

FARMER'S



JANUARY

TWENTY CENTS A COPY

TWO DOLLARS A YEAR

MACLEAN PUBLISHING COMPANY

LIMITED

TORONTO

MONTREAL

WINNIPEG

"Have You
a Little 'Fairy'
in Your Home?"

HEALTH

depends
largely upon
cleanliness; the
daily bath is worth
more than all kinds of
medicine. ¶ If you have
never bathed with Fairy
Soap you do not know
the real luxury of bathing.

Fairy Soap

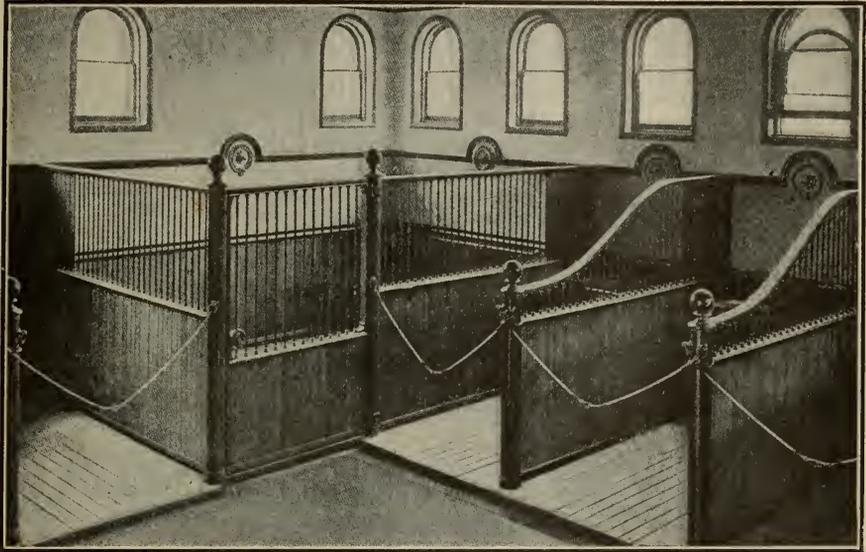
is made in the handy oval cake;
it is twice as handy as the old-
fashioned oblong bar. Fairy Soap
is white and pure—made from high-
est grade materials; it lathers freely,
cleanses thoroughly, soothes and
softens the skin. Fairy Soap
floats; it's always within easy reach.

¶ Fairy Soap is the best soap made
for the toilet and
bath. Once tried,
you would never
be without it



THE N. K.
FAIRBANK COMPANY
MONTREAL

You Can Equip Your Horse Stable Like This at a Very Low Cost



The BT Iron Horse Stable Fittings will add greatly to the appearance and durability. If you use BT Iron Stall Partitions and Iron Stall Posts, you will have a stable that you may well be proud of, and the beauty of it is, your stable will look well, not alone when finished, but for years to come.

BT HORSE STABLE FITTINGS

THE BT IRON STALL GUARDS

are made of $\frac{1}{2}$ -inch iron rods secured in a heavy frame. They allow the sunlight to flood every corner of the stable, thus adding greatly to the brightness and appearance. They cannot be broken or in any way disfigured by the horses. Once in place they never need repairing.

BT IRON STALL POSTS

add greatly to the durability of the stable. No amount of battering will disfigure them.

We also make Steel Stalls and Stanchions. See G. Feed and Litter Carriers, Waterbowls.

THE BT IRON STALL POSTS are grooved to receive the stall partitions, and so save much time in constructing the stable.

THE BT IRON FEED RACKS AND ADJUSTABLE MANGERS

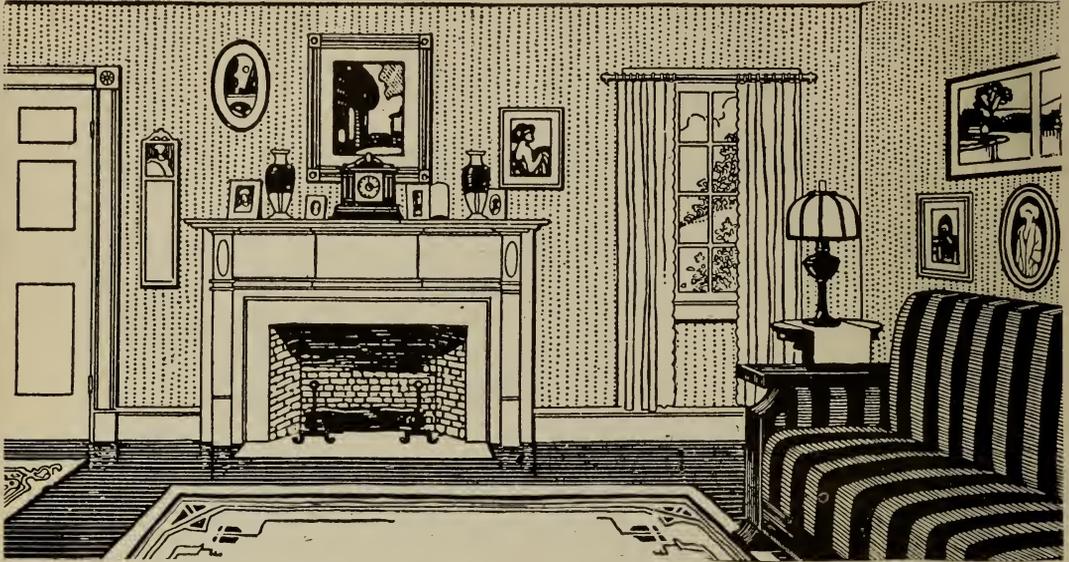
allow the dust to escape from the hay. We make open and closed mangers in a variety of different designs. They can be adjusted for different widths of mangers.

WRITE FOR CATALOGUE.

It will pay you well to get our catalogue and prices, and find how cheaply you can equip your stable with up-to-date Iron FITTINGS.

WRITE FOR OUR CATALOG "G," WHICH
DESCRIBES OUR DIFFERENT LINES

BEATTY BROS., Ltd., Fergus., Ont.



During the Quiet Winter Months is the Time to Fix Up the Home

It is wonderful what changes can be brought about by the use of a little paint and varnish during the winter days when not busy with outside work. Great improvements can be made about the house—all you need is a few cans of paint and a little time to apply it.

Are the floors of your rooms in good condition, or would not a coat of Floor Paint or a coating of Floorlac make them look bright and new?

Make the woodwork fresh and clean by painting it with Family Paint; or, if you prefer a grained effect, use Floorlac or Varnish Stain.

The modern finish for walls is a durable, flat-drying oil-paint like Flat-tone, easy to apply and absolutely sanitary; will last for years and can be cleaned with soap and water. Much better than germ-collecting wall paper.

Don't throw away your old furniture; give it a coat of Varnish Stain and it will look like new.

These are the days when \$100.00 worth of improvement can be made with \$5.00 worth of material and labor.

WRITE TO US FOR OUR PORTFOLIO OF SUGGESTIONS
WHICH IS SENT FREE ON REQUEST

SHERWIN-WILLIAMS PAINTS & VARNISHES

THE SHERWIN-WILLIAMS Co. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver



Farmer's Magazine

Vol. 5

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You Are on the Bench

YOU—the Public—are the judge. On your good opinion and your good word depends the success of the advertised article. For no amount of advertising will induce you to buy a second time what you do not like. No advertising will offset the bad effect of a dissatisfied buyer.

That is why advertisers must and do maintain the quality of their goods.

Advertisers realize that to turn their outlay for advertising into profit *they must give good value.*

To be successful, they must make steady customers. So, quality is being put in to *hold the trade* that advertising produces.

They are not looking for one-time sales. First sales, in most cases, would not pay for the advertising.

Thus, to be sure of quality, one naturally turns to goods that are advertised. And isn't it only reasonable?

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When writing advertisers kindly mention Farmer's Magazine.

VIOLIN FREE

OLD MASTERS' FREE FINE TONE VIOLIN



We will give you this superb violin absolutely FREE. Wonderful new system. We will teach you by note in your home. Violinists make big money. We guarantee to make you a player or no charge. Complete outfit FREE. Write to SLINGERLAND'S School of Music, Dept. 34, Auditorium Bldg., Chicago, Ill.

What Our Pupils say:—

Pueblo, Colo., Nov. 4th, 1912.

Slingerlands School of Music.
Dear Sir:—I received your outfit all O.K. and I think the violin has as fine a tone as any violin that I ever played on, and I also think your instructions very easy so far, and I only wish I had known of your system before.

Yours respectfully,

L.A. FENTON, 1401 Evans Ave., Pueblo, Colo.

Glace Bay Dominion No. 4, Cape Breton, Can.

March 1st, 1912.

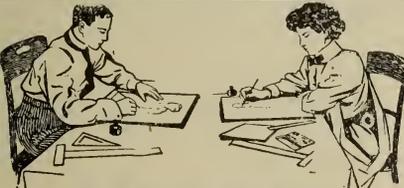
Dear Teacher:—Received the outfit Feb. 1st, 1912. am much pleased with it.

Yours very truly,

TOM LEE.

League City, Texas, Oct. 16, 1912.

Slingerlands Correspondence School, Chicago, Ill.
Dear Sirs:—I received the violin and outfit Oct. 14th, and I sure do think them fine. The violin is a "daisy." Can't hardly wait until I can learn to play.
Miss Mamie Moore, Box 288 League City, Texas.



MONEY IN ART

Many Sons and Daughters of our Farmers have natural talent for art. Scores have taken our Art Course by Mail and are now making good money as Book and Magazine Illustrators. Our fine Catalogue is mailed free on request. Write Art Dept.

SHAW CORRESPONDENCE SCHOOL
395 Yonge Street - - Toronto

WANTED—SALESMEN AND SALESWOMEN

Hundreds of good positions now open paying from \$1,000.00 to \$5,000.00 a year. No former experience required to get one of them. We will teach you to be a high grade Traveling Salesman or Saleswoman by mail in eight weeks and assist you to secure a good position where you can earn good wages while you are learning Practical Salesmanship. Write today for full particulars and testimonials from hundreds of men and women we have recently placed in good positions; also list of good positions open. Address Dept. S

NATIONAL SALESMEN'S TRAINING ASSOCIATION
806 Kent Building Toronto, Ontario

CAN YOU

expect to advance if you don't put forth an effort. You can become a first class Ad. Writer in three months by studying our lessons at home during your spare time

The entire cost is only \$30, payable monthly.
Shall we send you full particulars?

Box 223, MACLEAN'S MAGAZINE

MUSIC TAUGHT FREE

HOME INSTRUCTION

Special Offer to Our Readers

In order to advertise and introduce their home study music lessons in every locality, the International Institute of Music of New York will give free to our readers a complete course of instruction for either Piano, Organ, Violin, Mandolin, Guitar, Banjo, 'Cello, Brass Instruments or Sight Singing. In return they simply ask that you recommend their Institute to your friends after you learn to play.

You may not know one note from another: yet, by their wonderfully simple and thorough method, you can soon learn to play. If you are an advanced player you will receive special instruction.

The lessons are sent weekly. They are so simple and easy that they are recommended to any person or little child who can read English. Photographs and drawings make everything plain. Under the Institute's free tuition offer you will be asked to pay only a very small amount (averaging 14 cents a week) to cover postage and the necessary sheet music.

No one should overlook this wonderful offer. Tell your friends about it—show this article to them.

The International Institute has successfully taught others and can successfully teach you, even if you know absolutely nothing whatever about music. The lessons make everything clear.

Write to-day for the free booklet, which explains everything. It will convince you and cost you nothing. Address your letter or postal card to International Institute of Music, 98 Fifth Ave., Dept. 498 B, New York, N.Y.

Continued from page four

No manufacturer can afford to advertise for long an inferior article. From the moment the advertising begins, the quality must either be kept uniform or improve—to go back means ruin.

The day is passing when you ask for a pint of pickles. You name the brand.

You don't ask for Rolled Oats. You name the brand you prefer.

The unknown article *may* be good, but you are not so sure of it as you are of the advertised article, which bears the seal of quality,—a well known maker's trade name.

TO MANUFACTURERS:

You who make good goods and do not advertise—show your confidence in your product.

Advertise it.

Let the public know that you stand back of your goods to maintain their high quality.

Make your trade name the recognized standard in your line.

Advice regarding your advertising problems is available through any good advertising agency, or the Secretary of the Canadian Press Association, Room 503 Lumsden Building. Enquiry involves no obligation on your part—so write, if interested.

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Be Prepared For Future Opportunities

In the business world of to-day there are many opportunities for young men and women who are qualified. If you are not improving your position, it is not because of lack of opportunity, but you perhaps have not been prepared when the chance of advancement presented itself.

Let us prepare you for better positions and larger salaries. Our teaching staff is composed of the most efficient teachers for this work.

Make a start for better things before the old year goes, then the New Year will bring you prosperity.

SEND FOR OUR CATALOGUE "B," WHICH GIVES FULL PARTICULARS AND TERMS.

BRITISH AMERICAN BUSINESS COLLEGE
Y.M.C.A. Bldg., Yonge St., Toronto Ontario

Will Your Pay Envelope Show an Increase This Year?

It should do so, if you are improving. The future holds many opportunities for advancement for the qualified young man or woman. Are you qualifying for a better position and a bigger salary? Make a start now, let us prepare you for advancement, then you can ask for the salary that your service is worth. We are specialists in business training.

SEND US A POSTCARD TO-DAY, AND GET OUR CATALOGUE "B," WHICH GIVES TERMS AND FULL PARTICULARS.

The Canada Business College

Hamilton, Ont.
OSCAR MAIN, Principal

A GREATER DEMAND

exists to-day for successful salesmen than for men for any other commercial business.

Have you realized that the stepping stone to successful salesmanship is to represent a progressive magazine?

FARMER'S MAGAZINE, Canada's leading farm monthly, wants men in every locality in Canada to take subscriptions.

You do not require any experience to join our Sales Force. We train you and at the same time pay you liberally. Write for particulars to

The MacLean Publishing Co., Limited
143-149 University Avenue,

TORONTO

CANADA

Start Now With 1913



Determine to improve your capacity so that the work you will be doing next year will be more congenial to you, and also bring you better returns. The world owes you a comfortable living—but you must have the understanding necessary to do well your part. Your desire for understanding should be sufficient to induce you to reach out for a proper course of training because the understanding will not come to you. We can give you special equipment for bookkeeping and stenography.

OUR BEAUTIFUL PROSPECTUS AND PARTICULARS AS TO COURSES AND TERMS WILL BE MAILED TO YOU ON REQUEST. SUPPOSE YOU WRITE A POSTCARD NOW AND ADDRESS IT—

THE KENNEDY SCHOOL

570 Bloor Street West - - Toronto

MORE Good Paying Positions

are offered us than we have graduates to fill. We give individual instruction which enables our students to graduate quickly and assures progress to backward students. Qualify for one of these good positions. Winter Term begins January 2nd.

WRITE TO DAY FOR CATALOGUE.

DOMINION BUSINESS COLLEGE
TORONTO, ONT.

J. V. MITCHELL, B.A., Principal.

A New Year's Wish

All ambitious young people desire to improve their positions and increase their salaries this year. This is assured by taking a business training. We have helped many young men and women this way. Let us do the same for you.

WRITE FOR OUR CATALOGUE AND FULFILL YOUR NEW YEAR'S RESOLUTION.

Central Business College

50 James St. N., HAMILTON, Ont.

A. P. GIBBON, Principal



Prof. Brooks

MAKE THE FARM PAY

A COURSE of forty lessons in soils, tillage, fertilizers, farm crops and animal husbandry, under Dr. William P. Brooks of the Massachusetts Agricultural College.

Courses in Horticulture, Floriculture, Landscape Gardening, Forestry, Poultry Culture, Farm Accounting, etc., under able professors in leading colleges.

250 Page Catalogue Free. Write to-day.

THE HOME CORRESPONDENCE SCHOOL

Dept. 480 Springfield, Mass.



FOUND—"I have long realized the need of just this method of teaching Latin and I am more than pleased that at last I have found what I want."—H. D. Clum, M.A., Saugerties, N.Y. No system of teaching languages has been so universally praised as the De Brisay Method. Latin, French, German, Spanish, by mail.

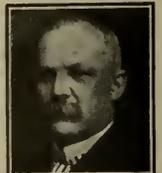
ACADEMIE DE BRISAY, 416 BANK ST., OTTAWA.



Shaw's Business and Shorthand Schools

TORONTO, CANADA

Have opened the door to success to thousands of the Sons and Daughters of the Farmers of our Dominion. The Central Business College of Toronto is the Main School. It has now Four City Branch Schools. Free Catalogue explains Courses. Write for it to W. H. SHAW, President, 391 Yonge Street, Toronto.



A Square Deal

As publishers we are determined that our readers shall always be given a square deal by our advertisers.

We therefore have refused to accept, and always shall, every advertisement which upon investigation we find cannot justify our thorough recommendation.

It is only fair, in return, that our readers should remember that

1. Our advertisers pay us for giving you, for \$2 a year or less, a magazine costing \$6 to produce.
2. Our advertisers pay this money so that they may TALK BUSINESS with you personally.
3. Our readers should therefore seek to PROFIT BY READING EVERY ADVERTISEMENT some time during the month.

Raw Furs

FREE

HALLAMS TRAPPER GUIDE BOOK. 96 pages; fully illustrated, tells how, when, where to trap, bait and traps to use, game laws of Canada, how to handle and sell your catch, ginseng growing, about fox, mink, skunk, muskrat farming, and other valuable information pertaining to the Raw Fur industry sent free for the asking.

We will also send you **free for the asking, Hallams up-to-the-minute Raw Fur quotations and market report.** They go regularly to 60,000 successful trappers and fur collectors all over Canada, who are making big money shipping their fur to us. We pay mail and express charges on all shipments, remit day goods received

Our method of handling Raw Fur shippers has stood the test for twenty seven years, and we positively **guarantee** satisfaction.

THE LARGEST IN OUR LINE IN CANADA

CAPITAL PAID
UP,
\$400,000.00

JOHN HALLAM Limited

Dept. 319
111 Front St. East
TORONTO



Take a Handful of "St. Lawrence" Sugar Out To The Store Door

—out where the light can fall on it—and see the brilliant, diamond-like sparkle, the pure white color of every grain.

That's the way to test any sugar—that's the way we hope you will test

St. Lawrence Sugar

Compare it with any other sugar—compare its pure white sparkle—its even grain—its matchless sweetness.

Better still, get a 20 pound or 100 pound bag at your grocer's and test "St. Lawrence Sugar" in your home.

ST. LAWRENCE SUGAR REFINERIES, LIMITED, - MONTREAL

67A

February Farmer's Magazine

PRICES FOR ELECTRIC POWER ON THE FARM

"If the farmer uses his power only one hour a day, it will cost from 4 2-3c to 7c to grind 100 pounds, which is from 2 1-3 times as much as by gasoline."

This article by an expert is given in answer to Farmer's Magazine's inquiry as to the cost of electricity to the farmer in Ontario. Be sure to get this if you are struggling with power questions.

HOW APPLES WON \$4,000

"Talk \$2,000 an acre to the owners and they would laugh at you. Why a Mr. Renfrew, of Toronto, purchased 40 acres of raw land down yonder,' and our guide pointed off towards Vernon, "for \$30,000, and he has since planted orchards and built that attractive red-tiled bungalow you see there to the right among the pines.'"

This is an extract from the above article describing the place where the apples grew, and how they won renown for British Columbia from Spokane.

HOW 5,000 COWS MILK FOR COPENHAGEN

"Thirty-four years ago the sanitary conditions of dairies in Copenhagen were very bad. Cows were fed on the refuse of distilleries, the stables were dirty and without light and ventilation. . . . Milk was treated with borax or bi-carbonate of soda to conceal its age as it was hawked about the streets."

Mr. Kilgour, a special correspondent of Farmer's Magazine, writes from Copenhagen, Denmark, for the February issue. It is well illustrated.

UPSETTING THE OYSTER-SHELL'S APPLE CART

This article will tell all about the success that has attended apple culture in Canada, and the way robber parasites are being dealt with by the successful farmer. Illustrated and full of references from various parts.

AN ONTARIO FARMER'S 5 YEARS ON A WHEAT SECTION

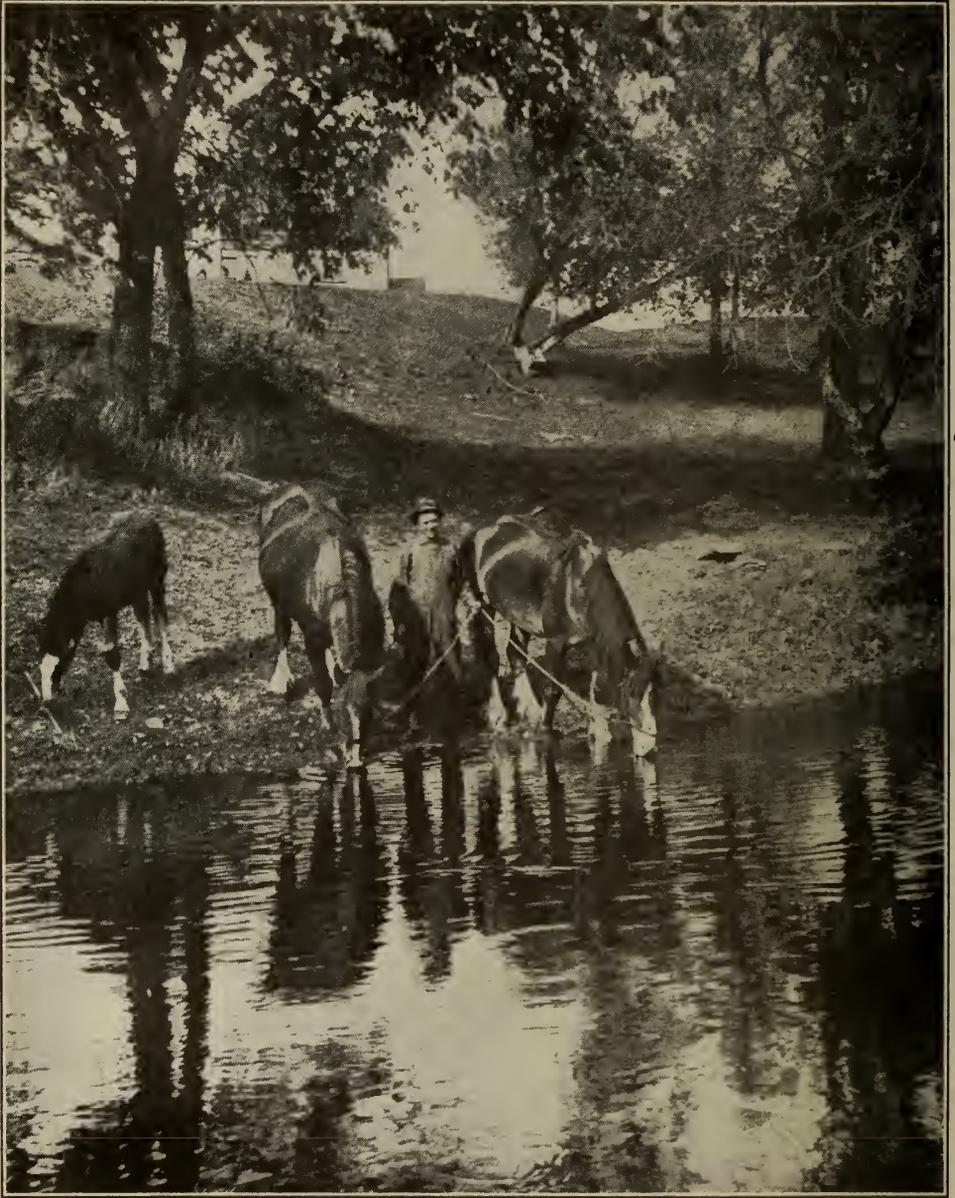
A story of an average man's shift from an Ontario farm to a farm of 640 acres in the West, where he has three good years out of five and is yet worth considerable money.

THE GOOSEGRASS SCHOOL YARDS

A second article by M. Moffat will appear in the February Number dealing with the "little red schoolhouse" question. This whole business of rural education needs shaking up, and Farmer's Magazine has been receiving much credit for its uplifting work. Every trustee and parent should receive this copy.

MANY OTHER GOOD FEATURES

Mr. E. C. Drury will continue his political article. Mrs. Kepper has something for the women. Dorothy Dot gives some recipes in her own good style. Besides many other features and photos that will attract and pleasantly surprise you. The Farmer's Magazine is a magazine that gives complete information in readable shape.



—Copyright by Galbraith Photo Co.

On "The Oaks," the farm of Mr. John Galbraith, Burnside, Manitoba.

FARMER'S MAGAZINE

Vol. 5

TORONTO JANUARY, 1913

No. 3

A REVIEW OF RURAL LIFE

The Debt Idea

“The whole question of Canadian Defence is one not of being taxed; it is one of paying a debt. . . . It is not an agreeable prospect that Canada should remain forever in leading strings and pinafores—sucking pap.”

One could hardly credit this language to a thoughtful writer in our magazine press. It is to be expected on the hustings or in the fireworks of a debate. Yet a recent issue of a journal on the Pacific province carries this cant to its readers on its editorial pages.

This writer must have partaken of some of the scare-jingo-pessimism that is altogether too current in British Columbia. Strange as it may seem to an Easterner or even to a dweller on the peaceful prairies, there are serious minded men in that province who assert that the Japanese will in three years capture California and extend up the whole Western slope of the Rockies. They alarm each other by picturing this dreadful yellow possibility, and by constant repetition come to believe what at first must have been chimerical even to themselves.

If there is one thing that will defeat the ends they try to reach, it will be to try to make the Canadian public believe that Canada is an ingrate, a child in arms, spurning to aid the feeble mother.

The paying-a-debt idea creates a nausea. Sane men do not give out such sentiments for serious regard to their serious readers. Canadians are the most loyal people in the world. They respect, honor, and are willing to stand in the forefront of the nations' battles, but nothing good can come from some writers, speakers and politicians who picture Canadians as ingrates and Great Britain as a feeble suppliant for a wayward son. This style of language is resented by all.

If we are going to talk navy, let us do so on a reasonable basis, and approach the subject from a business standpoint. When Canada built the C.P.R. or the G.T.P. such arguments were not advanced. When great undertakings are advocated, such puerile talk does not precede them. Neither is it necessary now for such language to be given our readers. Let us be men. The greatest good that can come to the Empire, is a stalwart race of heartfelt men, whose ideals have been noble, lofty and healthy. If we want a weakling, puny and servile race of men in this broad Canada of ours, there is no better road to that end than by the way of these appeals. If Canada builds her navy, it must be purely a business proposition for a business reason, along business lines.

The Ditching Machine Duty

To one wholly unacquainted with the moving of executive bodies, the delay in removing the duty on ditching machines by the Government at Ottawa cannot be understood.

Representations were made to the Laurier Government by prominent agriculturists and others some time before their defeat in 1911. That they were impressed with the reasonableness of the thing is well known. Upon the assumption of office by the Borden Government, a new effort was made to secure the entrance of traction ditching machines into Canada free of duty.

At present, they pay 27 per cent. duty, and as there are none manufactured in Canada, it can be readily seen that it is purely an arbitrary tax, and one that has a most discouraging effect on local drainage improvement. All told, there are now about 45 of these machines in Canada.

That there is a great need for them on the farms of Canada was evidenced this past season when the value of tile drains was demonstrated in every neighborhood. Owing to the scarcity of labor, farmers were unable to get their tiles put in the ground, although in many cases the tiles were already in the fields for the purpose. Tile makers find their sales of tiles limited for this reason. The evil of the duty acts in two ways; it retards the manufacture of tiles here, and decreases production by the amount of unproductive undrained land in the country.

Prof. Day, of the O.A.C., estimates that wet lands when underdrained produce annually crops to the value of \$20 to \$40 per acre, and that ordinarily this increase on other lands runs about \$15 per acre. This means an average of over \$20 per acre, something that ought to impress upon the Government the need of immediate action. In Ontario, alone, there are no less than 5,000,000 acres of wet land now comparatively useless, most of which could be reclaimed by underdrainage.

That the farmers will take advantage of all aids in the work is evidenced from the popularity that has attended the work of the Department of Physics in the Ontario Agricultural College. This demand is better shown by pointing out that in 1905 there were 15,000,000 tiles made in Ontario, which increased in five years to 35,000,000 tiles. The farmers want underdrainage done. They know it pays. This increase was due wholly to the assistance given farmers by that department.

Why then does the Government wait? There are no manufacturers in Canada holding them back. Perhaps it is the principle of the thing that sticks. If so, the farmers point to the cement duty rebate made last summer. Was that principle or expediency?

Every farming community should ask if their members ever think of them and their business. There should be as many traction ditching machines as clover threshers in the country. Anyone operating one during the summer will find a profitable demand for his services.

The Indian Reserves

As settlement grows denser in the Western provinces, the question of Indian Reserves becomes more frequently discussed. The Indian has long been confronted with the white man's civilization, and in many cases shows little advance upon the days of war paint and feathers.

It has been said that the Indian copies the white man's weaknesses and stands as it were paralyzed by the superior race's progress. A recent visit to the

Blackfeet reserve near Gleichen, Alberta, revealed how true this is. Here the Indian has nearly half a million acres of choice good land upon which he does very little cultivation. Instead he prefers to live in small groups by the river banks, and wander at will on his fleet ponies over the reserve to spend the nights in playing pool in the town.

Recently the Government sold a strip of this reserve beyond the river, for upwards of a million dollars. With this, many houses were built all over the reserve, for the purpose of encouraging the Indian to settle down to a more productive life. Following their tribal instincts of community life, four houses were located together on the adjacent corners of four quarter sections. These were pretty and neat, with fireplaces and other conveniences. But so far, the Indians have shown no serious intention of occupying them. They assert that they might do for the summertime for a little period, but that it is quite too far for the squaws to bring the wood from the river in winter!

On the bluffs of the high river banks on this reserve are yet found the coffins and bleaching bones of the braves awaiting instant departure for the happy hunting grounds. No further back than last summer one of the more thoughtful of the squaws purchased an iron bed with springs from the Mayor of Gleichen. Upon this her departed brave now sleeps his last lone watch, out upon the high hills on the reserve, while near him his hunting belt, camp poles and eating utensils lie ready.

A recent correspondent from Spring Coulee to the Lethbridge Herald, has a novel suggestion for the development of the reserve of the Blood Indians there. He would make the reserve a group of small ranches, where the stock of the surrounding farmers could be pastured all summer and herded by the Indians. Pure bred breeding stock could be kept on the reserve under the direction of the Indian agent, and the raising of a better class of butcher cattle made more certain. The suggestion has a good deal to recommend it. The present waste and loose methods in connection with Indian reserves must come to an end sooner or later.

Another difficulty troubles British Columbia. When a reserve in that province ceases to be a reserve, the province claims that it reverts to them as crown lands, while the Dominion Government hold that the lands belong to them.

Bank Act and Cheaper Money

It looks as if the Government in revising the Bank Act had been moved by political expediency rather than by statesmanship. It is true, as the farmers contended, with considerable justice, too, that they were unable to get loans upon their grain and cattle, whereas the buyer could secure all he wanted. Now the banks are to be permitted to issue loans upon these commodities.

The main question of farm financing is untouched and must forge its way into prominence before very long. An extension of credit will not work out very much to the good of agriculture.

