meeting with "my precious pet." For as much as five minutes I forgot my worries. Then they returned in full force, for now I had to worry for two.

The Station Agent, who was making merry in the bosom of his family, and was very loth, at first, to leave (later he seemed loth to depart) informed us that our last train for that night had gone; but said he, "there is either of two things you can do,—You can start in a freight train that will be along in about fifteen minutes, and that will take you within fifteen miles of where you want to go, and you can drive the rest of the way,"—he paused to see how that would strike us.

My "heart's sunshine," who, until now, had borne up nobly—barring a few tears and clingings—at this broke down and wept openly.

By this time the roads were mud, the night dark. The prospect did not look alluring, so I shook my head and intimated that I would like to hear his other proposition. "Well, you can board the first train to-morrow morning which will land you at your destination at three thirty." "But man alive," I gasped, "We are to be married at four o'clock, best man, bridesmaids, orange blossoms and all the fixings. Guests will be there, everything but us, and on this occasion we are IT."

"Console yourself," he grinned. They can't have the wedding without you, and talking of weddings, reminds me that there is a big one near here to-night. The Parson is from town. The right brand wasn't in the place so they had to import one. He intends taking that train I was just telling you about. His name is Mickle—old Dr. Mickle—perhaps you have heard of him?

"Heard of him! Well I should think so. He is due to marry us—I did not mean the Station Agent—to-morrow, or maybe it's to-day?"

"Just about that. Now look here, I have it. I suppose you have your license, as you couldn't get it Christmas Day, well you two are here, the Parson is here, or will be before long. There is no mortal chance of your being at home and clothed in wedding togs ready to be married at four o'clock to-day. Telegraph to the folks that you will both be ready for lunch at five, and when the Parson arrives, get married here."

It took my breath away, and as for my poor little bride-to-be it was almost too much for her. Not much wonder,

after all she had been through. But she pulled herself together and after a good deal of talk so it was decided. And I was more than proud of my girl who could so rise to the occasion. As for me, I was only too glad to avoid being stared at by fifty pairs of eyes during what is always a trying performance to a man.

We were married and arrived home in time to dress for the wedding supper; but to this day none of those guests will believe the whole thing was not all planned beforehand so as to be married "a little different from other folks."

### The Windrow.

There are 80,000 more women than men in Norway; 1,800,000 more men than women in the United States; and 1,300,000 more women than men in the United Kingdom.

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Three years ago the school fair was first introduced into Ontario. Recent statistics show that last year 148 fairs were held, embracing 1,391 schools, and with a total attendance of 95,310. The school fair is distinctly educative; it should be a feature of every rural school section in the country.

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A good story of General Dormer is told in "The Laughter Lover's Vade Mecum." Upon one occasion he found it necessary to impress some Arab spies who had laughed at the idea that the English could do more than the Mahdi. "Can he do this?" said the General, taking out his glass eye, tossing it in the air and putting it back again; and the Arabs, praying fervently, departed in haste.

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In England an energetic body known as the Women's Emergency Corps is devoting itself to collecting money to spend in promoting home industries, thus to lessen distress caused by unemployment due to the war. At Ainsdale one of the most devoted workers is "Deccan," an Irish Setter, who with his W. E. C. collecting-box is becoming quite a noted character in the town.

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The peculiar color of the German uniforms has been a subject of much interest in military circles. Richard Harding Davis, in an interesting article in Scribner's, dealing with the entrance of the enemy into Brussels, the capital of Belgium, refers to it: "For two hours," he says, "I watched them, and then, bored with the monotony of it, returned to the hotel. After an hour, from beneath my window I could still hear them; another hour and another went by. They still were passing. Boredom gave way to wonder. The thing fascinated you, against your will, dragged you back to the sidewalk and held you there open-eyed. No longer was it regiments of men marching, but something uncanny, unhuman; a force of nature like a landslide, a tidal wave, or lava sweeping down a mountain. It was not of this earth, but mysterious, ghost-like. The uniform aided this impression. In it each man moved under a cloak of invisibility. To describe its gray-green color is impossible, because it has no color, and yet it absorbs all colors, and reflects no light. We saw it first in the warm summer sunshine, later under the glare of electric lamps, hours later in the gray of the morning. At all times the men clothed in it were indistinguishable. They blended with the gray stones of the street, with the green of the trees; they shifted and merged like drifting fog. Even as you pointed they dissolved into thin air. It was like a conjuring trick. It is a fact that often you would see advancing toward you a troop of horses and you could not see the men who rode them." This "monstrous engine," the writer continues, referring to the German military system, "is, perhaps, the most efficient organization of modern times; and its purpose only is death. Those who cast it loose upon Europe are military-mad, and they are only a very small part of the German people. But to preserve

their class they have in their own image created this terrible engine of destruction. For the present it is their servant. But 'Though the mills of God grind slowly, yet they grind exceedingly small.' And, like Frankenstein's monster, this monster, to which they gave life, may turn on them and rend them."

### The Beaver Circle

#### Our Senior Beavers.

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

#### A Resolution.

Here's a New Year's resolution  
Anyone can make and keep;  
It will help one's constitution  
And enable one to sleep:

"I will try to keep from fretting  
When I cannot see the sun;  
I will try to keep from getting  
Into quarrels I may shun.

"I will try to keep from grieving  
Over troubles that are past;  
I will try to keep believing  
Things will all come right at last.

"I will try to keep from sighing  
When I ought to smile, instead;  
I will try to keep on trying  
To deserve to get ahead."

#### Funnies.

Two little boys who had been naughty all day were told by their teacher that they must stay after school and write their names 500 times.

After the other pupils had gone they fell to work, and for several minutes wrote away without a sound. Then one of them began to watch the other unhappily.

"Why don't you write, Tommy?" asked his teacher.

Tommy burst into tears. "Tisn't fair!" he said between his sobs. "His name's Lee and mine's Schluttermeyer!"

#### MORE IMPORTANT.

Little Marjorie came to tell her Sunday-school teacher that she would have to give up her part in the Christmas exercises.

"Oh, Marjorie!" lamented the teacher, "don't say that. Have you lost your Christmas spirit so soon, my dear?"

Marjorie shook her head. "Not my Chirithmath thpirit," she lisped. "It 'th my front teeth."—Winifred Arnold.

#### HAZEL YELLAND'S GARDEN LETTER

Dear Puck and Beavers,—Early in the spring I made a plan of my garden. I had more plants and seeds than last year, so I needed more ground.

I planted my flowers by themselves, on one side of the path, and the vegetables on the other. I planted the rows closer together; there were more flowers, and not so much room for weeds to grow.

I dug a trench and planted sweet peas, scarlet runners, and climbing nasturtiums. I put strings for them to climb up on the woodshed. They all grew well. Soon after the peas started to blossom, a very small, pale-green insect, very like the rose aphid, started to work on the vines and leaves, and they turned yellow. In a few days they were all dried up. My beans and nasturtiums were splendid. I planted one row of dahlias, different colors, and one row of gladioli, all red ones.

On my garden plot of last year, quite a lot of flowers grew from seeding themselves. There were white nicotiana, snapdragons, all colors; larkspur, blue and pink; caleopsis, asters, white and pink; candytuft, white, and summer cypress. Those I transplanted to my garden the last week in May.

I sowed seed of yellow daisy, lilac daisy, Joseph's coat. It is a beautiful plant, and the colorings were splendid. I had some verbenas given me for my garden, also pink cosmos, and enough feverfew for a border each side of the path. I kept it trimmed off until the other flowers grew up, when I let it

grow, and it became white, with little, daisy-like flowers. I left a piece at one end of the garden to grow as it would, and it was wild-looking—flowers and weeds as thick as they could grow. Everybody that saw it wanted to know what it was. When I explained to them they could see what hard work in a garden would do.

I planted my cucumbers in two rows, by the side of each other, with radishes between. We had the radishes pulled before the cucumbers spread, and they were both fine. I planted two hills of citrons, and a bed of small onions for green ones; they were good. A row of beets and a row of golden-eyed wax beans, for green ones, were a good crop, and a row of sweet corn. We had our first green corn the 2nd of August.

It was quite a large garden, and the weeds grew very fast, the pigweed and lamb's-quarters, and some round-leaf mallow.

There were a lot of butterflies, "Monarch," "Mourning Cloak," and "Meadow Brownies," and white and yellow ones. I caught a lot of different kinds for my collection of insects.

I saw a toad just outside my garden; it was the largest I ever saw. It was an orange yellow, with black warts on it. It was queer looking. I lifted it on the hoe and put it in my garden, but it did not stay long; it was very shy. I think it went under the wood shed.

I think this is all I can tell you about my work. It was a great deal harder to do the work than it is to write about it, but it is interesting work.

I am sending a snap of myself and flowers. I was going to have one of the vegetables, but you asked for only one, so I send all I have. It is not very good. It was taken on August 28th. Hoping this will escape the w.-p. b., and wishing the Beavers every success, I remain one little Beaver.

HAZEL YELLAND (age 14). Port Hope P. O., care of Fred. Ough, R. R. No. 1

EVAN LEIGH'S GARDEN.

In the winter I decided to try the Garden Competition. The first thing I did was to draw out a plan for my garden, and then I looked through the seed catalogues and sent for the seeds I wanted.

The first thing I did in the flower garden was to mark the shape of the beds. Then I dug the old earth out of the beds down to a depth of one and one-half feet. When I had done this I wheeled the dirt away in a wheelbarrow.

Papa brought one load of earth from the bush, and one load of sandy earth. I put the two kinds of earth into the beds and mixed them together. This made a very rich, loose soil.

As soon as I finished getting the beds ready for the flowers, I raked a piece of ground 8 1/2 x 8 1/2 feet in the garden for the vegetables. This piece of ground had been ploughed last fall.

There was a deep hollow at the front of our house. Papa filled in this hollow, built a stone wall around it, and then planted a cedar hedge on the outside of the wall. On the inside of this wall I had my flowers. They required a lot of water, because of the lawn being raised up like this causes the earth to dry out quickly.

To the back of the flower garden is our house. On the north side is a shop, and along the east and south sides is the cedar hedge. My flower garden is 24 x 15 feet.

Along the house I planted sweet peas. I sowed them April 18th, because they have to be in early. The other flowers I planted April 26th. I planted balsams in a box, and put it in the window behind the sweet peas. Beside the shop I sowed canary-bird vine and morning-glories. About five feet from the vines I planted a row of petunias in a long-shaped bed; but they didn't grow, so in their stead I put a row of balsams in the middle of the bed and a row of daisies on each side. In a bed next to the balsams and daisies I planted asters and candytuft. This bed is a horse-shoe shape, on the inside. At the bottom of the horseshoe, in the middle, is a little, round, balsam tree; at each side of the tree in front of the asters I planted a row of low hollyhocks. Along the south side of the hedge I planted nasturtiums in a long box. I made an arch out of maple gads and put it be-

tween the hedge and the house. Around the arch I planted canary-bird vine and morning-glories.

For vegetables I had watermelons, tomatoes, squash, beets, and carrots.

I kept the ground moist by watering it a little till the flowers and vegetables came up; then I watered them every night. In May I did the transplanting and thinning out. I put stones all around the flower beds and whitewashed them. I also whitewashed the nasturtium box.

When the sweet peas and canary-bird vine began to climb I made a rack for the sweet peas and put strings up for the canary-bird vine and morning-glories to climb on.

I brought earth from the bush and put it around the flowers. This nourished the plants and made them grow.

The sweet peas and canary-bird vine began to flower July 1st. The sweet peas were not as thick as they should have been, but my teacher says that they were the best sweet peas she had seen this year.

The canary-bird vine is very pretty; it hangs in clusters, covered with a yellow flower which looks like a canary bird. There were a lot of bees and humming-birds around the canary-bird vine.

The nasturtiums were pretty; there were a lot of different shades.

About the middle of July the low hollyhocks flowered. The flowers look like single petunias. They are a shell-pink color, gradually getting darker towards the center. We have never seen it advertised in any seed catalogues.

The balsams were pretty; there were a lot of different shades. Some were spotted, some were striped, and others looked like roses. Balsams require more water than some other flowers.

I had a lot of bouquets off the asters and sweet peas. I noticed lice on the sweet peas, and green bugs on the canary-bird vine. I killed all the bugs I saw. When the weather was very hot and dry I carried eight pails of water from the creek, a distance of one-third of a mile there and back, every day for my flowers.

About the 3rd of September I had the picture taken. I pulled the vegetables, piled them up beside the flowers, and had them taken together.

The picture didn't take very well. I am afraid you can't tell what my garden was like by it.

EVAN LEIGH (age 13). Hawkestone, Ont.

Their First Christmas.

By J. Winnifred Colwell, Brockville, N.B. (As a farewell to the members of the Beaver Circle.)

Down in the slums of one of our great cities where busy workers are now at work striving to lessen the burdens of the poor, there lived many years ago a poor family by the name of Winthrop. Indeed, Thomas Winthrop was the only one in that district who could boast of a fancier name than Jones, Brown, Smith, or Green. Many a taunt was thrown, not only in his direction, but his family's as well. But all nevertheless believed in that old maxim:

"Sticks and stones will break your bones, But names will never hurt you."

So in this way they managed to keep at least peace with their more warlike neighbors till Mrs. Winthrop's death, when her husband claimed them as his chums and paid little more heed to his children's development.

Young Thomas Winthrop, the hero of my story, was usually called "Junior." He was a short, sturdy, ruddy-haired urchin, newsboy part of the time and bootblack the rest. His brother Jim rejoiced in the same trade. Each morning the two would set out, Junior with his papers and Jimmy with his blacking apparatus. Later in the day the boys "swapped" jobs on account of an old saying of Juniors, "Striking at the same job all day made a feller kind o' tired o' nights." Change of jobs is good for the constitution.

One bitter evening following a day which had proved ill for the brothers, they were shuffling along through the darkened streets to the miserable hut they called home. Well did they know that a drunken father, sitting in hand,

was impatiently waiting them and their day's earnings. That switch, as Junior expressed it, "helped to keep them warm all day." But Jimmy, the weaker of the two, could not look upon things as Junior did, and consequently allowed his spirits to droop and his smiles lessen, especially when the picture of his daily whipping was forever in his mind.

"Junior," said he on the night in question, plucking his brother's sleeve, "don't let's go home. 'Pears to me I can't stand the old cat (switch) to-night!"

Junior squinted gravely at the starlit sky.

"Jim," said he, directing his gaze to his trembling brother, "the old cat's got to come! Colder day to-morrow, my boy, by the looks of things!"

Jimmy shuddered.

"Don't," he gasped. "Taint funny, Junior, you know 'taint, and besides—'Hist!"

Junior hugged his brother close to him, and both crouched low in the shadow as a well-known figure made his way along the street. The switch showed plainly in the moonlight, so that the brothers hardly dared to breathe till it and its owner had passed by. Then, hand in hand, they retreated in the shadows as much as possible. A yell of rage from the rear caused them to break into a run. Slowly their tormentor gained on them till a friendly banana peel proved to be the first benefactor, and a fur-muffled gentleman a second, to whom the brothers breathlessly related their tale of woe.

An entire change of scene. A room of the rich—a mass of brown velvet which soon resolves itself into a curly-haired boy, a lady resplendent in the fashion of the day, tying up numerous boxes in tissue paper and gay ribbons—a fat poodle at her feet disturbing the quiet of the room by an occasional grunt, followed by a smiling reproof from his mistress.

Into this room which I have just described Jimmy and Junior were ushered by their kind benefactor. Dirty and ragged? No, not long, for these proved to be enough small boy's attire to deck them out like golden-haired Herbert. While they were exploring the wonders of Herbert's play-room, their kind benefactor was down-stairs relating the tales of woe to his wife.

"I brought them home," said he, "because I want them to have what they never had before—a merry Christmas."

A merry Christmas? It was indeed merry, and though the brothers are men now, every gift, everything, is still clearly pictured in their minds. They still talk of the plump stockings, the turkey, the plum pudding, and the first talk with old St. Nick. They are rich now, and every Christmas the "Winthrop Dinner" is hailed with delight by every urchin who receives one, for Jimmy and Junior have not forgotten the Golden Rule.

Junior Beaver's Letter Box.

[For all pupils from the First Book to Junior Third, inclusive.]

Dear Puck and Beavers,—This is my first letter to your Circle. My father has taken "The Farmer's Advocate" for about six years, and likes it fine. I go to school about every day. My teacher's name is Miss Annie Secord. I am in the Senior Second Class. I am nine years old. I will end with a riddle.

Where does the time go the quickest? Ans.—In Italy; because you turn around and see a dagger.

ELLA D. PAMPLIN, R. R. No. 1, Harley, Ont.

Dear Puck and Beavers,—This is my first letter to your Circle. I live on a farm. My father has taken "The Farmer's Advocate" for three years, and would not be without it. The C. P. R. runs between our two farms. We built a new barn this summer. For pets, I have a cat. I go to school every day; our teacher's name is Miss E. Murray. We like her fine. Well, if my letter is too long you can give it to the w.-p. b. PERSIS M. ELLIS (age 10, Jr. III), West Bury, P. Q.

Dear Puck and Beavers,—This is my second letter to your charming Circle. I wrote once before, but I didn't see it in print, so I thought I would write once more. We live on a big farm. I go to school about every day. I live about half a mile from school. Our teacher's name is Mr. John Thomas. He has taught in this one school for forty years. I will come to a close now for a few riddles.