What the farmer wants is cheap money loaned for a long period of time. He wants to be able to use the money of the local depositors at a low rate of interest, and it was contended in a former issue of *Farmer's Magazine* that this could be done by means of a bond purchase upon which the lender was made secure and the farmer enabled to retire his indebtedness by a yearly payment which covered interest and principal.

If the farmer could do this, he would make a bigger success of the commercial end of his undertakings. He could finance a live stock deal or raise a

larger crop. He could hold his grain for good prices or erect the necessary accommodation for his work. His productive improvements would be large. He would make his home life attractive, thereby making for increased farm production.

As it has been, and will be, he must pay as high as 12 per cent. for current three months' money. He must often "take" all the patronizing of the local bank manager. Such he will not do, and so the deposits of his fellow farmers must go into the branch bank to drain away to the big centre, and so dwarf local enterprise. If there is one thing that is going to weaken the present Canadian banking system, it is the system of branch banks which act only as tentacles for the central organization. There must be more *general-manager-wisdom* if the farmers are going to stand it forever.

A big wholesaler in Toronto is reported as saying in a recent interview regarding the demand for cheaper farm money:—

"As a matter of fact farmers have always been able to secure all the accommodation to which they are entitled, and they should not be encouraged to borrow except when absolutely necessary. If, under the new Act, loans are too greatly facilitated, the country will suffer. The farmers need the protection and advice of bankers more than any other class in the country. They are too gullible by nature, and too easily influenced to be allowed to borrow money without proper restrictions."

Against this read this letter from a practical farmer:—

"I own over 300 acres of good land that I have half paid for. I would like to borrow some money so that I can buy a carload of fertilizer for use this year. As a result of six years' experience on this farm I have found this to be a good investment on my soil. If I buy for cash I can get the fertilizer much cheaper. Because I made a large payment on my farm this year I have not enough money to buy this fertilizer for cash. I would like to borrow from a bank, but no bank in my town will loan money to a farmer without a signer. I think that I can get money as easily as any farmer in the community, so that there is nothing personal about it. But I do not ask anyone to bolster up my credit, hence I cannot borrow money. Besides my interest in my farm above the mortgage value, I have nine horses worth \$1,500 any day; 900 purebred hens worth \$900 (I would not sell for twice this); 17 cows and young stock worth \$1,500, eight of them are purebred; farm machinery worth \$1,500; 500 bushels of wheat, 800 bushels of oats, 700 bushels of buckwheat, 25 tons of alfalfa, 35 tons mixed hay. Most of these I will feed. All these products are free from debt. All I owe is on the mortgage. Yet I cannot borrow a cent from a bank."

Farmers must have better financial credit associations. The Bank Act revision has remedied the situation very little.

Are Farmers Foolish?

Farmers generally are dissatisfied with the returns made to them for their products when marketed by the middleman. Not that farmers are perpetual grumblers and would be dissatisfied if they owned the universe, but because returns have so often been a very small fraction of the part the consumer has had to pay therefor. The celebrated \$5.75 apple case that is going the rounds of the Press, whereby the farmer got 75c and the Western consumer paid \$5.75, is not the only example extant.

While West this past season, the writer took occasion to visit the distributing centres of the prairies. What he saw there was evidence enough that the producer of fruits was not getting a square deal. Apples from Ontario were selling to farmers at the station in Fillmore, 50 miles from Regina, at \$6.00 per barrel. They were Greenings, Pewaukees and Suows.

A fruit company in Saskatoon sold carload after carload of Ontario apples, 75 per cent. No. 1's, Spies and Baldwins, at \$2.95, f.o.b. Ontario, to dealers in the towns nearby. The freight on a car of apples to Saskatoon would run about \$1 a barrel at that time. This put the apples at the station in Saskatchewan for \$3.95. Allow 50c more for cartage charges, and it looks like about \$4.50 before the country storekeeper could sell. Farmers from these points were paying as high as \$6.50.

This means that the dealer had to have a \$2 profit per barrel or he would not handle the fruit. Yet the Ontario farmer received \$1.25 for this barrel.

Again, let us look at the case in Toronto. A farmer from the neighboring county brings in Spies. One of the many local grocers buys barrel at \$2.00, quite a good price there this past season. The grocer sells these apples out by the peck at 40 cents. He succeeds in getting about 11 pecks out of a barrel, which return him about \$4.40. In justice to the grocer it must be said that he loses all that are decayed, and where the measurement does not hold out according as the barrel is standard or not. He has to deliver in small lots and stand all the little vexatious complaints that can come from a city customer. So that his return of over \$2.00 for his services has far more to its justification than has the commission man for his work.

Here then lies the whole question. The unorganized farmer is the prey of circumstances.

The distribution of the wealth from the soil takes place somewhat as follows:

A	Ontario Farmer Gets.....	\$1.00
	He pays out of this hired help—spray materials—cultivation—pruning—and cartage over bad roads. Net return say 50c.	
B	Ontario Dealer Gets (Gross).....	\$2.45
	He pays out of this cost of packing the apples and the barrel (45 cents.) Net return per barrel, 50c.	
C	Western Commission Man Gets.....	\$2.95
	He pays nothing but overhead office charges. Net gain per barrel, 50c.	
D	Western Storekeeper Gets.....	\$6.50
	He pays freight, say \$1.20. Insurance and cartage—and the \$2.95—total, say \$4.50. Net gain per barrel, \$2.00.	

Out of this there is \$3.50 of fine gain, of which the farmer gets a doubtful 50c. The middleman and transportation companies divide the other \$3.00, chiefly, however, to the middleman.

What's the solution? There is only one. This was told in the leading editorial in the January issue. It is *co-operation* and *organization* of the producing ends.

Why are the grain farmers getting fair returns to-day?

It is assuredly due to the organization of the Grain Growers' Grain Company that was fought tooth and nail by those whose business would be hurt.

Why do the citrus growers of California thrive and rejoice? Because they have a perfect organization in their selling of the fruit.

Why did the Okanagan peach growers throw a carload of peaches in the lake last summer? Why were Ontario apples left to the tender mercies of the hogs in the orchard? Because farmers pooh-pooh all organization and look upon the business as able to cope against big corporations individually.

How long will it take the average farmer to see that he must work with his neighbor towards a single end? The middleman's excessive profits must be cut out by an organized distributing end, among the farmers themselves.

As Granges, and Western farm organizations, let us bend our energies towards securing justice in this matter. It lies in our hands. Co-operation is the one big word that should be written across the proceedings of the Grain Growers and the Grange as they meet in January.

A Ranching Solution

“Resolved, that the grazing land lying within the forest reserves in the foothills and mountains be divided into cattle, horse and sheep areas, according to the adaptability of the country for each kind of stock, and that permits be issued for this land to the various classes of ranchers as applied for, no leases to be granted.”

The Ranching Commission passed the above resolution at their Pincher Creek session last month, and by so doing have pleased the three branches of the ranching family. The sheepmen, the cattlemen and the horsemen will each benefit if something like this can be worked out.

There is much land in the West that is being opened up which ought never to be given for settlement. It is of such poor quality for grain farming that the settlers soon move on and leave the place. This ties up this whole section and makes it unsuitable for any kind of farming enterprise.

This is not alone confined to the foothills and forest reserves. It might be a good thing also if the holders of these leases for ranching could be induced to plant shelter bluffs of some of the native trees, which in time would be valuable to the country.

New Brunswick Wealth

“It is not the towns that produce the men of business or the professional men, but the country lads who are healthy, brainy and strong, and who come into the towns and make the leading men of business. The authorities should concentrate on developing the land, and by education and training of various kinds, raise up a class of farmers who would add to the agricultural wealth of New Brunswick.”

In these words, Mr. M. J. Butler, late manager of the Dominion Steel Company, pointed to the magnificent chances which lay in the future for New Brunswick agriculture.

This province has too long been regarded as a pleasant hunting and fishing preserve. Of late, much attention is being directed to the immense possibilities which lie in the St. John Valley for young farmers with a vision. This valley, as has been shown by an article in Farmer's Magazine, is especially adapted to fruit. Other parts of the province raise potatoes that are superior to any others, while live stock raising can be carried on most successfully.

The province offers peculiar inducements to her young men. The recent Winter Fair at Amherst proved again what could be done by intelligence and thrift in the rearing of first class live stock.

If the country is giving the cities the best men, it is high time that the country retained many of these for the uplift of the land.

An Acre's Annual \$100

The returns from one county in Ontario where dairying is made the leading agricultural specialty as featured in this issue, are almost incredible. That farmers can make Ontario land return them \$100 an acre annually seems too good to be possible, yet it has been done in Oxford. Three milk condenseries, one milk powder factory, twenty-four cheese factories, and several

creameries are in operation in that county. These demand a yearly output from the farms of millions of gallons of milk. The cow has done wonderful things for agriculture in that county. Fine residences, many with modern water and lighting conveniences, large well-equipped barns, fertile well-fenced farms, good roads, and a vigorous people are some of the products of dairying in that inland county.

And yet Oxford is little known over the face of the country. Its wealth and worth are not told as are the half-sections of Saskatchewan or the orchards of the Okanagan. The time is coming when Ontario's valuable soil and climatic assets will be properly appraised by her people. Just now there is a partial eclipse, but the penumbra is waning.

The Farmer's Investments

The statement that farmers are easily fooled in matters of finance, gets most of its justification from the fact that they will subscribe to undertakings about which they know nothing. So many farmers applaud a good movement and allow their good will to carry them into countenancing some proposal coming through this approved channel, that they are easily taken in by the shrewd rascal after their money.

Just now co-operation is the one word that is being looked upon by the farmers as being able to remedy many of their ills. Along comes a commercial proposition from some part of the country with a fine prospectus of the way the farmer is being fleeced by retailers and asserting the value of co-operation as a remedy. The circular ends up with a request for this farmer's membership and if he will remit \$2 he may become a member and enjoy the benefits of 30c tea for 24c, etc.

Some farmers will, on their own initiative be taken in. Those farmers who consult their local organizations will know better. They know that co-operation begins at home, and that for co-operation to work out to their good it must begin among themselves and grow like the waves of the sea in a wide circle outwards.

The greatest inducement that is ever offered to the farmer is that of his getting something for nothing. This failing in humanity, not confined by any means to the farm, is the real root of the "gullibility."

The Wilderness Grows Alfalfa

Matthew Richardson, of Haldimand County, Ontario, went down to one of its heavy clay farms about half a century ago. His neighbors pitied his experience on such a poor farm.

Ten years went by and with the aid of red clover, alfalfa, beef cattle and hogs, he had turned those poor acres into fairly respectable producers. It was then that his desk taught him that he had to produce even more. He must get bigger returns. Dairy cattle were called in to help out. They did so, and the Blacks and Whites of Riverside farm have built up a reputation for Haldimand, Richardsons, and clay soils.

The poor farm designation, somehow or other, had been lost and the big Riverside farm was beginning to do some advertising of the county. A son had also grown enthusiastic in the business, and to-day the farm is known all over Ontario as one of the best farms in the whole province from every standpoint.

So much for ability and perseverance in overcoming natural obstacles. Joe Wing, of the Woodlands farm in Ohio, and well-known as an agricultural writer, has had an even more encouraging experience with what the neighbors called a useless rundown farm in Ohio.

A banquet by his neighbors and village friends was tendered the Richardsons last month at Caledonia. It was a fitting appreciation of a man who was sound enough to grasp the real business of agriculture and yet human enough not to forget this indebtedness to society in his soil regenerating work. It was a gladsome handshake that his old neighbors gave Mat Richardson. He has done well. He has made his country richer.

Assessment Reform

The movement for Assessment Reform is growing stronger in Ontario. Already the leaven of the progressive Western municipalities is working. The unfairness of taxing improvements on property is being seen by every property owner. Farmers for years have suffered for their thrift in erecting new buildings and in improving the soil, to be taxed at a high rate. Their shiftless neighbors have thus been bonused.

The assessment law was made to put a premium on extensive farming and rural depopulation. Had the many township clerks not been human enough to evade the law by being "measurably" near to its observance, as one man put it, the wrong would have been more accentuated than it is.

Again, the man who holds farm and city lands vacant in order that he may reap the fruits of the added valuation brought there by the settlers around him, has escaped his fair share of taxation. He should pay as much as the man on the next lot. Many railway companies and other corporations would have contributed more had this kind of justice obtained.

The reason why taxes are oppressive are that they are hitting the wrong fellow. If the principle of ability to pay must be the guide in taxation, then a great deal of the present tribute is robbery, pure and simple.

It is little to be wondered at that many of our tax reformers become intemperate in their remarks when they see the evils of the present system. The tax reforms are all right, even if many single taxes are highly objectionable. The principle is greater than the men.

Agriculture and Finance

Hon. Price Ellison, of British Columbia, is not impressed with the way some big financial men talk about the farmers not needing money. His latest influence is being brought to bear upon the Government to induce them to provide a method whereby farmers can get money for 3 per cent.

As Mr. Ellison holds the peculiar position of being Minister of Agriculture as well as Minister of Finance, he is, perhaps, in a better position to know the needs of the farmer, and can suggest a remedy for that need better than any other.

British Columbia has a limited amount of arable land. Yet one of the things which impresses the visitor there is the haphazard way that cultivation goes on. Under proper encouragement there is abundant land to supply the immense population. When the farmer finds that he can invest money in his land productively, and has a way of securing that money he will act. Hon. Price Ellison proposes to give him money borrowed by the province's guarantee. If railways can be so financed, why not agriculture? he reasons!

CANADA AND THE EMPIRE

By E. C. Drury

Note.—That there is considerable difference of opinion on the Navy question as to the position taken by both parties at Ottawa, one has only to take a trip through the country among the farmers to find out. When Sir Wilfrid Laurier introduced his Navy policy, the Nationalists of Quebec were not the only objectors to it. When Hon. Mr. Borden was reported as promising a plebiscite on the question, he caught the viewpoint of a large number of farmers. Now that he is legislating, apparently without that referendum, the people who rightly or wrongly favored a reference of the question to the people, are being disappointed.

Mr. E. C. Drury, who is on the executive of the Canadian Council of Agriculture and an ex-master of the Grange, writes from his farm near Barrie on the situation. Farmer's Magazine is pleased to present this argument to its readers.—Editor.

At the moment, the one great question which agitates the people of Canada is that involving the relations of Canada and the Empire. This is not because Canadians in their Parliament have nothing else to think about, for there are several little things which might be improved upon. For one thing, our Federal indebtedness is unreasonably great—fifty dollars, or nearly so, per head of our population. This debt has been largely incurred during a time of prosperity, and it would seem the part of common prudence for our Parliament to busy itself in devising ways and means of wise economy whereby this stupendous debt—upwards of three hundred and fifty millions—might be somewhat reduced before the inevitable lean years come.

Another thing requiring revision is our Bank Act. We have been told for ages that we have the best banking system in the world, and so we have—for our banks! But a system which sweeps the outlying districts bare of capital in order that it may be used for speculation in the great centres, which gives no adequate security to depositors, and which allows the banks to usurp, without taxation, the strictly Government function of issuing paper currency, can scarcely be called ideal for the country at large. Parliament could, with profit, give a little serious attention to it. Our rural population is shrinking in an alarming manner, and this must be stopped or national disaster will surely follow. Our natural resources of farm, forest and fisheries are being shamefully depleted, and no adequate steps are being taken to maintain or restore these national assets. The question of the "cost of living" is becoming a serious one, and there are whispers of unholy combinations, mergers and what not, among manufacturers and middlemen, which are aggravating the situation. These and a dozen other problems urgently demand the attention of Parliament, and it would seem as though that body with all its wisdom, would need to work overtime if the country is to be kept from going, in the words of the immortal Mr. Mantalini, to the "demnition bow-wows." But Parliament is giving scant attention to these matters. Its time is quite fully occupied by something entirely different.

NAVAL DEFENCE—A NEW THING.

That something is nothing less than how Canada shall participate in the naval defense of the Empire—not, be it noted, *whether* she shall do so, but *how*. This is a new thing so far as Canada is concerned. Never before in her history has it even been hinted that she was under any obligation, moral or otherwise, to assist in any way in maintaining the armed forces of the Empire, or rather of Great Britain, since there is no such thing as an Imperial force. It is quite clear that when Canada's constitution, the B. N. A. Act, was framed, it was expressly intended that there should be no such participation, otherwise some means would have been provided by which Canada would be given some voice in questions of peace and war, which she has not, and cannot have in any effective way except by a revolutionary change in the relations existing between the colony and the motherland. That Canada could be expected to contribute in any way without such a voice is impossible, contrary to the very spirit of British institutions. Moreover, the question is not only new to Canadians but it is revolutionary in its nature. It involves the expenditure of large sums of money and possibly the creation of a naval force which will of necessity be a continued and heavy financial burden to the country. It means that Canada shall enter the field of international military preparations. This is entirely contrary to Canadian tradition. Some years ago I remember reading a little verse which, though crude, expressed very clearly the Canadian national ideals. It ran, if I remember rightly, something like this:—

“O, the Eagle flaps his wings and screams,
And the Lion thirsts for blood,
But the Beaver musing by his streams,
Says nothing, but saws wood.”

RE-FITTING THE BEAVER.

If the present Parliament has its way, all this is to be changed. The

Beaver is to be fitted out with fangs and claws, and is to swagger around with the other beasts of prey. The whole proposal is revolutionary and momentous, and it has beside this peculiarity, that once accepted, it institutes a policy which cannot readily be abandoned. Once Canadian ships become a part of the British navy, they must of necessity be available for all Britain's wars, whether Canada approves of them or not. For Canada to refuse to participate, to withdraw her ships in the face of the enemy, would be an act of disapproval so marked that it is quite possible it would lead to such ill feeling between Canada and the old land, as to lead to their final separation. History repeats itself.

Canada has not always, during the past fifty years, seen eye to eye with Great Britain. Canadian public opinion would not stand for one moment for a second Opium war. During the Civil War in the United States, the people of Canada sympathized actively with the North, while England, through her Whig classes, favored the South.

Recently we have seen England as the possible ally of Japan against the United States. Canadians would scarcely submit tamely to have their ships and men used in any such causes. To withdraw them would be practically equal to an act of hostility toward Great Britain. Once we participate in the naval defence of the Empire, it appears that we stand pledged to support Britain in all her wars—a virtual tribute, since we can have no real say in the making of peace and war—or to withhold our support at the peril of severing our connection. The whole question is so serious that it should not be entered into without the most mature thought, and the full approval of our people.

THE PEOPLE HAVE NOT SPOKEN.

On this great, new and momentous question our present Parliament assumes its right to fix our policy for all time. It does not do so on any mandate from the people, who have never

had a chance to express themselves on the question in any way. If our two great political factions have their way the people will never have the chance to express themselves on the great question of whether we shall reverse our historic policy and enter the field of Imperial naval defence, being consulted only on the very minor, and relatively unimportant question of how we shall do so.

Technically, of course, our representatives in Parliament have a right to do this. Practically it is as much an act of tyranny as was the levying of ship money by Charles I. It makes little difference whether the tyrant be one or many. The vital thing is this, that on a question seriously involving our future, incurring vast expenditure, action is contemplated without the consent of the people having been obtained in any way. There is only one plea that can free Parliament from the charge of tyranny, and the violation of the spirit, if not the letter, of all measures of British freedom, from Magna Charta down, and that is, the plea that there is an "emergency," so urgent that there is not time to consult the people. If this can be established, Parliament will stand absolved of the charge of wilful tyranny, and the people may well forgive their representatives for an act of haste which necessity demands. Let us examine this "emergency" plea.

THE EMERGENCY PLEA.

Premier Borden claims that there is an "emergency" in the affairs of Great Britain, and in the matter of her naval defence, which demands a huge cash gift from Canada, thirty-five million dollars, to be used for the construction of three Dreadnoughts. These three ships are to be built in England, and manned and maintained by England, so that summed up, the contribution is merely a contribution of money given by Canada, to be used to augment the present British naval program. If really such an "emergency" exists, and it can be met in this manner, three things must be true. First, Great Bri-

tain's foreign relations must be such that war may be looked for at any time. Second, her navy must be inadequate to her defence. Third, her weakness does not consist of a lack of men, or of facilities to build or equip war vessels, but is solely a monetary affair—in other words, her credit is so strained that she can no longer build the ships necessary to her defence.

Let us examine these propositions. First, as to Great Britain's foreign relations, are we justified in assuming that there is reason to fear war in the immediate future? Her relations are at present, of course, friendly with all nations. Her hereditary enemy, France, has become her friend and ally, as has also Russia, with whom, at one time, conflict was possible. All possible causes of friction with the United States have been dealt with by a permanent treaty of peace and arbitration between the two nations, which, no less than the great and growing friendliness between the two peoples, makes war an impossibility from that quarter. There remains but one source of possible danger, Germany.

We are solemnly assured that Germany intends to invade and conquer England, that she is building a fleet solely for that purpose, that German officers solemnly pledge healths to their meeting in a conquered London. It matters little that Germany would have nothing to gain by such invasion; that quite probably, even were the British fleet completely destroyed, and the German fleet uninjured in the process—an unthinkable situation—Germany would be unable to land and provision a force large enough to conquer England; that France, England's ally, would undoubtedly seize the opportunity to invade Germany, and reconquer Alsace and Lorraine, not yet perfectly assimilated by Germany. In spite of all these reasons for believing that Germany would hesitate to invade England, we have all been frightened into hysterics by the idea.

Englishmen have lain awake nights listening for the hum of German air-

ships, and even innocent German waiters in London hotels have been objects of dread. There remains but one consolation in the midst of all this panicky fear. Germans are probably quite as much disturbed by fear of an English blockade, which would be designed to win Germany's growing sea-borne commerce, and leave England the undisputed commercial mistress of the seas.

But some people in both countries are finding out, more and more clearly, that the *whole scare is nothing more serious than a pumpkin with a candle inside, a sort of Hallowe'en ghost, designed to frighten both peoples into hysterics while the builders of warships and guns pick their pockets in security.* Indeed, the only apparent reason why Germany and England should be picked upon as foes is the fact that they have, each of them, one of the two greatest firms of gun-makers in the world—Krupps in Germany and Vickers and Maxim in England. These interests, supported by the land-owning classes in both countries, who welcome war-scars, if not actual war, as a means of diverting the people's attention from proposed and much-needed reforms, have undoubtedly been largely instrumental in promoting the war-scare.

It has even been asserted, and not denied, that a large number of British members of Parliament are financially interested in the armament firms. Aside from this artificial agitation there is no apparent reason why the two nations should ever have a serious difference, let alone a war. The two peoples are of kindred stock, their monarchs closely related; they have been friends and allies for centuries; in no part of the world do their interests conflict. Why, then, in the name of common sense, should there be war? Powerful organizations in both countries are working to maintain peace, and there is no reason why all misunderstanding should not be removed and the two nations become friends as France and England have. Indeed there are not wanting signs that this will, in time, take place. At any rate there is nothing in the re-

lations of the two countries to justify the Parliament of Canada in setting aside the whole spirit of British institutions, and committing the country to un-British "taxation without representation."

BORDEN'S POLICY WRONG.

But assuming that Britain's foreign relations are critical, is her fleet inadequate? It has never been claimed seriously that it is. The British Admiralty assures us that it is equal to all possible hostile combinations. In the face of these declarations and of the obvious superiority of the British fleet, it is absurd to assume that there is such urgency in extending Canadian help that the Canadian Parliament is justified in pursuing the cause it is apparently taking.

But, again, assuming for the sake of argument that the crisis in foreign relations exists, and that the British fleet is inadequate, is Mr. Borden's plan an effective way of extending aid? Is England insolvent? On the contrary, she is the great lending nation of the world, as Canada is one of the great borrowing nations. She has money to build her own Dreadnoughts. If there is a crisis, the proposal of Premier Borden's will not relieve it in the least. If England suffers a deficiency in anything it is in men and this Mr. Borden does not propose to relieve.

Clearly from all standpoints, Mr. Borden's proposals have neither the urgency nor the wisdom which would justify their acceptance by Parliament without a reference to the people.

OBJECTIONS TO LAURIER'S POLICY.

But what shall we say of Sir Wilfrid Laurier's proposals? He declares there is no emergency, and no need to rush to the aid of Britain. What we need, according to him, is coast defence, a navy, "Built, owned and manned in Canada," for our own defence, though, of course, available to Great Britain in time of war. This may or may not be our need. Several objections might be urged against it. In the first place, we might ask what we have to defend ourselves

against. Certainly not pirates, for they are a thing of the past. An invading foe then—Japan or Germany, we are told. But is it likely that either of these nations would care to try the experiment, with thousands of miles of ocean between—an almost fatal handicap, as was shown in the Boer war, and with the United States standing ready, by virtue of the Monroe Doctrine, to prevent them from retaining an inch of conquered territory should they succeed in beating Canada? Again, if either of these nations attempted to invade our country, of what use would any fleet which we can afford be against their powerful fleets. To destroy our fleet would be easy. Their real difficulties would begin when they attempted to force their way inland against a population of seven million, and with their base of supplies thousands of miles distant. Foreign invasion of Canada is, to say the least, highly improbable, and it is doubtful if Sir Wilfrid really thinks it of such great importance to provide for naval defence of our coasts, that we should at this juncture beat our plowshares into swords. Certainly he cannot think it of such urgency as to demand action before the people shall have been consulted.

What then is the explanation of the attitude of the two great parties? It is all a part of the beautiful game of ins-and-outs which has taken place of statesmanship in Canada. Nothing was ever hinted of a Canadian navy, or of Canadian participation in Britain's naval defence till 1909. Then the German war scare swept England. Certain jingoes in Canada began to clamor that we should do something to help the motherland. Loyalty has always been a useful stock-in-trade for Canadian politicians, and has in the past been supposed to be the peculiar property of Conservatives. Fearful that their opponents should get ahead of them the Liberal party hastened to propose that Canada should build and man ships for coast defence and to help Britain. The Conservatives at first concurred in this. It soon became apparent, however, that the proposition

was very unpopular among the French in Quebec. A party, the Nationalists, arose there to oppose it. Their chief objective was not the money involved, but the fear that Canadians would be required to man the vessels, to be shot down for England. Pictures of conscription of Canadians "disembowelled on the decks of battleships," were vividly painted before the minds of the habitants.

LAST ELECTION CRIES.

Meanwhile the general election was approaching and the Conservatives conceded the alliance of the Nationalists. The Liberals were committed to the policy of a Canadian navy—had taken steps for its creation. The Conservatives, in opposition, were committed to nothing. They became vague on the navy question. In British Canada they talked general loyalty while in Quebec the Nationalists promised a referendum if the Conservative Nationalist alliance was returned to power. They were returned, not, however, on the navy issue, but on the question of Reciprocity with the United States, with the navy as a minor issue, except in Quebec, where it was the great issue. Where the new cabinet was formed, a Nationalist, Mr. Monk, was one of its members. During the first year of Mr. Borden's administration nothing whatever was done with the navy question. In the fall of 1912, however, Mr. Borden made his announcement of policy—neither the Canadian navy scheme of Sir Wilfrid, nor the referendum which the Nationalists claimed had been promised to them, but a cash subsidy of \$35,000,000 to be given to Britain. There is scarcely any doubt that in this he hoped to placate the ultra-loyal section of his own party without offending the Nationalists, who, as we have seen, objected to the contribution of men more than that of money. Mr. Monk, however, claiming that he had been promised a plebiscite on the question, resigned his position in the Cabinet.

The split between the Conservatives and the Nationalists was now complete, and the Liberals were having rather

the best of the game. Their policy was quite as "loyal" as that of the Conservatives, and they had beside this advantage, that they had made a powerful appeal to national vanity, and, more substantial, to those financial interests which stood to profit by building and outfitting a Canadian navy. Seeing this, the Conservatives began to veer, and there is every indication that before the session ends their program will include a Canadian navy, in addition to a cash contribution. A beautiful, well-played game, truly, but where do the People come in?

In the situation in which the parties of Canada stand, the only way in which the people can have a voice is by means of a plebiscite. The two parties are agreed on this, that Canada shall enter the naval field in some form. It is all very well to say that when they go to the people in a general election the people can express themselves by their votes. But they have no choice. Theoretically, if a considerable proportion of the people favor doing nothing at the present juncture, they can elect representatives who will carry out their views. Practically, nothing short of an earthquake would enable them to do so.

Anyone in the least familiar with party conditions, knows how difficult it is for an Independent of any sort to secure election in a three-cornered fight. The regular parties have the funds, and the organization which counts for so much in an election, and even if a large majority of the people of Canada were against the naval policy of both parties, it would be almost impossible for them to elect a sufficient number of representatives to defeat it. It would be the case of the National Transcontinental over again. The Liberal Government, you will remember, on the eve of an election, suddenly proposed a second transcontinental railway to run through Northern Ontario and Quebec, to the West, and from sea to sea. This was to be built by the country and based by the Grand Trunk, or its new ramifica-

tion the G.T.P. The Conservatives went one better and proposed that the line should be built and owned by the Government. There were undoubtedly a great many Canadians who opposed spending public money on it at all, but they did not get a chance to voice their belief.

There is no urgency in the matter of the navy, but plenty of time to give the people a chance to express themselves by a popular vote. The next general election, if the parties stand as they now do, will not give them this chance. Mr. Monk's position is the only British one, under the circumstances, and in it he has the support of thousands of English-speaking Canadians. Unless this present Parliament wishes to stand convicted of a most serious offense against the spirit of British liberty, and to lend credence to the suspicion that sinister influences are behind the movement for a navy, it must give the people this chance. It is difficult to see how a party calling itself Liberal can oppose this course, which is certainly in accord with all Liberal traditions. But at the present moment in both parties alike, principles and statesmanship seem to be subordinated to party advantage, and this great question, which should be handled with the greatest caution, has been made the occasion of reckless political jockeying.

No valid reason can be urged against giving the people a chance to decide, by a referendum upon the navy question. If this is done, and the people support either a cash gift to Britain or the creation of a Canadian navy, the moral force of their action will be increased many times by its having been endorsed by a popular vote. If, on the other hand, they decide against both these courses, they will have shown that the proposed action of Parliament is not only contrary to the popular will, but unwise for a *navy created, or a subsidy voted, contrary to the will of the people, must injure rather than help the Empire.*

THE QUESTION OF NAVAL DEFENCE

By Edward William Thomson

Note.—Mr. Thomson has been writing for several issues of *Farmer's Magazine*. His views are his own. He is a vigorous, independent thinker and writes from his own standpoint as to the way politics are shaping ends in our country. This article will be read with interest by all just now, as the question is on the table at Ottawa, and is ably discussed from another standpoint in this issue by Mr. Drury.—Editor.

LET us consider the Navy proposals. Mr. Borden designs to pay thirty-five millions of Canadian money, or of what is essentially the same thing—money borrowed at fair interest on Canada's perfect credit—for three battleships of the most formidable. He designs to place them in the service and complete control of the Admiralty, until such time as Canada may withdraw them. Is it not obvious that they could not be in complete London control, during the period of loan, if they were manned and officered by persons supplied and paid by Ottawa? Some allege that the period of loan will not expire before the ships are worn out, superseded by vessels of later invention, or otherwise fit to be scrapped. If so, what harm? The period of loan must in any case extend until Canada shall have acquired the auxiliary craft necessary to great battleships. These addenda must include at least fast and strong cruisers for scouting, destroyers for employment against hostile torpedo craft, launches of lesser range for torpedo and mines service. Without such auxiliaries, which combined with a superior battleship constitute a fighting unit, the battleship itself would be not only much limited in action but much endangered, somewhat as a prizefighter would be if he were almost deaf, almost blind and capable only as to fists, arms, legs and trunk. Does Mr. Borden in-

tend to obtain for Canada the auxiliary equipment without which Canada cannot recall the battleships?

His further or permanent Navy programme has not been disclosed at time of this writing. But his careful and lucid speech on his preliminary policy indicated that he designs establishment of shipyards, etc., on both Canadian coasts, which will be capable of constructing such vessels and appliances as may suffice for not only coast defence service, but as auxiliaries to super-dreadnoughts. How rapidly the intended Canadian shipyards, etc., may turn out such minor craft must depend on the sum voted by our Parliament, and the speed of its application to the purpose. Let the period be conceived as five, ten, twenty years—no matter how short or long it be, Canada will, at its termination, be enabled to manage battleships, and recall of her first trio may then reasonably occur. Meantime, not only will Canada's security be enhanced by her strengthening of Britain's power on the high seas, but the plant for Canada's future coast defence may be rushed as fast as it could have been by adhering to Sir Wilfrid's former programme, supposing Parliament as generous to that as to Mr. Borden's plan.

But that is not all the gain. The Premier clearly indicated that the Admiralty, upon completion of the three Canadian battleships (perhaps earlier)

will be enabled to liberate and will detach for service along or off Canada's coasts, such cruisers, gunboats and other minor craft as will sufficiently insure these coasts against their main or sole danger in a great British war, viz., the danger from raids by hostile cruisers. Our three big ships will supply England with more than the line-of-battle strength of numerous smaller craft formidable enough to serve Canada's only need, and we shall get the use of these speedily—a fair exchange.

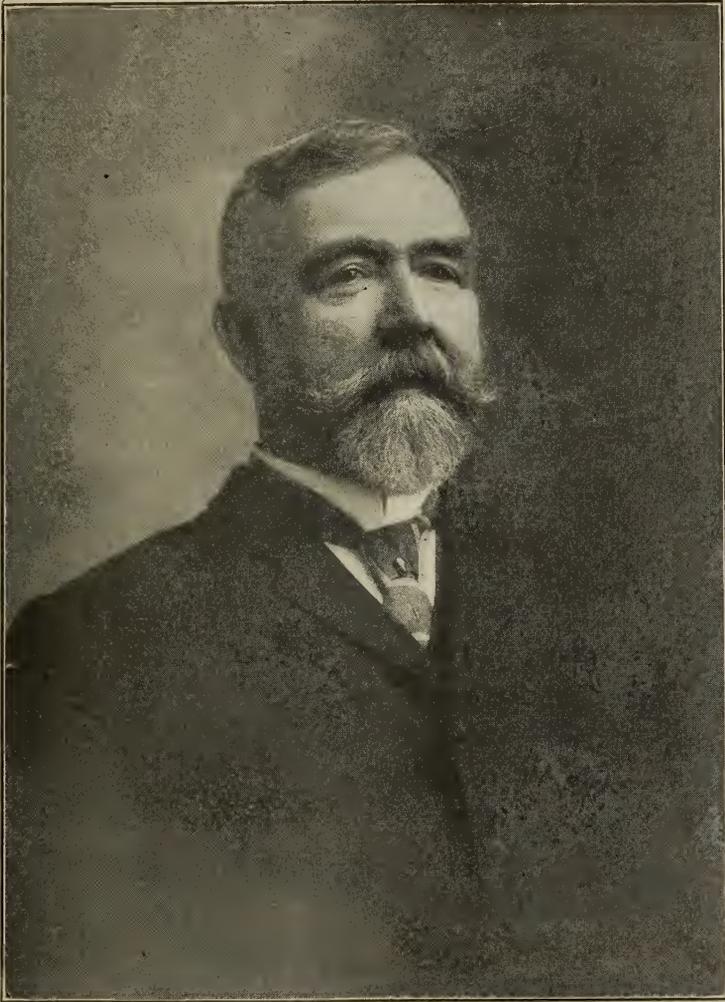
Yet the story is not all told. The London Government will employ the projected Canadian naval yards to build and repair armed vessels for Atlantic and Pacific service, thus aiding Canada to maintain effective staffs of artificers, whose presence here will facilitate the construction of such craft as we may undertake on account of a future Canadian Navy, or for the existing Fisheries Protection service. In short, everything needful to increase Canada's security, to guard her coasts, and to promote her presumed ambition to acquire a serviceable navy of her own, is intended by the Premier's business-like, masterly plan. He came to this success by looking straight at the military problem, with resolution to meet its requisitions. To those who, like myself, are convinced that Britain's sea-supremacy is necessary to her life; that both are now gravely endangered; and that Canada's separate political existence on this continent must depend on ample coast defence in case of Britain's very possible defeat at sea, Mr. Borden's plan may well appear the best possible. Thirty-five millions is a bagatelle compared with advantages to accrue. As much more, promptly, for Canadian shipyards and coast defence appliances would be another flea-bite in comparison with the benefits.

To him who deals sincerely much more than he apparently sought is often added. How about the political aspects of the Premier's scheme? Prima facie it must please Imperialists of every degree. Shall we who are pri-

marily Nationalists, or decentralizationist Imperialists, be therefore woful? Surely it must be well to rejoice that our centralizationist brethren are glad over what may much please ourselves. There does not appear to be the slightest infringement on Canada's autonomy, or what I prefer to term independence. Were we absolutely independent, in the sense of separation from Great Britain and the Crown, even as Chile and Argentina are, it would be within our independent right to build battleships in England; to sell or loan them at any price or none to France, Greece, Germany or Great Britain; and to accompany the sale or loan with a proviso for recall of the vessels in certain contingencies, our own Government retaining right to decide as to when these had arrived. Sovereign governments have often sold warships to other sovereign governments. Such craft are commercial commodities between nations as between builders and governments, even as locomotives might be. The seller assumes no accountability for the use by buyer or borrower. Hence Canada is not one iota more involved politically by Mr. Borden's plan than at present. The Dominion might, perhaps, be slightly more involved than now, if the three battleships were manned and officered by Canadians. By the way, there is a staring absurdity in protests that Canada is not adding men, but only ships, to Old Country sea-force. Those who lament this should either enlist or propose a scale of naval pay that will induce other Canadians to serve. Though the pay offered on the Laurier cruisers, "*Niobe*" and "*Rainbow*," is better than Old Country naval pay, crews for these ships could not be enlisted in the Dominion. They recruited but 349 men and boys in Canada, up to the end of last March, and 111 of these deserted, besides 38 who enlisted elsewhere. In Vancouver harbor last July the training-ship "*Egeria*" of the local "Navy League" had but two volunteer boys aboard. It is ridiculous to suppose that either patriotism or imperialism will move men and boys of

the working class to volunteer in peace time for naval service at lower pay than they can get ashore. Do men and boys of the mercantile, professional or gentleman class often volunteer on pure sentiment at a dead loss of money? As

purposes coast defence, even Messrs. Bourassa and Lavergne cannot consistently complain, since they have ever favored such defence. This is written in no derision of those most honorable, consistent, upright, brave gentlemen.



EDWARD WILLIAM THOMSON.

it has been necessary to raise R. N. W. M. Police pay, or do without good recruits, so it is necessary to raise Canadian naval pay, greatly, or do without Canadians in the service.

Back now to the political aspect of Mr. Borden's scheme. Insofar as it

They, as well as Messrs. Monk, Doherty and many others of Quebec, contended that Canada should abstain from going afloat in armed ships on the high seas. Why? Because such procedure could not but involve Canada newly in liability to be engaged in the Old Country's

possibly world-wide wars, not as mere defender of Canadian territory, but as a country maintaining afar ships auxiliary to those of Great Britain. They held that a voice in directing Great Britain's foreign policy should accrue to Canada if she put armed ships on the high seas. This contention surely implied that Canada, if her voice were over-ruled in council, might and should revert to her old obligation to do no more than defend herself in any Old-Country-made war. That was the traditional position of both our political parties, till the Boer war caused both to desert it. Now Mr. Borden does not propose to put Canada immediately afloat on the high seas.

We do not go there by paying for ships and loaning them to England, any more than if we built them and sold or loaned them to France or the United States. We shall, so far as those vessels are concerned, remain precisely where we have ever been in a political sense, i.e., liable to be engaged willy-nilly in our own defence, after strengthening Great Britain's. Again, Mr. Borden has not, at time of this writing, even proposed that Canada shall go afloat armed off her own shores. He has stated that the London Government will detach ships for the high-seas guard of our coasts, as of old. If his projected Canadian shipyards build war vessels for Great Britain, as proposed, Canada still will not be, any more than Vickers or Cramp, shipbuilders, going afloat on the ocean. Not till Canadian craft, controlled by Ottawa, and flying a distinctive Canadian flag, shall take to the high seas, can this Dominion be newly placed politically, toward Great Britain or foreign powers. Wherefore the Borden policy, except inasmuch as it proposes large expenditure, ought to be approved by the "Nationaliste" chiefs. This is so clear that we may expect to hear the programme denounced by ingenious "Grits" as one contrived by Messrs. Bourassa and Lavergne! It does not appear that a Canadian Minister on the so-called Imperial Defence Committee can newly involve us in a political sense.

There is only one point of view from which the Premier's sincere yet subtle plan can be consistently and powerfully attacked. That vantage ground is held by Mr. John S. Ewart, K.C., who has long contended that Canada should take or receive the status of an independent kingdom of the British Crown. His latest pamphlet (No. 11, "Kingdom Papers") is amazingly thorough and ably argued. It was written before Mr. Borden's scheme had been published. After acquaintance with its details, Mr. Ewart, now in England, may perhaps see reason to modify some arguments in his contention that Mr. Borden is bound by the spirit of the Canadian constitution to pass a Redistribution Act, and then call a general election on his naval policy. However desirable such procedure may be in view of so important a matter, there is less reason for doing so than Mr. Ewart supposed when he wrote, i.e., if it be true, as herein suggested, that the Premier presently proposes no change of Canada's status toward foreign countries or Great Britain.

But nothing, except sentiments contrary to Mr. Ewart's, can make light of his argument that it is not only unreasonable for Canada to remain liable to be involved in Old Country wars, but that Canada might be far more useful to England as a neutral than as a combatant. And no degree of contrary sentiment can annul the force of his exposition as to the prodigious accumulated wealth of the Old Country British, and the consequent monstrosity of their inviting and receiving from Canada the price of three super-dreadnoughts. Consider Mr. Ewart's own sentences:—

"Turning now to the capability of the wealthy and well-to-do classes in the United Kingdom to pay for their own navy, let it be noticed that the national wealth is simply colossal. The United Kingdom is the great creditor nation of the world. Almost every corner of the globe pays tribute to her. Part of the income of almost every civilized man (and of a good many of the uncivilized) goes to pay the great banker her interest. Her foreign investments amount to about £3,750,000,000,

and on this she draws every year the enormous revenue of £180,000,000. What does she do with it? Well, as she has nothing else to do with it, she re-invests it. Her new foreign investments last year were about £175,000,000. In fifteen years these investments have increased as follows:

Investments in 1911	£3,750,000,000
Investments in 1896	2,092,000,000

An increase of	£1,658,000,000
Or an annual average increase of	£110,000,000

The annual enhancement naturally increases in amount as the unexpended surpluses are re-invested. Last year, for example, exceeded the average of its fourteen predecessors as follows:

Increase in 1911	£175,000,000
Average increase in previous fourteen years	£110,000,000

An enhancement of	£65,000,000
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Foreign assets are but one-quarter of the total wealth of the United Kingdom. The magnificent aggregate is £16,000,000,000. It was estimated, in 1885, by Sir Robert Giffen, at £9,600,000,000; increase in twenty-six years, £6,400,000,000, or an annual increase of over £246,000,000.

Analysis of income confirms these figures. The annual revenue of the wealthy islanders is not less than £2,000,000,000. The portion on which income tax is paid can be stated with precision. For the year ending 5th April, 1910, it was £1,011,100,345. In 1896 it was £677,769,850; annual increase £23,809,320; increase in fourteen years £333,330,495. As the total income is about twice the income taxed, we may double this annual increase of revenue. The respective amounts, therefore, are as follows: Aggregate wealth £16,000,000,000; annual income £2,000,000,000; annual increase in wealth £246,000,000; annual increase in income £47,000,000. Figures like these are far from arousing my sympathy. They do not, by themselves, prove poverty or distress."

Mr. Ewart proceeds to show that the public debt of Great Britain has decreased by £69,000,000 since 1854, and by £56,000,000 during the last five years. The expenditure on army and navy is paid out of the ordinary revenue, and there was a surplus of £6,545,000 last year. Compared with his wealth "the weary Titan" is paying less to-day for armaments than ten years

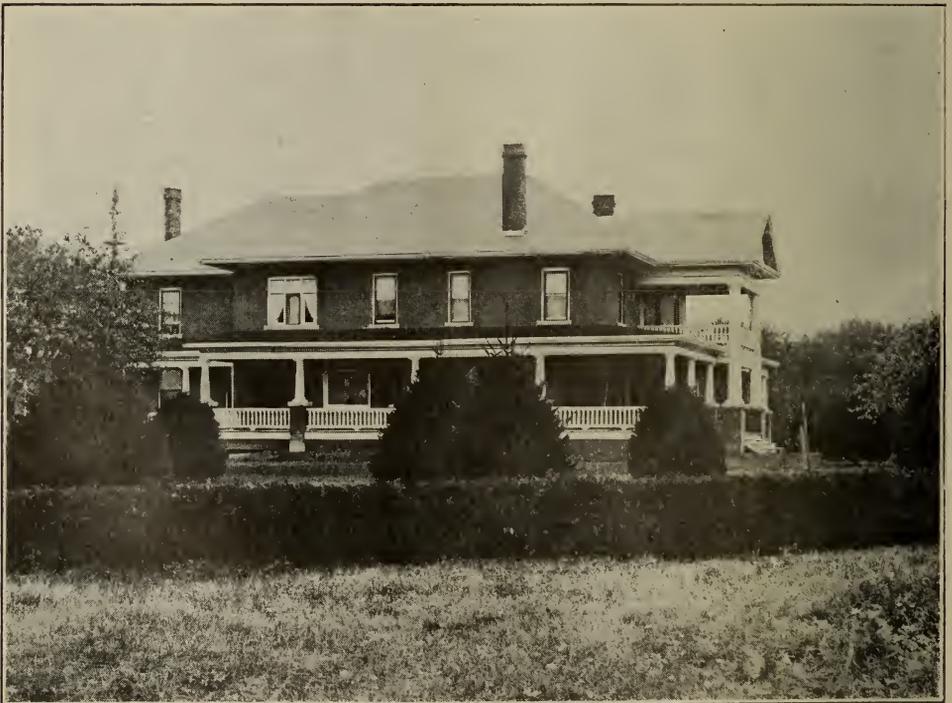
ago. "If the United Kingdom provided four new battleships, at cost of ten million pounds, her total war expenditure would be about one twenty-fifth part of the national income. If the ten million pounds were paid out of income there would still be left an increase in income, over the previous year, of £37,000,000. And what would be the proportion between the ten millions and the total foreign investments of £3,750,000,000. Not one three-hundred-and-seventy-fifth-part. The poor weary Titan! How can he be expected to meet an emergency without somebody's help?"

Mr. Ewart gives many more undeniable statistics, observing that the Titan might be less weary if the orb under which he is fancifully said to stagger were not one of gold. In previous numbers of this series of contributions it has been similarly, though far less elaborately argued that the Old Country British wealthy ought to pay for their own safety, and the wealthier of Canada pay, per income tax, for any defensive armament needed here. As yet Premier Borden has not intimated an intention to produce the \$35,000,000 from the more bulgy private pockets of our beloved fellow-countrymen.

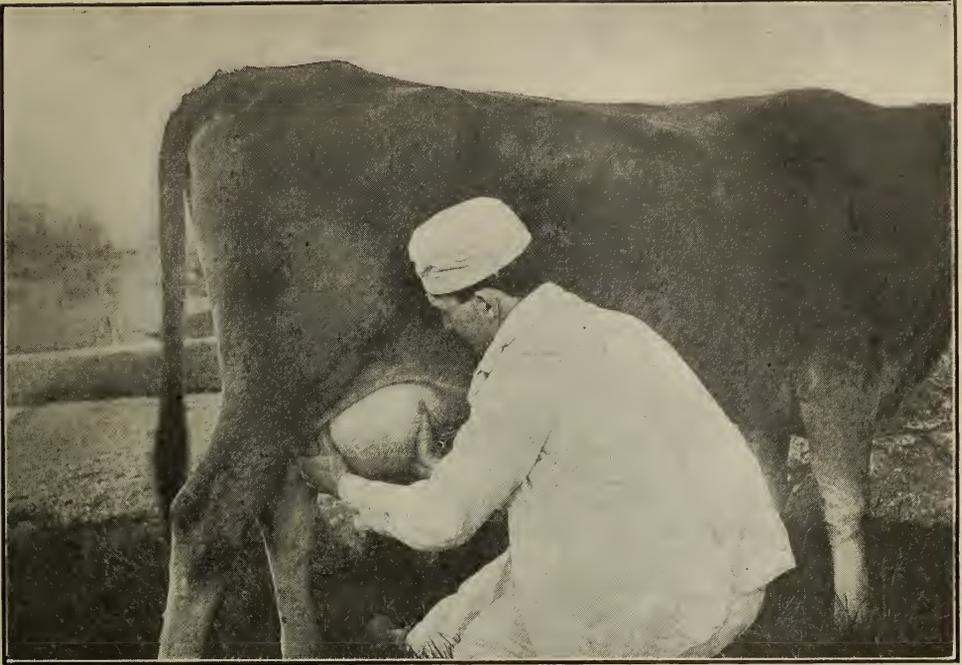
But all that line of contention cannot count with a people of grand sentiments. It is not to relieve either the Old Country wealthy nor the Old Country poor that good Canadians mean to give thirty-five millions to Admiralty use. It is not merely to do themselves proud. It is not even to gratify their sense of humor, though nothing could be more delightful to a humorist of moderate wealth than to drop a bit of money into the extended hat of a billionaire. Wouldn't we all rush to contribute if Baron Rothschild, John Rockefeller, or Andrew Carnegie were personally soliciting alms? There is a good, practical reason for approving Premier Borden's ostensible scheme. It may be, it probably is, but part of his entire real project. Behind the preliminary of December 5th, considerate eyes may perceive a swiftly developed

Canadian Coast Defence and Navy. Whatever may be incidentally done, meantime, to aid Great Britain will be kindly done,, valuable to our high seas defence, useful to Canadian self-respect, and elevating esteem for

Canada in British and American kin. Said Edmund Burke—"Never was there a jar or discord between genuine sentiment and sound policy. Never, no, never did nature say one thing and wisdom say another."



"Cairnbrogie," Claremont, Ont., the new residence just completed by Graham Bros., the well-known horse breeders.



Manipulating the right half of the udder to obtain the "strippings."

MILKING FOR QUALITY and QUANTITY

By George H. Dacy

Note.—In connection with this admirable article written for Farmer's Magazine by Mr. Dacy, we might quote the following from Col. F. M. Woods, of Lincoln, Nebraska, the well-known auctioneer. He says: "O, you who would abuse the cow, I wish that I could for once take from your table, as you are about to sit down to the evening meal, all that the cow has placed thereon. I would take the cup of milk sitting by the baby's chair; I would take the cream biscuit, the custard pie, the cream for coffee, the butter, the cheese, the smoking roast of beef, or steak, or the sweet corned plate of juicy meat. In fact I would leave you to make your meal upon Irish potatoes, beet pickles and toothpicks."—Editor.

"CONSARN ye, get over. Drat these crowding, shoving cows."

Then followed the sound of many bangs and thumps issuing from the stable, and as I reached the barn door to ascertain the cause of the disturbance I saw a scene which is too often enacted on the average dairy farm. Hunched up against the side of the stanchion was the hired man, milk

stool in hand, soundly belaboring one of the cows. Immediately I interfered and asked what he meant by abusing one of the best mannered animals in the entire herd.

"Gol darn her measly hide," the hired man exclaimed, "she stepped on my foot and when I lammed her one in the ribs she hauled off and kicked me. I'll show her who's boss around

here before I'm through with her though."

Thereupon he resumed beating the dumb beast with the stool. It was only after a physical set-to that I finally persuaded him to desist from his cruelty. Vowing future vengeance on the poor animal he resumed the milking operation and the manner in which he jerked at the teats and the udder of the cow indicated the revengeful disposition that he possessed. I noticed that he drew some of the milk over his hands in order to remove a little dirt which had stained his fingers during the encounter. Furthermore, he continued to milk with his wet hands and one could see the most objectionable things happening around that milk pail. As soon as the udder of the cow began to shrink in size and the flow of milk materially decreased he made a superficial attempt at stripping the cow before he began to milk the animal in the next stall.

LOTS LIKE HIM.

This hired man—who by the way is only typical of thousands of other hired men employed on dairy farms the country over—was a criminal. In the first place he was guilty of inhuman treatment of a dumb beast while secondly he was offending against the laws of sanitation by the manner in which he milked. In the third place he was robbing his employer by not thoroughly milking the cows dry. Is it any wonder that dairying is nicknamed "profitless farming," when such conditions as these prevail on a supposedly up-to-date milk farm?

For maximum production dairy animals must be maintained in peace, quiet, and contentment. They must be fed liberal amounts of a well balanced ration; they must have access to pure drinking water and salt; they must daily have an opportunity for a bit of exercise. Above all dairy cows must be kindly treated as they are naturally of an excitable and nervous disposition. Where the animals are abused, knocked about, and unduly ex-



The practice of "wet milking" is neither cleanly or sanitary, and should be vigorously condemned.

cited invariably their milk flow is seriously impaired. The manner in which the milking operation is performed is of immeasurable importance. As every dairy farmer knows the "strip-pings" are as rich as cream and where the cow is not thoroughly milked out a portion of the richest milk is sacrificed. In addition in the case of such a cow the development of the teats, udder, milk-elaboration system, and the productive capacity is seriously checked where the practice of not milking the animal dry is continued for some time.

HOW THE UDDER IS MADE.

To properly understand the milk-producing ability of the cow let us take a moment to investigate what veterinary science has to say about the milk secreting system of the dairy cow. According to the findings of the experts of "cowology," the dairy animal's udder is composed of four glands or quarters, each of which has an outlet through a teat. The interior of the udder is a series of spongy, fibrous masses which are known by the name

of "milk glands." These glands are composed of more ducts and cavities. Immediately above each teat is a milk cistern of an average capacity of one-half a pint. Milk canals branch upwards in all directions from these cisterns and terminate in sack-like apertures called alveoli. Herein the milk is directly manufactured from the blood; the arteries, veins, nerves, and lymph vessels supplying the glands with food materials as well as carrying away the waste products. The alveoli are egg-shaped and are about five thousands of an inch in length. When they are full and busily engaged in milk manufacture the udder enlarges while it subsequently shrinks after the milking process. When milk is secreted the alveoli are filled with detached cells, tissue and fat globules which are used in the manufacture of milk.

As the dairy calf develops the teats and udder also enlarge. It is of utmost importance that everything be done to favor the maximum and uniform development of these organs in the dairy animal. The mammary glands of the cow have been developed from the stage where the animals produced only enough milk for their young to the period when a good cow of the present era will yield about six times her own weight in milk every year as well as approximately half of her weight in butter fat. The intensive practice of rigid selection, careful feeding and painstaking breeding as well as the pursuit of regular and persistent milking have accomplished this transformation. The udder of the heifer begins to develop with the birth of her first calf and following the dropping of each subsequent calf the mother shows an improvement in her ability to secrete milk until the maximum point is reached after she bears her third or fourth offspring.

Nature intended that the cow should begin to yield milk as soon as she produced her calf. Man has improved on the plan of nature and has developed the cow so that she will produce milk for approximately three hundred days

in the year. Immediately after calving for several days the cow yields what is known as colostrum milk. This milk is not suitable for human food but is essential for the feeding of the calf as it possesses valuable laxative properties. The cow has become too useful as a producer of human food to allow her to suckle her calf for long, the usual plan being to remove the youngster from the dam two or three days after birth. Then the mother is ready to enter the milking herd. Henceforward her udder is emptied of milk two or three times a day in consequence of the milker handling the teats and the base of the udder so as to bring down the milk.

PROCESS OF MILKING.

By alternately opening and closing his hands over the teats the milker presses out the milk that has gathered in the cisterns. The milking process must be continuous until the flow of milk stops. It is worthy of particular note that the composition of the milk drawn throughout the milking is not uniform. The first streams of milk are



Where manipulative milking was practiced 142 cows in 13 different herds showed a daily increase of 1 pound of milk and .1 pound of fat per animal.

not as rich, ranging from two to six and one-half per cent. in fat content, as are the last streams or "strippings" which contain from twelve to fifteen per cent. of butter fat. These figures only go to show the importance of milking the cow dry and of securing all of the "strippings." Many dairymen suffer large annual losses in consequence of their cows not being milked dry at each milking. Where the stripping is efficiently carried out an increase in the production per cow of one pound of milk and one-tenth of a pound of fat per day over the yield where the cow is not thoroughly milked out is quite common. A primary rule in every dairy barn should feature the securing of all the milk present in the udders of the animals at the time of milking.

VALUE OF STRIPPING.

Some years ago over in Denmark, a country that ranks high in the annals of dairying, a native veterinarian named Doctor Hegelund devoted some time to investigating the problem of efficient and economical milking. He found that where the "stripping" method was painstakingly practiced that all the milk was obtained from the udder of the cow. However, after detailed test he devised an easier method of manipulating the udder of the animal so that all the milk was given down. The Hegelund system required only a minute or two of work and was practiced as soon as the animal was

showing a decrease in the flow indicative of the fact that her udder was about empty. He showed that according to the old method of stripping the milk was usually not entirely drawn from the cow while that by the practice of his manipulation system it is often possible to obtain an extra two pounds of milk from a cow that has been apparently milked dry. He gained as much as a ten per cent. increase in the fat yield per cow by practicing udder manipulation.

Doctor Hegelund's explanation of his system of milking is concise and specific. His summation of the manipulation method is about as follows: "The process consists of three different manipulations. To begin with the right quarters are pressed against each other (in case the udder is unusually large only one quarter is taken at a time) with the left hand on the hind quarter and the right hand on the fore quarter, the thumbs being placed on the outside of the udder and the four fingers in the division between the two halves of the udder. The hands are now pressed toward each other and at the same time lifted toward the body of the cow. This pressing and lifting motion is repeated three times; the milk collected in the milk cisterns is then pressed out and the manipulation is repeated until it is impossible to obtain any more milk in this manner. The left quarters are then treated likewise.

THE HEGELUND SYSTEM.

"The second manipulation consists in pressing the glands together from the side; the fore quarters are milked each by itself by placing one hand, with the fingers spread, on the outside of the quarter and the other hand in the division between the fore quarters. The hands are pressed against each other and the teat is then milked. When no more milk is obtained by this manipulation the hind quarters are milked by placing a hand on the outside of each quarter, likewise with fingers spread and turned upward, with the thumbs



The correct position of the hand and fingers for the milking operation.



An increased daily production of 5.5 pounds of milk and .64 pounds of fat per cow has attended the practice of the manipulation method.

just in front on the hind quarters. The hands are lifted and grasp into the glands from behind and from the side, after which they are lowered to draw the milk. The manipulation is repeated until no more milk is brought down.

"In the third manipulation the fore teats are grasped in partly closed hands and lifted with a push towards the body of the cow, both at the same time, by which method the glands are pressed between the hands and the body of the cow; the milk being drawn after every third push. When the fore teats are emptied the hind teats are milked in a like manner. When all the teats are dry the process is finished. To the average farmer these operations may appear laborious but as a matter of fact they are relatively simple and easily performed in the course of two or three minutes after the milker has gained a bit in experience. Some farmers have simplified the system by merely practicing extra handling, pressure and

massage movements on the udder so as to secure the last drops of milk."

In order to definitely ascertain the value of this massage method of milking the Wisconsin Agricultural College conducted a series of experiments and practical tests to find out the commercial value of the system. The first tests were run with ten cows of the University dairy herd. These animals had been making an average daily yield of 25.1 pounds of milk by the ordinary method of milking while they showed an increase of two pounds of milk daily per cow where the manipulation method was practiced. The animals showed an increase of 8.1 per cent. total milk yield and 18.1 per cent. total butter fat yield. The milk secured by the manipulation method was extremely rich, containing from six to fifteen per cent. of fat while the milk resulting from the ordinary system of milking varied from 2.95 to 6.73 per cent. in fat content.

A second test was carried out with twenty-four cows which were members of five different herds. For four weeks these animals were milked by the manipulation method and they showed an average gain of 4.5 per cent. in total milk production and an increase of 9.2 per cent. in the amount of fat yielded. In special cases some of the cows increased their fat yield over thirty per cent. In order to secure data from a large number of animals maintained under a great variety of conditions in different herds one hundred and forty-two cows were milked in thirteen separate herds in this manner. The cows were milked for a three-day period, the manipulation method being practiced just as soon as the animal became dry by the ordinary way of milking. The results of these detailed trials showed an increase of one pound of milk and one-tenth of a pound of butter fat per animal per day. The range in the increased milk yield for the different herds ran from .55 to 1.87 pounds daily while the yield of fat per animal was increased from .06 to .18 pounds daily. The average increase in milk amounted to 5.3 per cent. while the fat yield showed a gain of 12.6 per cent. Seventy-seven of the one hundred and forty-two cows gained more than ten per cent. in fat yield during the period that the manipulation method of milking was practiced. In special instances an increase of as much as 5.5 pounds of milk and .64 pounds of fat per animal per day was noted.

The annual monetary loss in consequence of the practice of inefficient milking is large. By the simple practice of the manipulation method this waste can be readily controlled. Mr. Milk Farmer are you going to do your

share towards eliminating this loss? For this is a problem that it is up to the individual dairyman to solve. Really the difficulty is already worked out for him. All he has to do is to make use of the answer to the riddle. The countryman who milks his cows according to the manipulation method is not only fattening his own pocket-book by increasing the dollar and cent income from his dairying operations but he is also improving the productive capacity of his herd. Thorough milking is one of the greatest aids in developing the mammary glands of the cow and in increasing her capacity for profitable milk production.

The additional expense of practicing the manipulation method is practically negligible as the gain in milk and fat yield more than covers the added cost. Where the milker is paid fifteen cents an hour, the after milking of twenty cows would cost thirty cents a day as it would require about two hours to perform this work. However, if each of the animals gave an increase of one-tenth of a pound of fat this would mean a daily gain of two pounds of fat. If butter fat is worth thirty cents a pound the net profit from the manipulative milking of the twenty cows would amount to thirty cents a day. Figuring the average lactation period as three hundred days the average net profit from a herd of twenty cows milked in this manner would be about \$90. In the average dairy state that has a cow population of one million animals an increase in the amount of resultant dairy products of \$4,500,000 per year would be possible where the method of after milking by the manipulation system was practiced.





Col. Talbot's old house near St. Thomas. A picnic party on the grounds.