What has eyes and cannot see? Ans.—A potato.

What goes up and down and never touches earth nor ground? Ans.—A pump-handle.

I hope my letter won't get into that nasty w.-p. b.

BRITANNIA DENYER (age 11). Waterloo, Ont., R. R. No. 3.

Dear Puck and Beavers,—We have taken "The Farmer's Advocate" for a number of years. I am learning to play on the piano, and like it very much. We had a concert on Hallowe'en, and it was very good. I sang two songs; one with my sister, and the other with my school chum. I go to school every day. We have over fifty pupils attending, and have only one teacher; her name is Miss Cook. We all like her real well. I will close, as my letter is getting long. Wishing your Circle every success. Bye-bye. MARGARET MCKENZIE. (Age 11, Jr. III.)

Dear Puck and Beavers,—This is my first letter to your delightful Circle. My father has just begun to take "The Farmer's Advocate," and I like it very much. For pets, I have one cat called Tommy. I go to school every day I can; our teacher's name is Miss Werly. I guess I will close, as my letter is getting long. I wish some of the Beavers would write to me. SADIE McLEAN (age 8, Sr. II.). Northfield Station, Ont.

Dear Puck and Beavers,—I am going to write to your charming Circle. I read the letters in the papers. I go to school every day I can. I am in the Junior III. Class. Our teacher's name is Miss Walker. I have five sisters and three brothers. My pets are my brother, age five months; his name is George Wilbert, and my sister, age two years; her name is Vela Velma Jean. I guess I will close, as my letter is getting rather long. I hope the greedy w.-p. b. is not hungry. Hoping to see this in print. LOUISE MOORE. P. S.—I would like some of the Beavers to write to me.

Dear Puck and Beavers,—I thought I would write to your interesting Circle. We have three horses and one colt. My father has a dog; his name is Major. For pets, I have a cat; his name is Tom. I hope this will escape the waste-paper basket. I am in the First Book. Good-bye. LILLIAN MOORE (age 9 years). Tyneside, Ont.

Your True Friend = the Dog.

By Mary D. Hedden.

Do not turn a homeless dog aside when he appeals to you for food and shelter, but take him in. This is a duty you owe your God toward His helpless dumb creatures, which were placed on earth in our care. They are ours to use but not to abuse or permit others to do so.

Never be ashamed to speak in defence of those who cannot speak for themselves. It is only the cowardly and weak that stand by and see cruelty committed and make no effort to stop it.

Treat your dog kindly, for a cross word from your lips cuts deep. A kind word or act makes him supremely happy and contented. Feed him well; give him plenty of fresh, clean water to drink; make him comfortable and warm; and for this kindness he will ever be grateful. He will love you, appreciate his home and guard it for you. CAN YOU FIND A HUMAN FRIEND AS FAITHFUL AS YOUR DOG?—Our Dumb Animals.

### To Please Husbands.

Here are some ways for the new housewife to please the new husband—or for the older housewife, either, for the matter of that, but, if she didn't begin when she was new the chances are she won't reform:

Always serve hot foods in hot dishes, and cold things in cold dishes.

Serve meals on time.

Keep the table linen clean.

Don't wear old street clothes for house gowns. A seven-cent print or lawn looks much better than a half-worn-out silk or broadcloth in the kitchen.

Learn to make good coffee, broil a steak and mix French dressing at once.

Spend some of your spare time studying cook books, menus and food principles. Nothing will please him better.

Learn at least one new dish every week, and introduce it into your menus.

If you never have gone or can't go now to a school of domestic science, ask your mother, aunt and grandmother to teach you their favorite dishes.

Form a housekeepers' organization and meet once a week to exchange house-keeping ideas and recipes. Such a club affords more real pleasure and profit than any of the so-called amusement clubs. Take turns meeting at the different homes. The woman who entertains demonstrates and serves her favorite dish.

Make it a point to have order and cleanliness reigning supreme when your husband returns from his day's work.

It is the duty and privilege of every wife to convert into happiness and a home such conditions and materials as are at hand.—Globe.

### Three Things.

There are three lessons I would write;  
Three words as with a burning pen,  
In tracing of eternal light,  
Upon the hearts of men:

Have hope. Though clouds environ now,  
And gladness hides her face in scorn,  
Put thou the shadow from thy brow,  
No night but hath its morn.

Have faith. Where'er thy bark is driven,  
The calm's disport, the tempest's mirth  
Knows this—God rules the hosts of  
heaven,

The inhabitants of earth.  
Have love. Not love alone for one,  
But men, as men, thy brother's call,  
And scatter, like the circling sun,  
Thy charities on all.

Thus grave these lessons on thy soul—  
Hope, faith and love—and thou shalt  
find

Strength when life's surges rudest roll,  
Light when thou else were blind.  
—From the German of Schiller.

### Your Thoughts.

If every thought you have to-day  
Could come alive to-night  
And visit you, would you rejoice  
And greet them with delight?

The loving, kindly, thoughtful ones,  
I'm sure you'd gladly meet;  
I think they come in shining white,  
All pure and fresh and sweet.

But oh, those dark and ugly ones,  
Deep hidden in the breast!  
I wonder in what shape they'd come,  
In what sad hues be dressed!

And rooted well, these thoughts do live  
In actions, great or small;  
And sometimes, somewhere, as results,  
You'll meet them, one and all.

So here's a golden one for you:  
"For this day I shall strive  
To entertain no thought but those  
I'll gladly meet alive."

### Alone!

Out of a million lamps  
That spell the city's night,  
Lord, give my lonely eyes  
One little light!

Out of a million men  
That love and toil and seek,  
Lord, let one other soul  
Find mine and speak!

Claire Wallace Flynn.

### Where Lepers are Made Happy.

Culion, with the accent on the on, is the name of one of the lesser Philippines, about a day's sail from Manila. The island has another name as well—"the Place of Happiness for the Unclean." Here is a leper colony that was established by the Health Bureau of the United States Government, under the direction of Dr. Victor G. Heiser, when this country went into the Philippines. Leper colonies were known hitherto as grim living graves, haunted by desolation and despair; but when the colony of Culion was formed the ideal of the founders was to institute a retreat where lepers might be happy. It sounds impossible, but is far from being so. Contrary to popular belief, leprosy, except in its last stages, has little apparent effect upon the mentality or physique of the victim. As long as he does not endanger others by the risk of contagion, he might as well go free and live like other men. This, then, is the secret of Culion. Here the leper is encouraged to live a clean, brisk, pleasant and profitable existence. He is taken away from the world of the clean, where he was an outcast, hated and avoided, and is placed in the community of the Unclean, where no one fears him, where all are glad to see him and be his friends, where he can live, work, amuse himself, and improve his condition in life, in close touch with others. What this means to the leper is shown vividly in the New York Evening Post's description of the arrival of the lepers:

The scene as one comes in toward the island gives the impression of serenity. The bay is deep and amazingly blue, and it swarms with varieties of the most brilliant fish. Reaching out from Culion, crescent-wise, is a peculiar and fantastic coral formation, called the Coral Islands, jagged and impassable; within them rises Culion itself, hilly and green and serenely beautiful. Except in typhoon season these waters are quiet, and as one nears the shore one has the sensation of being awaited by some spirit of friendliness and peace—an effect never lost upon the little throng of men and women—and often children—who stand forward in the vessel, looking with wondering eyes upon this spot where they are to spend the rest of their lives. They have been expecting a prison, and what they are beholding has the appearance of a home.

There is the colony. The little white houses or shacks, with their garden yards, cover the hillside, and the larger buildings showing here and there, the hospital, the quarantine buildings, the theatre, the church on the headland, and others. But it is on the wharf that the interest centers. There all the able-bodied of the colony have gathered—an eager throng, in the very vanguard of them a trim group of erect men in white uniforms, the Culion Leper Band, already playing welcome strains which greet the newcomers.

These two crowds gaze toward each other eagerly—the little crowd on the boat, the big one on the landing—because in the colony all the tribes of the Philippine Islands are represented, and great is the excitement of those who espy members of their own tribe. On the boat the entire attitude has changed. The despondency which the lepers have felt since they were first taken aboard rapidly gives place to an astonished and childlike delight. Not only does the colony appear now to be a home, but for many of the strangers it is the first home they have ever known. They begin to realize that here they will not be outcasts, living in avoided huts and among rocks on hill-sides, shunned by their fellow men, but they will be living with people.

It is a town that receives them, with a population of some thirty-two hundred, with shops, homes, a theater, a currency of its own, outdoor amusements, and even social life of a sort. Many of the inhabitants have gone in for market-gardening, while others have built themselves fishing boats and have taken up the fisherman's life as a means of subsistence. With all this they are content. The attempts to escape from Culion are extremely rare, and when the fugitives are caught their almost invariable request has been to be returned

to the colony again. Of the lighter side of their existence there we read:

Perhaps their favorite amusement is baseball, with the exception, of course, of cock-fighting. Scarce a shack in the Unclean part is without its game-cock. This sport is so instinctive with the Filipino that it has not been forbidden the lepers, in whose favor various laws have been a little stretched, as, for instance, the marriage law. Intermarriage is permitted, on the basis that it gives a normal tone to the colony. Few children are born of these marriages. Even if the children live, after birth, their lives are always brief; and in all the years in which the colony has been operated, very few of these children have lived to see the age of five years.

There is one phase of the colony-life we should not have pictured of ourselves, and yet which must inevitably be present as long as lepers are just human beings. That is to say, Culion, like any other community, is not sociologically ideal. It has class distinction, pronouncedly, and beneficially, too, in some cases. Many a leper, although of good family, enjoyed none of the benefits of his station in his former manner of life, being outcast and often isolated, but here he can take his proper place among other lepers of his better-born class, and after the fashion of mankind, his vastly increased importance in his own eyes has its good effects upon his health and entire outlook. He is at last Somebody—and that means much to human nature.—Literary Digest.

### A Letter From India.

Strangely-constructed letters of strange diction are common enough. Sometimes it is by sheer ridiculousness that they entertain. The original of the following was recently received from India by a Liverpool shipping firm:

"Most Honored Sir,—Understanding that there are several hands wanted in your honor's department, I beg to offer my hand as to adjustment. I appeared for the Matric. Exam. in Octy, but failed, the reason for which I shall describe, to begin with my writing was illegible this was due to climatic reason, for having come from warm to a cold climate found my fingers stiff and very disobedient to my wishes. Father I had received great shock to my mental system in the shape of the death of my only fond brother, besides most honored sir I beg to state that I am in very uncomfortable circumstances, being the soul means of support of my fond brother's seven issues, consisting of three adults and four females, the latter being the bairn of my existence, owing to my having to support two of my own wives as well as their issues, of which by God's misfortune the feminine gender predominates. If by wonderful good fortune the few humble lines meet with your benign kindness and favorable turn of mind, I the poor menial shall ever pray for the long life and prosperity of yourself, as well as your Honor's post-humous olive branches."

### Not His Last Cent.

The high cost of living at home is nothing to the high cost of living of home folks when they go abroad. Some travellers pay uncomplainingly, but others resent a manifest imposition. One American, who was economical as well as rich, was at Trouville last year during the grande semaine or "great week."

When his bill was sent up, he paused in his breakfast and studied it with a sarcastic smile. Then he said to the hotel clerk:

"See here," he said, "you've made a mistake in this bill."

"Oh, no, monsieur! Oh, no!" cried the clerk.

"Yes, you have," said the American, as he pointed to the total. "I've got more money than that."

Sunday evening, not far from Dumfries; churches dispersing, or "scalin'," as the Scotchman says it. "Hoo's the wife, Wullie?" "Oh, nae sae bad. She's verra near a' richt agin; but, man, she canna sleep at night." "Ay, man, I'm glad tae hear that. But if that's a' that's wrang wi' her, tell her tae come an' hear oor minister."

### Loyalty.

Whatever you did in the years that are gone,

In the year that is yours to-day,  
Lift up your brow in the light of the sun,

Be loyal and brave, I pray.

Be true to the best that is in your soul,

And follow your high ideal,  
And so, as the beautiful seasons roll,  
You shall see your dreams grow real.

Be true and dare for the right, my friend,

Fear nothing and dread no blame,  
In this brief life, all hastes to an end,  
Save only the world of shame.

The loyal heart is never alone,  
There are comrades ever real,  
Who will make the cause you love their own,

And stand by you staunch as steel.

Steadfast, unswerving, and pure of heart,

Meet shadow and shine, alike,  
And shunning only the coward's part,  
Learn when to wait or to strike.

Have thou no care for the years that are gone,

The year that is ours to-day  
Wears fair on its front, the light of the sun,

We may labor and hope, and pray,  
—Margaret E. Sangster, in Exchange.

### Success.

He is successful who finds himself surrounded by true friends who have confidence in him—confidence that he can be depended upon to do what he says he will do, to do what is right as he sees it and to be a good neighbor. And these things are not accomplished in a day. They are the result of years of devotion to a high purpose.—Exchange.

Kate Douglas Wiggin's choicest possession, she says, is a letter which she once received from the superintendent of a home for the feeble-minded. He spoke in glowing terms of the pleasure with which the "inmates" had read her little book, "Mama Lisa," and ended thus, superbly:

"In fact, madam, I think I may safely say that you are the favorite author of the feeble-minded."

Silence Best Policy.—Mrs. Sewed—"I am in an awful fix, mama."

Mrs. Eaglebeak—"What is the matter?"

Mrs. Sewed—"I went through George's pockets last night to hunt for change, as you advised me to, and I found some letters which I gave him to post last week, and now I dare not scold about the letters for fear he'll scold about my going through his pockets."—Puck.

"Can I git off to-day, boss?"

"What for?"

"A weddin'."

"Do you have to go?"

"I'd like to, sir—I'm the bridegroom."

—Cornell Widow.

"Fyther," said little Mickey, "wasn't it Pathrick Hinry that said, 'Let us have peace?'"

"Niver!" said old Mickey. "Nobody be th' name of Patrick iver said anything loike that."

"D'ye ken Mac fell in the river on his way home last night?"

"You don't mean to say he was drowned?"

"Not drowned, mon, but badly diluted."

Delighted Young Lady (to young man she has been dancing with)—Oh, I could dance to heaven with you.

Young Man—And can you reverse?—Life.

Crossed Wires.—"Now they've got a new contrivance for reducing adiposity."

"Dear me! There won't be a city in Europe when this awful war is over."—Buffalo Express.



Not for Sale.

By F. Louise Francis.

"How much will I sell him for? I wouldn't take a million dollars for that dog; no, 'siree."

"Why, yes, I'll tell 'yer' why I won't part with him, if 'yer' want 'ter' hear. Sit down!

"Well, when my boy was a baby, not more'n a year old, I was cap'n of a canal boat. We 'was' tied up on the Hudson River at Albany. The ice was 'jest' breakin' up an' 'a-floatin' down stream.

"My wife use' 'ter' put the baby out on deck in a clothes-basket most every day, an' he'd play in that for hours on a stretch, with the dog.

"One day she left 'em a second, and went 'inter' the cabin—I'd gone ashore that mornin', when—ker—plunk! overboard went the basket and baby 'onter' an ice-cake. 'Whew!' it makes me shiver when I think of it. They landed right side up tho', thank Heaven!

"Well, sir, that dog barked with all his might, till my wife rushed out 'ter' see what was up,—then, would 'yer' b'lieve it?—he jumped in, too.

"I came back 'jest' a few minutes after, and my wife was actin' 'like' she'd gone crazy;—she was wavin' her arms toward a speck down the river. I looked! my heart most stopped 'a-pumpin'! I lowered the boat as quick as I could, with my hands shakin' so,—and we put off.

"I saw a clear strip o' water ahead an' we made for it as fast as we could row. When we got within fifty feet o' the baby an' dog, the ice closed in around us.

"I looked over my shoulder! There was a big cake o' ice 'a-pilin' on top o' the one where the baby was an' 'a-pushin' the basket toward the edge.

"The dog was 'a-barkin' like mad.

"'Splash!

"My wife screamed.

"The basket an' baby 'was' in the water!

"That noble dog was 'onter' his job tho', all right. Yes, 'siree!' He grabbed that baby an' held on like a vise. Managed 'ter' keep heads above water, too, somehow.

"With superhuman strength we pushed, jammed an' broke our way through those ice-cakes. In a few seconds—they seemed like years—we got 'ter' 'em an' hauled 'em both aboard.

"The baby was all right, tho' a bit chilled, but the dog was about ready 'ter' 'cash in'—couldn't 'av' kept up much longer—could 'yer', old boy?

"Sell him? No, 'siree!'—Our Dumb Animals.

Responsiveness.

Whether you are a responsive person or not depends as much on your temperament as on your habit of mind. The disposition to be friendly, to like people and to find out what they are like tends to make you alert mentally in social intercourse; whereas if your tendency is to suspect people, to think they are critical of you, or trying to get the better of you, you are likely to be an unresponsive person. To be sure, unresponsiveness does not always imply the possession of such unfortunate tendencies or traits; sometimes it is due to self-distrust, self-criticism or self-depreciation. You think that you are not a very interesting or "exciting" person, and you therefore make yourself less interesting than you are. What you should remember is that the important thing in social intercourse is not to try always to be interesting; it is rather to make the other person feel that he is interesting. Just as soon as you lose self-consciousness you will become responsive. The mind has to be concerned with something; when it ceases to be employed upon self, it is sure to be occupied with the next object—and that will be the person talking to you.