THE PIONEERING OF COL. TALBOT

By Hattie Robinson

Note.—Canada has many instances of pioneering experiments. To-day we are particularly impressed with such colonization work as railroad companies in the West are doing, and as foreign colonies are doing, such as the Doukhobors, the Mennonites, and others. Other schemes in New Ontario and the West are being brought forward from time to time. At present some attention is being paid to the C.P.R.'s irrigation scheme around Calgary. Hon. Clifford Sifton and Hon. Frank Oliver started immigration policies for Canada that really began the big flow of population this way from Europe. The American invasion is featured in this issue on page 46. This account by Miss Hattie Robinson, a prominent worker in the Grange at Middlemarch, will be of special interest in throwing light upon the way some of the older settlements of Ontario were made.—Editor.

NEAR the centre of Pinafore Park, St. Thomas, stands a pyramid-shaped cairn made up of twenty-eight blocks of sandstone of various colors and shapes, set together with cobblestone and cement. On each of these, one word is chiseled. On the top reads "Erected at Centennial Anniversary of Talbot Settlement May 1903." Below this are the names of the seven townships of Elgin and the initiated know that the remaining twenty-one are the names of the town-

ships included in the Talbot Settlement. This is one of the permanent marks of the Centennial festivities which were held in St. Thomas for a week including the 21st of May, and were among the most successful ever attempted in Canada, all classes, creeds and nationalities joining harmoniously towards making this event worthy of those noble pioneers who "came, saw and conquered" a vast wilderness extending from the Detroit River to Long

Point and for many miles north of the shores of Lake Erie where now stand the influential cities of Chatham, St. Thomas and London.

The leading spirit in changing all this was the Honorable Thomas Talbot of Castle de Malahide, County of Dublin, Ireland, born 17th July, 1771. At an early age he became an officer in the British army and was a youthful companion of Arthur Wellesley, afterwards the Iron Duke. They served together as Aides to the Duke of Buckingham, a relative of Talbot. His regiment being ordered to America, Talbot served for four years as private secretary to the first Lieutenant-Governor of Upper Canada, the faithful and energetic Governor Simcoe, who was never so happy as when exploring the unbroken forest and investigating Canada's magnificent lakes and rivers.

In the winter of 1793 the Governor with a party of officials, including Talbot, visited the Mohawk village on the Grand River and under the guidance of Chieftain Brant, proceeded to the Thames where the Delaware and Chippewa Indians lived. Even at that date the church and school on the reserve near Brantford, had been built and the Moravian missionaries were teaching not only Christianity, but agriculture. The Governor's road, Dundas street, between Hamilton and London was the result of this journey, the Governor remarking he would have a road as straight as a crow could fly. Although the site of the city of London did not become the Government centre as plan-



Stone on which Indian axes were ground near Middlemarch.



The cairn at Pinafore Park, St. Thomas, erected in 1903 at the Talbot Centennial.

ned by Governor Simcoe, to be called Georgiana in honor of King George III, it has long been recognized as the commercial capital of the Western peninsula.

In 1797 Talbot's regiment was recalled and soon after was sent to the Continent. At the close of the war he returned to Canada, for in 1801, a letter dated at Skitteewaabaa, was written to the Duke of Cumberland, asking for his influence in obtaining the usual grant of land of 5,000 acres to an officer desiring to make his permanent home in the province. After considerable delay and much correspondence, he went to England and obtained the desired patent from the Crown, with a right of reserving other adjacent lands for settlement.

HIS COLONIZATION SCHEME.

For every 50 acres on which he placed a bona-fide settler, he was to receive 50 acres. This additional grant he often sold to the settler at \$3 per acre. According to Talbot's rule, every settler was obliged to do his settlement duties before receiving his title. These consisted in cultivating ten acres of land on his lot, building a dwelling on

it, and clearing the trees on one half of the road allowance in front of his land inside of three years. He afterwards obtained permission to place settlers on 100 acres of land on condition of performing the same duties and paying the fees to the Government of about \$33. Many agree that this plan was a wise one as by this means, the roads were established and the lazy or improvident weeded out. Col. Talbot was proud of his foresight in this matter as is shown by this extract from a letter to Sir John Colborne, written in 1831, when the population was over 40,000.

"I was the first person who exacted the performance of settlement duties and actual residence on the land located which at that time was considered arbitrary on my part, but the consequence now is that the settlers that I forced to comply with my system are most grateful and sensible of the advantage they could not otherwise have, for a length of time, derived by the accomplishment of good roads; and I have no hesitation in saying that there is not another settlement in North America which can, for its age and extent, exhibit so compact and profitably settled a portion of the new world as the Talbot Settlement."

A UNIQUE REGISTRY OFFICE.

If Colonel Talbot had a way of his own in settling his land his manner of registering it was still more unique. Upon the wall of the room used for an office, hung a map with the lots, concessions, and roads marked thereon. When a settler arrived this was taken down, his lot selected, and name entered with lead pencil. Should he sell or become dispossessed of it, the name was erased and the new one entered. The Colonel appeared as judge, jury, lawyer and registrar in one which certainly would be less expensive than the present system.

It was not until the 21st of May, 1803, that he arrived by boat from Long

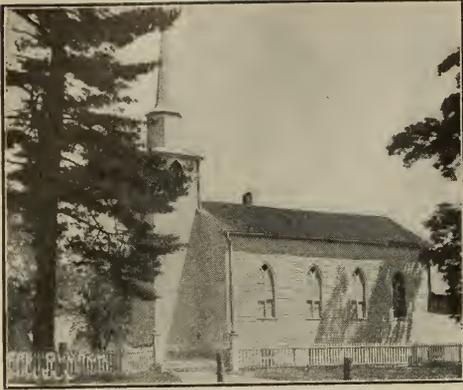
Point with a few menservants to make his home on the very spot so much admired ten years before. A log house was built on the brow of the hill overlooking the lake and here with a block of wood for a table and boughs for a bed, his backwoods life began. He cooked the meals for his men, ground out the flour by means of a hollow stump and a stone, mended the boots and churned the butter. The one-roomed hut was soon exchanged for a more commodious one, "his castle de Malahide" which was a long, low range of buildings built of logs containing three rooms, store room, dining room, also used as office and reception room, and kitchen.

LONDON AND PORT STANLEY GRAVEL ROAD.

For five years the Colonel and his men toiled alone exploring the country, making friends with the Indians and getting ready for "the hum of voices yet to come." The only one known to have taken up a homestead during that time was George Crane, a discharged soldier who came with him, stayed in his employ for three years, and then settled about four miles distant. In 1804 John Bostwick surveyed and blazed a trail for a road which is now part of the famous Talbot street, and took up two lots at the mouth of Kettle Creek, now



The old registry and post-office built by Col. Burwell, the first brick building in the Talbot settlement.



The oldest church in constant use in the Talbot settlement. Built in 1823.

Port Stanley. He married a daughter of Col. Joseph Ryerson, of Long Point in 1808, and his family afterwards became the first residents of Port Stanley. Colonel John Bostwick distinguished himself in the war of 1812, and was a man of high character. In 1822 he built a warehouse and dealt in grain. He also gave the land in 1840 to build Christ church, the pulpit being supplied at first by St. Thomas Church rector, Rev. M. Burnham, a son-in-law of Col. Bostwick. The London and Port Stanley gravel road was laid out by him starting at St. Thomas in 1823. This road was built on an old Indian trail from the mouth of the creek.

The progress of the settlement was very slow for in 1809 twelve families only are recorded. In that year John Pearce, a native of Rhode Island, Col. Patterson, Mrs. Story and son Walter, natives of Ireland, came together by way of Pennsylvania. Mr. Ermatinger says, "These early settlers are among the best who have ever entered the settlement." The story of their journey reads like a romance and is told by a great grandson, Walter Pearce. "The three families and a hired man, thirteen souls in all started from Erie, Pa., and rowed in a large open boat, around the eastern end of Lake Erie, keeping near the shore. But Walter Story walked around by land alone and drove the cattle. They were a

month on the voyage before they arrived at Port Talbot."

A STIFF PRESBYTERIAN.

About this time John Barber and James Watson also from Pennsylvania, settled in Southwold, North-east of Port Talbot. It seems John Barber was a stiff Presbyterian, who kept the Sabbath from sunset on Saturday to sunrise on Monday. Whilst doing his settlement duties he was in the habit of returning to Port Talbot on Saturday afternoon to get his food ready for the coming week. One night he failed to appear. The Colonel becoming alarmed walked to his clearing carrying some provisions. John, who was reading his Bible, said he had worked too late, so could not break the Sabbath by walking over. It need not be told the scolding he received.

James Watson, whose farm is now called Watson's Corners, gave an acre of land in 1816, on which the first school house was built in the settlement. It was made of logs, and was twenty by eighteen feet. The first teacher was Wm. Hannah, and the trustees, John Barber, James Watson and Colonel Burwell. In 1820 this building was destroyed by fire. A frame building took its place which in turn gave place to the present brick structure. Crowell Wilson, afterwards M.P.P., taught here four years. Being an excellent Latin scholar, he taught some of the boys this language at noon, receiving one hundred acres of land extra for this work.



Remains of two rows of earthworks on an Indian fort three miles from Port Talbot, on the Henderson farm. Quite large trees have since grown on the mounds.



Modern science makes a big change in the look of the country. This is Lyndhurst Bridge, St. Thomas, being the longest cement span in Canada.

Colonel Mahlon Burwell was a noted and conspicuous figure in political and military affairs for years. He came from New Jersey and being a surveyor, was employed in laying out the townships and the site of London. For his services large tracts of land were allotted to him. In 1811 appointed Registrar of Middlesex, Elgin being then a port, he built the first registry and post office of red brick on his lot on the town line between Southwold and Dunwich, about three miles from Port Talbot. The walls are still standing in Burwell Park.

MORAVIAN TOWN DEVASTATION.

After the ill-fated engagement at Moravian town the United States soldiers over-ran this part of the province committing many depredations as shown by a petition presented by Colonel Talbot to the Loyal and Patriotic Society, asking for assistance. The names of fifty families are given as losing their all. The grist and saw mills erected on the creek by the Colonel, were completely destroyed, causing great inconvenience as the nearest one was 60 miles away. The irons of this mill were afterwards taken to Alaboro and used there by Peter McKellar at Sixteenth Creek, being 16 miles from Port Talbot. Colonel Talbot narrowly

escaped death as the following instance by Captain Patterson shows:

“On the approach of the marauders they both agreed it was in vain to resist. The first who entered the premises was an Indian, and the following colloquy took place between him and the Captain:—‘You one officer?’ ‘Yes.’



On the beach of Lake Erie, just below the Talbot house.

'What officer?' 'Oh! big officer,— Captain.' Others came rushing up to the house when they saw Colonel Talbot walking off. 'Who that yonder?' said the Indian. 'He big officer, too?' 'No,' said Patterson. 'He is only the man that tends the sheep.' (which statement was true in part). At the same moment two Indians levelled their rifles at him, when the other called not to fire on the poor old man that kept the sheep and they dropped their rifles. But seeing the Colonel walking off at a brisk step, they were not satisfied and raised their rifles again but the Colonel in the meantime was lost to sight in the ravine."

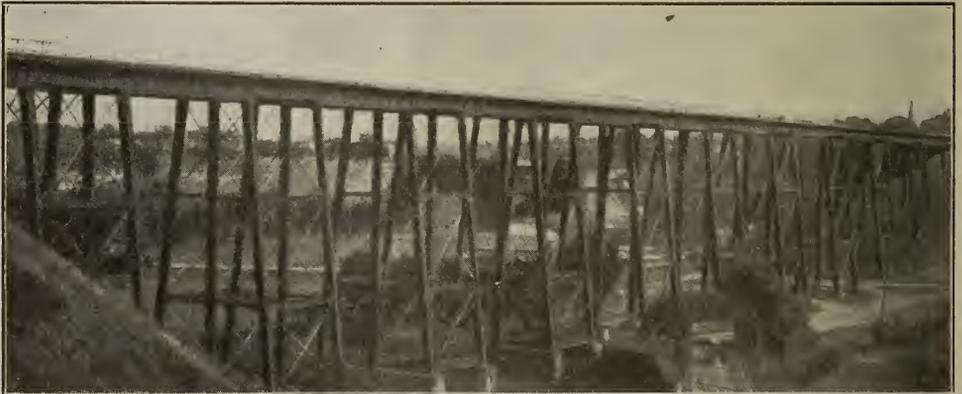
The house was rifled and fired but was extinguished by Captain Patterson. The cattle were all driven off. Proceeding along Talbot street leaving desolation in their wake they encamped for the night on Daniel Rapelje's new farm (now the west end of St. Thomas).

The women were equally brave for they cut their grain, sometimes having only a knife to do it with, ground their flour in a handmill if one was owned within reaching distance and cared for the stock, being obliged to defend them from the wolves. It is no wonder with

such mothers that the Talbot Settlement in spite of reverses grew and prospered.

In 1817 a movement was set on foot by Dr. Rolph to hold a Talbot Anniversary on the 21st of May to commemorate the landing. The first one was held at Dr. Lee's hotel in Yarmouth, near St. Thomas, attended by seventy-five persons. After this it became an annual event, and was celebrated for twenty years with appropriate festivities. A dinner and speeches and toasts at which Colonel Talbot replied always ending with "God bless you all." After the dinner the ball commenced led by the Honorable Founder of the Settlement accompanied by the prettiest lady there, even his advancing years proving no hindrance to the joyful occasion.

Mrs. Jameson, the gifted writer, visited the Talbot Settlement in 1837, where she spent a week with Colonel Talbot, she described the farm of 600 acres, the orchard of sixteen acres and its roses. In conversation she questioned him about his life work, when he made the oft-quoted remark, "I have accomplished what I resolved upon. My work is done. But not for the universe would I again go through the horrors of forming this settlement. But do not imagine I repent it. I like my retirement."

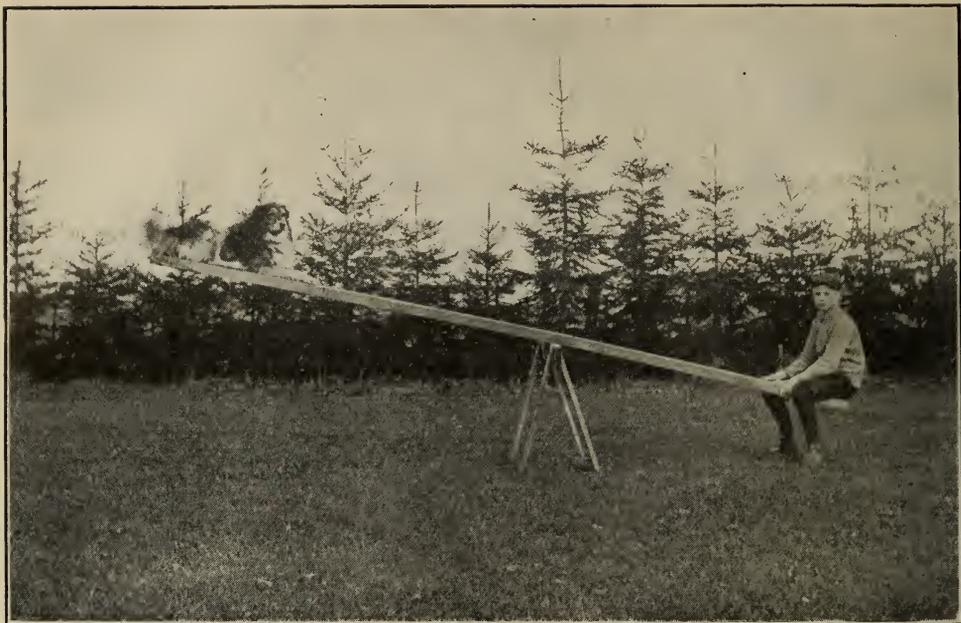


Another big change in the look of the valley since Col. Talbot landed there—the M.C.R. Railway Bridge. This view shows the corner where the first four settlers located in St. Thomas.

AGRICULTURE AND HORTICULTURE

Note.—This is an examination paper as prescribed for the examinations of students taking the agricultural course at Guelph. The farmer who reads this might try his hand at answering the questions. He will find in many cases that it is a good deal easier to do things than it is to tell how to do them, and an attempt of this kind might disabuse the mind of some farmer who apparently has no use for book learning, to give him more respect for that fine class of men who are writing to dignify the profession of agriculture. The greatest drawback of the farm life to-day is the man who knows it all.—Editor.

1. *On Farm Animals*—Sketch a half of beef, marking the butcher's cuts, OR, Describe a typical dairy cow.
2. *On Dairying*—The O. A. C. is to have new dairy stables: how will you expect them to be planned, equipped and finished?
3. *On Poultry*—Point out the structural features of the 100-fowl hen-house advocated by the Poultry Department.
4. *On Physics*—The site on which your school garden is to be made is heavy clay. Explain how you will try to work it.
5. *On Bacteriology*—How do bacteria act beneficially (a) in soil, (b) in milk, (c) in animals?
6. *On Agronomy*—Outline a schedule for scoring a standing field crop.
7. *On Field Crops*—Explain the process of plant improvement by selection by sketching the history of O. A. C. No. 21 Barley, or O. A. C. No. 72 Oats.
8. *On Weeds*—A farmer's field is infested with mustard or couch grass or perennial sow thistle. Outline a plan for eradicating any one of them.
9. *On Botany*—Describe a typical grass flower, OR, Outline the life history of wheat rust.
10. *On Plant Propagation*—Explain the method employed by nurserymen in producing an apple tree OR a peach tree.
11. *On Vegetable Gardening*—Explain structure and use of cold frame, OR, Tell how to prepare a hot bed.
12. *On Orcharding*—What are the requisites for a proper site for an apple orchard?
13. *On Chemistry*—Name the common artificial fertilizers (giving formulæ if possible) and describe a test for any one of them.
14. *On Entomology*—Name the common insect pests of the apple and describe one of them.



THE SHIFTING OF POPULATION

By Augustus Bridle

Note.—This article by Mr. Bridle will be found to be interesting reading to those who do not travel enough to realize what a big shuffle is being made in population and how fast new settlements of Canada are being turned into populous neighborhoods. The Yankee is coming across the border. He is not only invading the homestead lands, but is even coming into the older parts of Canada and buying up the farms, often for prices less than the cost of the improvements before the spiritless owners of these rich Eastern soils awaken to the possibilities that are in them. The Corn Show at Essex in February will be a success if it turns the attention of our farmers to the value of our farms.—Editor.

WHEN a Yankee becomes immigration agent for Canada—well at any rate it's a new role, and one very unpopular with public opinion t'other side of the line. Even the efforts of our diligent and enthusiastic Canadian officials to deplete the farm lands of the western States have not been appreciated by American editors and politicians. The fact that we have already more than half a million Americans in

the West seems to irritate these political economists. That in the words of the old Salvation Army song, "There's room for millions more," makes them suspicious of our real loyalty to the interests of the United States.

We were not always so generous providing homes for people. They remember when last generation we had about six million people, being one to about every twenty-five square miles of

territory; yet we sent hundreds of thousands across the line, into New England, to Chicago, New York, Boston, Buffalo, Cleveland, Detroit and San Francisco. At that time the United States were kind enough to take care of our surplus population. We were over-populated. They knew it. With rather less territory, they had more than ten times as many people—yet they had room for millions more. We sent some of the millions along.

According to the best reports these Canadians we shipped out to Uncle Sam had no capital—in the shape of money, goods and chattels. They went out to make money, which was very scarce in Canada. In those days we had but one little gold-mine, down around Madoc; no silver mines at all; apparently no iron and copper and nickel; only a few million acres of land fit for anything but pastures or moose runs; plenty of forest but no market for timber; only two cities and both asleep; Winnipeg a mediaeval fur post, Vancouver a place for ships that could get no further into a country that seemed to have no trade, Toronto a college town, Montreal with about two hundred thousand French or less, a few thousand Irish and very few English, and Quebec merely a remnant of war.

CANADA A GOOD LAND TO LEAVE.

In fact Canada was a first-class land to leave, and the average young man "with any sand in his craw" left it.

So far as we can remember those days there was no howl in the United States about young Canadians stealing jobs from young Americans. There seemed to be room in Chicago and New York for all we had a mind to send—of the kind. And most of them were young men from high school, business college and university, who had spent what little money they had been able to rake up in paying for what education they had.

Ever since the hard times that succeeded the World's Fair, the big population-octopus across the line seems to have been tolerably glad to have and

to hold these many thousands of capable Canadians. It didn't really matter that a large percentage of them never became American citizens, renouncing allegiance to Great Britain. They were good producers, good consumers, good boosters—and a great deal more efficient to the United States than the millions of polyglots that went in from Europe. They had the best hard-knocks' training that a new world could give. They knew the value of hard labor and plenty of it. In fact they had a sort of capital to invest in the United States better than money, goods and chattels. They had brains and diligence and love of labor.

And these Canadians have helped to make the United States. They have helped to build up industries, to extend railroads, to man colleges, to operate factories, to manage businesses, to solve political problems, to get out newspapers and to write for magazines.

EACH YANKEE BRINGS \$1,000.

The half million or more of Americans that have drifted across from the western States into the wheat lands of Canada are said to bring an average of a thousand dollars each of real capital. At least that is the average for the last couple of years, though the first-comers brought little but a wagon-load and a hope for the future.

According to United States methods of arithmetic a yearly investment of \$50,000,000 American capital in Can-



Bright Canadian girls on sleek Indian ponies enjoying life west of Edmonton.



Farmers from the South reaping bumper oat crops in Agricola settlement near Fort Saskatchewan, Northern Alberta, which 25 years ago was looked upon as beyond the bounds of civilization.

ada, coupled with the extra investment of 50,000 lives—is rather too generous on the part of the United States. Uncle Sam has no objections to investing two or three hundred millions in Canadian factories, if Canadians will be so selfish as to keep tariffs up and American goods out. But he hates like sin to lose population along with the money; because the population has a habit of never coming back—whereas dividends cross the line without duty or inspection by the immigration authorities.

Uncle Sam has a notion that our absorption of his people along with their goods and chattels is a poor pay-back for his kindness in accepting our surplus population that we had no work for a few years ago.

But the movement still goes on. Canadian governments and railroads are looking after that.

Now the latest phase of the movement is—that down in Indiana the Yankee has himself turned immigration agent for Canada. During the past year or two thousands upon thousands of acres of corn lands in the counties between Lake Huron and Lake Erie have been bought by a syndicate from Ontario farmers. The land is being resold to farmers from Indiana. The syndicate have an office in Detroit. They have agents in the counties. The lowlands of Essex, Kent and Lambton have been spied out. The corn-cribs have been inspected. The corn fields,

this year ten to twelve feet high with white and yellow Dent corn, have been sized up.

ESSEX CORN LANDS GOOD.

The syndicate say that these corn lands are as good for corn as the land in Indiana that sells for two hundred dollars an acre. The price paid for the Canadian land varies from fifty to seventy-five dollars an acre. The syndicate tile the land. In those lowlands tiling increases yield about twenty-five per cent. The cost of tiling is about ten or twelve dollars an acre; at least that's all it costs the syndicate who put their tiles down every eight rods which is reckoned to be about half-tiling. But it will do for the present. The Indiana farmer who is crowded out at home can finish the job.

Meanwhile the Indiana farmer pays from a hundred to a hundred and twenty-five dollars an acre for the land. He brings up his family and his goods and chattels. The Ontario farmer moves out. He and his father before him chopped the trees and cleared the land and dug the ditches. But he has no objections to letting the Yankee have it. Sentiment he may have had for the land that his fathers made; just as the Englishman has for the land where the bones of his ancestors lie buried. But modern betterment and the march of civilization on the farm has become a bigger economic fact than

sentiment. The son of the man who chopped the trees in lower Ontario sells out to the grandsons of men who cleaned up the scrub oaks of Indiana.

THE BUMP OF LOCALITY.

The shifting of population in new Canada may be a problem: in older Canada it is something of a paradox. We have long ago forgotten how the Indian felt when his hunting-grounds were camped upon by French and English; when he saw the bush cut down and logged up and burned, that the white man might grow crops and make roads and build towns. Yet the old sentiment once in a while re-emerges, and we discover that after all our civilized development we still have about us lingering traces of the savage who never dreamed of a railway, and whose bump of locality was so strong that he never got far away from the voice of one river.

The double shuffle of population is particularly felt in the English-speaking provinces of older Canada. Quebec has little of which to complain. True, that years ago many thousands of French-Canadians migrated to New England; but the cause was simple—too many folk, too little land and scarce any wages at all. The places left by these Frenchmen, who with their descendants work in the factories of New England, were never filled by any but their own people. Quebec is still French. And outside of the big centres of trade and industry, Quebec will probably never be anything else.

Not so in Nova Scotia and New Brunswick, where already thousands of young men and women have gone to the Western wheat lands, and whose places it is necessary to fill with fresh immigrants from the British Isles. The recent effort of New Brunswick through the Farm Lands Act to people its vacant lands illustrates how keenly the eastern provinces have felt the competition of the prairie.

THE DRAIN FROM NOVA SCOTIA.

So in Nova Scotia. Newspapers have wailed—largely in vain. So fair was

the land slowly being drained of its increase of people by migration to cheap land and free land in the West, that it began to feel to many an Easterner like a repetition of Goldsmith's "Deserted Village." What was the remedy? Every year thousands of young men trekked West to help harvest the wheat. Every year hundreds failed to use their return tickets. The wheat-fields had got them. They homesteaded or bought cheap farms or drove stakes in the towns where work was plentiful and wages high. Immigrants that came in by the first liners of spring before the St. Lawrence route was clear, saw the lovely land that to so many looked for all the world like England or Scotland over again. But they passed on to the prairie. Perhaps if the Government could induce the steamship companies to land immigrants at Vancouver, they would keep the trail till they got to the valleys of Nova Scotia and New Brunswick. For it's the way of population, once it sets out, to move as far as possible, as long as the price of moving is low; especially if the tickets read right through from Liverpool or Bristol or Southampton to some place on the fabulous prairie.

How has it been in Ontario? Similar but not the same. Here again thousands have gone west. That movement began as soon as the C. P. R. was through. It died away and revived again. None too soon perhaps in many cases. The families were bigger than the farms. Twenty or thirty years ago a fifty-acre farm supplied labor and food and clothes to a family. But their wants were few. Now twice the land will scarce do for half the family. The modern Ontario farmer is a bigger farmer. He needs more land. He is able to work more land. Machinery has multiplied his powers along with the cost of living. To make a profit on the land commensurate with what the land is worth the farmer must spend more. His standard of living is higher. Less than thirty years ago Goldwin Smith in his book "Canada and the Canadian Question"—as if one ques-

tion was all Canada had and one man might settle it!—defined the Canadian farmer's economics by stating that he sold all of his produce that was fit to sell and consumed the rest. Which was somewhat true, as it has been of many a primitive people forced to wrest a living from small plots of land in the teeth of the very devil.

The farmer of this century has no such economics. He is sure of a market for all he produces. He is equally sure that he needs to consume the best of what he can raise; that he must spend more on what once would have been called luxuries than he then spent upon the necessities of life.

ONTARIO FARMS APPRECIATING.

So the increase in the cost of living has brought about a need for more land to make it possible to live at a fair profit on the investment. When the westward trek first began to deplete the

farms of Ontario about the time of the Northwest Rebellion, an average farm in Ontario was worth less than forty dollars an acre. To-day the same land is worth from eighty to a hundred dollars an acre. Why? Because it produces more; because modern methods of farming have reduced the waste of nature and increased the fertility of the soil. More—because the general prosperity of the country has called into being a bigger home market right at the farmer's door. The urban, mainly consuming population of Ontario has much more than doubled in twenty years. The amount of produce consumed has increased faster than the urban population. The standard of living has been raised in the town even more than in the country. Prices of farm commodities have gone up. Railways and trolley lines and better roads have multiplied the ease of transportation. A hundred-acre farm within ten



Packing apples on the old Home Farm in Elgin County, Ontario.



Essex corn lands are good, but this is not Essex. It is a corn field near Fort Saskatchewan on the 12th of September, 1912. The corn measured over $8\frac{1}{2}$ feet, and justifies the slogan of the Corn Growers in extending the corn line Northward.

miles of any considerable town or city to-day produces much more than twice the value of what it did in the days of few factories and low prices and small wages.

At the same time to bring about an increase of production the farmer has been compelled to invest more in his land. He has a better house and bigger barns; more horses at three times the price they used to be; more cattle and hogs and sheep—all at an increased value; more machinery—in many cases costing as much to buy as the whole farm was worth when father was a middle-aged man. He has wire fences that cost about four hundred dollars a mile for the raw material. He has tile drains that cost at least twenty dollars an acre. He has fruit trees that have cost large money to improve and to preserve. *He has better roads, better schools, more expensive teachers, better churches with preachers whose salaries have also increased—at least a good-*

sized fraction of the increase in the cost of living. Along the road are the poles and wires of rural telephones connecting with every farmhouse whose owner is willing to pay the annual rental for the same. Rural delivery of mails has put him on a near level with the townsman. Motor-cars call for his cream and in many cases delivers his goods. He is able to market his wheat and his hogs and his fruit at the station three miles away, whereas once he had to drive twenty miles to the county town.

In short life on the Ontario farm has become so much revolutionized that it not only costs more but is worth more to live than it used to be in the days of the saw-mill and the logging-bee. The value of living is reflected in the price of the land.

The one offset to this increase of value in the land has been and still is the scarcity of help. Machinery has increased the efficiency of men and horses. But it has not compensated for

the disappearance of that useful and admirable type of citizen once known as the hired man. There is now no Ontario hired man in the sense that there used to be. He is either the owner of a farm or a tenant of one; or he has gone west along with the immigrant and become a homesteader. His place is precariously taken by the newcomer; in many cases by the English immigrant.

But the supply is less than the demand. The farmer is neither willing nor able to pay the hired man as much wages as he can get in town; nor to compensate him for staying off the land as a freeholder. The difficulty of either getting or keeping a man is the bugbear of many a farmer in Ontario. One man makes all the difference between getting a crop harvested on time and leaving it out till it throws all the farm operations behind. In many cases

it makes the difference between getting it in decently at all and waiting until the farmer is able to borrow help from a neighbor who probably needs to borrow from somebody else.

The advent of the immigrant and uncertain hired man who may be here to-day and ten miles away to-morrow is one phase of the paradox of shifting population in Ontario. The farmer's son and the once bushwhacker who became a regular hired man has been replaced by the itinerant.

These changes are unsettling. They are part of a silent revolution in rural life that has been more radical in Canada than in the United States, because more sudden. But they are part of the making of a bigger Canada which as it began on the farm must look mainly to the farm for the prosperity of the future.

THE MEMORY

Oh, the old sea-wall on the coast of Clare,
 Against a sunlit sky,
 The hush of the keen, salt-scented air,
 And the white clouds sailing high.

A bird-note soaring in reckless joy,
 And clear, from a tossing boat,
 The call of a gray-eyed sailor-boy
 From a brave young Irish throat.

Out from the past it comes back to me,
 Soft through a mist of tears;
 I hear the croon of the treacherous sea
 Across the lonely years.

Never again were skies so blue
 Above the water's gleam,
 For an Irish heart is ever true,
 And only once comes the dream!

—By Faith Baldwin in *Munseys*.

THE SMOKE BELLEW SERIES

WONDER OF WOMEN--Part II

Note.—Farmer's Magazine has run the whole series of Smoke Bellew, by Jack London, and has been gratified to learn of the way these have been received by our readers. Many farmers have told us that this series has been one of the best features of the magazine, and they have enjoyed every issue. This series will be concluded in our February number. The whole series is put out in book form. Other stories are being arranged for which assure to our readers the highest class literature that any farm paper has ever attempted in Canada.—Editor.

By Jack London

VIII.

SMOKE'S new situation at Snass's fire was embarrassing. He saw more of Labiskwee than ever. In its sweetness and innocence, the frankness of her love was terrible. Her glances were love glances; every look was a caress. A score of times he nerved himself to tell her of Joy Gastell, and a score of times he discovered that he was a coward. The damnable part of it was that Labiskwee was so delightful. She was good to look upon. Despite the hurt to his self-esteem of every moment spent with her, he pleased in every such moment. For the first time in his life he was really learning woman, and so clear was Labiskwee's soul, so appalling in its innocence and ignorance, that he could not misread a line of it. All the pristine goodness of her sex was in her, uncluttered by the conventionality of knowledge or the deceit of self-protection. In memory he reread his Schopenhauer and knew beyond all cavil that the sad philosopher was wrong. To know woman, as smoke came to know Labiskwee, was to know that all woman-haters were sick men.

Labiskwee was wonderful, and yet, beside her face in the flesh burned the

vision of the face of Joy Gastell. Joy had control, restraint, all the feminine inhibitions of civilization, yet, by the trick of his fancy and the living preaching of the woman before him, Joy Gastell was stripped to a goodness at par with Labiskwee's. The one but appreciated the other, and all women of all the world appreciated by what Smoke saw at Snass's fire in the snow-land in the soul of Labiskwee.

And Smoke learned about himself. He remembered back to all he knew of Joy Gastell, and he knew that he loved her. Yet he delighted in Labiskwee. And what was this feeling of delight but love? He could demean it by no less a name. Love it was. Love it must be. And he was shocked to the roots of his soul by the discovery of this polygamous strain in his nature. He had heard it argued, in the San Francisco studios, that it was possible for a man to love two women, or even three women, at a time. But he had not believed it. How could he believe it when he had not had the experience? Now it was different. He did truly love two women, and though most of the time he was convinced he loved Joy Gastell more, there were other moments when

he felt with equal certainty that he loved Labiskwee more.

"There must be many women in the world," she said one day. "And women like men. Many women must have liked you. Tell me."

He did not reply.

"Tell me," she insisted.

"I have never married," he evaded.

"And there is no one else?—no other Iseult out there beyond the mountains?"

Then it was that Smoke knew himself a coward. He lied. Reluctantly he did it, but he lied. He shook his head with a slow indulgent smile, and in his face was more of fondness than he dreamed as he noted Labiskwee's swift joy-transfiguration.

He excused himself to himself. His reasoning was jesuitical beyond dispute, and yet he was not Spartan enough to strike this child-woman a quivering heart-stroke.

Snass, too, was a perturbing factor in the problem. Little escaped his keen black eyes, and he spoke significantly.

"No man cares to see his daughter married," he said to Smoke. "At least, no man of imagination. It hurts. The thought of it hurts, I tell you. Just the same, in the natural order of life, Margaret must marry some time."

A pause fell, and Smoke caught himself wondering for the thousandth time what Snass's history must be.

"I am a harsh, cruel man," Snass went on. "Yet the law is the law, and I am just. Nay, here with this primitive people, I am the law and the justice. Beyond my will no man goes. Also, I am a father, and all my days I have been cursed with imagination."

Whither his monologue tended, Smoke did not learn, for it was interrupted by a burst of chiding and silvery laughter from Labiskwee's tent, where she played with a new-caught wolf-cub. A spasm of pain twitched Snass's face.

"I can stand it," he muttered grimly. "Labiskwee must be married, and it is my fortune, and her's, that you are here. I had little hopes of Four

Eyes. McCan was so hopeless I turned him over to a squaw who had lighted her fire twenty seasons. If it hadn't been you, it would have been an Indian. Libash might have become the father of my grandchildren."

And then Labiskwee came from her tent to the fire, the wolf-cub in her arms, drawn as by a magnet, to gaze upon the man, in her eyes the love that art had never taught to hide.

IX.

"Listen to me," said McCan. "The spring thaw is here, an' the crust is comin' on the snow. It's the time to travel, exceptin' for the spring blizzards in the mountains. I know them. I would run with no less a man than you."

"But you can't run," Smoke contradicted. "You can keep up with no man. Your backbone is limber as thawed marrow. If I run, I run alone. The world fades, and perhaps I shall never run. Caribou meat is very good, and soon will come summer and the salmon."

Said Snass: "Your partner is dead. My hunters did not kill him. They found the body frozen in the first of the spring storms in the mountains. No man can escape. When shall we celebrate your marriage?"

And Labiskwee: "I watch you. There is trouble in your eyes, in your face. Oh, I do know all your face. There is a little scar on your neck, just under the ear. When you are happy, the corners of your mouth turn up. When you think sad thoughts they turn down. When you smile there are three and four wrinkles at the corner of your eyes. When you laugh there are six. Sometimes I have almost counted seven. But I cannot count them now. I have never read books. I do not know how to read. But Four Eyes taught me much. My grammar is good. He taught me. And in his own eyes I have seen the trouble of the hunger for the world. He was often hungry for the world, yet here was good meat, and fish in plenty, and the

berries and the roots, and often flour that came back for the furs through the Porcupines and the Lusk-was. Yet was he hungry for the world. Is the world so good that you, too, are hungry for it? Four Eyes had nothing. But you have me." She sighed and shook her head. "Four Eyes died still hungry for the world. And if you lived here always would you, too, die hungry for the world? I am afraid I do not know the world. Do you want to run away to the world?"

Smoke could not speak, but by his mouth-corner lines was she convinced.

Minutes of silence passed, in which she visibly struggled, while Smoke cursed himself for the unguessed weakness that enabled him to speak the truth about his hunger for the world, while it kept his lips tight on the truth of the existence of the other woman.

Again Labiskwee sighed.

"Very well. I love you more than I fear my father's anger, and he is more terrible in anger than a mountain storm. You told me what love is. This is the test of love. I shall help you to run back to the world."

X.

Smoke awakened softly and without movement. Warm small fingers touched his cheek and slid gently to a pressure on his lips. For, with the chill and frost clinging in it, next tingled his skin, and the one word, "Come," was breathed in his ear. He sat up carefully and listened. The hundreds of wolf-dogs in the camp had lifted their nocturnal song, but under the volume of it, close at hand, he could distinguish the light regular breathing of Snass.

Labiskwee tugged gently at Smoke's sleeve, and he knew she wished him to follow. He took his moccasins and German socks in his hand and crept out into the snow in his sleeping moccasins. Beyond the glow from the dying embers of the fire, she indicated to him to put on his outer foot-gear, and while he obeyed, she went back under the fly where Snass slept.

Feeling the hands of his watch Smoke found it was one in the morning. Quite warm it was, he decided, not more than ten below zero. Labiskwee rejoined him and led him on through the dark runways of the sleeping camp. Walk lightly as they could the frost crunched crisply under their moccasins, but the sound was drowned by the clamor of the dogs, too deep in their howling to snarl at the man and woman who passed.

"Now we can talk," she said, when the last fire had been left half a mile behind.

In the starlight, facing him, Smoke noted for the first time that her arms were burdened, and, on feeling, discovered she carried his snowshoes, a rifle, two belts of ammunition, and his sleeping robes.

"I have everything fixed," she said, with a happy little laugh. "I have been two days making the cache. There is meat, even flour, matches, and skis, which go best on the hard crust and, when they break through, the webs will hold up longer. Oh, I do know snow-travel, and we shall go fast, my lover."

Smoke checked his speech. That she had been arranging his escape was surprise enough, but that she had planned to go with him was more than he was prepared for. Unable to think immediate action, he gently, one by one, took her burdens from her. He put his arm around her and pressed her close, and still he could not think what to do.

"God is good," she whispered. "He sent me a lover."

Yet Smoke was brave enough not to suggest his going alone. And ere he spoke he saw all his memory of the bright world and the sun-lands reel and fade.

"We will go back, Labiskwee," he said. "You will be my wife, and we shall live always with the Caribou people."

"No! no!" She shook her head; and her body, in the circle of his arm, resented his proposal. "I know. I have thought much. The hunger for the world would come upon you, and in the

long nights it would devour your heart. Four Eyes died of hunger for the world. So would you die. All men from the world hunger for it. And I will not have you die. We will go on across the snow mountains on the south traverse."

"Dear, listen," he urged. "We must go back."

She pressed her mitten against his lips to prevent further speech.

"You love me. Say that you love me."

"I do love you, Labiskwee. You are my wonderful sweetheart."

Again the mitten was a caressing obstacle to utterance.

"We shall go on to the cache," she said with decision. "It is three miles from here. Come."

He held back, and her pull on his arm could not move him. Almost was he tempted to tell her of the other woman beyond the south traverse.

"It would be a great wrong to you to go back," she said. "I . . . I am only a wild girl, and I am afraid of the world; but I am more afraid for you. You see, it is as you told me. I love you more than anybody else in the world. I love you more than myself. The Indian language is not a good language. The English language is not a good language. The thoughts in my heart for you, as bright and as many as the stars—there is no language for them. How can I tell you them? They are there—see."

As she spoke she slipped the mitten from his hand and thrust the hand inside the warmth of her parka until it rested against her heart. Tightly and steadily she pressed his hand in its position. And in the long silence he felt the beat, beat of her heart, and knew that every beat of it was love. And then, slowly, almost imperceptibly, still holding his hand, her body began to incline away from his and toward the direction of the cache. Nor could he resist. It was as if he were drawn by her heart itself that so nearly lay in the hollow of his hand.

XI.

So firm was the crust, frozen during the night after the previous day's surface-thaw, that they slid along rapidly on their skis.

"Just here, in the trees, is the cache," Labiskwee told Smoke.

The next moment she caught his arm with a startle of surprise. The flames of a small fire were dancing merrily, and crouched by the fire was McCan. Labiskwee muttered something in Indian, and so lash-like was the sound that Smoke remembered she had been called "cheetah" by Four Eyes.

"I was minded you'd run without me," McCan explained when they came up, his small peering eyes glimmering with cunning. "So I kept an eye on the girl, an' when I seen her caching skis an' grub, I was on. I've brought my own skis an' webs an' grub. The fire? Sure an' it was no danger. The camp's asleep an' snorin' the waitin' was cold. Will we be startin' now?"

Labiskwee looked swift consternation at Smoke, as swiftly achieved a judgment on the matter, and spoke. And in the speaking she showed, child-woman though she was in love, the quick decisiveness of one who in other affairs of life would be no clinging vine.

"McCan, you are a dog," she hissed, and her eyes were savage with anger. "I know it is in your heart to raise the camp if we don't take you. Very well. We must take you. But you know my father. I am like my father. You will do your share of the work. You will obey. And if you play one dirty trick, it would be better for you if you had never run."

McCan looked up at her, his small pig-eyes hating and cringing, while in her eyes, turned to Smoke, the anger melted into luminous softness.

"Is it right, what I have said?" she queried.

Daylight found them in the belt of foot-hills that lay between the rolling country and the mountains. McCan suggested breakfast, but they held on. Not until the afternoon thaw softened

the crust and prevented travel would they eat.

The foot-hills quickly grew rugged, and the stream, up whose frozen bed they journeyed, began to thread deeper and deeper canyons. The signs of spring were less frequent, though in one canyon they found forming bits of open water, and twice they came upon clumps of dwarf willow upon which were the first hints of swelling buds.

Labiskwee explained to Smoke her knowledge of the country and the way she planned to baffle pursuit. There were but two ways out, one west, the other south. Snass would immediately dispatch parties of young men to guard the two trails. But there was another way south. True, it did no more than penetrate half way into the high mountains, then, twisting to the west and crossing three divides, it joined the regular trail. When the young men found no traces on the regular trail they would turn back in the belief that the escape had been made by the west traverse, never dreaming that the runaways had ventured the harder and longer way around.

Glancing back at McCan, in the rear, Labiskwee spoke in an undertone to Smoke.

"He is eating," she said. "It is not good."

Smoke looked. The Irishman was secretly munching caribou suet from the pocketful he carried.

"No eating between meals, McCan," he commanded. "There's no game in the country ahead, and the grub will have to be whacked in equal rations from the start. The only way you can travel with us is by playing fair."

By one o'clock the crust had thawed so that the skis broke through, and before two o'clock the web-shoes were breaking through. Camp was made and the first meal eaten. Smoke took stock of the food. McCan's supply was a disappointment. So many silver fox-skins had he stuffed in the bottom of the meat-bag that there was little space left for meat.

"Sure an' I didn't know there were

so many," he explained. "I done it in the dark. But they're worth good money. An' with all this ammunition we'll be gettin' game a-plenty."

"The wolves will eat you a-plenty," was Smoke's helpless comment, while Labiskwee's eyes flashed their anger.

Enough food for a month, with careful husbanding and appetites that never blunted their edge, was Smoke's and Labiskwee's judgment. Smoke apportioned the weight and bulk of the packs, yielding in the end to Labiskwee's insistence that she, too, should carry a pack.

Next day the stream shallowed out in a wide mountain valley, and they were already breaking through the crust on the flats when they gained the harder surface of the slope of the divide.

"Ten minutes later and we wouldn't have got across the flats," Smoke said, when they paused for breath on the bald crest of the summit. "We must be a thousand feet higher here."

But Labiskwee, without speaking, pointed down to an open flat among the trees. In the midst of it, scattered abreast, were five dark specs that scarcely moved.

"The young men," said Labiskwee.

"They are wallowing to their hips," Smoke said. "They will never gain the hard footing this day. We have hours the start of them. Come on, McCan. Buck up. We don't eat till we can't travel."

McCan groaned, but there was no caribou suet in his pocket, and he doggedly brought up in the rear.

In the higher valley in which they now found themselves, the crust did not break till three in the afternoon, at which time they managed to gain the shadow of mountain where the crust was already freezing again. Only once did they pause to get out McCan's confiscated suet, which they ate as they walked. The meat was solidly frozen, and could only be eaten after thawing over a fire. But the suet crumbled in their mouths and eased the palpitating faintness in their stomachs.

Black darkness, with an overcast sky, came on after a long twilight at nine o'clock, when they made camp in a clump of dwarf spruce. McCan was whining and helpless. The day's march had been exhausting, but in addition, despite his nine years' experience in the Arctic, he had been eating snow and was in agony with his parched and burning mouth. He crouched by the fire and groaned, while they made the camp.

Labiskwee was tireless, and Smoke could not but marvel at the life in her body at the endurance of mind and muscle. Nor was her cheerfulness forced. She had ever a laugh or a smile for him, and her hand lingered in caress whenever it chanced to touch his. Yet, always, when she looked at McCan, her face went hard and pitiless and her eyes flashed frostily.

In the night came wind and snow, and through a day of blizzard they fought their way blindly, missing the turn of the way that led up a small stream and crossed a divide to the west. For two more days they wandered, crossing other and wrong divides, and in those two days they dropped spring behind and climbed up into the abode of winter.

"The young men have lost our trail, an' what's to stop us restin' a day?" McCan begged.

But no rest was accorded. Smoke and Labiskwee knew their danger. They were lost in the high mountains, and they had seen no game nor signs of game. Day after day they struggled on through an iron configuration of landscape that compelled them to labyrinth in canyons and valleys that led rarely to the west. Once in such a canyon, they could only follow it, no matter where it led, for the cold peaks and higher ranges on either side were unscalable and unendurable. The terrible toil and the cold ate up energy, yet they cut down the size of the ration they permitted themselves.

One night Smoke was awakened by a sound of struggling. Distinctly he heard a gasping and strangling from

where McCan slept. Kicking the fire into flame, by its light he saw Labiskwee, her hands at the Irishman's throat and forcing from his mouth a chunk of partly chewed meat. Even as Smoke saw this, her hand went to her hip and flashed aloft with the sheath-knife in it.

"Labiskwee!" Smoke cried, and his voice was peremptory.

The hand hesitated.

"Don't," he said, coming to her side.

She was shaking with anger, but the hand, after hesitating a moment longer, descended reluctantly to the sheath. As if fearing she could not restrain herself, she crossed to the fire and threw on more wood. McCan sat up, whimpering and snarling, between fright and rage spluttering an inarticulate explanation.

"Where did you get it?" Smoke demanded.

"Feel around his body," Labiskwee said.

It was the first word she had spoken, and her voice quivered with the anger she could not suppress.

McCan strove to struggle, but Smoke gripped him cruelly and searched him, from under his armpit, where it had been thawed by the heat of his body, drawing forth a strip of caribou meat. A quick exclamation from Labiskwee drew Smoke's attention. She had sprung to McCan's pack and was opening it. Instead of meat, out poured moss, spruce needles, chips—all the light refuse that had taken the place of the meat and given the pack its due proportion minus its weight.

Again Labiskwee's hand went to her hip, and she flew at the culprit only to be caught in Smoke's arms, where she surrendered herself, sobbing with the futility of her rage.

"Oh, lover, it is not the food," she panted. "It is you, your life. The dog!—he is eating you, he is eating you!"

"We will yet live," Smoke comforted her. "Hereafter he shall carry the flour. He can't eat that raw, and if he does I'll kill him myself, for he will be eating your life as well as mine." He

held her closer. "Sweetheart, killing is men's work. Women do not kill."

"You would not love me if I killed the dog?" she questioned in surprise.

"Not so much," Smoke temporized.

She sighed with resignation.

"Very well," she said. "I shall not kill him."

XII.

The pursuit by the young men was relentless. By miracles of luck, as well as by deduction from the topography of the way the runaways must take, the young men picked up the blizzard-blinded trail and clung to it. When the snow flew, Smoke and Labiskwee took the most improbable courses, turning east when the better way opened south or west, rejecting a low divide to climb a higher. Being lost, it did not matter. Yet they could not throw the young men off. Sometimes they gained days, but always the young men appeared again. After a storm, when all trace was lost, they would cast out like a pack of hounds, and he who caught the later trace made smoke signals to call his comrades on.

Smoke lost count of time, of days and nights and storms and camps. Through a vast mad phantasmagoria of suffering and toil he and Labiskwee struggled on, with McCann somehow stumbling along in the rear, babbling of San Francisco, his everlasting dream. Great peaks, pitiless and serene in the chill blue, towered about them. They fled down black canyons with walls so precipitous that the rock frowned naked, or wallowed across glacial valleys where frozen lakes lay far beneath their feet. And one night, between two storms, a distant volcano glared the sky. They never

saw it again, and wondered whether it had been a dream.

Crusts were covered with yards of new snow, that crusted and were snow-covered again. There were places, in canyon and pocket-drifts, where they crossed snow hundreds of feet deep, and they crossed tiny glaciers, in draughty rifts, wind-scoured and bare of any snow. They crept like silent wraiths across the faces of impending avalanches, or roused from exhausted sleep to the thunder of them. They made fireless camps above timber-line, thawing their meat-rations with the heat of their bodies ere they could eat. And through it all Labiskwee remained Labiskwee. Her cheer never vanished, save when she looked at McCann, and the greatest stupor of fatigue and cold never stilled the eloquence of her love for Smoke.

Like a cat she watched the apportionment of the meager ration, and Smoke could see that she grudged McCann every munch of his jaws. Once, she distributed the ration. The first Smoke knew was a wild harangue of protest from McCann. Not to him alone, but to herself, had she given a smaller portion than to Smoke. After that, Smoke divided the meat himself. Caught in a small avalanche one morning after a night of snow, and swept a hundred yards down the mountain, they emerged half-stifled and unhurt, but McCann emerged without his pack in which was all the flour. A second and larger snow-slide buried it beyond hope of recovery. After that, though the disaster had been through no fault of his, Labiskwee never looked at McCann, and Smoke knew it was because she dared not.

To be Concluded in the February Issue.





A splendid young orchard near Heathcote, Grey County.

APPLES MAKE \$100 LAND

By T. H. Binnie, B.S.A.

The counties of old Ontario are just beginning to awaken in spots to the value there lies in advertising. Only a little while ago Lambton County began to do something to make herself known. The consequence is, as was remarked at a gathering of farmers the other day, that "Lambton is known to everybody." Farmer's Magazine has been trying to bring out these stories of the wealth that is possible in the farms, and in this article by Mr. Binnie a start is made on Grey County. Everybody believes his county is best. The people of Grey think they have possibilities that cannot be beaten. Our advice to every farmer in the county is to "follow the gleam."

"CAN we grow apples here?" If you could have seen the surprised look on the face of the man who said that to me you would think that I had insulted him when I asked him if any apples were grown in his locality. "If you do not think we can, just look at that, and I have sold about 100 barrels just as good."

"That" was a great big spy, of good shape and well colored. It made one wish he could do nothing else but eat

such fruit. His was one of the few good orchards around. By "good" I mean one of the few that had been well cared for. It had been cultivated and fertilized and sprayed. The result was a fair crop of good apples in a year when apples were scarce.

Why were they scarce? Not because of the lack of trees or for the want of a good climate but because the weather, when the trees were in blossom, was wet and the blossoms did not get a chance

to set. It is seldom that this happens in Grey county but this year it did.

In the county of Grey in the province of Ontario there are two valleys and a portion of the land facing to the Georgian Bay that can and do grow as good or better apples than can be grown any other place in Ontario.

This is a big statement to make in the present race for apple production. Perhaps some people have never heard of the county in connection with the fruit industry. That is because the people of that locality who grow the fruit have never advertised the possibilities which are at their doors. They have never advertised their fruit at any of the big shows. There was a movement on foot for the county to advertise itself by placing a good exhibit at the Flower, Fruit and Honey Show at Toronto this year but the county council put their foot down and would not assist the farmers in this. They thought that it would be wasting money. It is to be hoped that they will see clearer after the elections at the first of the year.

Little or nothing has been done for some years in the way of setting out young trees or enlarging the orchards in the county. The majority of the

orchards are old and in bad need of care. By care I mean pruning, spraying and cultivating. The trees are allowed to grow as they like; the grass is allowed to grow underneath them; the insects and diseases play with the trees as they like and then the farmer wonders why he cannot have a good crop of fruit.

Along the southern shore of the Georgian Bay and up the valleys of the Beaver and Big Head Rivers things have taken on a different hue during the past few years. There the farmers depend on the trees for much of their income and the orchards are cared for and attended to as they should be. These sections of Grey are well protected and are well adapted to apple growing. One member of the County Board of Agriculture states that from 25,000 to 50,000 barrels are shipped from his locality every year. This at the price received means from \$25,000 to \$75,000 yearly to the farmers in that settlement alone.

All the while I had been getting this and other information I had been eating that big juicy spy. "Do you not grow a cover crop on the orchard?" I asked. "No," he said, "I do not but I believe it is the correct method. To tell



This is the Kimberley Demonstration Orchard. Pruned and attended well, but rather too far from the Railway.

you the truth," he added, "there are many things that I do not do exactly as I would like to do. Not because I do not care but because fruit growing is only one part of my farm work." This caused me to enquire, "Do you not think it would pay you to let the other parts of the farm work go and spend all your time on the orchard and enlarge it?" "If I thought it would," he said, "I would do so. Although I am not one of these 'high financiers' yet there is nothing done that does not pay me if I know it."

There were two acres of orchard on the farm, and all the trees were apple trees. He said that the rent of the two acres would be about \$5.00; the cost of fertilizer and work would run to about \$80.00; the cost of barrels would be about \$15.00, making a total cost for the year of \$100.00. This year he sold 100 barrels at \$1.25 per barrel, making a gross return of \$125.00. Therefore he had only \$25.00 for his year's banking fund. He says this is the lowest return he has ever had. These figures he gave me out of his head as he was too busy for me to ask him to go to the house to get the right figures from him. I asked him if he thought he would be money in pocket to pack the apples in boxes. "No, it would not. I have not time to take from the other farm work to do the packing properly and if it is not done properly it is better not done at all. I believe it would pay me to do so if I had some place to store the apples till after the rush of the fall work was over. In fact I have been seriously thinking of building such a place and holding the fruit for the late fall and early winter trade. I know I would make money by so doing."

"Look at that farm over there," he said, pointing across to his neighbor's fields. "Two years ago I could have bought that place for \$60 per acre but to-day the owner would not sell for \$100 an acre. Apple growing has taken a boost here and the farmers are all going in for more fruit and better fruit. It pays them well and they are

going after some of the money the city people have to spend."

Rents have also advanced. Farms that used to rent for \$3.00 per acre and less, are now renting for \$5.00 per acre and those who want to rent have to get on the ground early if they are going to get a chance at the place they want.

Now one of the questions which concerns some of the portions of the fruit sections is the lack of a railway. The Canadian Pacific Railway comes into the county at Dundalk and angles through to Owen Sound. The Grand Trunk comes along the shore of the Georgian Bay through Thornbury to Meaford. "Now," said my fruit-growing friend, "if we had a railway to go straight across the county from east to west it would pierce this fruit belt and we could market our fruit in better condition. If you can interest the financiers of Ontario in this project we will stand by them and give them all our trade." This, however, has not prevented the farmers from raising fruit nor has it prevented the rise in land values. These two latter will keep on increasing till the financiers will be glad to spend some of their money in Ontario and develop it instead of Western Canada.

Another member of the County Board of Agriculture asks for a demonstration orchard. This is being remedied. Mr. H. C. Duff, the district representative, has several this year in the county and although the wet weather was against the fruit growers these orchards have more than paid for the work which has been put on them. They have shown the improvement that can really take place in old orchards. "Look at that," said the owner of one of these orchards. "I have never grown fruit like that before. It means that I look after my orchard after this and get all out of it I can." All I can say is this, that the public will suddenly sit up and take notice one of these fine days when Grey county apples are placed on the exhibition stands and for color and flavor will beat all others.

HOME JOY KILLERS

By Dr. Orison Swett Marden

Note.—Dr. Marden, the late Editor of Success Magazine, has already made a name for himself as a writer of inspirational literature. There is no farmer who has made a success of his department but knows the value of being himself enthused with his work, and of keeping those who work for him, whether it be his family or his hired help, thoroughly seized with the joy of doing what they are doing. It is this same principle that makes these articles by Dr. Marden so attractive. Every farmer and lover of the country life will find this article to be worthy a careful perusal. Many are binding their copies of Farmer's Magazine and keeping them for reference, and in a library such an article as this will be found of inestimable benefit, not only for the present, but for future reference.—Editor.

DID you ever come across the hog at home—the man who is so affable, such a genial good fellow in the club downtown and among his men friends and business associates, but who, when in his home, throws off his mask and feels no obligation to restrain himself or to temper his language; the man who finds fault with everything, abuses everybody, criticises everything, who storms about the house like a mad bull when he is out of sorts and things do not please him?

We have all undoubtedly met this man, the good fellow at the club and the hog at home—the man who uses his home for a kicking post.

The hog at home is a very curious animal. I have seen him in the midst of a terrible rage when he seemed to be the plaything of his passion, become as gentle and docile as a lamb in an instant with the ringing of a door-bell and the announcing of company. It would seem as though there must be some magical connection between the door-bell and this man's temper.

When it did not seem possible for him to get control of himself, he did not have the slightest difficulty in calming down in an instant when a caller was announced, thus proving that this matter of self-control was largely one of vanity, self-pride. He would be mortally ashamed to have the caller see

the hog husband that was there when the door-bell rang.

We often see him in the home sitting cross, crabbed, glum, during the entire evening and at meals, without making the slightest effort to be agreeable. At the club or in his business dealings, even if things go wrong, he feels obliged to restrain himself and be decent because he would not have his business friends see him with his mask off. He has too much pride and vanity for that. But when he is at home he thinks he is under no obligation to be agreeable; he thinks he has a perfect right to do just what he feels like doing, and to be just as mean, hateful, and disagreeable as he wants to be. He makes no attempt to restrain or control himself.

Such boorishness and lack of companionableness between husband and wife are among the most common domestic joy killers.

Of course the woman is often at fault, but she is more naturally a home maker at heart than the man. He is more selfish and apt to be indifferent to the home, and he is the one who needs to be roused to the responsibility of making home happy, and marriage full of the mutual joy in giving.

"If there are women who do not, by study and that best companionship which they could offer to their hus-

bands, learn rightly to play the part of helpmeets, there are far more men who, for one selfish reason or another, never give their wives the opportunity," writes Mrs. John Logan.

A woman's thirst for sympathy and close companionship is very difficult for the average man to comprehend. It would be as impossible for a woman to live her normal life under abuse or indifference without sympathetic companionship, as for a rose to develop its normal beauty and fragrance without sunshine. This is often the reason why so many wives seek elsewhere the sympathy which their husbands deny them.

There are men who think that if they do not actually strike their wives, if they provide a house and clothing for them, they ought to be satisfied and happy. But these things will never insure happiness to the kind of a woman you would desire your wife to be, my friend.

It often occurs that a man marries a beautiful, bright, cheerful girl, who is always bubbling over with animal spirits, and in a short time everybody notices a complete change in her character, brought about by the perpetual suppression of her husband, who if not actually brutal, is severe in his criticisms and unreasonable in his demands. The wife is surrounded with this joy killing atmosphere of sharp criticism or severity until she entirely loses her naturalness and spontaneity, and self-expression becomes impossible. The result is an artificial, flavorless character.

Think of the suffering of a wife who feels her spirits gradually drying up, and her buoyancy and youthfulness evaporating; her beauty, her attractiveness gradually fading; in fact her ambition strangled, her whole life being blighted in a cold, loveless environment.

A lady recently told me that not once during several months which she spent at the house of friends did she see the husband display the slightest sign of affection for his wife, although

she is a woman vastly superior to him in every way.

She has dragged out an unloved, miserable existence for more than a quarter of a century with a husband who is cold and absolutely indifferent to her comfort, pleasure, or happiness. Not once in a year does he take her anywhere. He is practically never seen with her away from home. He never thinks she needs an outing, a vacation, or a change. When he travels, he goes alone or in the company of others, never even suggesting that his wife accompany him. This man is not unkind or cruel, he is only indifferent to his wife. He has not a particle of sentiment for her.

To many women indifference is worse than cruelty, if the cruel husband shows at least a little affection now and then. Utter indifference is one of the things that the feminine heart cannot endure without keen suffering.

Indifference and cruelty are evident forms of selfishness, the root of domestic unhappiness. Less evident, perhaps, is that self-love which many men mistake for love of their wives. It is a sort of projection of themselves with which they are in love. They think more of their own comfort, their own well-being, their own ambitions, their own pleasure, than they do of the highest welfare of their wives.

Many such men do not mean to be selfish in their home life, and really believe they are generous, but their minds are so focused upon themselves and their ambition that they can only think of a wife in reference to themselves. Whereas the highest love has the highest welfare of the individual at heart, not its own.

It is fortunate for the world that a woman's love is not so selfish, not so self-centred as a man's. If it were, civilization would go back to barbarism.

When a woman has given up everything for a husband who, before marriage was always bringing her flowers and showing other little evidences of his affection, who was generous and loving

no real importance, get offended with each other, and the husband goes away without his usual morning kiss,— goes down town and is miserable all day long, and the wife stays at home and is miserable all day long; and over what? They forget the time when she was the one ideal of all that was beauteous while pursuing the object of his regard, could become indifferent and cruel after he had secured the prize; but this is true of multitudes of men.

With many men romance ends with marriage, as a hunter's interest dies with the game when he has fired the shot that kills.