Cultivating a responsive, friendly disposition, you cultivate alertness and flexibility of mind. Bringing out the best in others, you enlarge your own horizon. And quite apart from the benefits to yourself, if you are responsive to people, you are as useful a person in the world as the man who is inventive or creative.—Youth's Companion.

The Value of the Skunk To Agriculture.

A recent circular from the U. S. Department of Agriculture gives the following conclusions on the economic value of the skunk to agriculture:

"The skunk, which is represented throughout the country by a number of varieties, genera and species, is an animal of great economic importance. Its food consists very largely of insects, mainly of those species which are very destructive to garden and forage crops. Field observations and laboratory examinations demonstrate that they destroy immense numbers of white grubs, grasshoppers, crickets, cut-worms, hornets, wasps, and other noxious forms. The alarming increase of the white grub in some localities is largely due to the extermination of this valuable animal.

"It is a matter of common observation where white grubs are particularly abundant in corn fields to note little round holes burrowed in the ground about hills of corn. These are made by skunks in their search during the night for these grubs. During the recent outbreak of grasshoppers in Kansas it has been determined that in many cases a large proportion of the food of skunks consisted of these grasshoppers.

"Some of the most destructive insects in agriculture are such as do their work below the ground and out of reach of any method that the farmer can apply, and it is against many of these that the skunk is an inveterate enemy. Notwithstanding all of this, there is probably not an animal that is as ruthlessly slaughtered as is this one, whereas it is equally entitled to protection with, if not more so, than some of our birds which enjoy this privilege."

A Yorkshire dentist, in whose capable hands I happened to be lately, recalled for my encouragement two virile patients he had had in his wide and long experience. One was a professional pugilist, from whose ponderous jaw he had at length extracted without an anaesthetic a doggedly obstinate tooth. "That was a tough job and must have hurt you horribly." "Nowt o' sowrt, lad," he replied cheerfully. "It nobbut waarmed me oop a bit." The other patient, a local Methodist preacher, was a man of magnificent physique with a yet more ponderous lower jaw from which two molars were to be extracted without an anaesthetic. When, after a quarter of an hour's tugging and tugging, one was at last wrenched out, the dentist said sympathetically, "I think you have got enough for to-day. You had better have the other out to-morrow." "Pooh! Not at all! I don't mind, if you don't mind, finishing the job right away." The other tooth, as the dentist had suspected, was a yet more obstinate customer, and when at last it was torn out without breaking the patient's jaw he said, "Well, in all my practice I have never seen a man bear pain as you have borne it to-day." "Nay," he said, "I have had none to bear—none at all. You see I'm a man of very strong will, and when a job of this kind is on I concentrate my mind on something else—usually upon a funny tale—and as long as I can keep it so concentrated I feel no pain whatever." Being an anecdote-monger I got from the dentist the particular story which so effectively distracted this patient's attention, and I present it now to my readers without, however, much hope of its serving them as an anaesthetic.—An Irish emigrant to the States, having been carried immeasurable miles by train, first to the Rockies and then up and down the Rockies, wrote home, "You must all come out here. There is so much land they are stacking it!" —T. P.'s Weekly.

A Case of Gravity.—The latest Boston story is about a small child who fell out of a window. A kind-hearted lady came hurrying up with the anxious question, "Dear, dear! How did you fall?" The child looked up at the questioner and replied, in a voice choked with sobs, "Vertically, ma'am."—Tit-Bits.

Willie.—Paw, how long does a honeymoon last? Paw.—Usually until the last quarter is gone, my son.

The Gains of Middle Age.

While youth may be the chief period or time for working along the lines of actualizing one's ambitions or ideals we miss much in life if into our maturer years we do not carry these same characteristics of youth. To stop growing, to cease at all in our interest in all things about us and in the world at large because we have reached middle age or have passed beyond it is the cause of tremendous losses in happiness, in attainment, in helpful service to the friend, to the family, to the neighbor, and to the world.

It would seem that middle or later life should be the most happy and truly satisfying period of life—that to which the previous years all have been leading. But we can't then stop growing if we would be truly happy and useful—and let us remember that to be useful is one of the prime requisites of being truly happy. Some things possibly have gone; but other things surely have taken or should take their places.

Some of the bloom may have left the cheeks; little streaks of color, different from that of babyhood or youth may have appeared in the hair; less litheness in the form may require a little different suit or gown to reveal its greatest attractiveness, or even to envelop it at all. These changes are at least to a certain degree to be expected, though less, I contend, than we so many times find them if we have been sufficiently awake to the duty of self-preservation, and to both the mental and the physical laws that mutually act and interact in building life.

But whatever changes the years may bring, and we will all reach middle age—if we live long enough and have not already passed it—there should be gains, in experience, in knowledge, in wisdom, and in powers, that will far more than compensate for whatever losses or apparent losses the passing years have brought. There will be disappointments both in ourselves and in others. There will be disillusion. But nothing is ever quite perfect in this world or in this life. We will moreover save ourselves much of unhappiness when we once fully and frankly recognize this fact. There will be discouragements; there will be conditions at least temporarily hard to bear; there will be sorrows. But these all have their influences, and their beneficent influence, in building character and in beautifying life if wisely grasped, wisely turned, and wisely used.

We are so apt to think that were our conditions different and were we in some one else's place we should be much more happy. But the most important part of this thought is that it isn't so. Each has his own weakness, failings, limitations, trials, sorrows—but so many times so bravely and so silently borne that the world knows but little, if indeed of them at all. We are so apt to think that those in our own lives are so much greater than those in the lives of others, because they are so much more intimately related to us; and we thereby forget that all others have theirs likewise—peculiar to them as ours are to us, and that there is not one of whom this is not true in some form.

After all, in the face of whatever has come or whatever may come, life and the way we live it is the main thing. Many times, in fact almost invariably, the mental attitude we take toward anything of an unfriendly or seemingly unfriendly nature that enters our lives determines its actual effect upon us. It determines also whether it grows and increases in its enervating hold upon us, or whether it be dissolved and dissipated in its effects upon us.—Ralph Waldo Trine, in Woman's Home Companion.

The Wrong Setting.

A newly appointed crier in a county court in Australia, where there are many Chinese, was ordered by the judge to summon a witness to the stand.

"Call for Ah Song," was the command.

The crier was puzzled for a moment. He glanced shyly at the judge; but found him as grave as an undertaker; then, turning to the spectators, he blandly simpered:

"Gentlemen, would any of you favor his Worship with a song?"

The Health Habit.

If a man is sick it is because he has violated the laws of Nature. And such a one, instead of feeling disgraced, often feels sorry for himself and explains his sad plight to any one and every one who will listen.

Man is made to be well and happy and useful. And if a person is happy, the probabilities are he will be well; and in order to keep well he has to be useful.

Health is the most natural thing in the world.

Nature is on our side. Health is the norm, and all Nature tends thitherward.

Physicians nowadays do not talk about curing people. All the wise and good physician can do is to put the patient in line with Nature. Nature heals, and all the healing forces of Nature are perfectly natural.

We know the rules of health. Every one of common intelligence is familiar with them. The trouble is that many men consider themselves exceptions; and postponed punishment does not deter them from violating the laws of Nature.

We must not only know the rules of health and bear them in mind, but we must bring to bear will to see that we live them.

We have the knowledge, but we lack the technique—that is to say, we haven't got the habit.

Health is a habit, and a vast number of people in America are getting it. They make it their business to be well every day and all the time, and the rules whereby they succeed are endorsed by every physician. First, think health, not disease.

Keep your mind on the ideal, and picture the strong, happy, self-reliant person that you would like to be.

Our Serial Story. PETER.

A Novel of Which He is Not the Hero.

By E. HOPKINSON SMITH.

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Chapter XXIV.

The check "struck" MacFarlane just as the chairman had said it would, wiping out his losses by the flood with something ahead for his next undertaking.

That the verdict was a just one was apparent from the reports of both McGowan's and the Railroad Company's experts. These showed that the McGowan mortar held but little cement, and that not of the best; that the backing of the masonry was composed of loose rubble instead of split stone, and that the collapse of his structure was not caused by the downpour, but by the caving in of culverts and spillways, which were built of materials in direct violation of the provisions of the contract. Even then there might have been some doubt as to the outcome but for Holker Morris's testimony. He not only sent in his report, but appeared himself, he told the Council, so as to answer any questions Mr. McGowan or his friends might ask. He had done this, as he said openly at the meeting, to aid his personal friend, Mr. MacFarlane, and also that he might raise his voice against the slipshod-work that was being done by men who either did not know their business or purposely evaded their responsibilities. "This construction of McGowan's," he continued, "is especially to be condemned, as there is not the slightest doubt that the contractor has intentionally slighted his work—a neglect which, but for the thorough manner in which MacFarlane had constructed the lower culvert, might have resulted in the loss of many lives.

McGowan snarled and sputtered, denouncing Garry and his "swallow-tails" in the bar rooms and at the board meetings, but the decision was unanimous, two of his friends concurring, fearing, as they explained afterward, that the "New York crowd" might claim even a larger sum in a suit for damages.

The meeting over, Morris and Jack dined with MacFarlane and again the distinguished architect won Ruth's heart by the charm of his personality, she telling Jack the next day that he was the only old man—fifty was old for Ruth—she had ever seen with whom she could have fallen in love, and that she was not sure after all but that Jack was too young for her, at which there was a great scrimmage and a blind-man's-buff, chase around the table, up the front stairs and into the corner by the window, where she was finally caught, smothered in kisses and made to correct her arithmetic.

This ghost of damages having been laid—it was buried the week after Jack had called on his uncle—the Chief, the First Assistant, and Bangs, the head foreman, disappeared from Corklesville and reappeared at Morfordsburg.

The Chief came to select a site for the entrance of the shaft; the First Assistant came to compare certain maps and documents, which he had taken from the trunk he had brought with him from his Maryland home, with the archives resting in the queer old courthouse; while Foreman Bangs was to help with the level and target, should a survey be found necessary.

The faded-out old town clerk looked Jack all over when he asked to see the duplicate of a certain deed, remarking, as he led the way to the Hall of Records,—it was under a table in the back room,—"Reckon there's somethin' goin' on jedgin' from the way you New Yorkers is lookin' into ore lands up here. There come a lawyer only last month from a man named Breen, huntin' up this same property."

The comparisons over and found to be correct, "starting from a certain stone marked 'B' one hundred and eighty-seven feet East by South," etc., etc., the whole party, including a small boy to help carry the level and target and a reliable citizen who said he could find the property blindfold—and who finally collapsed with a "Goll darn!—if I know where I'm at!"—the five jumped into a mud-encrusted vehicle and started for the site.

Up hill and down hill, across one stream and then another; through the dense timber and into the open again. Here their work began, Jack handling the level (his Chief had taught him), Bangs holding the target, MacFarlane taking a squint now and then so as to be sure,—and then the final result,—to wit—First, that the Maryland Company's property, Arthur Breen & Co., agents, lay under a hill some two miles from Morfordsburg; that Jack's lay some miles to the south of Breen's. Second that outcroppings showed the Maryland Mining Company's ore dipped, as the Senior Breen had said, to the east, and third, that similar outcroppings showed Jack's dipped to the west.

And so the airy bubble filled with his own and Ruth's iridescent hopes,—a bubble which had floated before him as he tramped through the cool woods, and out upon the hillside, vanished into thin air.

For with Ruth's arms around him, her lips close to his, her boundless enthusiasm filling his soul, the boy's emotions had for the time overcome his judgment. So much so that all the way up in the train he had been "supposing" and resupposing. Even the reply of the town clerk had set his heart to thumping; his uncle had sent some one then! Then came the thought,—Yes to boom one of his misleading prospectuses—and for a time the pounding had ceased; by no possible combination now, either honest or dishonest, could the two properties be considered one and the same mine.

Again his thoughts went back to Ruth. He knew how keenly she would be disappointed. She had made him promise to telegraph her at once if his own and her father's inspection of the ore lands should hold out any rose-colored prospects for the future. This he had not now the heart to do. One thing, however, he must do, and at once, and that was to write to Peter, or see him immediately on his return. There was no use now of the old fellow talking the matter over with the director; there was nothing to talk over, except a bare hill three miles from anywhere, covering a possible deposit of doubtful richness and which, whether good or bad, would

cost more to get to market than it was worth.

They were on the extreme edge of the forest when the final decision was reached, MacFarlane leaning against a rock, the level and tripod tilted against his arm, Jack sitting on a fallen tree, the map spread out on his knees.

For some minutes Jack sat silent, his eyes roaming over the landscape. Below him stretched an undulating mantle of velvet, laid loosely over valley, ravine and hill, embroidered in tints of corn-yellow, purplings of full-blossomed clover and the softer greens of meadow and swamp. In and out, now straight, now in curves and bows, was threaded a ribbon of silver, with here and there a connecting mirror in which flashed the sun. Bordering its furthest edge a chain of mountains lost themselves in low, rolling clouds, while here and there, in its many crummings, were studded jewels of barn stack and house, their facets aflame in the morning light.

Jack absorbed it all, its beauty filling his soul, the sunshine bathing his cheeks. Soon all trace of his disappointment vanished: with Ruth here,—with his work to occupy him,—and this mighty, all-inspiring, all-intoxicating sweep of loveliness spread out, his own and Ruth's every hour of the day and night, what did ore beds or anything else matter?

MacFarlane's voice woke him to consciousness. He had called to him before, but the boy had not heard.

"As I have just remarked, Jack," MacFarlane began again, "there is nothing but an earthquake will make your property of any use. It is a low-grade ore, I should say, and tunnelling and shoring would eat it up. Wipe it off the books. There are thousands of acres of this kind of land lying around loose from here to the Cumberland Valley. It may get better as you go down—only an assay can tell about that—but I don't think it will. To begin sinking shafts might mean sinking one or a dozen; and there's nothing so expensive. I am sorry, Jack, but wipe it out. Some bright scoundrel might sell stock on it, but they'll never melt any of it up into stove plate."

"All right, sir," Jack said at last, with a light laugh. "It is the same old piece of bread, I reckon, and it has fallen on the same old buttered side. Uncle Peter told me to beware of bubbles—said they were hard to carry around. This one has burst before I got my hand on it. All right—let her go! I hope Ruth won't take it too much to heart. Here, boy, get hold of this map and put it with the other traps in the wagon. And now, Mr. MacFarlane, what comes next?"

Before the day was over MacFarlane had perfected his plans. The town was to be avoided as too demoralizing a shelter for the men, and barracks were to be erected in which to house them. Locations of the principal derricks were selected and staked, as well as the sites for the entrance to the shaft, for the machine and blacksmith's shops and for a storage shanty for tools; the Maryland Mining Company's work would require at least two years to complete, and a rational, well-studied plan of procedure was imperative.

"And now, Jack, where are you going to live,—in the village?" asked his Chief, resting the level and tripod carefully against a tree trunk and seating himself beside Jack on a fallen log.

"Out here, if you don't mind, sir, where I can be on top of the work all the time. It's but a short ride for Ruth and she can come and go all the time. I am going to drop some of these trees; get two or three choppers from the village and knock up a log-house like the one I camped in when I was a boy."

"Where will you put it?" asked MacFarlane with a smile, as he turned his head as if in search of a site. It was just where he wanted Jack to live, but he would not have suggested it.

"Not a hundred yards from where we sit, sir—a little back of those two big oaks. There's a spring above on the hill and sloping ground for drainage; and shade, and a great sweep of country in front. I've been hungry for this life ever since I left home, now I am going to have it."

"It will be rather lonely, won't it?" The engineer's eyes softened as they

rested on the young fellow, his face flushed with the enthusiasm of his new resolve. He and Ruth's mother had lived in just such a shanty, and not so very long ago, either, it seemed,—those were the happiest years of his life.

"No!" exclaimed Jack. "It's only a step to the town; I can walk it in half an hour. No, it won't be lonely. I will fix up a room for Uncle Peter somewhere, so he can be comfortable,—he would love to come here on his holidays; and Ruth can come out for the day,—she will be crazy about it when I tell her. No, I will get along. If the lightning had struck my ore beds I would probably have painted and papered some musty back room in the village and lived a respectable life. Now I am going to turn savage."

The next day the contracts were signed; work to commence in three months. Henry MacFarlane, Engineer-in-Chief, John Breen in charge of construction.

It was on that same sofa in the far corner of the sitting-room that Jack told Ruth,—gently, one word at a time,—making the best of it, but telling her the exact truth.

"And then we are not going to have any of the things we dreamed about, Jack," she said with a sigh.

"I am afraid not, my darling,—not now, unless the lightning strikes us, which it won't."

She looked out of the window for a moment, and her eyes filled with tears. Then she thought of her father, and how hard he had worked, and what disappointment he had suffered, and yet how, with all his troubles, he had always put his best foot foremost—always encouraging her. She would not let Jack see her chagrin. This was part of Jack's life, just as similar disappointments had been part of her father's.

"Never mind, blessed. Well, we had lots of fun 'supposing,' didn't we Jack. This one didn't come true, but some of the others will and what difference does it make, anyway, as long as I have you," and she nestled her face in his neck. "And now tell me what sort of a place it is and where daddy and I are going to live, and all about it."