If there is any person who needs pity in the world, it is the wife who gives love and makes perpetual sacrifices in return for indifference, neglect, and even cruelty. Is it not a crime for a man to take a beautiful, affectionate buoyant girl from a happy home, after a romantic courtship, and then crush her spirit, and freeze her love by cold, heartless indifference and selfishness; to wreck her happiness? Can any greater disappointment come into a woman's life than to see her dream of love, marriage, and a happy home blighted by cold-hearted, indifferent, cruel neglect?

"Jealousy and suspicion poison the atmosphere of the family. The home joy cannot live where they are entertained. At the outset young people who marry should resolve never to permit the sun to go down on their wrath. Lovers fondly fancy that they will never have a quarrel. However, most husbands and wives occasionally have little differences which need not amount to much if they simply follow one rule; never to go to sleep at night except in friendly harmony. If there has been a disturbance of peace, settle it before bedtime. If either has done or said anything to wound the other, confess and seek forgiveness before the head touches the pillow.

"We take offence too easily. I know cases of husbands and wives—who, in a discussion over a matter of perhaps

and kind, but who afterwards seldom thinks of these little attentions so much appreciated by women, but is often indifferent, cross, and fault-finding, she cannot help feeling unhappy at the contrast.

It does not seem possible that a man who could be so affectionate, kind, and tiful; they forget the time when he was the one hero picked out of all the sons of earth. For a contemptible, petty, little nothing they think unkindly and harshly of each other. Is a little trifle like that worth purchasing at the price of the happiness of a day? How petty it is! If people would only stop and think, they would be ashamed of themselves, and ask each other's pardon, and devote themselves to creating sunshine and peace instead of getting offended over things that are of no earthly account."

"If folks could have their funerals when they are alive and well and struggling along, what a help it would be!" sighed Mrs. Perkins, upon returning from a funeral, wondering how poor Mrs. Brown would have felt if she could have heard what the minister said. "Poor soul, she never dreamed they set so much by her!

"Mis' Brown got discouraged. Ye see; Deacon Brown, he'd got a way of blaming everything on to her. I don't suppose the deacon meant it,—'twas just his way,—but it's awful wearing. When things wore out or broke, he acted just as if Mis' Brown did it herself on purpose; and they all caught it, like the measles or the whooping cough."

Just think what a woman who has half a dozen children has to endure if she is obliged to do all her work,—sewing, cooking, washing, and cleaning—without even the assistance of a hired girl. How long could a man stand this kind of an existence, shut up in a house or a little flat year in and year out, rarely ever going anywhere, with very little variety or change? How would he keep his cheer? A few days of confinement in the home is about all most men can stand, especially if their rest is disturbed at night by sick children.

Most men little realize how rapidly a woman fades and uses herself up and loses her cheer when she works like a slave all day and long into the night, caring for a large family. Just because a wife is willing to do everything she can to help her husband, is no reason why he should allow her to ruin her health and attractiveness, rob her of the zest for living, in the operation. There is nothing more wearing and exasperating, nothing which will grind life away more rapidly than monotonous, exacting housework. A man has a great variety during the day in his business; but his wife slaves at home and rarely gets any variety. How is she to keep joy in the home for the children, or for guests and friends?

She is plodding and digging all day long, year in and year out, cleaning, scrubbing, mending clothes, caring for the children,—a work which grinds life away rapidly, because of the drudgery and monotony in it.

The husband has constant change which rests and refreshes him; but to the average wife it is one dull, monotonous routine of hard, exacting, exasperating toil. And yet the wife and mother should be the fountain head of joy in the home.

Many a man is cross and crabbed when he comes home, just because his wife is not quite as buoyant and cheerful and entertaining as he thinks she ought to be after a nerve-racking, exacting day's work. What does he do to make the evening pleasant for her? How many times during the last year has he taken his wife out to entertainments or to dinner? When did he last take her away on a little trip? How long has it been since he brought her home some flowers, confectionery, a book, or some other little gift which would tell her that he was thoughtful of her? How often has he given up his club, or the society of his companions, or his own pleasure to remain home and help his wife take care of the children, or make the evening delightful for his family?

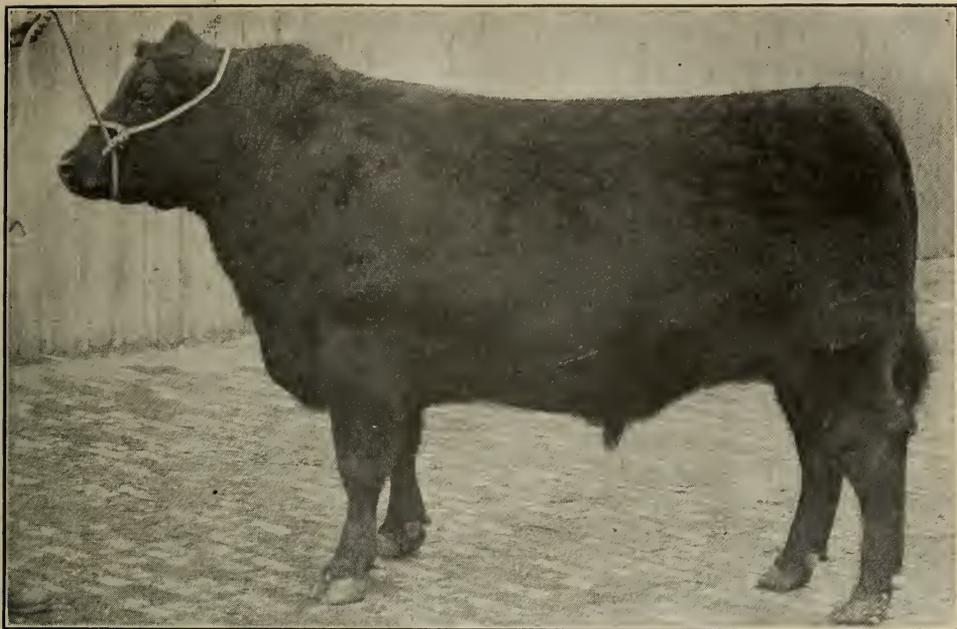
Saving only the dregs for the home, exasperated nerves and jaded energies,

is a very short-sighted policy. Thousands of homes in this country are made up of shreds and patches. All we find there is the by-product of a man's occupation. Many a man gives the home what he has left over,—the crumbs, the odds and ends. Instead of bringing to it his freshest energies, his buoyant spirits, he often comes a physical wreck. He remains in the store or office as long as there is anything left of him that is any good. Then he goes home, and he wonders why the children avoid him, why they do not run and throw their arms about his neck, delighted to see him.

The children know that when such a father reaches home their fun is pretty nearly over. They do not see anything very interesting or attractive in his long, tired face. They know there is no spring in his dragging, hesitating steps. They know there is no vitality left for a romp with them on the floor or on the lawn. They know they have to keep quiet or they will be sent to bed or out of the room.

The average modern man has taken the cream off his energies during the daytime, and brings home only the skimmed milk, and this is often very sour. Then he wonders why his wife is not as bright and as agreeable as she used to be! He cannot see the poor, mean, miserable, starved part of himself that he brings to her, and he expects her to match it all with the same charm and sweetness, the same joyous response that she gave him when he brought the best part of himself to her. His weariness and depression cannot summon forth that happy response; they paralyze the children's play; they strangle the home joy.

The fun loving faculties in many children are never half developed; hence the melancholy traits, the tendency to sadness, moroseness, morbidity, which we see in men and women everywhere. These are not normal. They are indications of stifled, suppressed, dwarfed nature. And they are to be laid at the door of the killers of the home joy.



Glenmarnock, the grand champion Angus fat steer at Chicago, owned by Mr. McGregor, of Brandon. The grand championship on carload lots, was secured also by the Angus cattle.

CANADA'S WINTER LIVE STOCK SHOWS

By F. M. Chapman

COMMERCE knows no flag. The spirit of barter is cosmopolitan. When the Indian met the white man on the shores of North America he had not even a language of communication. Nevertheless the white man having some things that the red man desired, an exchange took place and trade began. It was between them solely a question of arriving at the point when the white man would be willing to part with his goods for what was offered by the red man. All this was as if it were only yesterday. To-day warehouses, long lines of wharves, big carrying steamers and miles of freight cars tell of the progress of barter. Last summer there were over forty steamers on the Lesser Slave Lake, Northern Al-

berta, trying to handle the goods for that district which was not very long ago looked upon as an impossible land.

The community dealings of men in a big city abundantly illustrate the fact that nationality counts for little, in the buying and selling of produce. The whole question of national law is being settled by reference to the courts of commerce. The little Balkan war in Europe progressed only with the consent of the trading states. It is becoming more and more evident that better trading relations between nations mean a greater security for peace. The men who produce are the real governors of the nation and democracy is thus in the ascendant, because aristocracy was founded upon the personal rule of



Gainsford Marquis, the champion Shorthorn bull at Chicago, owned by R. W. Caswell, of Saskatoon.



The grand champion Wether at Chicago, owned by John Campbell, of Woodville, Ontario.

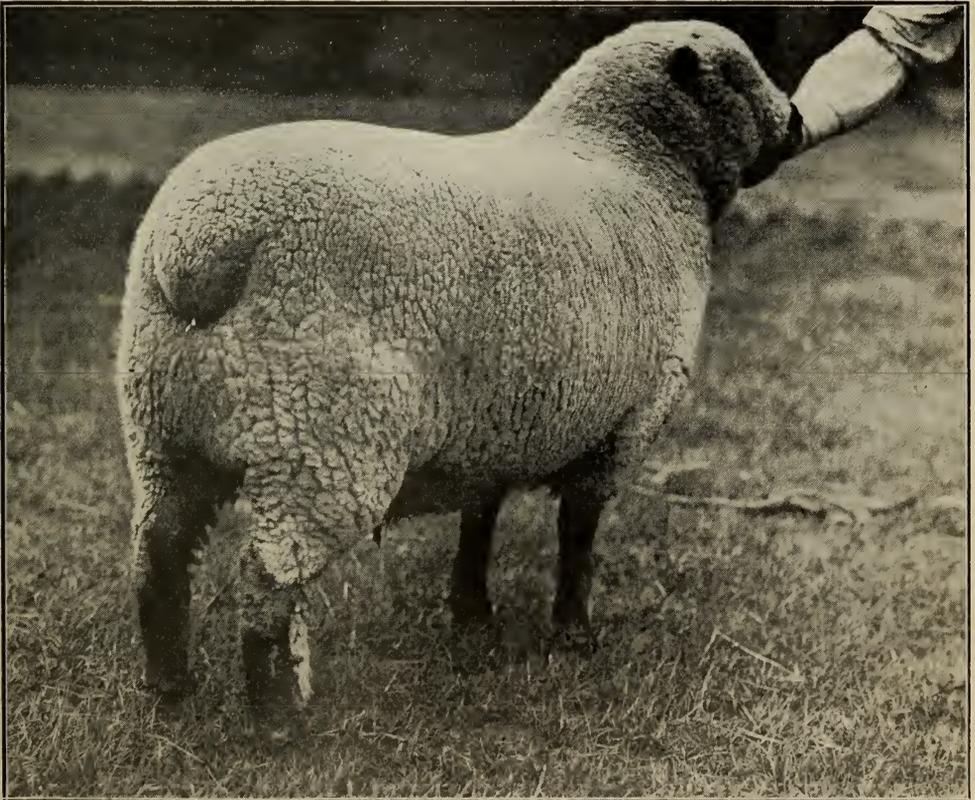
the sovereign and the acknowledgment of privilege. This old divine right idea of superiority on the part of some has to give way in the practical world to efficiency and ability.

FARMERS ARE DEMOCRATIC.

This largely explains why farmers as a rule are democratic in their ideals. They believe in a fair field with no favors. They want everybody to have a chance. The man who can do things is the man who should have them, and no condemnation is too severe for the clique or combination of circumstances which so hampers their free movements as to prevent the attainment of this end. A farmer is a producer. He is also a salesman of that produce and as such has to enter the commercial world and make as good a bargain as he can in the world's markets. It is, therefore,

easily seen that there are two sides to agricultural life, one the producing and the other the commercial. Many men are first-class producers. They can grow the No. 1 hard wheat under the most discouraging conditions. They can carry off the honors in the fat stock shows and yet when it comes to the marketing of these products they are helpless in the teeth of the combination they meet. The same story holds throughout the country. It is given in popular parlance in the following manner:—

“John Jones is a very decent fellow. He works hard and slaves away from morning until night and practically has his nose to the grindstone all day, yet he is a poor man and at sixty years of age has to work as hard for his daily bread as at twenty. He doesn't seem to have had any head on him.”



The champion Shropshire ewe at Chicago, owned by John Campbell, of Woodville, Ontario.

Every reader knows many such men through the country who have been fine producers, good, steady, honest workers but who knew absolutely nothing of the commercial end of farming.

THE OTHER FELLOW—THE SCHEMER.

Then there is the other man. He goes to the other extreme. He is no good to work nor steady at employment but he can scheme the utmost out of the other men in a first-class manner. His bump of commercial life is well developed, and he, perhaps, enjoys more of the sweets of this present life than the other fellow.

Neither of these fellows are very good neighbors. You pity the one and you watch the other. Modern education is trying to unite the two men, not by marrying John Jones' daughter to Bill Smith's son but by teaching the young farmer to be a good producer and a student at the same time.

In this work there is no greater force for education than the fat stock shows which have been held during the last month and which are to be held in different parts of Canada before the winter ends.

CHICAGO, THE HUB.

What is called the world's greatest live stock show has for the thirteenth time held its annual session at that centre of live stock production, Chicago. Admirably located because of the Union Stock Yards and the gravitation there of the carloads of cattle, sheep, horses and hogs daily, the international fat stock show at this point makes it almost impossible for it to be a failure. Stockmen from all over the world, breeders, commission men, ranchmen and dealers visit the show for the sake of its new ideas and for the market features which it presents.

Canada has entered the arena at almost every one of the shows and has carried off high class generally. This year in the breeding sheep classes, Ontario has well nigh swept the boards. John Campbell, of Woodville, after winning the championship in Shrop-

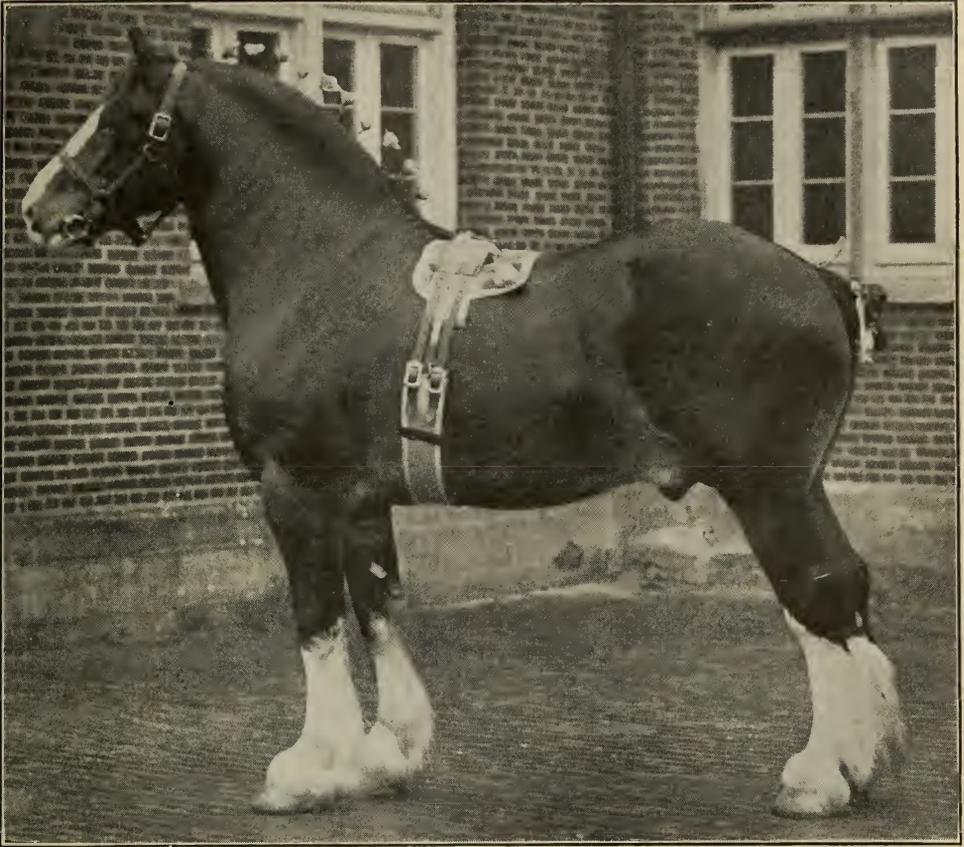
shires might well be excused for thinking that he knows about all there is to know in the breeding and production of a fat wether. In horses the old Scotch Clydesdale has been recognized as the first horse in Canada. If Canada should win at Chicago on any line of horse flesh it should be on this line, and such has been done time and again. This year the lists were again entered and championship carried off by the Cairnbrogie Stables, of Claremont, Ontario, by one of the best specimens of the breed that has ever been shown there. Lord Gleniffer, after winning the prize, was sold to a millionaire near Boston.

WESTERN CANADA CAN RAISE THEM.

In cattle, Western Canada took a turn. Already, through the West, many magnificent breeding farms are springing up with an equipment of fine buildings and field production second to none in the world. Despite the allurements of real estate advancements and the glitter of the golden Marquis and the Red Fyfe, the glory of breeding animals to perfection has so taken hold of a great many of these good farmers that have been actually invading the Canadian National Exhibition at Toronto as well as the International at Chicago, to carry off its highest honors. Mr. R. W. Caswell, of Saskatoon, takes no greater joy than when he jumps into his automobile in his city residence by the river to motor out to his farm where his splendid animals are feeding. He was induced, along with several others of Saskatchewan, by the live stock department of the Saskatchewan Government, to show at Chicago and the accompanying cut shows his winning animal.

GUELPH SHOW OVERCROWDED.

Ontario is rapidly coming to the front with her live stock show in the royal city of Guelph. From a humble beginning under the auspices of the Guelph Fat Stock Club, this show has grown to its present large proportions. This year the immense crowds and the



A grand pose of a model Clydesdale, Lord Gleniffer, the championship Clydesdale at Chicago shown by Graham Bros., Cairnbrogie, Claremont, Ontario, and sold to a millionaire near Boston. In conversation with Mr. Wm. Graham, of the firm of Graham Bros., this horse was claimed to be the best horse they had ever owned, and although the price was not announced, it is understood that the figure was also one of the highest ever paid for a Clydesdale in America.

large entries made the stone buildings seem like overcrowded annexes on a many-roofed Dutch farm. It was only under such conditions of popularity that the total lack of architectural design in these buildings became so noticeable.

It is apparent that if Guelph is going to remain the centre of the Ontario live stock in winter time they will have to get out in the open, shake themselves free from lean-tos and butcher stalls and put up a building worthy of the province and of the industry they foster.

The show of horses was perhaps this year better than anything that has ever

been held previously. Clydesdales and Shires were as good as any other. New men are coming into the lists. The quality of the horses demonstrates the force of these live stock shows in developing a type. The people have been educated to see a Clydesdale after the style of Baron's Pride and that same beauty of form and intelligent head are to be seen in the winners in almost every class.

SHEEP SHOWS ARE GOOD.

The show of sheep this year excelled other years in the matter of quality. The Dominion Government has been making an effort to encourage the

sheep industry in Canada and interest is reviving through the many provinces in this regard. The only undesirable thing about the sheep show at Guelph was the accommodation and prize monies. There both were inadequate.

In dairy cattle the protest against this shelving of the exhibits has taken a definite shape and the dairymen of Ontario are now looking towards the formation of a national dairy show likely to be held in the city of Toronto where the dairy cow will receive that attention that is her due. This is likely to take place despite any promises on the part of the winter fair officials. It is recognized by all that a fat stock show is no place for a dairy show.

The educational features of the winter fair have in the past been a notable feature. Former Ministers of Agriculture giving their sanction to the provincial grants for the exhibition have looked upon this feature of the fair as one of prime importance. Things have changed somewhat this year and it is noted that Ontario's Minister of Agriculture, the Hon. James Duff, has not taken the personal interest in the affair that the former occupants of the office did. In speaking of this the Weekly Sun says: "The chief cause of the falling off in attendance at the Lecture Hall is found in the changes which have taken place in the office of Minister of Agriculture. Where there was an acknowledged leader among progressive farmers there is now a politician."

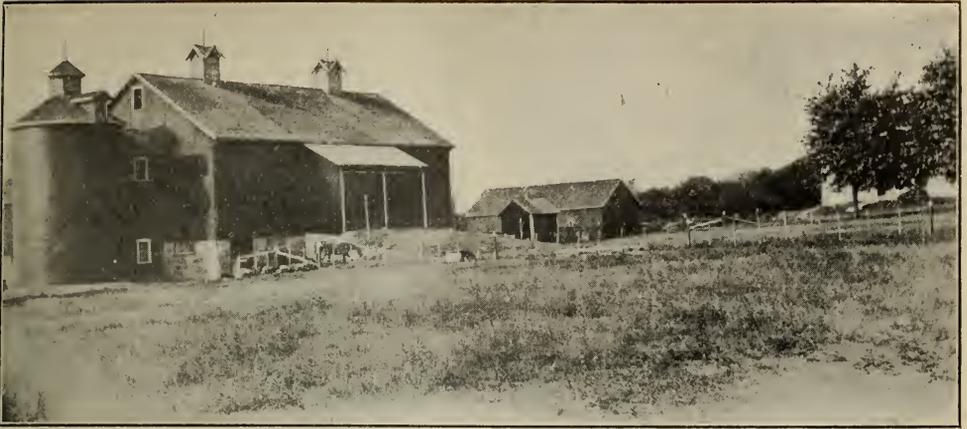
The Maritime Provinces during the last five years have been gradually awakening to the effect of a real live stock in their midst and at the Maritime winter fair are presenting one that is really creditable to the provinces by the sea. The farmers there are beginning to see that they have the soil and the climate for live stock production and that if they can get a proper spirit infused into the farmers that they will assume that importance in the breeding world that they should. They look at old Scotland with her hills and dales and uninviting moun-

tains and lake scenery as evidence of what can be done when enthusiasm takes hold of people, in the matter of raising high-class live stock.

The Western Provinces of Canada have three live stock shows later in the winter. The reason for this no doubt largely lies in the fact that harvesting of grain occupies the major portion of attention of the farmers up to Christmas. Brandon and Regina and Calgary are each having fat stock shows while no doubt others will spring up as the population grows. So far the Brandon show has premier place and is a sort of clearing house for Western ideas in the month of March.

The people of Brandon fully realize the benefits to be derived by encouragement of live stock raising. The erection of a new building in Brandon which will be ready for the coming show is along the lines of the big ideas that have prevailed with the management for some time. Breeders of Western Canada may confidently look to much better accommodation and to a record attendance during the coming fair. It is said that Brandon's show of horses is second to none in America. The Ottawa live stock show, which takes place in the Howick Hall during January, is also coming to the front as a high-class show. Situated as it is with its back to the Laurentian rocks of the north and in a valley where the dairy industry has been largely predominant, this show has to draw upon Western Ontario, the eastern townships and other far away places for its main supply of fat stock. It will be noted this year that the encouragement and demand of the show has raised the standard of the local breeders.

A private enterprise at Toronto in the Union Stock Yards there has for the last two or three years been holding a small fat stock show. It is growing in importance for the same reason that Chicago grew. The big stock yards to which the big American farmers have been gradually drawn have proved of immense value in getting a bunch of animals for show purposes.



The splendid farm buildings of T. Banbury, near Ingersoll, Ontario. Note the thrifty appearance of everything, the cement silo, the painted barns, good fences and the milk house.

OXFORD'S OCEAN OF MILK

By W. J. Brown, B.S.A.

Note.—After all the farmers of our country suffer a great deal from isolation. In the little district not thirty miles from Toronto through which two transcontinental railroads are now being built there is as fine opportunity for the business of dairying as is to be found in any part of the country. Yet the farmers there are barely making a living. This story of South Oxford will make interesting reading to all the young men on the farm who believe that the farm has to-day as great opportunities as it ever had. The principle thing, indeed, is enthusiasm or in other words, faith. The personnel of the neighborhood suffers in like proportion with the decrease of wealth. Only the less intelligent will remain where the interest in production lags. Go over Oxford County and you will find not only fine farmsteads, well tilled farms and up-to-date residences, but a class of farmers of which any Country may well be proud. It is the dairy cow that is making Oxford rich. Here is the story.—Editor.

SINCE 1864, when the first cheese factory in Ontario was established in Oxford County by Mr. Harvey Farrington, this section has taken a keen interest in dairying. The southern part of the county ranks high to-day among the leading dairy districts of Canada. The country is undulating and slopes gradually toward the south. The scenery is attractive, chiefly because of its commercial aspects. Natural drainage is excellent. The soil is for the most part clay loam. Owing to the presence

of an abundance of gravel and the enterprise of the people, the roads are wonderfully good. The farm homes, out-buildings, fences, etc., indicate a thrifty and aggressive and a prosperous community. There was a time when South Oxford was famous for its Short-horns, its beef cattle, its sheep, and its swine; but to-day its specialty is dairying.

The cow is supreme. It is for her that the fields are cropped, the buildings and silos erected, the highways improv-

ed, and the farm help employed. She is a machine that works twenty-four hours in the day for seven days in the week, and seldom fails to pay dividends. She turns hay and grain, grass and roughage, silage and oil cake into milk. The quantity and the quality of her produce depend on her feeding, her breeding, her care, and her individuality. The weigh scale and Babcock test reveal the fact that individuality is the chief requisite in determining a cow's value. Oxford has the largest sum of money invested in milch cows of any county in Ontario. The aggregate value is about \$2,170,000. The leading breeds are Holstein-Friesian, Ayrshires and Shorthorns, with a few Guernseys and Jerseys. The larger herds consist of Holstein and Ayrshire grades. There are many Short-horn grades, but these are rapidly giving place to the special dairy breeds. The Oxford dairyman has only one standard of selection. He wants the cow that



Twin stave silo on a farm in South Oxford. This building is equipped with wind power.

will produce the largest quantity of milk of the best quality for the food consumed.

AN OCEAN OF MILK.

In the County of Oxford there are 49 cheese factories using nearly 116,000,000 pounds of milk, and making more than 10,000,000 pounds of cheese annually. There are 4 creameries using 1,209,000 pounds of milk and making 293,000 pounds of butter each year. The milk condenser at Ingersoll has a capacity of 150,000 pounds, and the condenser at Tillsonburg a capacity of 100,000 pounds of milk per diem. The milk powder factory at Brownsville has a capacity of 55,000 pounds of milk a day. All three of these institutions operate at their full capacity for the greater part of each season. In fact, the milk flow in the vicinity of Brownsville is sufficient during the summer months to supply not only the milk powder factory, but a cheese factory as well.

It is doubtful if there are many other districts in Canada of the same area which are devoting more attention to, or have made a greater success of dairying than Brownsville. There are, of course, many individual herds throughout the country which have established a reputation for breaking records in milk production by single cows, but these herds do not necessarily indicate the standard of the average dairyman in their respective sections. The Brownsville district is, however, famous for the number and producing ca-



There are some spots of pasture land in old Ontario that are almost ideal.

pacity of the cows kept on each and every farm. Nature has favored the farmers here, as there is practically no waste land, while all the farms are in a high state of cultivation. Lines may be drawn through Brownsville extending north, south, east and west for two miles or more in each direction making the radii of a circle. Within the area thus described the farms range in size from 50 acres to 300 acres, while the dairy herds average 20 cows to 100 acres. The largest herd is 75 cows, and 30 young cattle on 300 acres, owned by Mr. Spencer Freeman, of Culloden. The next largest is 50 cows and 25 young cattle on 200 acres owned by Mr. Isaac Holland. The herd belonging to Mr. F. J. Brown, consisting of 40 cows and 20 young cattle on 200 acres, may be considered the standard for that section.

EACH COW RETURNS \$100 YEARLY.

Mr. Isaac Holland is perhaps the most successful dairy farmer in South Oxford. He secures the largest returns from his cows. His 50 head of cows and heifers yield him \$100 per cow per annum. In his herd are 30 pure bred Holsteins, and among them are several famous producers. Mr. Holland's farm is one of the most perfectly equipped in Western Ontario. His buildings are modern and contain everything that convenience and comfort demand, not only for his live stock but for his family as well.

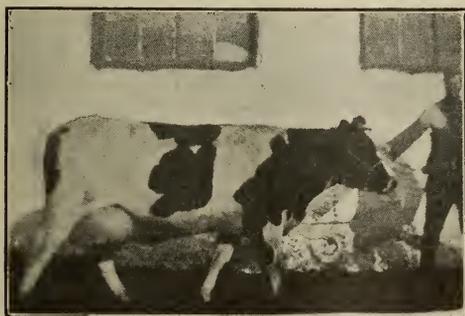


An ordinary pasture scene in South Oxford.

He began his career about thirty years ago as a chore boy. Later he rented the James Williams homestead at Culloden and there laid the foundation for his fortune. For several years he made a specialty of raising swine. During the time that the bacon industry was on the up-grade in Canada Mr. Holland frequently marketed \$4,000 worth of hogs annually. He now owns a splendid farm in the ninth concession of Dereham Township, consisting of 200 acres and worth easily \$28,000, while his herd of cows, young cattle, etc., would net him at an ordinary sale not less than \$7,000 more.

He practices soiling in the summer and silo feeding in winter. Like all the other farmers of the Brownsville district he not only feeds all the grain he can grow, but he buys many car-loads of bran, shorts, mill feed, oil-cake, cotton seed meal, etc. He endeavors to feed each cow according to her ability as a milk producer.

For some years he has kept a record of each cow, but recently having installed a milking machine he found it inconvenient to keep the milk of each cow separate in order to weigh it and record the amount. The milking machine is very useful for the full flow months of the summer season, but is not so successful when the cows are beginning to go dry. Mr. Holland employs seven milkers for his herd. The milking machine has often milked 40 cows while the force of milkers were stripping out 10. This shows that the machine is a great time-saver at cer-



Midnight Glen DeKol, five years old with the following record:—In 1 day, 513.6 pounds of milk; in 7 days, 22.97 pounds of butter; in 1 year, 18,492. pounds of milk; in 1 year, \$252.52 at Condenser.

tain seasons. It is, however, of doubtful commercial value. Mr. Holland does not now devote any attention to keeping bacon hogs. He sells his milk to the milk powder factory. His cows are not kept in show condition. He tries to adhere closely to nature's requirements in order that his cows may be able to maintain a healthy existence and may produce the maximum quantity and quality of milk for the food consumed and care given. The average butter fat test for the herd for the whole of last season was 3.7 per cent.

FARMERS QUIT HOG-RAISING.

The largest individual dairyman in South Oxford is Mr. Spencer Freeman. He has an excellent farm at Culloden and keeps one of the best dairy herds in the Province. His idea about dairying is that "it is not what the cows produce, but, do they pay or do they not?" His herd is made up of grades of various kinds including Jerseys, Guernseys, Ayrshires, Holsteins and Short-horns. Each cow occupies her place in his stable because of her individual excellence as a producer of milk. His cows average nearly 7,000 pounds of milk each per annum. The milk powder factory pays an average of \$1.23 per cwt. for milk. Mr. Freeman's cows yielding 7,000 pounds of milk bring him a revenue of \$86 each, or \$6,450 cash for the milk from the whole herd each year. He too, made a specialty of producing bacon hogs for a number of years, and has one of the largest piggeries in western Ontario. This building is now standing idle. His contention is and apparently the other farmers of South Oxford who are sending their milk to the milk powder factory or to the condensers agree with him, that it pays better to devote the whole attention of the management to the dairy herd and that the extra feed consumed by the hogs will give equal results if fed to the cows. Mr. Freeman has four silos on his farm, three of which are of large proportions. No one can visit his place without being impressed with the fact that he is a

man of large ideas and best of all knows how to put his plans into operation.