And then, to soften the disappointment the more and to keep a new bubble afloat, Jack launched out into a description of the country and how beautiful the view was from the edge of the hill overlooking the valley, with the big oaks crowning the top and the lichen-covered rocks and fallen timber blanketed with green moss, and the spring of water that gushed out of the ground and ran laughing down the hillside, and the sweep of mountains losing themselves in the blue haze of the distance, and then finally to the log-cabin he was going to build for his own special use.

"And only two miles away," she cried in a joyous tone,—and I can ride out every day! Oh, Jack!—just think of it!" And so, with the breath of this new enthusiasm filling their souls, a new bubble of hope and gladness was floated, and again the two fell to planning, and "supposing," the rose-glow once more lightening up the peaks.

For days nothing else was talked of. An onslaught was at once made on Garry's office, two doors below Mrs. Hicks, for photographs, plans of bungalows, shanties, White Mountain bean-tos, and the like, and as quickly tucked under Ruth's arm and carried off, with only the permission of the office boy.—Garry himself being absent owing to some matters connected with a big warehouse company in which he was interested, the boy said, and which took him to New York on the early train and did not allow his return sometimes, until after midnight.

These plans were spread out under the lamp on the sitting-room table, the two studying the details, their heads together, MacFarlane sitting beside them reading or listening,—the light of the lamp falling on his earnest, thoughtful face.—Jack consulting him now and then as to the advisability of further extensions, the same being two rooms shingled inside and out, with an annex of bark and plank for Ruth's horse, and a kitchen and laundry and no end of comforts, big and little,—all to be occupied whenever their lucky day would come and the merry bells ring out the joyful tidings of their marriage.

Nor was this all this particularly radiant bubble contained. Not only was there to be a big open fireplace built of stone, and overhead rafters of birch, the bark left on and still glistening,—but there were to be palms, ferns, hanging baskets, chintz curtains, rugs, pots of flowers, Chinese lanterns, hammocks, easy chairs; and for all Jack knew, porcelain tubs, electric bells, steam heat and hot and cold water, so enthusiastic had Ruth become over the possibilities lurking in the 15 x 20 log-hut which Jack proposed to throw together as a shelter in his exile.

#### Chapter XXV.

The news of MacFarlane's expected departure soon became known in the village. There were not many people to say good-by, the inhabitants having seen but little of the engineer and still less of his daughter, except as she flew past, in a mad gallop, on her brown mare, her hair sometimes down her back. The pastor of the new church came, however, to express his regrets, and to thank Mr. MacFarlane for his interest in the church building. He also took occasion to say many complimentary things about Garry, extolling him for the wonderful manner in which that brilliant young architect had kept within the sum set apart by the trustees for its construction, and for the skill with which the work was being done, adding that as a slight reward for such devotion the church trustees had made Mr. Minnott treasurer of the building fund, believing that in this way all disputes could be better avoided,—one of some importance having already arisen (here the reverend gentleman lowered his voice) in which Mr. McGowan, he was sorry to say, who was building the masonry, had attempted an overcharge which only Mr. Minnott's watchful eye could have detected, adding, with a glance over his shoulder, that the collapse of the embankment had undermined the contractor's reputation quite as much as the freshet had his culvert, at which MacFarlane smiled but made no reply.

Corinne also came to express her regrets, bringing with her a scrap of an infant in a teetering baby carriage, the whole presided over by a nurse in a blue dress, white cap, and white apron, the ends reaching to her feet; not the Corinne, the Scribe is pained to say, who, in the old days would twist her head and stamp her little feet and have her way in everything. But a woman terribly shrunken, with deep lines in her face and under her eyes. Jack, man-like, did not notice the change, but Ruth did.

After the baby had been duly admired, Ruth tossing it in her arms until it crowded, Corinne being too tired for much enthusiasm, had sent it home, Ruth escorting it herself to the garden gate.

"I am sorry you are going," Corinne said in Ruth's absence. "I suppose we must stay on here until Garry finishes the new church. I haven't seen much of Ruth,—or of you, either, Jack. But I don't see much of anybody now,—not even of Garry. He never gets home until midnight, or even later, if the train is behind time, and it generally is."

"Then he must have lots of new work," cried Jack in a cheerful tone. "He told me the last time I saw him on the train that he expected some big warehouse job."

Corinne looked out of the window and fingered the handle of her parasol.

"I don't believe that is what keeps him in town, Jack," she said slowly. "I hoped you would come and see him last Sunday. Did Garry give you my message? I heard you were at home to-day, and that is why I came."

"No, he never said a single word about it or I would have come, of course. What do you think, then, keeps him in town so late?" Something in her voice made Jack leave his own and take a seat beside her. "Tell me, Corinne. I'll do anything I can for Garry and you too. What is it?"

"I don't know, Jack.—I wish I did. He has changed lately. When I went to his room the other night he was walking the floor; he said he couldn't sleep, and the next morning when he didn't come down to breakfast I went up and found him in a half stupor. I had hard work to wake him. Don't tell Ruth.—I don't want anybody but you to

know, but I wish you'd come and see him. I've nobody else to turn to,—won't you, Jack?"

"Come! of course I'll come, Corinne,—now,—this minute, if he's home, or to-night, or any time you say. Suppose I go back with you and wait. Garry's working too hard, that's it,—he was always that way, puts his whole soul into anything he gets interested in and never lets up until it's accomplished." He waited for some reply, but she was still toying with the handle of her parasol. Her mind had not been on his proffered help,—she had not heard him, in fact.

"And, Jack," she went on in the same heart-broken tone through which an unbidden sob seemed to struggle.

"Yes, I am listening, Corinne,—what is it?"

"I want you to forgive me for the way I have always treated you. I have—"

"Why, Corinne, what nonsense! Don't you bother your head about such—"

"Yes, but I do, and it is because I have never done anything but be ugly to you. When you lived with us I—"

"But we were children then, Corinne, and neither of us knew any better. I won't hear one word of such nonsense. Why, my dear girl—" he had taken her hand as she spoke and the pair rested on his knee—"do you think I am—No—you are too sensible a woman to think anything of the kind. But that is not it, Corinne—something worries you," he asked suddenly with a quick glance at her face. "What is it? You shall have the best in me, and Ruth will help too."

Her fingers closed over his. The touch of the young fellow, so full of buoyant strength and hope and happiness, seemed to put new life into her.

"I don't know, Jack." Her voice fell to a whisper. "There may not be anything, yet I live under an awful terror. Don't ask me—only tell me you will help me if I need you. I have nobody else—my stepfather almost turned me out of his office when I went to see him the other day,—my mother doesn't care. She has only been here half a dozen times, and that was when baby was born. Hush,—here comes Ruth,—she must not know."

"But she must know, Corinne. I never have any secrets from Ruth, and don't you have any either. Ruth couldn't be anything but kind to you and she never misunderstands, and she is so helpful. Here she is. Ruth, dear, we were just waiting for you. Corinne is nervous and depressed, and imagines all sorts of things, one of which is that we don't care for her; and I've just told her that we do."

Ruth looked into Jack's eyes as if to get his meaning—she must always get her cue from him now—she was entirely unconscious of the cause of it all, or why Corinne should feel so, but if Jack thought Corinne was suffering and that she wanted comforting, all she had was at Corinne's and Jack's disposal. With a quick movement she leaned forward and laid her hand on Corinne's shoulder.

"Why, you dear Corinne,—Jack and I are not like that. What has gone wrong,—tell me," she urged.

For a brief instant Corinne made no answer. Once she tried to speak but the words died in her throat. Then, lifting up her hands appealingly, she faltered out:

"I only said that I—Oh, Ruth!—I am so wretched!" and sank back on the lounge in an agony of tears.

Chapter XXVI.

At ten o'clock that same night Jack went to the station to meet Garry. He and Ruth had talked over the strange scene—unaccountable to both of them—and had determined that Jack should see Garry at once.

"I must help him, Ruth, no matter at what cost. Garry has been my friend for years; he has been taken up with his work, and so have I, and we have drifted apart a little, but I shall never forget him, for his kindness to us when I first came to New York. I would never have known Uncle Peter but for Garry, or Aunt Felsa or my own darling."

Jack wanted under the shelter of the overhanging roof and the young archer stepped from the car and crossed

the track. Garry walked with the sluggish movement of a tired man—hardly able to drag his feet after him.

"I thought I'd come down to meet you, Garry," Jack cried in his old buoyant tone. "It's pretty rough on you, old fellow, working so hard."

Garry raised his head and peered into the speaker's face.

"Why, Jack!" he exclaimed in a surprised tone; the voice did not sound like Garry's. "I didn't see you in the train. Have you been in New York, too?" He evidently understood nothing of Jack's explanation.

"No, I came down to meet you. Corinne was at Mr. MacFarlane's today, and said you were not well,—and so I thought I'd walk home with you."

"Oh, thank you, old man, but I'm all right. Corinne's nervous—you mustn't mind her. I've been up against it for two or three weeks now,—lot of work of all kinds, and that's kept me a good deal from home. I don't wonder Cory's worried, but I can't help it—not yet."

They had reached an overhead light, and Jack caught a clearer view of the man. What he saw sent a shiver through him. A great change had come over his friend. His untidy dress,—always so neat and well kept; his haggard eyes and shambling, unsteady walk, so different from his springy, debonair manner, all showed that he had been and still was under some terrible mental strain. That he had not been drinking was evident from his utterance and gait. This last discovery when his condition was considered, disturbed him most of all, for he saw that Garry was going through some terrible crisis, either professional or financial.

As the two advanced toward the door of the station on their way to the street, the big, burly form of McGowan, the contractor, loomed up.

"I heard you wouldn't be up till late, Mr. Minott," he exclaimed gruffly, blocking Garry's exit to the street. "I couldn't find you at the Council or at your office, so I had to come here. We haven't had that last payment on the church. The vouchers is all ready for your signature, so the head trustee says,—and the money's where you can get it at."

Garry braced his shoulders and his jaw tightened. One secret of the young architect's professional success lay in his command over his men. Although he was considerate, and sometimes familiar, he never permitted any disrespect.

"Why, yes, Mr. McGowan, that's so," he answered stiffly. "I've been in New York a good deal lately and I guess I've neglected things here. I'll try to come up in the morning, and if everything's all right I'll get a certificate and fill it up and you'll get a check in a few days."

"Yes, but you said that last week," there was a sound of defiance in McGowan's voice.

"If I did I had good reason for the delay," answered Garry with a flash of anger. "I'm not running my office to suit you."

"Nor for anybody else who wants his money and who's got to have it, and I want to tell you, Mr. Minott, right here, and I don't care who hears it, that I want mine or I'll know the reason why."

Garry wheeled fiercely and raised his hand as if to strike the speaker, then it dropped to his side.

"I don't blame you, Mr. McGowan," he said in a restrained, even voice. "I have no doubt that it's due you, and you ought to have it, but I've been pretty hard pressed lately with some matters in New York; so much so that I've been obliged to take the early morning train,—and you can see yourself what time I get home. Just give me a day or two longer and I'll examine the work and straighten it out. And then again, I'm not very well."

The contractor glanced into the speaker's face as if to continue the discussion, then his features relaxed. Something in the sound of Garry's voice, or perhaps some line of coloring in his face, must have reached him.

"Well, of course, I ain't no beg," he explained in a softer tone, which was none as an apology, "and if you're sick that ain't no business of mine, but I'll be glad to help you."

"Yes, I understand and I won't forget. Thank you, Mr. McGowan, and good-night. Come along, Jack,—Corinne's worrying, and will be till I get home."

The two kept silent as they walked up the hill. Garry, because he was too tired to discuss the cowardly attack; Jack, because what he had to say must be said when they were alone,—when he could get hold of Garry's hand and make him open his heart.

As they approached the small house and mounted the steps leading to the front porch, Corinne's face could be seen pressed against a pane in one of the dining-room windows. Garry touched Jack's arm and pointed ahead:

"Poor Cory!" he exclaimed with a deep sigh, "that's the way she is every night. Coming home is sometimes the worst part of it all, Jack."

The door flew open and Corinne sprang out: "Are you tired, dear?" she asked, peering into his face and kissing him. Then turning to Jack: "Thank you, Jack!—It was so good of you to go. Ruth sent me word you had gone to meet him."

She led the way into the house, relieving Garry of his hat, and moving up an easy chair stood beside it until he had settled himself into its depths.

Again she bent over and kissed him: "How are things to-day, dear?—any better?" she inquired in a quavering voice.

"Some of them are better and some are worse, Cory; but there's nothing for you to worry about. That's what I've been telling Jack. How's baby? Anybody been here from the board?—Any letters?"

"Baby's all right," the words came slowly, as if all utterance gave her pain. "No, there are no letters. Mr. McGowan was here, but I told him you wouldn't be home till late."

"Yes, I saw him," replied Garry, dropping his voice suddenly to a monotone, an expression of pain followed by a shade of anxiety settling on his face: McGowan and his affairs were evidently unpleasant subjects. At this instant the cry of a child was heard. Garry roused himself and turned his head.

"Listen—that's baby crying! Better go to her, Cory."

Garry waited until his wife had left the room, then he rose from his chair, crossed to the sideboard, poured out three-quarters of a glass of raw whiskey and drank it without drawing a breath.

"That's the first to-day, Jack. I dare not touch it when I'm on a strain like this. Can't think clearly, and I want my head,—all of it. There's a lot of sharks down in New York,—skin you alive if they could. I beg your pardon, old man—have a drop?"

Jack waved his hand in denial, his eyes still on his friend: "Not now, Garry, thank you."

Garry dropped the stopper into the decanter, pushed back the empty tumbler and began pacing the floor, halting now and then to toe some pattern in the carpet, talking all the time to himself in broken sentences, like one thinking aloud. All Jack's heart went out to his friend as he watched him. He and Ruth were so happy. All their future was so full of hope and promise, and Garry—brilliant, successful Garry,—the envy of all his associates, so harassed and so wretched!

"Garry, sit down and listen to me," Jack said at last. "I am your oldest friend; no one you know thinks any more of you than I do, or will be more ready to help. Now, what troubles you?"

"I tell you, Jack, I'm not troubled!"—something of the old bravado rang in his voice,—"except as everybody is troubled when he's trying to straighten out something that won't straighten. I'm knocked out, that's all,—can't you see it?"

"Yes, I see it, and that's not all I see. Is it your work here or in New York? I want to know, and I'm going to know, and I have a right to know, and you are not going to bed until you tell me, nor will I. I can and will help you, and so will Mr. MacFarlane, and Uncle Peter, and everybody I ask. What's gone wrong? Tell me!"

Garry continued to walk the floor. Then he wheeled suddenly and threw himself into his chair.

"Well, Jack," he answered with an un-

drawn sigh,—if you must know, I'm on the wrong side of the market."

"Stocks?"

"Not exactly. The bottom's fallen out of the Warehouse Company."

Jack's heart gave a rebound. After all, it was only a question of money and this could be straightened out. He had begun to fear that it might be something worse; what, he dared not conjecture.

"And you have lost money?" Jack continued in a less eager tone.

"A whole lot of money."

"How much?"

"I don't know, but a lot. It went up three points to-day and so I am hanging on by my eyelids."

"Well, that's not the first time men have been in that position," Jack replied in a hopeful tone. "Is there anything more,—something you are keeping back?"

"Yes,—a good deal more. I'm afraid I'll have to let go. If I do I'm ruined."

Jack kept silent for a moment. Various ways of raising money he help his friend passed in review, none of which at the moment seemed feasible or possible.

"How much will make your account good?" he asked after a pause.

"About ten thousand dollars."

Jack leaned forward in his chair. "Ten thousand dollars!" he exclaimed in a startled tone. "Why, Garry,—how in the name of common-sense did you get in as deep as that?"

"Because I was a fool!"

And again there was silence, during which Garry fumbled for a match, opened his case and lighted a cigarette. Then he said slowly, as he tossed the burnt end of the match from him:

"You said something, Jack, about some of your friends helping. Could Mr. MacFarlane?"

"No,—he hasn't got it,—not to spare. I was thinking of another kind of help when I spoke. I supposed you had got into debt, or something, and were depending on your commissions to pull you out, and that some new job was hanging fire and perhaps some of us could help as we did on the church."

"No," rejoined Garry, in a hopeless tone, "nothing will help but a certified check. Perhaps your Mr. Grayson might do something," he continued in the same voice.

"Uncle Peter! Why, Garry, he doesn't earn ten thousand dollars in three years."

Again there was silence.

"Well, would it be of any use for you to ask Arthur Breen? He wouldn't give me a cent, and I wouldn't ask him. I don't believe in laying down on your wife's relations, but he might do it for you now that you're getting up in the world."

Jack bent his head in deep thought. The proposal that his uncle had made him for the one lands passed in review. At that time he could have turned over the property to Breen. But it was worthless now. He shook his head:

"I don't think so." Then he added quickly: "Have you been to Mr. Morris?"

"No, and won't. I'd die first!" this came in a sharp, determined voice, as if it had jumped hot from his heart.

"But he thinks the world of you; it was only a week ago that he told Mr. MacFarlane that you were the best man he ever had in his office."

"Yes,—that's why I won't go. Jack, I'll play my hand alone and take the consequences, but I won't beg of my friends; not a friend like Mr. Morris; any coward can do that. Mr. Morris believes in me—I want him to continue to believe in me. That's worth twenty times ten thousand dollars." His eyes flashed for the first time. Again the old Garry shone out.

"When must you have this money?"

"By the end of the week,—before next Monday, anyhow."