Prices for dairy cows in South Oxford range from \$47 upwards according to breeding and milking capacity. During the past few months a large number of good cows have been shipped from South Oxford to the northwest for the purpose of establishing the dairy industry in the vicinity of Saskatoon, Edmonton, Calgary, Moosejaw, etc. Mr. E. A. Butler has shipped sixty-four carloads of dairy cows from Ingersoll during the autumn of 1912. There were a number of other buyers carrying on this business in similar proportions until many of the farmers of the county became alarmed regarding the possible depletion of the dairy herds. The prices therefore stiffened until it is now exceedingly difficult to buy a good dairy cow in Oxford at her real value.

A SHORT ROTATION.

The general practice is a short rotation of crops and thorough tillage. The standard rotation for the county is corn and roots, oats or oats and barley, wheat, clover. All the manure which is taken direct from the stables to the fields in the winter time is on most farms given to the corn crop.

FALL WHEAT YIELDS 54 BUSHELS.

The Oxford county farmer still adheres tenaciously to fall wheat. He likes the straw for bedding and as he has good wheat land he thinks that it pays him to grow this crop. The average yield per acre for the whole county is about 29 bushels, but in the better sections of South Oxford it runs to 34 bushels. On one farm near Culloden a field of wheat was grown in 1911-12 which yielded 54 bushels per acre. This farm was formerly owned by Mr. R. T. Williams, and the field of wheat was protected by large and dense woods. Owing to the increase in the number of silos fodder corn is becoming more largely grown from year to year. It is the main source of supply for food for the dairy herd. Every farm has a silo



The milk condensery at Ingersoll, Ontario. The milk received in 1912 was 30,000,000 pounds. The amount paid the farmers for this milk was \$350,000. There are three condenseries in the County and they have just made a contract with the farmers for \$1.65 a can for the milk delivered at their factories. The one at Tillsonburg brought 20,000,000 pounds and at Brownsville, 12,500,000 pounds this year.

and it has become difficult to get them filled in the short season available for this purpose during the fall. On one thresher's beat in South Oxford there were ninety silos to be filled in September, 1912. Each year the silos erected are more substantial and more costly and are larger in size.

There are a few silos made of cement blocks and a large number made of solid cement—the monolithic type—but the well-constructed wooden silo on a cement foundation is the favorite with the majority of the progressive farmers of the community. The inside of the monolithic silo seems to scale because of the action of the acids developed during the making of the ensilage. To overcome this tendency a cement plaster is now used consisting of one part cement, one part of asbestos flour, mixed with the usual proportion of plaster sand. It is claimed that this preparation can be made as smooth as

glass and is impervious to water and resists the action of acid. The monolithic silos that have been erected for a few years seem to need strengthening by the use of hoop iron on the outside.

From a distance these silos appear like wooden silos because of the number of hoops. The wooden silos are usually made of good lumber and are thoroughly painted before they are erected. It is generally agreed that they do not freeze as readily as the cement silos and less ensilage is spoiled, but they require to be anchored either by rods or guy wires to the foundation or nearby buildings, in order to prevent them from blowing over while they are empty.

As South Oxford is very largely denuded of its tree growth the wind at certain seasons of the year is a factor that must be taken into account. Most farmers practise soiling more or less. The crops used are rye, clover, peas and

oats, and corn. Every effort is made to keep the cows in full flow of milk throughout the season; grass alone cannot be depended upon to do this. The cows not only need to be fed to their capacity and must have abundance of water, but they require to be protected from the flies. On many farms during the dry portions of each season the food obtained in the pasture fields is supplemented by ensilage, bran, oat chop, etc., fed morning and evening in the stables.

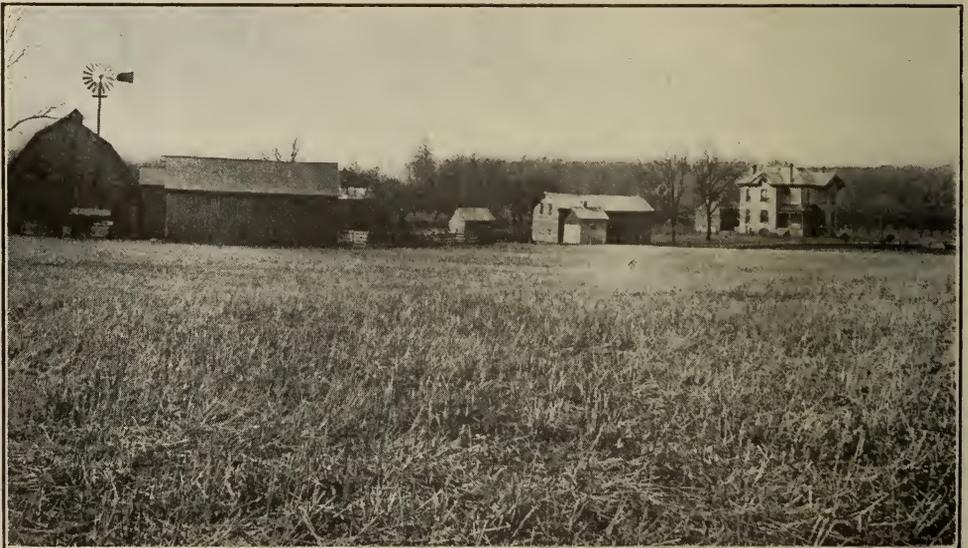
AVERAGE FARM WORTH \$100 PER ACRE.

The average 100-acre farm in South Oxford is worth \$10,000. The buildings average in value about \$4,000 for each 100-acre farm. Each dairy farmer keeps about twenty cows and these yield to him about \$1,600 a year in cash. There is a marked tendency toward herd improvement. The poor cows are being weeded out and more intelligent methods are being employed in selection, feeding and care of the cows, as well as in handling the product. Practically every farm now has a special building in which the dairy utensils are kept, and the milk cooled before it is sent to the factory. The labor problem is one of the severest

handicaps in developing the dairy industry, but the farmers who employ their men throughout the year find less difficulty than those who depend on getting labor for only a portion of the season.

Married men with families receive about \$400 a year wages including a cottage rent free, a garden, fire wood, and a supply of milk daily. The wage bill on a 200-acre farm is about \$1,000 per annum.

The statement has been made that the dairy cow has made the farmers of South Oxford wealthy. A close study of the conditions that prevail in Dereham and Norwich abundantly confirm this view. Almost every farm has good buildings, complete and excellent equipment, and has about it the atmosphere of contentment and prosperity. The village schools and churches also indicate the progressive spirit of the community. The people apparently enjoy all the good things of life and are not content with merely the necessities of rural existence. While the competition among the dairy farmers is keen and each man is striving to make a record for himself, yet the public spirit and community interests are neither forgotten nor neglected.



The thrifty farm buildings of John Starkey, near Aylmer, Ontario. Note the use of wind power and the splendid residence. Such farmsteads as this are common throughout the whole County of Oxford.



On a small lake near Winterburn, Alta. The farm house is nearby and is delightfully set among the trees on its bank.

THE GLORY OF THE FARM FAMILY

By Alberta Kepper

Note.—A great deal has been said of late on the subject of Eugenics. Prof. Atkinson, of Montana, read a paper on the subject at the recent Lethbridge conference. An interview with Dr. English of the Hamilton Asylum has confirmed in us the great necessity there is for intelligent work along this line. No doubt a similar state of affairs will be revealed by the head of every public institution. We want no further additions to the criminal classes, and an intelligent regulation of the laws governing matrimony will do much to bring about desired ends. The healthy farm family is to-day the greatest source of the world's supply of good men and women. This article was written especially for Farmer's Magazine by Mrs. Kepper and will be found worth re-reading.

IT has long been a matter of grave concern, this trouping of our young men cityward, and the questions would recur "What is it the country lacks that the boys are impatient under the roof-tree? Would it always be the same?"

It wasn't a comforting thought that when the years have mostly come and gone, and we need the strong right arms of those we love, that they will all be somewhere, far away, absorbed in a different life, forgetful of the old home and but half mindful of the parents.

A study of the Smiths and their drift-

ing offspring, though a composite picture, reveals the cause of the unrest. The homesteads are not homelike; there is a barrenness of gentler things; there is heart hunger. The fields were fairly cultivated, for these gave money returns; sleek kine were finished on the corn and these herds were ever a source of pride to the owner. But gates hung by a single hinge; the dooryard was without grass; chickens tracked about the steps; there were rag-filled windows; the mother appeared fifteen years older than the family Bible declared her to be. She walked to town, carrying her



"Grandfather gave us each a wee ewe lamb."

produce, then walked home; this bent, tired, dust-grimed mother that no ambitious boy can look upon and not grow resentful towards the life that made this possible.

New clothes were events in the lives of the Smith boys, and the few allowed them were always far too big in the beginning, but were worn for best until their limbs came through so far they looked like new born colts. Mother cut their hair; which did not resemble the real barber's work, but father did not believe in spending money recklessly, and "it didn't matter anyway how a boy looks. It is what he is that counts," they told themselves. Poor, deluded Smiths. If someone had only whispered to them that somehow boys are thought to be just as they look, they would have been saved many a heartache.

The bottle-fed lambs and pigs were taken by the father as soon as they no longer required special care. He tried to make peace with his sons and his conscience by saying, "Everything will be yours sometime—when I am gone." There was to be a gala day ahead! but it seemed so far in the future that the sons, one by one, as they attained their majority entered the trades or professions, and, without appreciating the tragedy that drove them there, the old

folks were alone with their hoardings.

True, not every boy born upon the farm is fitted by inclination to follow the furrows of his ancestors, and it is just that every human being choose his life work—but, by our short-sightedness, we can make any avenue so repulsive that none cares to travel it. The good and the beautiful that rightfully belong to it are obscured.

Parents must not value their boys as so much power for wealth production alone. They are something higher than the horse or the gasoline engine. They have minds that, rightly directed, will place them as executors, not mere drudges, in farm work as well as in any profession.

Whether or not any circumstances turned the Smith boys away from the farm may be a question; but it did not hold them to it. Another plan must be tried.

The home was neither fine nor modern. The income must be saved closely; for on a farm the taxes, interest, upkeep, etc., must ever be placed before anything that may be termed a luxury. But in front of it all was the resolve that my boys in their childhood should have the same measure of joy as a mother in like financial circumstances could give them, if the father had chosen another calling. Their home must be as good; the lawn well kept and the trees set so as to add beauty. There must be flowers in and about the house.

It was easier planning than doing: but first the yard was brought to a fine grade and the blue grass carpeted it thickly. Then a lawn mower was procured and each time the grass was mown the elder son was paid 25 cents.

It is not our custom to pay the children for regular work; they must be taught to bear their share of the burdens of civilization, though disagreeable and unusual labor was always rewarded. Such chores as cleaning the hen house are not half so disagreeable if there is a piece of money awaiting the worker when he has finished. After a few seasons of mowing for pay, the sons' pride was aroused and they would not permit an unkept lawn.

They encourage the birds to live near us. We have a regular mooning song service from the day the first robin, with his "cheer up," brings news of the end of winter till the black birds meet and chatter wildly about going South, and still we have happy and contented neighbors throughout the winter for the "cardinal" and the "blue jay" are year 'round dwellers in the pines.

It is one of my convictions that the birds pay higher for the fruit they take than any customer we might find, and our children were taught to love them and leave them free to go over the lawn, gathering worms or work on tree trunks, or on the wing, as do the martins, in search of moths.

I heard a mother say to her boy who had been all the afternoon trying to kill song birds, "hurry home, dear, and say your prayers. Now don't forget it, because I am away." To me it seemed prayers could never rise on the wings of dead birds.

Long journeys we made for flowers. They thought my fondness for them alone called me out, but to me it seemed if I could only fill those first restless and impressionable years with innocent occupations, desirable traits would be fixed.

Grandfather gave each a wee ewe lamb. The income has always been their own. In tending their small flocks they grew fond of farm animals and were getting valuable lessons in thrift and management.

When a young man is fond of birds and flowers and animals—when he delights in the wonders and beauty of earth and sky, there is a strong tie binding him to country life.

A wise housewife once said, "*If I must have cobwebs, let them be in my house rather than in my brain, or in the brains of my children.*" Appreciating this, our boys always had access to the best reading matter. Early in life they were taught pleasant rhymes and jingles that have to do with country life and pleasures.

Not being of musical turn, but loving it, a high-class talking machine



Mrs. Alberta Kepper of Winfield Iowa, the writer of this article.

with more than 150 records was placed in the house. On rainy days this is busy for hours. I hear some one say "how tiresome!" It is, at time, wearing; but mothers, if we are not willing to put a little self-sacrifice into the lives of those we love we are the losers; for the world returns just what we put into it. And if my boy is permitted to loaf in town during rainy weather, bad influences may get the better of his judgment; and I have found that the contented boy is the busy one. It is the parent's duty to keep the children pleasantly employed at work or play while the character is still plastic. A neighbor asked me how we manage to keep the boys out of town, when it is but half a mile away, and they had always attended school there. We answered: "they were never forbidden, as that would spur the desire, we just allowed them to be busy at home."

It is very trying when children insist on popping corn or making candy when they cannot be out of doors, nor is it restful to play games all the evening after a hard day's work; but no gambler ever plays for higher stakes than the mother that takes a hand in innocent games for her boy's sake, hoping, by so doing, to beat the streets and alleys out of their prey.



Just now the farm boy delights in a day off with his gun when the rabbit tracks are fresh.

This is just as it was all through their childhood; and now that they are men and still interested and happy in country life, I feel repaid.

They plan crop rotations, are enthused breeders and feeders of live stock, and put their strong young shoulders to the wheel and together push for better farming; yet they appreciate the cultural side of life though loving nature more, but the self respect inculcated all through their childhood causes them to feel they are the equals of their schoolmates that are taking up law, banking or medicine.

I like to recall the Quaker mother's advice to her son that was about to go out in the world: "*Remember, my boy, thee is as good as anybody; remember, also, thee is no better.*"

Never by word or act allow the boy to think the farm will drag him down. We must dignify our own profession and yield not a jot in self respect to anyone, if we would see our sons take up their life work in the very heart of things, and there in delight practice the ancient and honorable art—agriculture.

THE SCHOOL OF THE FUTURE

By L. H. Bailey.

I teach
The earth and soil
To them that toil,
The hill and fen
To common men
That live just here;

The plants that grow,
The winds that blow,
The streams that run
In rain and sun
Throughout the year;

And then I lead
Thro' wood and mead,
Through mould and sod
Out unto God;
With love and cheer
I teach!



The House- Keeper's Journal

By Dorothy Dot

Note.—This is a new department. Dorothy Dot in her spare moments has been writing her diary. So far she has produced something really good and as you sit in a sunny window on the winter's afternoon you will enjoy the reveries that appear. Further from her pen will appear in the February Number.—Editor.

OCTOBER 20.—The Housekeeper is one only in the sense that a man is a housekeeper. She earns the where-withal, and in emergencies she "turns in" and helps. She wasn't born with an inordinate love for housekeeping. No woman should be. She should love mind-keeping and body-keeping first, housekeeping next. The Housekeeper believes in having a book or a magazine on hand to pick up for a few minutes every day—not when there is a lemon pie browning in the oven and not when it is time to put the dinner on, but some set few minutes some time. An active woman is apt to fall asleep if she sits down to read, therefore she should read something sufficiently short, such as a magazine would afford her, or a book interesting enough to keep her awake. The Housekeeper has just finished "Elizabeth and Her German Garden," and liked it—even the cynicism—but wished there had been more of the garden. She

quite agrees with the sentiments regarding too much housekeeping. "If my furniture ever annoyed me by wanting to be dusted when I wanted to be doing something else, and there was no one else to do the dusting for me, I should cast it all into the nearest bon-fire and sit and warm my toes at the flames with great contentment." The Housekeeper to-day voiced her opinion that every woman on a farm should read something comical, or at least cheerful, every day if it is only a joke from the newspaper. The trouble is there are so few jokes in the newspaper. This opinion was received with scorn by the company. When people reach maturity they should put away childish things. A grown woman can work without such foolish aids. Have you ever noticed that the people who have put away such childish things as fun, sociability and love of change, have not also put away such childish things as anger, irritability, malice and clamor?

OCTOBER 22.—A day in the house! It rains and the wind is never weary! What a comfort it is to be able to stay a whole day in the house! That is, to those whose vocation drives them out every day! A day which drives one in is a treat. The Housekeeper's last duties for the day were, locking the door, winding the clock, and, as she has an eye to economy in morning duties, she made the porridge in the rice boiler that it might be hastily prepared for breakfast, though not for hers. The kindling wood and the coal were placed in readiness to light the range.

When she reached her room she glanced out to see what of the night, finding it clear and cold. Out of the west window could be seen the Spinning Maiden, Vega, glittering in the black-blue sky, and Hercules plunging into the western abyss in a most undignified manner, head first and legs sprawling. At the south window she was greeted by Fomalhaut (Fo malo) The Lonely, the only bright star straight south this month. She put a wedge between the upper and lower sashes of the window to prevent its rattling when open, then jotted these few notes in her journal. Now she is ready to fall like a log, thanking heaven she is tired enough to sleep.

OCTOBER 28.—The Housekeeper had the extreme pleasure of cleaning the dining-room. A spark of love for housekeeping which she thought she had not inherited flared up and some dried-up fragments of fuel blazed a little as she dusted the walls and ceiling and cleaned the windows. She even had a friendly feeling to the leaded panes of the little window as she rubbed them though they are so good for developing patience. The Housekeeper is not fond of the process of having patience developed in her. Now, the clean curtains are up, the pictures are hung and everything back in its place. She is reminded of Longfellow's Blacksmith

"Something accomplished, something done

Has earned a night's repose."

NOVEMBER 1.—Nearly every day Little Boy Brown is brought in for a few hours after his nap. Little Boy Brown is just learning to eat. Sometimes the Housekeeper is reminded of the infant the Khan spoke of last summer. It took the mother, the grandmother, the auntie, the hired girl and the 'ome boy to feed that one child. Little Boy Brown can amuse himself for hours with saucepans and lids. The only counter-attraction is an open door, preferably pantry or cellar. Or sometimes when Little Boy Blue gets an elevator shaft built of blocks and is shouting "Millinery, mantles, boots and shoes!" along comes Little Boy Brown racing on all fours and hurling himself upon it laughs as none but Little Boy Brown can laugh at the smash-up.

When the Housekeeper thinks of things to do, she likes to be up and doing. A psychologist would call this a vicious tendency. The Housekeeper sometimes suffers for it but remains as vicious as ever. Her grievance just now is a combination stain and varnish. Wanting to have the floor done quickly she applied this alluring mixture. Nasty, sticky stuff! She has learned to prefer slow processes, stain first and varnish afterwards.

NOVEMBER 12.—What sort of a recipe-book have you got? The Housekeeper finds the most convenient to be a hard-backed reporter's note-book. It can be thrown open on the table and remain open. She has it indexed down the right side like a dictionary for easy reference. About a dozen pages each are devoted to cakes, candies, pies, puddings, pickles, preserves, sauces, salads and the rest. A bit of transparent adhesive tape pasted on each name will prevent them becoming worn with the thumb when the cook is finding her recipe. Some people, of course, are clever enough to cook without taking out the recipe-book. That's the first thing the Housekeeper puts on the table when she begins to bake. There are far pleasanter things than recipes whereby

she can exercise her muscle of remembering. In the front of her book she has a Valentine post-card which was sent her once. It bears the lines:—

"Oh, queen of cooks, your comely looks

And dishes, how they stir me!"

It was sent her by a woman, not by a man. She also has this written on the first page:—

"Look so neat and sweet in all yer frills and fancy pleatin'!

Better shet yer kitchen, though, afore ye go to meetin',

Better hide yer mince-meat an' stewed fruit an' plums;

Better hide yer pound-cake an' bresh away the crumbs;

Better hide yer cupboard key when Billy Goodin' comes

A-eatin', an' a-eatin', and' a-eatin'."

—J. W. Riley.

Why not decorate your recipe-book with pictures and verses and jokes? It will make your baking hours go more merrily.

Cranberry-pie time has come. You can make your cranberry-pie taste like cherry-pie if you make it this way.

For one pie:

1 c. cranberries, cut and seeds washed out;

½ c. seeded raisins chopped;

1 tablespoon flour, ½ c. boiling water, make sauce;

1 c. sugar;

1 teaspoon vanilla.

After lining a large pie-plate, fill the plate with the above, cover and bake.

NOVEMBER 19.—How the days fly! Old Father Time is such a hustler for his age! He does not give us a chance to draw proper hygienic breaths. When the Housekeeper wishes to do some writing she has to seize him by the forelock with her left hand and hold on with might and main while she does some "scarting" with her right.

The Ontario Horticultural Show is just over. The main attraction was apples. The old countries of Durham and Northumberland had a grand exhibit. There was a steamship built of

apples, Kings, Alexanders, Baldwins, with railings of little red crabs and smoke-stacks of Greenings. Lambton county had its map in apples, Lake Huron in Greenings and the county in Spys. The Housekeeper is always interested in the Ribston Pippin. She once read a description of it in The Globe, which she seized as eagerly as the writer of it did the apple.—"A greyish apple, russet about the stem and top, streaked with red and yellow like an aged cheek. medium in size, unprepossessing, a fruit to be indifferently passed over in the company of highly colored Wealthy and Alexander, unless the buyer is a connoisseur. In that case he will choose without hesitation. *'Thou when thou makest a feast if it be of Ribstons, eat it thyself!'*" The flesh is short—short as shortbread, neither crisp nor juicy. The flavor is a mixture of Golden Russet and Bartlett pear. But conceive of the goldenest of Russets and a Bartlett pear just turned ripe, skilfully compounded, and it falls short of that orchard joy—quick, thy tablets, Memory! Ribston Pippin."

NOVEMBER 29.—10 p.m. Sirius is rising. How very far south he is! And what a sun! Will he find the Housekeeper performing her round of winter work as beamingly? She has not begun it so. Keep yersel' in mind o' Sirius this winter, Housekeeper. Ye need it, ye ken! How many people have thought of making friends with the stars. They are never in the way. They are never offended if they are forgotten, and when they are wanted, there they are. They never disapprove of what is done and want it done differently. They are never disappointing. All other signs may fail but the stars are true. What has this to do with housekeeping? Nothing. But it has much to do with the Housekeeper. What countless generations of people have the stars seen living their little lives and disappearing! "Keep placid," they say. "Everything comes to pass."

(Continued in February issue)

The Twentieth Century Farmer's Wife

By J. Muldrew

Note.—A sensible talk, on a sensible subject, by a sensible woman, will be the verdict of everyone who takes the time to thoroughly digest this article. Mrs. Muldrew is the Principal of the new Ladies' College at Red Deer, Alberta, and has written this especially for Farmer's Magazine. Her address at Lethbridge was one of the cleverest things given at the Woman's Congress, and the manner that she carried with it marks her for a splendid work among the girls who shall attend the Red Deer Ladies' College. You do not have to read this very far, to see that she knows farm life conditions and can size them up admirably.—Editor.

THE twentieth century farmer's wife is a new kind of farmer's wife, just as the twentieth century farmer is a new kind of farmer. He does not use a sickle any more, or bind by hand, or hoe potatoes in large quantities with a hand hoe, or spray by hand, or pitch hay, or thresh with a flail on the barn floor, or draw water for the cattle with a well-hook, or do any other kind of antiquated farming. No, it is safe to say he is up-to-date in every respect. He reads agricultural journals, understands rotation of crops, he has learned the value of mixed farming, of the dairy industry for the keeping up of the land, he knows the value of a clover crop and has learned to use all modern machinery. He also knows the value of experimental institutions. He will tell you they save him the cost of experimenting, and allow him to profit from the results they have obtained. He knows the value of co-operation, and how to build an excellent barn. He knows a heap that our splendid pioneers did not know, in fact there is no more interesting person to meet and to converse with than an up-to-date farmer.

He has been awake a long time, but his good wife has been slower to awaken. Nevertheless, she is awakening fast, and the twentieth century farmer is going to work hard if he manages to keep ahead once she gets up speed in the race towards improvement in the home.

This is as it should be. A man works with growing things in soil and with the animals on the farm, both of great interest, but a woman has to do with human beings, and the results from her work are more important for the welfare of our country than any other results that can be secured on a Canadian farm.

Yet in most respects they are partners and co-workers in a more intimate sense than a business man and his wife. A farmer's wife is very closely connected with the work of the farm, and indeed it is not an unheard of thing to find the farmer's wife the better farmer of the two. She has always been very much interested in farm improvements and has almost always sacrificed much for the purchase of modern machinery, that the farm work may be done more smoothly. In many respects improvements on the

farm help the house mother in that it means fewer laborers, and this means less cooking, less cleaning, less washing and ought to bring more leisure. It seldom does, however, figure it as you may. However, she is to-day asking the twentieth century man to take an increased interest in the work of the home, and to lend his support towards indoor progress, and he is doing it like the wise man he generally is. For if from selfish reasons only, it would be an unwise thing to refuse, seeing it must mean increased comfort and increased happiness to him.

She is learning the value of machinery to save her strength and hence prolong her life. Talk about keeping the boys on the farm, why a little effort and a little wise expenditure of money in modern helps and conveniences and sanitary surroundings would keep most mothers a little longer on the farm than many of them stay. There are not so many old women on the farms to-day as there should be, as the grim Harvester reaps earlier than he needs in many cases.

Why should a modern barn and machinery shed be supplied with the best the market has to offer, and a woman struggle with a washboard and tub?

Why should a gasoline engine run machinery for the farm and not for the house? It is just as easily obtained and just as easily run. I have seen women put up with a wretched cooking range for years when it was consuming twice the fuel a good up-to-date economic cooking range would use, and the old one was fit for old iron only.

The twentieth century farmer's wife is going ahead as fast in other ways as her husband. She is beginning to question the unfairness of giving an education in farming to the boys and withholding the corresponding training in home-making from the girls.

She is also alive to the fact that there are experimental places where women are working out household problems and she is asking that these be placed within her reach, in order that from these results she may reap in time and money the value of others' experiments on household control.

She is also realizing that "man cannot live by bread alone," and that no woman can live and grow in richness of thought who does not continually refresh her mind with new ideas. Just as man must read to keep pace with modern movements in agriculture and science, so women must have access to literature and read to keep pace with modern housekeeping.

The aim of the twentieth century woman is to become a better mother, a better wife, a better home-maker. She is a woman of ideals, and the men who would see the progress of the homes alongside the general prosperity of the country must stand by the women in their efforts to make the homes the most advanced, the most beautiful, the most interesting homes that it is within the possibility of their united strength to bring about.



HOUSE HELPS
FOR THE
FARM KITCHEN
by
WINNIFRED MARCHAND



A HOT WATER BOTTLE.

Oats heated in a frying pan until very, very hot, then put quickly into a warmed flannel bag will greatly relieve cramps, headache, etc. It is light and retains heat. The top must be securely tied.

T. R.

CLEANING FRYING PANS.

To clean a frying pan after fish or onions, boil out the pan with soda water, wash it clean, then put on the fire and shake a little oatmeal in; let this brown; after, wipe out with a dish cloth. All unpleasant taste or smell will have vanished.

J. T.

TO GET RID OF MOSQUITOES.

To clear a room of mosquitoes put a teaspoonful of oil of lavender in a cup of boiling water. They can't endure it.

J. T.

HAM AND TOMATOES.

When there is a little meat left on a ham bone, a palatable dish may be made of it by using a few good sized tomatoes. Hollow out the centres. Fill with onion and ham, chopped fine, and bread crumbs. Season with pepper and salt. Cover the opening on top with a thin slice of ham, putting a piece of butter on each. Bake in a buttered dish until tomatoes are done.

G. A. M.

EASY WAY TO BOIL MACARONI.

Put the macaroni in a wire flour-sifter having a tin handle and immerse

this in a kettle of boiling water. There will be no trouble caused by the sticking of the macaroni to the bottom of the kettle, and the sifter may be easily lifted from the hot water.

F. H. E.

PUMPKIN MARMALADE.

Seven pounds pumpkin, cut fine. Five pounds white sugar. Sprinkle sugar over pumpkin and let stand over night. In the morning add two lemons cut fine and five cents worth of crystallized ginger cut fine. Boil until thick. This is just as nice as orange marmalade and much cheaper.

J. T. E.

TO BAKE JUICY PIES.

This is my way for keeping pies from losing their juice while baking. After wetting and pressing the edges together, dip your hands in flour and run them around the edges. Then with a knife make an incision in the top crust, almost across the pie. This enables the steam to escape without bursting apart the edges. When serving the pie use this incision for the dividing line.

B. C.

TO SET ICING.

To prevent the icing from running off a cake first sift flour over it. Then wipe off with a soft cloth. You will find this method will set and dry much more easily than without it.

B. C.

FOR HOARSENESS.

A fine thing to relieve hoarseness is to mix one teaspoonful of dry mustard with a table spoon of lard. Spread on

a piece of flannel and apply to the lungs. I cured myself of bronchitis by this means and many cases of pneumonia could be prevented if used in time. This can be used on infants with good results. Within a very short time they will breathe easier. B. C.

IMPROVING EYELET EMBROIDERY.

Rub white soap on the cloth first. When making eyelet embroidery hold a piece of soap under the material and let the stiletto pass through into it. The soap gives a slight stiffness to the cloth and a much better eye can be made. If you have no stiletto, a nutpick makes a fine substitute.

R. E. M.

TO REVIVE THE FIRE.

The next time your fire has almost gone out, try throwing a little granulated sugar on it, which will have the same effect as kerosene, but is not at all dangerous.

R. E. M.

REMOVING ODOR OF COOKED VEGETABLES.

To remove the smell of cooked vegetables from the house, put a piece of apple, or peeling, on the stove and let it fry for a while.

L. H.

STAINS ON TAN SHOES.

To remove stains from brown shoes, take a piece of cut lemon and rub it for a while on the shoe where the stain is. Polish with brown polish and all the stain will disappear and the shoe will look like new.

G. D.

SOPA DE ARROZ.

A most palatable and nourishing dish, much prized on Mexican bills-of-fare.

Take scant half cup of best rice, wash thoroughly, let stand for a few minutes while preparing the following: One medium-sized ripe tomato, peeled and crushed smooth. Into a frying pan put a tablespoon of lard, heat quite hot, add a small finely shredded onion, a little

salt and a dash of cayenne pepper. Into this pour the rice and keep stirring and turning till slightly colored in the hot fat. Next add the tomato and stir again a minute. Pour all into an earthen bowl or granite dish, add sufficient water to swell the rice, cover, set back on stove where it may cook slowly and thoroughly. To be eaten hot—delicious—savory—nutritious.

H. B. M.

TO WHITEN CLOTHES.

Fill your boiler with water, soft preferred, and after shaving the soap into the water put a tablespoonful of coal oil. This will be found to whiten the clothes beautifully and leave no odor.