"Then the situation is not hopeless?"

"No, not entirely. I have one card left, I'll play it to-morrow, then I'll know."

"Is there a chance of its winning?"

"Yes, and no. As for the 'yes,' I've always had my father's luck. Minotte don't run under and I don't believe I shall, we take risk and we win. That's what brought me to Corleysville, and you see what I have made myself. Us—"

"Us—"

"Us—"

"Us—"

at present I've got my foot in a bear trap, but I'll pull out somehow. As for the 'no' part of it,—I ought to tell you that the warehouse stock has been knocked endways by another corporation which has a right of way that cuts ours and is going to steal our business. I think it's a put-up job to bear our stock so they can scoop it and consolidate; that's why I am holding on. I've flung in every dollar I can rake and scrape for margin and my stockings about turned inside out. I got a tip last week that I thought would land us all on our feet, but it worked the other way." Something connected with the tip must have stirred him for his face clouded as he rose to his feet, exclaiming: "Have a drop, Jack?—that last one braced me up."

Again Jack shook his head, and again Garry settled himself back in his chair.

"I am powerless, Garry," said Jack. "If I had the money you should have it. I have nothing but my salary and I have drawn only a little of that lately, so as to help out in starting the new work. I thought I had something in an ore bank my father left me, but it is valueless, I find. I suppose I could put some life in it if I would work it along the lines Uncle Arthur wants me to, but I can't and won't do that. Somehow, Garry, this stock business follows me everywhere. It drove me out of Uncle Arthur's office and house, although I never regretted that,—and now it hits you. I couldn't do anything to help Charlie Gilbert then and I can't do anything to help you now, unless you can think of some way. Is there any one I can see except Uncle Arthur,—anybody I can talk to?"

Garry shook his head.

"I've done that, Jack. I've followed every lead, borrowed every dollar I could,—been turned down half a dozen times, but I kept on. Got it in the neck twice to-day from some fellows I thought would help push."

Jack started forward, a light breaking over his face.

"I have it, Garry! Suppose that I go to Mr. Morris. I can talk to him, maybe, in a way you would not like to."

Garry lifted his head and sat erect. "No, by heaven!—you'll do nothing of the kind!" he cried, as he brought his fist down on the arm of his chair.

"That man I love as I love nothing else in this world—wife—baby—nothing! I'll go under,—but I'll never let him see me crawl; I'll be Garry Minott to him as long, as I breathe. The same man he trusted,—the same man he loved,—for he does love me, and always did!" He hesitated and his voice broke, as if a sob clogged it. After a moment's struggle he went on: "I was a fool to leave him or I wouldn't be where I am. 'Garry,' he said to me that last day when he took me into his office and shut the door,—'Garry, stay on here a while longer; wait till next year. If it's more pay you want, fix it to suit yourself. I've got two boys coming along, they'll both be through the Beaux Arts in a year or so. I'm getting on and I'm getting tired. Stay on and go in with them.' And what did I do? Well, what's the use of talking?—you know it all."

Jack moved his chair and put his arm over his shoulder as a woman would have done. He had caught the break in his voice and knew how helpfully he was struggling to keep up.

"Garry, old man,"

"Yes, Jack."

"If Mr. Morris thought that way, then, why won't he help you now? What's ten thousand to him?"

"Nothing,—not a drop in the bucket! He'd begin drawing the check before I'd finish telling him what I wanted it for. I'm in a hole and don't know which way to turn, but when I think of what he's done for me I'll die before I'll take his money." Again his voice had the old ring.

"But, Garry," insisted Jack, "if I can see Morris in the morning and lay the whole matter before him—"

"You'll do nothing of the kind, do you hear!—keep still—somebody's coming downstairs. Not a word if it is Corinne. She is carrying now all she can stand up under."

He passed his hand across his face with a quick movement and brushed the sweat from his cheeks.

"Remember, not a word. I haven't told her everything. I tried to, but I couldn't."

"Tell her now, Garry," cried Jack. "Now—to-night," his voice rising on the last word. "Before you close your eyes. You never needed her help as you do now."

"I can't—it would break her heart. Keep still!—that's her step."

Corinne entered the room slowly and walked to Garry's chair.

"Baby's asleep now," she said in a subdued voice, "and I'm going to take you to bed. You won't mind, Jack, will you? Come, dear," and she slipped her hand under his arm to lift him from his chair.

Garry rose from his seat.

"All right," he answered assuming his old cheerful tone, "I'll go. I am tired, I guess, Cory, and bed's the best place for me. Good-night, old man,—give my love to Ruth," and he followed his wife out of the room.

Jack waited until the two had turned to mount the stairs, caught a significant flash of Garry's dark eyes as a further reminder of his silence, and, opening the front door, closed it softly behind him. Ruth was waiting for him. She had been walking the floor during the last half hour peering out now and then into the dark, with ears wide open for his step.

"I was so worried, my precious," she cried, drawing his cheek down to her lips. "You stayed so long. Is it very dreadful?"

Jack put his arm around her, led her into the sitting-room and shut the door. Then the two settled beside each other on the sofa.

"Pretty bad,—my darling—" Jack answered at last,—"very bad, really."

"Has he been drinking?"

"Worse,—he has been gabbling in Wall Street and may lose every cent he has."

Ruth leaned her head on her hand: "I was afraid it was something awful from the way Corinne spoke. Oh, poor dear,—I'm so sorry! Does she know now?"

"She knows he's in trouble, but she doesn't know how bad it is. I begged him to tell her, but he wouldn't promise. He's afraid of hurting her—afraid to trust her, I think, with his sufferings. He's making an awful mistake, but I could not move him. He might listen to you if you tried."

"But he must tell her, Jack," Ruth cried in an indignant tone. "It is not fair to her; it is not fair to any woman—and it is not kind. Corinne is not a child any longer, she's a grown woman and a mother. How can she help him unless she knows? Jack, dear, look into my eyes;" her face was raised to his:—"Promise me, my darling, that no matter what happens to you, you'll tell me first."

And Jack promised.

#### Chapter XXVII.

When Jack awoke the next morning his mind was still intent on helping Garry out of his difficulties. Where the money was to come from, and how far even ten thousand dollars would go in bridging over the crisis, even should he succeed in raising so large a sum, were the questions which caused him the most anxiety.

A letter from Peter, while it did not bring any positive relief, shed a ray of light on the situation.

I have just had another talk with the director of our bank—the one I told you was interested in steel works in Western Maryland. He by no means agrees with either you or MacFarlane as to the value of the ore deposits in that section, and is going to make an investigation of your property and let me know. You may, in fact, hear from him direct as I gave him your address.

Dear love to Ruth and your own good self.

This was indeed good news if anything came of it, but it wouldn't help Garry. Should he wait till Garry had played that last card he had spoken of, which he was so sure would win, or should he begin at once to try and raise the money?

This news at any other time would have set his hopes to fluttering. If Peter's director was made of money and intent on throwing it away, and if a blast furnace or a steel plant, or whatever would come, worthless rocks into

pruning-hooks and ploughshares, should by some act of folly be built in the valley at the foot of the hill he owned, why something might come of it. But, then, so might skies fall and everybody have larks on toast for breakfast. Until then his concern was with Garry.

He realized that the young architect was too broken down physically and mentally to decide any question of real moment. His will power was gone and his nerves unstrung. The kindest thing therefore that any friend could do for him, would be to step in and conduct the fight without him. Garry's wishes would be respected, but that did not mean that his own efforts should be relaxed. Yet where would he begin, and on whom? MacFarlane had just told him that Morris was away from home and would not be back for several days. Peter was out of the question so far as his own means—or lack of means—was concerned, and he could not, of course, ask him to go into debt for a man who had never been his friend, especially when neither he nor Garry had any security to offer.

He finally decided to talk the whole matter over with MacFarlane and act on his advice. The clear business head of his Chief cleared the situation as a north-west wind blows out a fog.

"Stay out of it, Jack," he exclaimed in a quick, positive voice that showed he had made up his mind long before Jack had finished his recital. "Minott is a gambler, and so was his father before him. He has got to take his lean with his fat. If you pulled him out of this hole he would be in another in six months. It's in his blood, just as much as it is in your blood to love horses and the woods. Let him alone;—Corinne's stepfather is the man to help; that's his business, and that's where Minott wants to go. If there is anything of value in this Warehouse Company, Arthur Breen & Co. can carry the certificates for Minott until they go up and he can get out. If there is nothing, then the sooner Garry sells out and lets it go the better. Stay out, Jack. It's not in the line of your duty. It's hard on his wife and he is having a devil of a row to hoe, but it will be the best thing for him in the end."

Jack listened in respectful silence, as he always did, to MacFarlane's frank outburst, but it neither changed his mind nor cooled his ardor. Where his heart was concerned his judgment rarely worked. Then, loyalty to a friend in distress was the one thing his father had taught him. He did not agree with his Chief's view of the situation. If Garry was a born gambler, he had kept that fact concealed from him and from his wife. He recalled the conversation he had had with him some weeks before, when he was so enthusiastic over the money he was going to make in the new Warehouse deal. He had been selected as the architect for the new buildings, and it was quite natural that he should have become interested in the securities of the company. This threatened calamity was one that might overtake any man. Get Garry out of this hole and he would stay out; let him sink, and his whole career would be ruined. And then there was a sentimental side of it even if Garry was a gambler—one that could not be ignored when he thought of Corinne and the child.

Late in the afternoon, his mind still unsettled, he poured out his anxieties to Ruth. She did not disappoint him. Her big heart swelled only with sympathy for the wife who was suffering. It made no difference to her that Corinne had never been even polite, never once during the sojourn of the Minotts in the village having manifested the slightest interest either in her own or Jack's affairs—not even when MacFarlane was injured, nor yet when the freshest might have ruined them all. Ruth's generous nature had no room in it for petty rancors or little hurts. Then, too, Jack was troubled for his friend. What was there for her to do but to follow the bump he held up to guide her feet—the bump which now shed its glad, indulgence over both? So they talked on, discussing various ways and means, now the born of a deeper understanding binding them the closer—these two, who, as they sometimes whispered to each

other, were "enlisted for life," ready to meet it side by side, whatever the day developed.

Before they parted she promised again to go and see Corinne and cheer her up. "She cannot be left alone, Jack, with this terrible thing hanging over her," she urged, "and you must meet Garry when he returns to-night. Then we can learn what he has done—perhaps he will have fixed everything himself." But though Jack went to the station and waited until the arrival of the last train had dropped its passengers, there was no sign of Garry. Nor did Ruth find Corinne. She had gone to the city, so the nurse said, with Mr. Minott by the early train and would not be back until the next day. Until their return Jack and Ruth found their hands tied.

On the afternoon of the second day a boy called at the brick office where Jack was settling up the final accounts connected with the "fill" and the tunnel, preparatory to the move to Morfordsburg, and handed him a note. It was from Corinne.

"I am in great trouble. Please come to me at once," it read. "I am here at home."

Corinne was waiting for him in the hall. She took his hand without a word of welcome, and drew him into the small room where she had seen him two nights before. This time she shut and locked the door.

"Mr. McGowan has just been here," she moaned in a voice that showed how terrible was the strain. "He tried to force his way up into Garry's room but I held him back." He is coming again with some one of the church trustees. Garry had a bad turn in New York and we came home by the noon train, and I have made him lie down and sent for the doctor. McGowan must not see him; it will kill him if he does. Don't leave us, Jack!"

"But how dare he come here and try to force his—"

"He will dare. He cursed and went on dreadfully. The door was shut, but Garry heard him. Oh, Jack!—what are we to do?"

"Don't worry, Corinne; I'll take care of Mr. McGowan. I myself heard Garry tell him he would attend to his payments in a few days, and he went away satisfied."

"Yes, but McGowan says he has been to the bank and has also seen the Receptor, and will stop at nothing."

Jack's fingers tightened and his lips came together.

"He will stop on the threshold," he said in a low, determined voice, "and never pass it—no matter what he wants. I will go up and tell Garry so."

"No, not yet—wait," she pleaded, in nervous twitching tones—with pauses between each sentence. "You must hear it all first. Garry had not told me all when you were here two nights ago; he did not tell me until after you left. Then I knelt down by his bed and put my arms around him and he told me everything—about the people he had seen—and—McGowan—everything." She ceased speaking and hid her eyes with the back of one hand as if to shut out some spectre, then she stumbled on. "We took the early train for New York, and I waited until my stepfather was in his office and went into his private room. It was Garry's last hope. He thought Mr. Breen would listen to me on account of mother. I told him of our dreadful situation; how Garry must have ten thousand dollars, and must it in twenty-four hours, to save us all from ruin. Would you believe, Jack—that he laughed and said it was an old story; that Garry had no business to be speculating; that he had told him a dozen times to keep out of the Street; that if Garry had any collaterals of any kind, he would loan him ten thousand dollars or any other sum, but that he had no good money to throw after him; I did all I could; I almost went down on my knees to him; I begged for myself and my mother, but he only kept saying—'You go home, Corinne, and look after your baby—women don't understand these things.' Oh, Jack—I could not believe he was the same man who married my mother—and he isn't. Every year he has grown harder and harder; he is a thousand times worse than when you lived with him. Garry was waiting outside for me, and when I told him he turned as white as a sheet, and

had to hold on to the iron railing for a moment. It was all I could do to get him home. If he sees Mr. McGowan now it will kill him; he can't pay him and he must tell him so, and it will all come out."

"But he will pay him, Corinne, when he gets well."

There came a pause. Then she said slowly as if each word was wrung from her heart:

"There is no money. Garry took the trust funds from the church."

"No money, Corinne! You don't mean you can't—Oh! Not Garry! No—not Garry!"

"Yes! I mean it. He expected to pay it back, but the people he is with in New York lied to him, and now it is all gone." There was no change in her voice.

She stood gazing into his face; not a tear in her eyes, no quiver of her lips. She had passed that stage; she was like a victim led to the stake in whom nothing but dull endurance is left.

Jack backed into a chair and sat with bowed head, his cheeks in his hands. Had the earth opened under him he could not have been more astounded. Garry Minott a defaulter! Garry a thief! Everything seemed to whirl about him—only the woman remained quiet—still standing—her calm, impassive eyes fixed on his bowed head; her dry, withering, soulless words still vibrating in the hushed room.

"When did this happen, Corinne—this taking of Mr. McGowan's money?" The words came between his closed fingers, as if he, too, would shut out some horrible shape.

"Some two weeks ago."

"When did you know of it?"

"Night before last, after you left him. I knew he was in trouble, but I did not know it was as bad as this. If Mr. Breen had helped me everything would have been all right, for Garry sold out all the stock he had in the Warehouse Company, and this ten thousand dollars is all he owes." She shivered as she spoke, and her pale, tired eyes closed as if in pain. Nothing was said between them for a while, and neither of them stirred. During the silence the front door was heard to open, letting in the village doctor, who mounted the stairs, his footfalls reverberating in Garry's room overhead.

Jack raised his eyes at last and studied her closely. The frail body seemed more crumpled and forlorn in the depths of the chair, where she had sunk, than when she had been standing before him. The blonde hair, always so glossy, was dry as hemp; the small, upturned nose, once so piquant and sunny, was thin and pinched—almost transparent; the washed-out, colorless eyes, which in her girlhood had flashed and sparkled so roughly, were half hidden under swollen lids. The arms were flat, the hands like bird claws. The white heat of a furnace of agony had shrivelled her poor body, drying up all the juices of its youth.

And yet with the scorching there had crept into the wan face, and into the tones of her tired, heart-broken voice, something Jack had never found in her as a girl, something of tenderness, unselfishness—of self-sacrifice for another, and with it there flamed up in his own heart a determination to help—to wipe everything—to sponge the record, to re-establish the man who in a moment of agony had given way to an overpowering temptation and brought his wife to this condition. A lump rose in his throat, and a look of his old father shone out of his face—that look with which in the years gone by he had defied jury, district attorney, and public opinion for what he had considered marry. And money should be exercised now. Garry had had never done one dishonest act before, and never, God helping, should he be judged for this.

He, John Breen, let Garry be called a common thief! Garry whose every word in Corklesville had been for justice, Garry whom Morris loved, whose presence brought a cheery word of welcome from every room he entered! Let him be proclaimed a defaulter, insulted by ruffians like McGowan, and treated as a felon—brilliant, boyish, ferocious Garry! Never, if he had to go down on his knees to Holker Morris or any other man who could hold out a dollar,

Corinne must have seen the new look in his face, for her own eyes brightened as she asked:

"Have you thought of something that can help him?"

Jack did not answer. His mind was too intent on finding some thread which would unravel the tangle.

"Does anybody else know of this, Corinne?" he asked at last in a low-pitched voice.

"Nobody."

"Nobody must," he exclaimed firmly. Then he added gently—"Why did you tell me?"

"He asked me to. It would all have come out in the end, and he didn't want you to see McGowan and not know the truth. Keep still—some one is knocking," she whispered, her fingers pressed to her lips in her fright. "I know it is McGowan, Jack. Shall I see him, or will you?"

"I will—you stay here."

Jack lifted himself erect and braced back his shoulders. He intended to be polite to McGowan, but he also intended to be firm, he also intended to refuse him any information or promise of any kind until the regular monthly meeting of the Church Board which would occur on Monday. This would give him time to act, and perhaps to save the situation, desperate as it looked.

With this in his mind he turned the key and threw wide the door. It was the doctor who stood outside. He seemed to be laboring under some excitement. "I heard you were here, Mr. Breen—come upstairs."

Jack obeyed mechanically. Garry had evidently heard of his being downstairs and had some instructions to give, or some further confession to make. He would save him now from that humiliation; he would get his arms around him, as Corinne had done, and tell him he was still his friend and what he yet intended to do to pull him through, and that nothing which he had done had wrecked his affection for him.

As these thoughts rushed over him his pace quickened, mounting the stairs two steps at a time so that he might save his friend even a moment of additional suffering. The doctor touched Jack on the shoulder, made a sign for him to moderate his steps, and the two moved to where his patient lay.

Garry was on the bed, outside the covering, when they entered. He was lying on his back, his head and neck flat on a pillow, one foot resting on the floor. He was in his trousers and shirt; his coat and waistcoat lay where he had thrown them.

"Garry," began Jack in a low voice—"I just ran in to say that—"

The sick man did not move.

Jack stopped, and turned his head to the doctor.

"Asleep?" he whispered.

"No;—drugged. That's why I wanted you to see him before I called his wife. Is he accustomed to this sort of thing?" and he picked up a bottle from the table.

Jack took the phial in his hand; it was quite small, and had a glass stopper.

"What is it, doctor?"

"I don't know. Some preparation of chloral, I should think; smells and looks like it. I'll take it home and find out. If he's been taking this right along he may know how much he can stand, but if he's experimenting with it, he'll wake up some fine morning in the next world. What do you know about it?"

"Only what I have heard Mrs. Minott say," Jack whispered behind his hand. "He can't sleep without it, she told me. He's been under a terrible business strain lately and couldn't stand the pressure, I expect."

"Well, that's a little better," returned the doctor, moving the apparently lifeless arm aside and placing his ear close to the patient's breast. For a moment he listened intently, then he drew up a chair and sat down beside him, his fingers on Garry's pulse.

"You don't think you're in danger, do you, doctor?" asked Jack, as the doctor's fingers moved.

"No—he'll pull through. His breathing is bad, but his heart is doing fairly well. But he's got to stop this sort of thing." Here the sick doctor's voice rose as he and Garry's eyes opened, and

# Buy High-Grade Flour

MAKE the best bread and pastry you've ever tasted. Prices of flour and feeds are listed below. Orders may be assorted as desired. On shipments up to 5 bags buyer pays freight charges. On shipments over 5 bags we will prepay freight to any station in Ontario east of Sudbury and south of North Bay. West of Sudbury and New Ontario add 15 cents per bag. Prices are subject to market changes. Cash with orders.



## Cream of the West Flour

the hard wheat flour that is guaranteed for bread

GUARANTEED FLOURS	Per 98-lb. bag
Cream of the West (for bread)	\$3.40
Toronto's Pride (for bread)	3.15
Queen City (blended for all purposes)	2.95
Monarch (make delicious pastry)	2.95

FEED FLOURS	
Tower	1.85

CEREALS	
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Norwegian Rolled Oats (per 90-lb. bag)	3.10
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FEEDS	Per 100-lb. bag
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Bullrush Middlings	1.45
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Whole Manitoba Oats	1.95
Crushed Oats	2.00
Chopped Oats	2.00
Whole Corn	1.65
Cracked Corn	1.75
Feed Cornmeal	1.65
Whole Feed Barley	1.90
Barley Meal	1.95
Oatmeal	2.05
Geneva Feed (Crushed Corn, Oats and Barley)	1.90
Oil Cake Meal (old process)	2.00

Special prices to farmer's clubs and others buying in carload lots.

## The Campbell Flour Mills Company Limited (West) Toronto

**CHALLENGE COLLARS**

Acknowledged to be the finest creation of Water-proof Collars ever made. Ask to see, and buy no other. All stores or direct for 25c.

Made in Canada

**THE ARLINGTON CO. of Canada, Ltd.**  
68 FRAZER AVENUE TORONTO

All "ARLINGTON COLLARS" are good, but our CHALLENGE BRAND is the best MADE IN CANADA

**St. Lawrence Sugar**

Buy St. Lawrence Granulated Pure Cane Sugar in original packages, and get pure, clean, perfect sugar.

**MOFFAT Ranges**

Are acknowledged best. Write for Free Booklet. THE MOFFAT STOVE COMPANY LTD. Weston, Ont.

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Write for FREE Fertilizer Booklet and prices. THE ONTARIO FERTILIZERS, LIMITED West Toronto, Ont.

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Hundred acres, York County, second concession, east of Yonge Street, Whitchurch Township, mile from village; clay loam soil; comfortable dwelling; two barns; driving house; pigery and poultry house; orchard; small acreage woods. Price: Fifty-six hundred.

**JOHN FISHER & CO., Lumsden Building, Toronto**  
For Sale The Aberdeen-Angus bull, Sam. Black - 8081 - calved March 10th, 1914; dam, Glen Maple - Miss - 7588 - 2; sire, Valley Farm Rebel - 5676. This calf is of good quality, and would make a good sire for any herd.

**SAM. MULHOLLAND Mitchell, Ont.**

**Great Athletic Book 10c**

Learn wrestling, self-defense, jiu-jitsu. Let Farmer Burns, Mr. Frank Gotch, World's Champion, teach you. Makes you strong, healthy and skillful. Fine book showing great holds. Send 10c and track by Burns and Gotch. Write today—immediately—giving your age. Farmer Burns School of Wrestling Bldg. Omaha

### "Even a Single Hair Casts Its Shadow"



There is scarcely any facial blemish which is greeted with such disfavor by the sex feminine as the appearance of

#### HAIR ON THE FACE

It coarsens and ages the face, besides giving it a masculine character. Constant tapering stimulates and thickens the growth. There is positively and absolutely no permanent treatment but Electrolysis. We employ skilful and experienced operators only. Satisfaction assured in each case. Over 22 years established. Consultation invited in person or by mail. Booklet "F" mailed on request.

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## CREAM

We supply cans and pay all express charges within a radius of 100 miles of Berlin. Send a statement of each shipment. Pay every two weeks.

WRITE FOR FULL PARTICULARS

**The Berlin Creamery Co.**  
Berlin, Canada

## WANTED

We have again advanced our prices for good quality cream. We could use yours. It will be worth your while to write us.

**Toronto Creamery Company, Limited**  
Toronto, Ontario

## CREAM WANTED

We are offering highest prices for cream to cheese factory patrons and others having a supply during the fall and winter. Express paid and cans supplied. Write us

**VALLEY CREAMERY OF OTTAWA, LTD.**  
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Big price for butter fat. We want you cream. Write us; cans supplied.

**GALT CREAMERY**

Galt, - - - Ontario

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## FURNITURE?

Write for our large photo-illustrated Catalogue No. 7. It's free to you. **The ADAMS FURNITURE CO., Limited** Toronto, Ontario

When You Buy a

## SHERLOCK-MANNING

20th Century Piano you get "CANADA'S BIGGEST PIANO VALUE" and at the same time save fully \$100.

Write Dept. 4 for Catalogue L.

**THE SHERLOCK-MANNING PIANO CO.** London (No street address necessary) Canada

## Chiclets

REALLY DELIGHTFUL  
THE DAINTY  
MINT-COVERED  
CANDY-COATED  
CHEWING GUM

ing would wake Garry). "It's criminal—it's damnable! Every time one of you New York people get worried, or short of money or stocks, or what not, off you go to a two-cent drug shop and buy enough poison to kill a family. It's damnable, Breen—and you must tell Minott so when he wakes up."

Jack made no protest against being included in the denunciation. He was too completely absorbed in the fate of the man who lay in a stupor.

"Is there anything can be done for him?" he asked.

"I can't tell yet. He may only have taken a small dose. I will watch him for a while. But if his pulse weakens we must shake him awake somehow. You needn't wait. I'll call you if I want you. You've told me what I wanted to know."

Again Jack bent over Garry, his heart wrung with pity and dismay. He was still there when the door opened softly and a servant entered, tiptoed to where he stood, and whispered in his ear:

"Mrs. Minott says, sir, that Mr. McGowan and another man are downstairs."

The contractor was standing in the hall, his hat still on his head. The other man Jack recognized as Murphy, one of the church building trustees. That McGowan was in ugly mood was evident from the expression on his face, his jaw setting tighter when he discovered that Jack and not Garry was coming down to meet him; Jack having been associated with MacFarlane, who had "robbed him of damages" to the "fill."

"I came to see Mr. Minott," McGowan blurted out before Jack's feet had touched the bottom step of the stairs. "I hear he's in—come home at dinner time."

Jack continued his advance without answering until he had reached their side. Then with a "Good-evening, gentlemen," he said in a perfectly even voice:

"Mr. Minott is ill and can see no one. I have just left the doctor sitting beside his bed. If there is anything I can do for either of you I will do it with pleasure."

McGowan shoved his hat back on his forehead as if to give himself more air. "That kind of guff won't go with me no longer," he snarled, his face growing redder every instant. "This ill business is played out. He promised me three nights ago he'd make out a certificate next day—you heard him say it—and I waited for him all the morning and he never showed up. And then he sneaks off to New York at daylight and stays away for two nights more, and then sneaks home again in the middle of the day when you don't expect him, and goes to bed and sends for the doctor. How many kinds of a fool does he take me for? That work's been finished three weeks yesterday; the money is all in the bank to pay for it just as soon as he signs the check, and he don't sign it, and ye can't get him to sign it. Ain't that so, Jim Murphy?"

Murphy nodded, and McGowan blazed on: "If you want to know what I think about it—there's something crooked about the whole business, and it gets crookeder all the time. He's drunk, if he's anything—boiling drunk and—"

Jack laid the full weight of his hand on the speaker's shoulder:

"Stop short off where you are, Mr. McGowan. The voice came as if through tightly clenched teeth. "If you have any business that I can attend to I am here to do it, but you can't remain here and abuse Mr. Minott. My purpose in coming downstairs was to help you if I could, but you must act like a man, not like a ruffian."

Murphy stepped quickly between the two men:

"Go easy, Mac," he cried in a conciliatory tone. "If the doctor's with you ye can't see him. Hear what Mr. Breen has to say; ye can't wait any more. Of course, Mr. Breen, Mr. McGowan is hot up because the men is getting the money and ye ain't got money enough for his next payroll, and the last one ye'll all paid it."

McGowan again shifted his hat this time he shifted it on one side. His companion's warning had had its effect, for his eyes were now peered in a lower key.

"There's nothing to be talking any more

Mr. Breen, Jim," he growled. "He knows what it is; he gets up again' it once in a while himself. If he'll tell me just when I'm going to get my money, I'll wait like any decent man would wait, but I want to know, and I want to know now."

At that instant the door of the sitting-room opened, and Corinne, shrinking as one in mortal fright, glided out and made a hurried escape upstairs. Murphy sagged back against the wall and waited respectfully for her to disappear. McGowan did not alter his position nor did he remove his hat, though he waited until she had reached the landing before speaking again.

"And now, what are you going to do, Mr. Breen?" he demanded in threatening tones.

"Nothing," said Jack in his same even voice, his eyes never moving from the contractor's. "Nothing, until you get into a different frame of mind." Then he turned to Murphy: "When Mr. McGowan removes his hat, Mr. Murphy, and shows some signs of being a gentleman I will take you both into the next room and talk this matter over."

McGowan flushed scarlet and jerked his hat from his head.

"Well she came on me sudden like and I didn't see her till she'd got by. Of course, if you've got anything to say, I'm here to listen. Where'll we go?"

Jack turned and led the way into the sitting-room, where he motioned them both to seats.

"And now what is the exact amount of your voucher?" he asked, when he had drawn up a chair and sat facing them.

McGowan fumbled in his inside pocket and drew forth a slip of paper.

"A little short of ten thousand dollars," he answered in a business-like tone of voice. "There's the figures," and he handed the slip to Jack.

"When is this payment to be made?" continued Jack, glancing at the slip.

"Why, when the money is due, of course," he cried in a louder key. "Here's the contract—see—read it; then you'll know."

Jack ran his eye over the document until it fell on the payment clause. This he read twice, weighing each word.

"It says at the monthly meeting of the Board of Trustees, does it not?" he answered, smothering all trace of the relief the words brought him.

McGowan changed color. "Well, yes—but that ain't the way the payments has always been made," he stammered out.

"And if I am right, the meeting takes place on Monday next?" continued Jack in a decided tone, not noticing the interruption.

"Yes, I suppose so."

"Well, then, Monday night, Mr. McGowan, either Mr. Minott or I will be on hand. You must excuse me now. Mrs. Minott wants me, I think," and he handed McGowan the contract and walked toward the door, where he stood listening. Something was happening upstairs.

McGowan and his friend looked at each other in silence. The commotion overhead only added to their discomforts.

"Well, what do you think, Jim?" McGowan said at last in a subdued, baffled voice.

"Well, there ain't no use thinkin, Mac. If it's writ that way, it's writ that way; that's all there is to it—" and the two joined Jack who had stepped into the hall, his eyes up the stairway as if he was listening intently.

"Then you say, Mr. Breen, that Mr. Minott will meet us at the Board meeting on Monday?"

Jack was about to reply when he caught sight of the doctor, his hand sliding rapidly down the stair-rail as he approached.

McGowan, fearing to be interrupted, repeated his question in a louder voice:

"Then you say I'll see Mr. Minott on Monday?"

The doctor crossed to Jack's side. He was breathing heavily, his lips quivering; he looked like a man who had received some sudden shock.

"Go up to Mrs. Minott," he gasped. "It's all over, Breen. He's dying. He took the whole bottle."

At that instant an agonizing shriek cut the air. It was the voice of Corinne.

(To be continued.)

## POULTRY AND EGGS

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

**BREEDER** of high-class Barred Rocks and Pekin ducks. Two hundred cockerels at reasonable prices. Leslie Kerns, Freeman, Ont.

**FOR SALE**—Mammoth Pekin ducks. Choice birds. John Beckton, Glencoe, Ont.

**FOR SALE**—A limited number of Rose Comb Brown cockerels for sale at three dollars each. James Browning, Knoch, Ont.

**MAMMOTH** Bronze turkeys, both sexes, choice birds. D. Ashworth & Son, R.R. No. 2, Cold, Ont.

**MAMMOTH** Bronze Turkeys—Winning more first prizes than all other exhibitors at London, Hamilton and Guelph Shows. W. H. Beattie, Wilson Grove, Ont.

**PUREBRED** Bronze Turkeys, Rouen Ducks and Guinea Fowl. C. A. Powell, Ettrick, R. R. 1, Ontario.

**WHITE WYANDOTTES**, Cockerels, bred from good laying strain; also two yearling cocks, two dollars each. A. J. Helson, Maple, Ont.

**\$2 EACH** for bred-to-lay Barred Rock cockerels. Have ability to transmit the egg-laying habit to their offspring. Bred from O. A. college record-laying strain. Flock trap-nested and selected for early maturity and high egg production. Order now. Settings for sale in season. Walter H. Smith, Athens, Ont.

## WANTS & FOR SALE

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

**TERMS**—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

**FERRETS**—Rid your place of rats, drive rabbits. Calvin Jewell, Spencer, Ohio.

**I AM A MANUFACTURER** having a 125 acre farm fronting on the Niagara Boulevard near Niagara Falls. Have constructed concrete barns, incubator, brooding houses, laying houses (capacity 5,000), water tower, cold storage, natural gas and splendid house. Have spent \$30,000 on improvements. Will make most favorable and long terms to a reliable, industrious party on a share or rental basis to work and develop the property. This is a rare opportunity. Come and see it or address William L. Doran, Niagara Falls, Ontario.

**WANTED** at once—Reliable married man on stock farm, capable of taking full charge when necessary; small or no family; state yearly wage, age, etc., with references. Apply: Gordon Smith, Woodlee, Ont.

## Wanted: Stallions or Mares

In exchange for a good brick house in Meaford; on corner lot, close in with stable in rear. Price \$1,500. Also one rough cast house in Collingwood. Price \$1,000.

**HENRY M. DOUGLAS & CO.**  
Dealers in Clydesdale, Percheron and Hackney Stallions

## EUREKA FEED

With Molasses  
A low priced feed of good value for young, growing cattle.

Write for full particulars and prices.

**THE CHISHOLM MILLING CO., LIMITED,**  
TORONTO

## FREE

We will give free to any person interested in stock or poultry one of our 80-page illustrated books on how to feed, how to build hen-houses; tells the common diseases of poultry and stock, with remedies for same; tells how to cure roup in four days; tells all about our ROYAL PURPLE Stock and Poultry Foods and Remedies. Write: W. A. JENKINS MFG. CO. London - - - Canada

## Wanted

Carload of clean wheat or oat straw. Quote best cash price.

A. G. Hull & Son, - - - St. Catharines

## Richards' QUICK NAPTHA

THE WOMAN'S SOAP

MADE IN CANADA



Add water to milk—  
You weaken the milk.  
Add soft wheat to flour—  
You weaken your flour.  
Cheapens it too.  
Soft wheat costs less—worth less.  
Soft wheat flour has less gluten—less nutriment.  
Your bread is less nutritious, sustaining, economical.  
Soft flour has less strength, less quality gluten.  
Giving less good things for your money and things less good.  
Use Manitoba flour—Manitoba hard wheat flour.  
Having everything the soft stuff lacks.  
**FIVE ROSES is all Manitoba.**  
Without a grain of cheaper wheat.  
Strengthen your food values.  
Use **FIVE ROSES**.

# Five Roses Flour

Not Bleached



Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED, MONTREAL

### Questions and Answers.

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.  
2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.  
3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.  
4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

#### Miscellaneous.

##### Township Surveyor.

A municipal council appoints a township surveyor. Can any ratepayer have him fined for running lines in the township he has been appointed in?  
Ontario.

Ans.—Yes, unless he has been duly authorized to practice as a land surveyor according to the provisions of The Ontario Land Surveyor's Act, or was so authorized before the passing thereof according to the laws then in force, and is registered under the Act.

##### A Whitewash that Will Stick.

Kindly tell me of a good, white paint, for use on the interior of a stone dairy barn? In one number of "The Farmer's Advocate" it gave the names of certain things for a mixture used for stables, but I have not been able to find it.  
W. T. S.

Ans.—People desire a whitewash that will adhere to the wall, and in the one prescribed below, the glue and salt and other ingredients are used for this purpose. This prescription has been recommended many times, and has given good results:—Half a bushel of unslaked lime. Slake with warm water, cover it during the process to keep in the steam. Strain the liquid through a fine sieve or strainer, add a peck of salt previously

well dissolved in warm water, three pounds of ground rice boiled to a thin paste, and stir in boiling hot; half-pound of powdered Spanish whiting, and a pound of glue which has previously been dissolved over a slow fire, and add five gallons hot water to the mixture; stir well, and let it stand for a few days, covered up from the dirt. It should be put on hot. One pint of the mixture will cover a square yard, properly applied. Small brushes are best. There is nothing that can compare with it for outside or inside work, and it retains its brilliancy for many years. Coloring matter may be put in, and made of any shade—Spanish brown, yellow ochre, or common clay.

##### Feed for Horse.

1. How much hay and oats should a 1,070-pound horse get per day to be able to make 24 miles in five hours every day to a buggy?  
2. Would you consider 24 miles per day of five hours a good drive over none too good a road? This has to be done every day.  
C. C.

Ans.—1. About one pound of hay and one pound of oats for every hundred pounds of horse.  
2. Yes.

##### Feeding Hogs.

I am feeding a number of store hogs on corn and mixed grain chop, and they do not seem to gain as I would like. I have a lot of small potatoes and would like to know whether it would make any improvement if they were to be boiled, and mix the chop in with the potatoes, leaving the water in which was used in boiling or to drain and mash, and then put in chop and water? Also, would this be good feed for pigs, which I am keeping over?  
M. G.

Ans.—In boiling the potatoes use as little water as possible, and use the

feed thick with the meal. Do not feed potatoes raw. About 270 lbs. of potatoes thus boiled are considered equal to 56 lbs. of corn in pig feeding.

##### Feeding Pigs.

What forms of roughage can be fed advantageously to growing hogs? Can sugar beets be used to replace part of the grain ration? Will you also inform me whether corn silage can be fed to hogs, and if so, how much, alone, or with feed? We have been subscribers to your paper for nearly four years, and should be very grateful to you for any information on the above subject.  
A. J. H.

Ans.—Sugar beets, mangels, and sometimes turnips; also alfalfa. Sugar beets are good for growing pigs. Corn silage is seldom fed to pigs.

##### A Minor's Wages.

Last January I hired a boy seventeen years old, for a year, from his father. The boy's sister made the agreement with me, which was verbal, for her father for a certain amount, I to give the boy a certain amount during the term, paying the rest to his father. His father died last May. Then his sister told me I could settle with the boy. During the summer the boy contracted certain debts to the extent of nearly all his wages, giving an order, and in one case a note.  
1. If I paid these debts, could his mother collect amount due his father?  
2. Could his mother hold his sister responsible for amount due his father?  
3. If his mother can collect amount due his father, or his sister, can I be held responsible?  
4. What would be the best way to have it all settled?  
W. B.  
Ontario.

Ans.—1. Yes, if she has taken over letters of administration to her husband's estate.  
2. No.  
3. You are responsible to the father's estate for the portion payable to him of the son's wages, and to the son for the balance. The part which you may pay to the administrator of the estate must be applied for the boy's benefit.  
4. Pay the amount due the estate to the administrator, and take a receipt for it. As to the balance, do not make payment to the holder of an order without taking the joint receipt of such holder and the boy. Do not pay the holder of the note either without getting it, and the boy's receipt for the amount as representing so much of his wages.

### Gossip.

Abe Martin says: "Th' ranks o' th' down an' out are filled with fellers who nailed a horse-shoe over th' door instead o' puttin' a ad in a newspaper."

Miss C. Smith, proprietress of Maple Lodge Stock Farm, writes: "We have completed another very successful year, thanks to our many old and new friends who so kindly remembered and were interested in our stock, and the work we tried to do. We have sold all the pure-bred cattle and sheep offered, and all purchasers have expressed perfect satisfaction. We are now offering this year's calves. We have four bull calves from seven to thirteen months old. They are thrifty, shapely animals, choicely bred for both milk and beef. Our cow, Gipsy Lady 2nd—520860—, has finished a very creditable record, as shown elsewhere in this magazine, and freshened on May 9th, giving us a fine red heifer. She is now in fine flesh. The other cows under test are making creditable records also. Our sheep have done exceptionally well, and are in a promising condition, having been in the fields till a few days ago."

"British through and through"

**BUY DIRECT**We pay freight to any point  
in Old Ontario

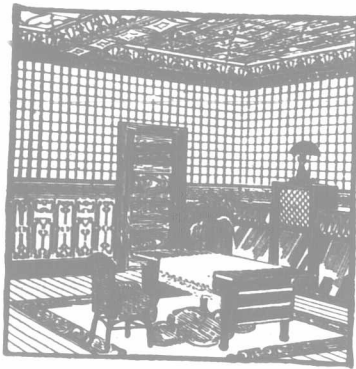
The Metallic Roofing Co., Limited, is determined that the farmers of Ontario shall have the fullest opportunity of buying British-made goods, with the least possible trouble and at the lowest possible price and we now advertise

**"Metallic" Ceiling and Wall Plates**

for sale direct from the factory at rock bottom prices for cash. There being so many patterns and styles, it is impossible to quote prices here—so just write us for information that will open your eyes. "Metallic" Ceiling and Wall Plates come in many beautiful, registered designs. The patterns are clean and sharp. The sheets are British-made, always true and straight and can be laid on any surface.

Of course we have always sold direct to farmers

during our whole 80 years' business, whenever they wished to buy that way, so it is no new thing with us for any of our products. Just now, however, we wish to make it specially easy for Ontario farmers to beautify their homes, churches, schools and other buildings with these beautiful, cleanly, fire-retardant, British-made "Metallic" Plates and offer big bargains in reduced prices. We also pay freight to any point in Old Ontario, which amounts to another big cut in price. Now is the time to buy.



Just drop us a card—We send you full information, illustrated catalogues, etc., without committing you in any way. Cut prices also made on the famous "Eastlake" Shingle, Rock and Brick-face Siding, "Empire" Corrugated Iron. Address:

**The Metallic Roofing Co.**  
Manufacturers Limited Toronto

Established 1885

New Edition  
Just OutModern  
**SILAGE**  
MethodsSend for the New Edition of  
This Famous 264 Page Book

It's far superior to anything we have ever put out before. Tells everything you want to know about silos and silage. Home made silos—hoop and octagonal silos, pit silos, brick, concrete, tile, cement, metal—all modifications of all known types. We do not make silos, therefore, can recommend without favor. When you read this book you can make an unerring choice of the best type of silo suited for your particular needs. Your climate—your conditions—your stock—your land—your crops—are all fully discussed and best suggestions offered for increasing your profits. Copyrighted November, 1914. Contains 30 page Feeders' Guide and complete 10 page Index, 56 illustrations. Be sure to get this new copy. It's far ahead of former editions which were used as text books in agricultural colleges. We send it for 10 cents, stamps or coin. Send for this revised edition—read it and profit from the knowledge you will get from it.

**Silver's "Ohio" Silo Fillers**

have for you made the best records for big capacity, fast work and low operating cost. Let us tell you about our new model by sending you catalog and our free booklet, "Silo Filler Logic." Write today for these two books. Enclose 10 cents and receive the new edition of "Modern Silage Methods" with them!



**The Silver Mfg. Co.**  
343 Broadway  
Salem, O.

**Distribution of Tobacco Seed.**

A sample of choice seed, in 1/4-ounce packages, of one of the following varieties of tobacco: Comstock Spanish, General Grant, Connecticut Seed Leaf, Connecticut Broad Leaf, Big Havana, will be sent free to any tobacco-grower who applies for same to the Tobacco Division, Department of Agriculture, Ottawa, before the 15th February next. This quantity of seed is sufficient to sow 150 square feet of seedbed, and to plant one acre. Applicants can also secure a sample of "Canelles" tobacco seed, in 1/4-ounce packages, which is sufficient to sow about 80 square feet of seedbed, and to plant half an acre. The Tobacco Division will supply in limited quantities, other varieties of tobacco seed not mentioned in the present notice. In such cases the request will have to be explicit, that is, one must state the district in which he expects to plant, the nature of the soil, for what purpose the product is to be used, etc. Our supply of seed being limited, we would ask all growers desirous of securing seed to send their applications at an early date, as all requests will be classified in the order which they are received. No applicant will be supplied with more than one sample of seed.

**The Planting and Care of Shade Trees.**

A bulletin entitled "The Planting and Care of Shade Trees" has just been issued by the Central Experimental Farm. This publication, which has been prepared by F. R. Buck, B.S.A., Assistant to the Dominion Horticulturist, contains practical directions and advice in the selection of shade trees, their planting, transplanting, and subsequent treatment and care, with notes on the principal injuries and unfavorable conditions to which shade trees are subjected, especially in towns and cities. Lists of varieties suitable for street and home planting are also given. This bulletin is No. 19 of the Second Series of the Central Experimental Farm, a copy of which will be mailed to those to whom the information is likely to be useful, and who make application to the Publications Branch, Department of Agriculture, Ottawa.

**Trade Topic.****FAST MONTREAL-TORONTO-DETROIT-CHICAGO TRAIN SERVICE.**

These solid de luxe trains, carrying buffet-library-compartment-observation cars, electric-lighted standard sleepers, together with standard dining-car service between Montreal-Toronto-Detroit-Chicago, via Canadian Pacific and Michigan Central railroads, are known as "The Canadian," and operated daily through the Michigan Central twin tubes between Windsor and Detroit.

Westbound: Leaving Montreal 8.45 a.m., arriving Toronto 5.40 p.m.; leaving Toronto 6.10 p.m., leaving London 9.33 p.m., arriving Windsor 12.10 a.m., arriving Detroit 11.35 p.m. (central time); leaving Detroit 11.55 p.m., arriving Chicago 7.45 a.m.

Eastbound: Leaving Chicago 6.10 p.m. (central time); arriving Detroit (M.C.R. Depot) 12.35 a.m.; leaving Detroit (M.C.R. Depot) 12.43 a.m.; leaving Detroit (Fort street) 11.40 p.m., leaving Windsor (C.P.R.) 1.20 a.m. (Eastern time), leaving Windsor (M.C.R. Depot) 2.10 a.m., leaving London 5.15 a.m.; arriving Toronto 8.30 a.m.; leaving Toronto 9.00 a.m.; arriving Montreal 6.10 p.m.

Full particulars from Canadian Pacific ticket agents, or write M. G. Murphy, District Passenger Agent, Toronto.

The oft-quoted Finnegan has a rival in Pat Donohue, an Ohio freight conductor whose train had a breakdown recently. After the accident he sent this message to Train Dispatcher Straight:

"Two-twenty-two has a busted flue. What will I do?" DONOHUE.

This awakened the slumbering muse in the telegraph office, and the reply ran:

"Wait. Two-twenty-eight will take your freight."

DISPATCHER STRAIGHT.

**Questions and Answers.  
Veterinary.****Bronchocele.**

I have three pigs with lumps in their throats. They are doing and eating all right.

R. F.

Ans.—This is enlargement of the thyroid glands. Rub well once daily with an ointment made of four drams each of iodine and iodide of potassium, mixed with two ounces vaseline.

**Bursal Enlargement.**

Mare has a soft lump on the outside of her hock.

SUBSCRIBER.

Ans.—This is a bursal enlargement, commonly called thoroughpin. These enlargements are very hard to reduce, and even though reduced, are liable to recur. Get a liniment made of four drams each of iodine and iodide of potassium, and four ounces each of alcohol and glycerine, and rub a little well in once daily. Have patience, and continue treatment, as it is probable that reduction will be slow.

**Horse Interferes.**

My horse interferes. My blacksmith shod him with shoes heavy on the inside and light on the outside, but he still strikes. How should he be shod? How can I reduce the swelling already caused?

D. J. McE.

Ans.—It is not possible to shoe some horses so that they will not interfere. Some horseshoers are quite clever at shoeing interfering horses. The shoeing that will be effective with one horse will not with another. On general principals the shoes should be light, and made to fit the foot neatly, and a boot should be worn until he ceases striking. To reduce the enlargement, rub well once daily with a liniment made of four drams each of iodine and iodide of potassium, mixed with four ounces each of glycerine and alcohol. Of course, treatment will be ineffective so long as the cause continues.

**Miscellaneous.****Co-operation.**

If a person, by paying an annual fee, becomes a member of a co-operative concern, would that person be held responsible for debts contracted by that firm during the year, or at any time?

Ontario. A SUBSCRIBER.

Ans.—It is probable that he would be so responsible.

**Poultry Queries.**

1. How can I tell the sex of guinea fowl?  
2. Give the composition of the International egg-laying contest.

D. S. A.

Ans.—1. We have referred this question to an expert.

2. We scarcely understand this question. Each pen in the competition consists of five birds, and the competition runs for a year, all pens receiving the same treatment.

**Lice on Mare—Frozen Cabbage for Cows.**

1. We have a mare which is covered with big black lice. What would you call them, and how did they originate? Kindly send a remedy to exterminate them as soon as possible, as we are very anxious to get rid of them.

2. Kindly tell me what the percentage of water would be in brewers' grains, and what it would be in Swedish turnips or mangels?

3. Would there be any danger in feeding frozen cabbages that have been thawed out to cows?

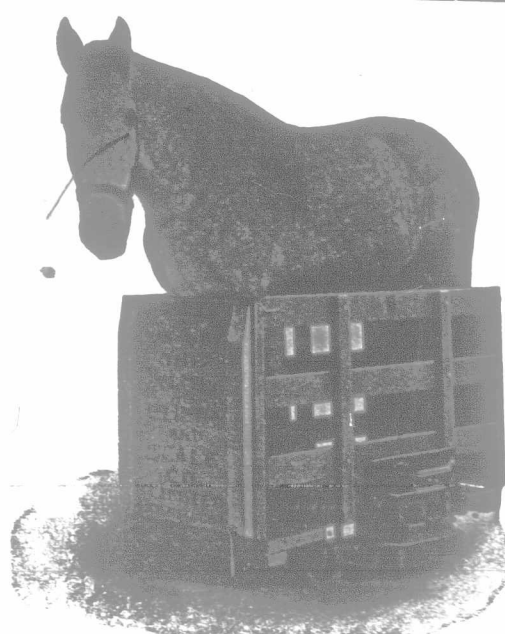
T. J. O.

Ans.—1. The proprietary powders which may be procured at most druggists are effective, but if you wish to prepare something at home, mix four parts of cement with one part of hellebore, and sift into the hair. Of course, the animal should be kept dry, and treatment repeated two or three times as the young hatch out.

2. Following are the percentages of moisture in the different feeding-stuffs: Wet brewers' grains, 77 per cent.; dry brewers' grains, 8.7 per cent.; turnips, 84.6 per cent.; mangels, 90.9 per cent.

3. We can see no reason for any danger in feeding cabbage, that has been frozen and thawed, to cows, if they have not started to decompose.





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### Wednesday, 3rd March, 1915

Entries close 10th January, 1915. For further information apply to:

**C. L. NELLES, President.** **J. M. DUFF, Secretary.**  
GUELPH FAT STOCK CLUB, GUELPH

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**G. A. Attridge, Muirkirk, Ont. P.M. and M.C. Ry. L.-D. 'Phone Ridgetown**

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**L. O. CLIFFORD, OSHAWA, ONTARIO**

### Questions and Answers. Miscellaneous.

#### Breeding Crate for Cattle.

We have a Holstein bull weighing about twenty-three hundred pounds. Would like if you would give us a plan of a breeding crate which would take part of this weight off the cow, either through the columns of your valuable paper, or otherwise?  
S. G. & E.

Ans.—If any of our readers have a successful crate in operation we invite them to describe it in our columns.

#### Pinworms in Colt.

Could you, through your valuable paper, give me a remedy for pinworms in colts?  
A. A. S.

Ans.—For pinworms, give an injection per rectum. Take half a pound quassia chips and add two gallons of water in a pot. Put on the stove and bring to a boil. Then allow to almost boil for four or five hours, adding a little water if necessary. Strain off now and add sufficient warm water to make a gallon. Inject the rectum first with warm water to remove all faeces. When this is removed, inject the decoction and hold the tail down for at least half an hour to prevent the animal expelling it. The worms will be expelled with the fluid. It is probable the colt also has intestinal worms, which require internal treatment.

#### Cow Coughs.

I have a cow that contracted a cough last April after she had calved. I did not think anything of it at the time and let her go, but she don't seem to get any better or worse. She was in fair condition and milked well all summer. We fed her alsike straw last winter which was a bit dusty. Would the dust have anything to do with giving her the cough? We did not feed her any roots as we had none, but we gave her some dry chop. She had not much bedding, and lying on a cement floor gave her a cold. I asked my veterinarian about it and he said to blister her on the throat. I would like your opinion on that. Do you consider it safe to use her milk, and is it contagious among cattle or ourselves. She gives three or four hard coughs every morning after she gets up, and sometimes at the water-trough. The cough seems to be a sort of a sneeze, as though it was in her nostrils. She ran water at the eyes last summer, but has got over that now. I fed her outside a while where a sow was running around, and a few days ago I noticed the sow coughing. Would it be that the sow had taken it from her, besides some smaller pigs about four months old? My neighbor had a bull that he shot because of having tuberculosis, though I never bred any cows to him. They claimed that sleeping on the bare cement gave it to him. My cow was three years old last spring with her first calf. She is supposed to be in calf now, being bred last summer. If I sold her to a drover, could he come back at me for damages if I did not tell him, or would it be advisable to put her up at an auction sale? I have a heifer a year and a half old that had scabs around her eyes and ears. It has now gone down her throat. Her jaws seem to be swollen, and she don't seem to be able to chew right when we feed her. She also slobbers at the mouth all the time. She eats up her chop and roots all right, but seems to have got thin. What could I do for her, and is it contagious?  
A SUBSCRIBER.


Ans.—You had better have a competent veterinarian test the cow for tuberculosis. If she does not react, he will be able to prescribe for the chronic cough. Cold cement and dusty feed may cause coughing, the former from cold, the latter from irritation. Keep her away from other stock if she proves to have the disease. The bull would not likely get the disease simply from the cement. It is a germ disease, but the cold cement may have caused colds, which weakened his constitution, making him more susceptible to the trouble. It is not likely the pigs have the same trouble. Pigs may get tuberculosis from drinking milk containing the germs. You should not attempt to deceive a buyer. Unless her udder is affected, it is likely her milk is all right. Pasteurizing would fix it anyway.

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Choice, young Bulls fit for service. Females all ages, for sale.

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 8 bulls from 7 to 15 months, some are herd headers both in quality, size and breeding, some are thick, fleshy, sappy bulls that will get good steers, also 10 heifers and a few young cows bred on milking lines; prices easy. Write me your wants.  
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**Lochar Stock Farm** is offering a choice lot of young bulls of breeding age, some cows and heifers the get of Broadkirk Prince (imp.) a noted milk and beef-producing strain, some heifers at 1st calf giving 35 to 40 lbs. milk a day. Prices and terms reasonable. Also M. Bronze Turkey pairs and trios furnished not akin.  
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 We have now for sale three young bulls, one 13 mos. old and two ten months. These calves are choicely bred for both milk and beef and are good and very promising animals. Come and see them.  
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 Herd headed by the two great breeding bulls, Newton Ringleader (Imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex  
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 Visitors say our herd, numbering 62 head, look like good breeders, feeders and milkers. Now that is just what they are, many fine heifers and bulls for sale. No fancy prices.  
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 65 females, reds and roans, servicable, best type and quality, size; cows milking up to 50 lbs. Prices easy. **THOMAS GRAHAM**  
 R. R. No. 3, Port Perry Ont.

## Questions and Answers. Miscellaneous.

**Silos Square or Round.**  
 As I want to build a silo this coming summer, I should like your advice as to which kind would be most satisfactory, a round one 12 feet across by 28 feet high, or an 8-foot square silo? Kindly publish in your columns, the material required for an 8-foot square silo, 28 feet high.  
 SUBSCRIBER.

Ans.—We know of no circumstances where it would be advisable to build a square silo. Occasionally one is seen throughout the country, but there appears to be no grounds or arguments for their erection, while to the contrary the arguments are very strong against them. It would be extremely wise on your part to build the round silo as you suggest, using staves, or preferably, cement, or cement blocks. Owing to the fact that no square silos are being built of any consequence, we have never figured out the amount of material required in them, and we consider our time would be wasted if we did so now. We cannot advise you too strongly to drop the idea of building a square silo.

**Onions and Strawberries.**  
 1. Will you kindly tell me how much onion seed should be drilled to the acre without requiring too much thinning?  
 2. When is the right time to plant strawberries to fruit this next summer?  
 R. S. T.

Ans.—1. The variety of onions has something to do with the amount sown, and the germination of the seeds used is also important. It would be wise to run a germinating test and see how the seed will germinate. Ninety per cent. of germination is desired, and considered very good. About eighteen seeds should be sown to each foot in length, which will use up from four to five pounds of seed per acre, when the rows are fifteen inches apart. Where the onion maggot is prevalent, it is necessary often to sow more in order that a good stand is left after their depredations have been completed. Some growers use as much as six pounds per acre. Try the sower on a hard, clean floor, and see that it is doing its work properly before putting it to work in the field.  
 2. The best crop of strawberries will be gotten from a plantation set during the spring of the previous season. Some growers plant in the fall, but the best plants and the best crops come from the plantation which has been set one year previous to time of bearing.

**Difficult Churning.**  
 I shall be much obliged if you can tell me, through the medium of your paper, why we have difficulty in getting butter when we churn. We have a heifer which freshened last April, and is due to freshen again about the same time next year. Until we put her in the barn for the winter we have had no difficulty in obtaining good butter from her milk, but last three churning the butter would not come, and the cream frothed up, and then settled on the top of the liquid as a semi-solid mass. We have tried churning at different temperatures, but that does not solve the difficulty. We feed hay, good soft upland timothy, turnips and short feed. This latter was a mixture of corn meal and crushed oats, which we have since altered to corn meal and bran. We have tried to strain this froth from the other liquid and work it into butter, but on adding water to wash it, it returns to the consistency of milk.  
 I. S. S.

Ans.—Increase your churning temperature to 64 degrees F. Do not feed the heifer entirely on dry feed. Add a little linseed cake to her ration. However, the roots should aid in keeping her right. Be sure to get the cream warm enough, as it requires a higher temperature when the cows are well advanced in lactation. Cream which foams badly is usually poor, cold, and contains a gas-producing ferment. If skimmed with a separator, shift the cream screw to skim a richer cream. If set in pans or cans, allow to stand longer. Get the churning temperature right. Fill the churn only one-third full. If it foams, add a handful of salt and a little water, at 70 or 80 degrees F. If this does not settle the foam, remove part of the cream and raise the temperature ten degrees. Heating all the cream up to 125 degrees F. will also sometimes remedy the trouble.

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The herd is headed by the well-known Auchenbrain Seafoam (Imp.)=35755+. A few young bulls for sale from Record of Performance Dams, imported and home-bred.  
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If you are wanting a richly-bred young bull out of a 50-lb.-a-day and over cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy.  
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**Questions and Answers.**  
Miscellaneous.

**Sheep Dip.**  
Do you know of any firm in Canada that sells McDougal's Sheep Dip?  
**A. H.**

Ans.—Manufacturers of and dealers in this dip should advertise in these columns.

**Stone.**  
How many cords of stone would it take to build a wall 2 feet thick and 10 feet high, 33 X 80 feet, or a wall 2 feet thick and 226 feet long?  
**G. W. K.**

Ans.—About 35 cords.

**Lice on Horses.**  
Let me know, through the columns of "The Farmer's Advocate," your remedy for killing lice on horses.  
**T. K.**

Ans.—Try some of the proprietary powders advertised in these columns, or a mixture of cement four parts to hellabore one part.

**Shorthorn Cow.**  
On page 2097 of "The Farmer's Advocate" is shown a cut of dual-purpose Shorthorn. Can you give me address of owner, as I am in the market for cows of good milking strains?  
**E. H. A.**

Ans.—We cannot give the address of the owner of the cow illustrated. Look up our advertising columns and correspond with some of our advertisers.

**Heifers Do Not Breed.**  
Having purchased two two-year-old heifers from your vicinity the first of May, which have proven not to breed, would the change of climate be great enough to produce this effect? They are of the dairy Shorthorn type, and are in splendid condition.  
**G. M. B.**

Ans.—The change of climate should not seriously affect the heifers. Have a veterinarian open them up before breeding, and try again.

**Lice on Cattle.**  
What could I do to get rid of lice on cattle? I have been troubled with them for years, and have tried everything I ever heard of with failure.  
**F. M. R.**

Ans.—Thoroughly clean and whitewash the walls of the stable. Apply to the cattle some of the proprietary powders or lice killers advertised in these columns, or make a mixture of four parts common cement and one part hellabore, and dust thoroughly into the animal's hair. It is important that the powder be worked down to the skin.

**Feed for Dairy Cows.**  
Would like some information about feeding dairy cows. I am feeding mixed hay, oat straw, silage, and oat provender.  
1. How much wheat bran and cottonseed meal would it take to make a balanced ration?  
2. What is the value of barley provender as a feed for milch cows?  
**G. W. F.**

Ans.—1. When feeding about 10 pounds of mixed hay, 40 pounds of ensilage, 5 pounds of oat straw, and 2 or 3 pounds of chop, it will require about 2 pounds of cotton-seed meal and a couple of pounds of bran to give you anywhere near a balanced ration. The mixed hay, silage, straw and oat chop, are all comparatively rich in carbohydrates rather than in protein, thus it requires quite a considerable amount of protein-rich fodder to balance the ration. With the quantities previously given, the nutritive ratio will be about one part of protein to six and one-half parts of carbohydrates and fats. It is not advisable to feed more than two pounds of cottonseed meal per day, and they should be brought up to that amount very gradually.  
2. It is impossible to say what the real value of barley provender is, but the Danks saw barley and oats together in the proportion of one part of barley to two of oats. The quality of the barley from the crop is considered to be one of the best. I believe for the average farmer it is the best available. It is necessary to have a good quality of grain, a few years ago it was common to get a few years of grain that was so poor that it would not pay to feed it at all. I had some of this grain and it was so poor that it was not worth the cost of the grain.

**60 Registered Holsteins 60**  
**Head BY AUCTION Head**  
**A complete dispersion of the Woodbine Herd**  
**Wednesday, Jan. 20th, 1915**

We have in this sale the results of 30 years breeding and careful selection, they are nearly all young; 30 are sired by Duke Beauty Pieterje, a son of a 32 lb. cow, and a G. son of a 30 lb. cow; he is backed up by 3 generations of 30 lb. cows. A number of others are daughters of King Segis Pontiac Lad, record of his sire's dam 37.21 lbs.; his dam is a sister to the World's Champion, K.P. Pontiac Lass, 44.18 lbs., this kind of breeding has cost us a lot of money but it goes at the sale. On day of sale we will meet the C.P.R. Trains at Ayr. The G.T.R. Trains and Electric Cars from Galt and Brantford, at Paris.

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**DAIRYMEN'S CONVENTION**  
Dairymen's Association of Western Ontario.  
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**Holstein Cattle and Yorkshire Hogs**  
We offer for sale a dozen bulls, some ready for service, from high official record dams. If you are wanting a bull, better write us and let us tell you how good they are. Can also spare a few good heifers. Yorkshire hogs all ages.  
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For sale: Two exceptionally fine young bulls, one ready for service, and dams have good official records. Also three heifer calves, six, seven and ten months old; good individuals and bred right. Write for particulars, or come and see them.  
**A. E. HULET, R.R. No. 2, Norwich, Ont. Bell 'phone.**

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Am offering choice young stock in  
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Sows bred, others ready to breed; boars ready for service: 200 from six to twelve weeks old, both sexes, pairs not akin. All breeding stock Imp. or from Imp. stock. Prices reasonable. **R. R. No. 1 C. J. LANG, Hampton, Ont.**

**CHESTER WHITE SWINE**  
For Sale—High class sows from 9 to 18 months of age bred to farrow in March. Also my stock boar Nimble Sam, 21 months old, a right good hog. Another 6 months old. **JOHN POLLARD, Norwich, Ont.** - R. R. No. 4

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Please mention "The Farmer's Advocate."

## Questions and Answers. Miscellaneous.

### Veterinary Book.

1. Tell me where I could get the veterinary book that you recommended in your columns recently. The price of the book was \$5, postpaid, through your office; also all particulars about it.  
2. Will you tell me what is the matter with a mare whose symptoms are the same as in a question asked this week in your paper, signed T. H., but the mare has not got worms? R. P.  
Ans.—1. The book may be had through this office.  
2. It is impossible to diagnose without further symptoms.

### Pedigree Astray.

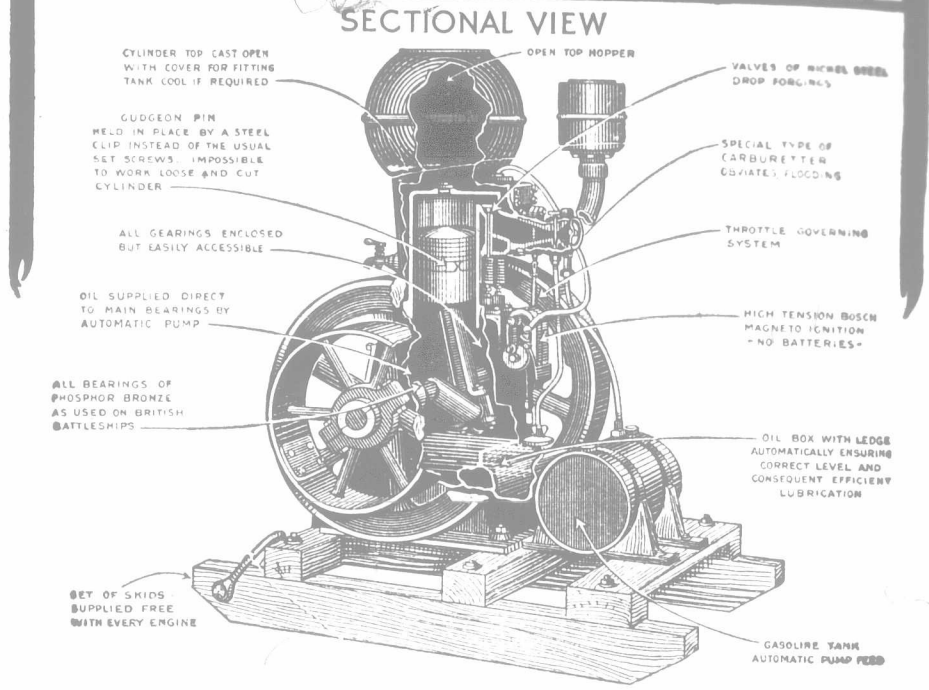
A and B are both subscribers of your paper. A sold two pure-bred heifers to B, for which B was to receive pedigrees for same. A made pedigrees out in C's name by mistake on A's part, and sent them to C, but C claims he never received them. Can B compel A to send new certificate made out in B's name, or will B have to accept duplicate of C's pedigrees? A. J. C.  
Ans.—First, recover letter sent with pedigrees to C. Then write the Accountant, National Live-stock Records, Ottawa, for information as to what to do.

### A Home-made Power Sprayer.

I have met quite a number of fruit farmers who, like myself, are at present using a hand spraying outfit, but who would like to use a power outfit if it could be procured at a reasonable price. The power outfits cost from \$300 up, which is quite a large investment, and the engine is often useless for other purposes. I intend, if I can manage it, to set up one for myself. I would get a small gasoline engine, say, 1 1/2 h.-p. or less, a tank of 150 gallons with an agitator, a pump for two leads of hose, and a jack. The information I and others need is how best to assemble such an outfit for use on a farm truck; how best to connect the agitator with the pump so as to make it automatic, and what connection with the engine is best—belt, gear, or sprocket chain. The engine would be the only piece that need ever be removed from the frame, except for cleaning. It would also be nice to have the pump equipped so that it might fill the tank from a water-hole or cistern itself. A diagram or illustrations showing how all this could be managed by the farmer himself, would, I am sure, be useful to many, and it appears to me that it all might be done at a cost of \$100 to \$150. If you think this is of sufficient interest to your fruit-growing subscribers, you might have someone demonstrate the matter in your journal, to the excellence of which I would like to add my own tribute. R. B. K.

Ans.—When power sprayers were becoming common, growers often did as you suggest—they assembled their outfit. However, any power sprayer gives considerable trouble, and they cannot be put together or assembled too efficiently. In the first place, to carry two leads of hose, a 1 1/2 h.-p. engine is too small. We would advise buying nothing less than 2 1/2 h.-p. A smaller engine is sure to give trouble sooner or later, as they are not powerful enough to supply two lines of hose. They are best connected by a jack and gear rather than by a belt or chain drive. The agitator should consist of a shaft fastened to the neck and entering the tank near the bottom, and, of course, at that end near the engine, rather than have it move backwards and forwards across the bottom. There should be two or three fans on the end of the shaft which revolves. In this way the liquid is thoroughly stirred, and the power required to drive it much less than where the old-fashioned kind of agitator is used. We would advise you strongly to first inform yourself as to the actual cost of the assembled outfit, and then compare it with one you might buy complete. There will at first be a small difference in the actual cash outlay, but when you consider the efficiency of the different machines you will probably at last decide in favor of the outfit as manufactured by the leading manufacturing concerns. Information from anyone having had experience with such an outfit would be appreciated and given room in these columns.

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