E. L. D.

TO PREVENT CHEESE MOULD.

To prevent cheese from getting mouldy wrap it in a cloth that has been dipped in vinegar and wrung as dry as possible. Keep in a cool place.

E. C. T.

GREEN LICE ON PLANTS.

If you have house plants which are troubled with little green lice, try breaking up a cigar in bits and sprinkle around the plant.

J. B.

ROCKS.

Two eggs, 1 cup sugar, 1 cup of butter or meat drippings, 2 handfuls of currants, a little cinnamon, 2 teaspoons of cream tartar, 1 teaspoon of soda, flour to stiffen. Take a piece of dough in the hand and form into small cakes.

B. M. A.

WHITE STAINS ON VARNISHED SURFACES.

Saturate a woolen rag with equal parts of linseed and olive oil and apply to the white patch at intervals of a half hour. It depends upon the duration and depth of the stain as to how many applications will be necessary, but persistence in this treatment will positively remove it.

A. L.

A FARM REVIEW OF REVIEWS

SOME GOOD THINGS THAT HAVE APPEARED IN OTHER
AGRICULTURAL JOURNALS HERE SUMMARIZED
FOR OUR READERS

It is the purpose of Farmer's Magazine to reprint articles of merit from other magazines from time to time. It is often impossible for a farmer to take all the magazines that are published, and this department will give him in short form some of the leading articles that have appeared.

Faith in One's Farm

From the Maritime Farmer.

DICKSIE Land Farm at Board Landing Bridge, near Truro, N.S., is not only the home of one of the most promising herds of Guernseys in the Maritime Provinces, but also the home of Mr. Hugh A. Dickson, one of our most enthusiastic and successful young farmers.

Mr. Dickson comes from a family of successful farmers. His father and grand father were pioneers in underdraining and clover-growing in their district. Long before the advent of the Agricultural College they had their farms underdrained with a thorough system, which reached every square rod of their uplands, at a cost of \$50.00 per acre. Mr. Dickson says that he has often heard his father tell of some of their first lessons on the real value of underdrainage, gleaned by observing the results of their own experiments.

Mr. Dickson is a young farmer who is full of faith and enthusiasm in the highest calling open to man. He is full of faith in the future of his province and of the opportunities which it presents. He is full of faith in his farm and the Guernsey cow.

Most people would call such faith as Mr. Dickson evidences a spirit of optimism. Call it what you will. He's got it.

When Mr. Dickson was fifteen years of age his father died, and as he was the old-

est boy he left school, which he had been regularly attending up to that time, and ever since he has been carrying on farming operations, largely under the guidance of his mother for the first few years.

At the age of nineteen or twenty, partly under the spur of having a very productive farm and partly the ambition to do things right he began to branch out and soon worked into a very intensive system of farming, raising ten to twelve thousand bushels of vegetables yearly, keeping about thirty-five milch cows and retailing the milk in the neighboring town of Truro. He carried on the retail milk business for the five years previous to the first of last January, when he sold the milk route. He now wholesales the milk to the man who bought his route. The retail trade was somewhat the more profitable but there was so much more detail to look after in connection with accounts, collecting, etc., and as he had to depend on hired help to deliver it he decided to sell the route.

The breeding of pure bred stock and exhibiting at the exhibitions and fairs made it harder to watch the details of all departments.

Dicksie Land Farm comprises 129 acres under cultivation, 45 of which is marsh land. The marsh is all high and dry and produces the best quality of English hay

and a splendid crop of after grass on which the herd thrives for three or four weeks every fall.

The marsh has all been turned over during the last six years, a crop of grain has been grown on every part of it and it has been reseeded with timothy and clover, and fertilized by the application of 7 or 8 cwt. of basic slag per acre. The result is that this year it produced an average crop of nearly three tons of hay to the acre.

Mr. Dickson and his father before him have always followed a systematic rotation of crops on their uplands. The rotation has been: roots, grain, clover hay and pasture, sometimes varied a little by taking two crops of roots off the same land such as small vegetables following potato crop or allowing it to go two years in pasture.

Mr. Dickson finds two years of incessant pasturing will kill any couch grass which may have gotten into the land. This year the returns from the Dicksie Land Farm garden vegetables amount to about \$1,800, F.O.B. besides the large quantities of mangels, turnips, etc. used for feeding purposes. The sales of vegetables are as follows:

Turnips	\$550.00
Parsnips	400.00
Carrots	175.00
Cabbage	300.00
Potatoes	160.00
Garden Truck	200.00
<hr/>	
Total	\$1,785.00

The Dicksie Land vegetables find a ready market in Truro and they hold it on their merit and they prove to be one of the farmer's main sources of revenue.

We hear a great deal now-a-days about farmers raising their own feed instead of sending so much money out of the country for mill feeds. Mr. Dickson's contention is that this is all right in sections of the Maritime Provinces where it is impossible to market very much farm produce and where land is cheap; but in sections of the country where land is worth from \$100 to \$300 per acre he considers a man would be foolish to raise, say fifty bushels of fifty cent oats to the acre, netting him perhaps \$25 per acre when he could net from \$100 to \$200 per acre by growing vegetables.

Grain growing on Dicksie Land Farm is used as a means to an end viz:—for the purpose of seeding down.

Mr. Dickson says "Let the West raise our mill feeds where land is worth but \$20

per acre. For my part I prefer to follow an intensive system of farming on high priced land."

If a man can grow strawberries on his farm cheaper than he can grow grain, let him sell strawberries at \$600 per acre and buy his mill feed.

Mr. Dickson also considers that the use of hoed crops in the rotation is the only sure way of keeping the farm clean, while grain growing is especially conducive to the seeding of noxious weeds and consequently weedy farms result.

As all grain grown on Dicksie Land Farm is fed on the farm, Mr. Dickson prefers to grow mixed grain as they give a larger yield per acre and stand up much better thus allowing the clover to make a better start.

His seeding mixture consists of 10 pounds of common red clover, 2 pounds alsike and 8 pounds timothy. He finds the common red clover is much more preferable than the mammoth red as the stalks are not so coarse and the common red produces an aftermath while the mammoth red does not.

Mr. Dickson has been experimenting with alfalfa and we would judge that he is on the high road to success in the undertaking. He has one and one-quarter acres, started in 1911, without inoculation, from which four and one-half tons of hay were harvested in 1912, from two cuttings and there is a strong growth left for winter covering.

The Dicksie Land herds consist of 35 milch cows and a number of young stock, which is turned to hay field pastures (as there are no rough pastures on the farm) about the first of June.

The farm rotation is so planned that sufficient hay fields are let out to pasture to carry three head per acre. As the grass has had a good start before the stock is turned out they get all they want to eat throughout the month of June or longer if good showery weather prevails. As soon as the pastures begin to fail, Mr. Dickson commences the feeding of soiling crops to make up the deficiency. The soiling crops consist of clover or alfalfa first, then a mixture of green oats, peas and vetches which had been sown at different periods so as to be ready for soiling about every two weeks. This green feed carries the stock along until the earliest soft turnips will be ready for feeding—the Greystone and Aberdeen Yellow make excellent crops for summer feeding and are very easily harvested.

The Glories of the Kitsilano

By Bruce in The Sunset.

THE stranger in Vancouver, not to say the citizen, is attracted by the wonderful diversity of interest to be obtained from a trip over the Kitsilano car route. It is a scenic railway line on a plan of its own, combining the natural with the acquired charm, and affording scope to that imagination which is latent in everyone. It is one of those routes, so rare in cities, which lends itself easily to the spirit of play. We begin by pretending that we are in a train instead of a street car and that we are speeding from Vancouver to an unknown land.

After traversing the city at almost its entire length by the main streets of Hastings and Granville, in which we get an impression of Vancouver as a modern city—not un-American in type—we leave it behind as we round the corner to the Eburne station. There we see all classes of people awaiting the tram-car which is to carry them far from the city's "madding crowd"—chiefly the Anglo-Saxon race, but also Hindus, Indians, Chinese and Japanese, such a mixture as may be seen at big union stations.

Moving on, we approach the labor palaces of the monarchs of industry, whence the kings of steel, lumber, coal, brick and marble dispense their benefactions far and near. They own a kingdom of their own upon the waterfront of False Creek, with tugs, dredges and scows at their royal command.

At their feet, but a distinct colony by themselves, with a government of their own, live the float-dwellers in the most picturesquely Bohemian-like boathouses, and flaunting to the breeze a fine disregard for the petty conventions of inland life. The inhabitants may sometimes be seen capturing their fish breakfast or hanging out their washing. They have their commercial transactions, too, as witnessed by signs such as "House for sale, furnished," or "Tom Greene's saloon." Farther amid-stream lives the lumber-jack, a picturesque figure in sweater and top-spiked-boots, who may be seen any time in the day walking the logs with careless ease and carrying his pike-pole and peavie-hook. Often he rides the logs as they are towed, raft-shape, down the stream.

The bridge across the Creek possesses as much spirit of enchantment as the draw-

bridge of old which led to moated castles and keeps. There is so much to see and so much to understand. It seldom swings open, and then only for some tall-masted ship or obdurate blue or yellow funnels. Being, for the most part, a one-track bridge it necessitates much mechanical contrivance, and it is interesting to mark the ingenuity and skill employed in conducting a mode of safe traffic with beacon-lights and electrical wires. Not the least interesting device is the right-of-way pole, which demonstrates what primitive people we are, after all, with primitive instincts.

Across the stream lives the Red Man, child of the wandering foot, who seems to have found a stay for his restless spirit in his three-beamed teepee or his log hut. He is secure in his reserves and will have none of his near neighbors, the Hindus, whose settlement savors of Orientalism and the Far East.

Beyond these calling places lies a bit of real railroad scenery, where the car-rails lead between banks cut out for the purpose. The vegetation growing on these banks is practically mountain vegetation. Moss and vines overrun the slopes, and great clumps of bracken, dried up now, intersperse the spaces between the scrubby fir and pine trunks.

As we emerge from the cut and arrive at the first of the little Kitsilano stations we see straggling houses, which, in a railroad trip, are the usual precursors of approaching towns or cities. On arriving at the last station we see to our right the waters of English Bay stretching away in limitless expanse beneath the shadow of the black mountains, whose distant snow-capped peaks can be seen on a day of very rareful atmosphere. To our left is a well-groomed park whose beauty is diversified by hedges and shrubbery of tropical growth. Beyond the park rises Kitsilano, a city in itself. Seen in the glow of the setting sun, it looks like a many-spired minaret-ed city of romance.

This section of the city of Vancouver has grown to such proportions, and has so exceeded the most sanguine expectations of the B. C. Electric Railway Company as to present an unexpected problem of transportation, and we understand they are now entertaining in thought a project for a two-track bridge as a means of obviating their difficulties.

The Trials and Tribulations of a Country Church

THE LATEST United States religious census reports the statistics of one hundred and eighty-six separate and distinct denominations, besides more than a thousand individualistic and independent churches that could not find a place within any of the regular sects. Organized religion in America is a vast, concrete and practical fact attested by fifteen hundred millions of dollars invested in property with overhead fixed charges of about two hundred millions a year. But these figures, observes Joseph H. Odell in a widely discussed article in *Munsey's Magazine*, are somewhat deceptive. Christianity is not as strong as it seems to be.

Especially, continues Mr. Odell, is the country church in America in need of new support and vitality at the present time. The very largeness of its plant is one of its chief difficulties. "From a poetical standpoint," Mr. Odell reminds us, "it is advantageous to have the white spire of a church in every landscape; from a practical point of view, it is a financial and spiritual crime. Ten churches may dismally fail where one would be conspicuously successful. When you overmultiply prophets they become parasites."

Mr. Odell takes a typical case—that of Lake Township, in Wayne County, Pennsylvania. Lake Township has a population of twelve hundred, the people being representative American citizens. They have three post-offices, seven schoolhouses, one bank and one saloon. The church figures are as follows:

- 10 church buildings.
- 14 congregations (two of them meeting in schoolhouses).
- 10 denominations.
- \$30,000 invested in church property.
- \$4,180 raised by churches per year.
- \$500 sent into the township by denominational home mission boards.
- 405 church members—36.75 per cent. of the population.
- 29 average membership of churches.
- \$10.07 average annual contribution per member.
- 40 average attendance at Sunday worship of each church.
- 10 ministers engaged in preaching.
- \$750 maximum salary paid to minister.
- 1 minister with regular college and theological training.

7 ministers with little more than high-school training.

One's first impression from these figures might be that Lake Township is the most intensely religious spot on the American continent. As a matter of fact, more than sixty-three per cent. of its people are not members of any church organization. In a community that provides a congregation for every eighty-eight inhabitants, nearly two-thirds of the total population are outside of the pale. Mr. Odell criticises the ministers as ill-equipped for their task; he notes that the small congregations are necessarily involved in a desperate struggle for self-preservation; but the outstanding cause for failure, he says, is the fact that these churches are not meeting the obvious needs of the community.

"In one part of this particular township there is a book-club, organized three or four years ago. There is one small school library. A patrol of Boy Scouts is being organized in one of the churches. If there were one or two centrally placed churches, with reading rooms and recreation grounds, with agricultural institutes and exhibits at stated intervals, with literary and social entertainments of a high type, with ministers trained to understand and fill the varied needs of the people, there is little doubt that the story would be entirely different. Ten men and ten churches can fail where one would succeed."

The conclusion reached by Mr. Odell from a study of rural counties in Indiana are exactly the same as in Lake Township in Pennsylvania. "We find," he says, "that there are too many small churches; the ministry is ill-equipped for its work; and there is almost complete neglect of opportunity in grasping the peculiar needs of rural communities." The last point is illustrated by an analysis of the manner in which each dollar is spent by the churches.

Minister's salary	.....53 cents
Buildings and repairs	.....20 cents
Benevolences	.....16 cents
Sunday school	.....10 4-5 cents
Social life	.....One-fifth of one cent

The effect of this policy, Mr. Odell proceeds, is visible at once in the composition of the churches. "Out of the ninety-one churches in Marshall County, twenty-five report that they have no young men under twenty-one years of age, and Boone County

has twenty-one churches without young men. With literature brought by the rural free delivery, and lodges at the various crossroads, young men are not likely to flock to institutions which deny their social instincts and offer nothing but sectarian doctrinal papulum."

The immediate need of the hour, Mr. Odell remarks, is not a revival of religion, but a renaissance of common sense; less homiletics and more economics. He proposes, in the first place, that boards of home missions, sustentation or church extension of the various denominations withhold money from any church in an over-churched region. "If a number of rigid sectarians in any given neighborhood have not sufficient charity to worship with their fellow Christians, they should at least be compelled to pay for the luxury of their differentiating dogmas." In the next place, he suggests that the leading men, both clerical and lay, of all denominations of kindred faith should begin at once a propaganda designed to reach the rural districts. "The points of agreement in doctrine and polity should be emphasized, and grounds of union pointed out. Where organic union is impossible or inexpedient, a form of federation should be advocated, by which churches of any given locality could be grouped for worship and social service." In the third place, an economic conscience must be developed in the matter of church finance. Mr. Odell writes:

"Four churches, existing in a kind of suspended animation on a revenue of five hundred dollars a year each, would be a vigorous and aggressive institution if united and possessed of an income of two thousand dollars. The proceeds of a sale of the three abandoned churches would equip a building really adequate to the needs of the neighborhood. Wherever the country church has become vitally related to the life of the community, it has been successful. The ideal is not impossible of attainment, if the farmers will use the same com-

mon sense that they ordinarily give to the establishment of the communal grain elevator, cheese factory, or day school, and if they are not encouraged in sectarian crankiness by denominational leaders and literature."

The country minister, Mr. Odell concludes, must be better trained for his task, and must learn to extend his sympathies. He ought to "know something of the regeneration of the soil, as well as of the soul." But the essential thing is that the local churches should coalesce in such a way that they can establish and maintain a plant that will furnish a worthy expression of their life.

"The village or open-country churches, to-day, are chiefly the one-room type—an oblong, barnlike structure, furnished with hard, straight-backed pews. With a proper amalgamation, that may become one of a cluster of buildings, or a part of a multi-form plant. There should be a reading-room and a library; a play-room, perhaps a bowling-alley and a pool-table; a place for exhibitions and lectures bearing upon agriculture or social enjoyment. The curse of the country is its social sterility, and nothing but the church can safely remove that curse.

"The recreation of the young people should be encouraged and supervised by the church, with suitable grounds—baseball diamonds and tennis courts—and with regular field-days and tournaments and fairs, where such are not already conducted by county or State associations. But none of these ideals can be reached by the present little segregations, each occupied in its vain struggle for existence.

"The only way in which the country churches can regain and maintain their hold upon the people, and minister to the total life of the community, is to find a basis of union and sink their infinitesimal differences of doctrine and polity. Then they will really serve their age as their Master served his."

Thanksgiving a Farm Festival

By W. L. Nelson, in the Breeder's Gazette. AUTUMN in the country is a season of inviting sights and sounds and smells, of happy harvest days and joyous farm festivals. In woodland, orchard and vineyard are nuts in such generous store that the

squirrels do not miss the children's share, wild grapes purple and plentiful, and persimmons and paw-paws sweetened and mellowed by the first frosts. As scarlet and gold of leaf is lost in blending to brown, there bursts into beauty along highways

and by-ways the lasting bitter-sweet whose tiny cups of burnished gold are filled each frosty morning with rubies and diamonds. Brighter still are the colors of the Indian arrow with red and pink in profusion—pink as bright as that of springtime blossoms in which Nature writes her proclamation of plenty. In the Indian turnip red has run riot, while in sumach it tends toward the sombre. Red, too, are the buckberry bushes under which quail feed and where later they find shelter from the snow.

In early autumn, in the orchards which men planted, apples with cheeks reddened by the kisses of sun and frost make beautiful the trees bending with their loads. In the field is the golden corn and the golden pumpkins, for this is the "golden age" of the year. The farmer's storehouse is rich in gold—gold that grows and gold that bears the stamp of the Master's mint. What does it matter now if the stretches of sunshine are shorter, for locked away against the cold that is to come is an ample supply of the late summer sun.

To the ear attuned to nature's music there is in fall-time sounds a matchless melody. There is cheer even in the cricket's chirp, and in the sometimes stillness of Indian summer, a peace almost sacred. Often "through the ghost gray mist of the morning" comes the covey call, the staccato whistle of Bob White. In mid-day squirrels chatter to one another as they put away their winter's store of nuts, and as the day dies wild geese, feathered weather forecasters, take up their flight marked by a rush of wings and a ceaseless "honk, honk."

It is in the twilight hour of an autumn day when the appetizing odors of fresh pork frying, apple butter boiling, or cider or sorghum making are most distinct, that we are most likely to appreciate the meaning of the fall time in the country. In the city, autumn may be a mere matter of calendar calculation, but where dwell rural folk it is a time which marks the fullness of farm festivals and frolics. The old-fashioned husking bee finds a worthy successor in the modern seed corn picnic. For nutting parties, with camp fires, there has been found no satisfactory substitute. Cider and apple-butter making, especially during years of such splendid apple crops, are among the customs generally observed. Then along about Thanksgiving comes butchering time or hog killing, to put it in rural parlance.

All these are red letter days on the farm. They are preparations for feasts soon to follow—for Thanksgiving days by the dozen. The farmer who has so much for which to be thankful, whose fields, orchards, vineyard and garden have yielded of great plenty, enters heartily into the spirit of the established Thanksgiving Day, with its reminder of his partnership with the Master of the vineyard, but just one Thanksgiving Day will not do.

In the country, fall time is feast time. The invitation to eat is even in the air. Everybody has an appetite and something savory with which to satisfy it. Take home-made cider, apple butter, for instance. No highly spiced concoction put up in fancy pails—and sold at fancy prices—can compare with this pure food product that does not need the Government guarantee. Made of sound apples and pure sweet cider it is a wonderful appetite agitator. Eat as much as we please—or rather as much as we can, for capacity must be taken into account—we suffer no ill effects. It is both food and medicine. It is a real "love potion," too, just as much so as any mysterious mixture that ever came from a black kettle stirred by a black "mammy." Mesmeric is the effect it enables its maker to exert upon mere man, especially if he is a city cousin just come to the country.

The work of apple-butter making begins in the orchard where the proper selection of apples must be made. If cider apples of choice flavor are ground in a hand mill, the wine-like cider as it runs into earthen crock or galvanized pan foretells the matchless flavor of the apple butter that is to be. Placed in a big copper kettle and boiled down half, it smells sweeter still. Apples, carefully pared, sliced and cored, are added. Then comes the start at five hours of stirring, but with a revolving paddle, fitted in the kettle so as to sweep the bottom and kept moving by a person comfortably seated in a chair at the end of a long handle attached to the stirrer; this job is easy. Shortly before the cooking has been completed sugar and spices are added, but both should be used sparingly. Almost before we know it a big kettle of apple butter, smooth and fine and without a lump, has been made. It is apple butter such as the money of the millionaire in the city cannot buy. It is food for feasts, and the making of it was fun for all concerned.

Seven Wonders of the Modern World

WRITING in *The Cosmopolitan* Dr. Henry Smith Williams presents an interesting contrast of the monumental wonders of the ancients and the seven achievements of modern science.

The seven wonders of antiquity were examples of engineering or architectural skill or of sculpture on a colossal scale. In our day, such enterprises have become so common that their results have for the most part ceased to cause wonder. In other directions, however, the scientific workers of our time have produced results which excite the astonishment even of the initiated. The publishers of *Popular Mechanics* recently desired to ascertain which among the remarkable modern achievements are best entitled, in the opinion of experts, to rank as the seven most remarkable of the present-day wonders. Therefore they made out a list including fifty-six discoveries or inventions of modern times, all of which might properly be described as wonderful. The list was comprehensive in its scope, including the results of great engineering efforts such as the Simplon Tunnel, the Catskill Aqueduct, subway transportation, and the Panama Canal at one end of the scale, and such achievements of theoretical science as have to do with ultra-violet rays, the ultra-microscope, and synthetic chemistry at the other.

This comprehensive list of modern achievements was sent out to 1,000 eminent men in Europe and America, including members of the French Academy of Science, the Royal Society of London, the great German Universities, and the American Academy of Science. The request was made that each would mark off on the list of fifty-six subjects the seven that seemed to him to represent the most wonderful modern achievements. It is reported that about 700 of the scientists responded. The result of their balloting is not definitive, of course, but it has obvious interest. It presents seven modern "wonders," in the following order: (1) the wireless telegraph;

(2) the telephone; (3) the aeroplane; (4) radium; (5) antiseptics and antitoxins; (6) spectrum analysis; (7) the X-ray.

As illustrating the wide diversity of opinion, it is to be noted that, although the wireless telegraph led all competing wonders by a wide margin, yet the vote for it was only 244, or just over one-third of the total. Meantime the telephone, second on the list, received only 185 votes, or a little over one-fourth of the total. The aeroplane received 167 votes, and the others successively fewer, down to the X-ray with 111 votes.

Of the seven chief "wonders," all but one are familiar to the general public as to their main developments. The exception is spectrum analysis, which is less familiar partly, perhaps, for the rather paradoxical reason that it has been longest in evidence. The first efforts at spectrum analysis were made before the middle of the nineteenth century, and the spectroscope was applied to the analysis of the composition of the nebulae by Higgins in 1864. The perfected instrument, however, is a matter of much more recent development, and its feat of measuring the flight of stars and testing their chemical composition has failed to attract wide popular interest chiefly because it deals with subjects so remote from everyday life.

Of the remaining six modern wonders, the telephone dates from about the year 1876, and the initial use of antiseptics is but a few years older. Wireless telegraphy, the aeroplane, radium, the antitoxins, and the X-ray have all seen their entire development within the past sixteen years. No doubt their extreme newness accounts in part for their selection in the present instance, for of course things seem wonderful somewhat in proportion as they are novel; but, on the other hand, we can hardly doubt that each of these strictly up-to-date discoveries and mechanisms will continue to hold high rank among the things extraordinary of coming generations.

The Biggest Baby Chick Farm

Visit to a Scotch Chicken Farm by a Writer in the
"Country Gentleman"

CANADIANS do not realize that Great Britain has the developments along agricultural lines that a visit there will reveal to them. It will be interesting, therefore, to all Farmer's Magazine readers, to hear what Mr. J. L. Tormey has to say about his visit to the poultry farm of Mr. Robert Miller at Denny, Stirlingshire.

This quaint old Scotch village with a population of about 5,000 is not in itself prepossessing. The principal industries are paper-making, iron-working and coal-mining. At the station I found that Mr. Miller was well known as one of the best patrons of the road. After a drive of three and a half miles over roads better in quality than fifty per cent. of our city streets, through a rather rugged and not especially productive-looking section of Stirlingshire, we came in sight of "Boards," located on a rather non-productive spot. Although not especially adapted to cropping, the land is proving to be one of the best agricultural investments in Scotland, thanks to Mr. Miller's skillful application of good business methods to the poultry industry. A view of over a hundred colony houses that covered about forty acres suggested to me that I was approaching no small or secondary establishment.

An Unsuspected Market.

Arriving at Boards Farm I met Mr. Miller near the house—a fine, neatly appointed stone house, covered with ivy. A neatly kept lawn surrounded by a well-trimmed ivy hedge added much to the beauty of the place and attested the thriftiness of the owner. A lesson or two in the Scotch method of finishing off a home would do no great harm in some of our American locations. I found Mr. Miller as fine a man as one would wish to meet and willing to give information concerning his affairs, of which he had thorough knowledge. Briefly he told me the story of how he came to build up from mere experimentation an industry about which he knew nothing some eight or nine years ago, but which now has reached such immense proportions that he expects to sell over 90,000 day-old chicks the coming year.

Mr. Miller is a man about forty years of age who started to prepare himself for the ministry at Edinburgh. He was, however, forced to abandon this plan and took over the management of the old farm, which has been in the Miller family for over three hundred years. For a few years he tried straight agriculture, and about seventeen or eighteen years ago he started in the chicken business for egg production—even though he was laughed at more or less by his neighbors. Beginning moderately with about 100 crossbred hens of good laying qualities, Mr. Miller was successful. Thinking to double his output he doubled the number of hens, but had comparatively poor results. He recognized the cause—too much crowding—and the colony idea struck him as being proper. While in the egg business he aimed to keep only hens that would produce from 120 to 130 eggs a season, and by careful study he learned the fine points of the chicken business and mastered the mysteries of the incubator. In the commercial egg business a net profit of five shillings was expected from each hen and five or six shillings was expected to pay the feed bill.

How He Started.

His start in the day-old-chick business came as a sequel to a strange coincidence. About eight years ago a woman in the town of Denny who had no incubator and wanted some chickens asked Mr. Miller if he would let her have 50 chickens from one of his hatches about the first of July. At that time he hatched only enough chicks to supply his own required quota of new laying hens. His incubator hatched 400 chickens. As the request came at a time when Mr. Miller had all his hatching done, he found himself with about 350 extra chicks on hand. He inserted a small advertisement in a poultry paper. The result of that one advertisement was that he worked his machines steadily that year until October and produced nearly 4,000 chicks for sale.

At once struck with the idea that this might be a lucrative part of the poultry business, Mr. Miller began a campaign of

advertising the following year and sold 16,000 chicks; the third year he sold 32,000; the fourth, 48,000; the fifth, 56,000; the sixth, 66,000. Last year his season ran from February to November, and he sold 74,000 in all parts of Great Britain, from the Shetland Islands to Kent and over in Ireland. He expects the number to go to 90,000 by the end of the season of 1912. He now operates 48 big 400-egg machines and 6 420-egg machines; has 100 colony houses, of which 80 are for breeding chickens of the laying hens and 20 for the chicks which he keeps to replenish the stock of hens. About 1900 laying hens are kept busy and 2,500 chickens are raised annually on the farm to replace the old hens, it being considered false economy to keep a hen after she is two years old, and many of the cocks are sold at the age of one year. Only the best-bred chicks are kept for home use to insure customers young birds of the best quality.

The Leghorn a Favorite.

The advantage of selling the day-old chicks over the commercial egg business is that one reaps the benefit to be derived from carefully conducted purebred sales. Mr. Miller breeds purebred Black, White and Cuckoo Leghorns, Black Wyandottes, White Wyandottes, Buff Orpingtons, Rhode Island Reds and a few Partridge Wyandottes. He favors the Leghorns quite strongly on account of their superb laying qualities. Some six or seven years ago a black-and-white sport came from the White Leghorns and from this was developed, by selecting and mating, a pure strain which Mr. Miller favors very strongly. Just now the Rhode Island Red is very popular in Scotland and Mr. Miller last year imported 40 for breeding stock from a well-known breeder in America. Besides the day-old chicks there are sold from the farm breeding stock, both male and female, and about 15,000 to 16,000 eggs for breeding purposes during the season. The prices of chicks average about eight shillings a dozen. The prices of setting eggs run from five to nine shillings a dozen. The hens are sold for about five shillings each.

There must needs be considerable system about this establishment, and during the hatching season Mr. Miller is never absent from the farm. The hens are all kept in colony houses, each containing about 35 hens and 3 cocks. Each breed is kept in a

colony by itself, so that there is no danger of crossing. There is no rule as to the number of houses in a colony. The colony idea is preferred to the system of a separate yard for each house, since the hens get more exercise and a better range of grass. Mr. Miller says that the grass is much better on the 40 acres that have been set aside for the chickens than it was before the poultry plant was started, and horses and cattle seem to relish it a great deal.

In one colony covering seven acres 550 hens are kept. In addition to the hens over 1,000 chicks are also kept until they are about ten weeks old, when they are transferred into a common 16-acre range set off expressly for young growing breeding stock. They are kept on this range containing 20 colony houses until the end of the season, when they are brought back to the colony houses of their respective breeds to replace the hens which are sold off at the end of their second season. In two other colonies of $2\frac{1}{2}$ acres each are kept about 640 birds and about 550 are kept in 31 houses with individual yards. In the big colonies each acre has about 100 birds, while in the small ones there are about twice as many.

The Cost of it All.

The business end of the establishment is carefully attended to and an idea of the amount of supervision necessary can be obtained when I say that the farm has sent away as many as 2,300 chicks in one day. One of the largest hatchings was 3,000 chicks in one day. During the busy season about 150 letters are received daily and the stamp bill alone from January to June, 1912, amounted to over \$600. Advertising costs about \$2,500 a year and Mr. Miller contemplates extending the campaign the coming year. Other printed matter runs to about \$1,000 annually. The bill for labor amounts to about \$1,500 with board. Young, untrained men are preferred because they have no ideas of their own which may not coincide with those of Mr. Miller. Orders are received in all sizes from 3 up to 1,100, which is the largest single order ever received. All orders must be accompanied by cash, and all are received with equal courtesy and dispatched in regular order. During the latter part of the season special inducements are offered to the buyers and Mr. Miller sends out pamphlets, advertising, post-season specials, so to speak.

Efficiency for Hydraulic Ram

An Orchard and Farm Writer tells about the Principle
of the Ram in Forcing Water

It takes only a small fall for a farmer to make use of the hydraulic ram to have plenty of running water in his buildings.

The hydraulic ram as an automatic machine has been in use ever since it was invented by Joseph Michael de Montgolifer in 1796. The principle of the ram is very simple. The machine must be located at a point where a fall for power may be obtained, as on the banks of a stream, pond, lake or near a spring from where the water can be brought in a pipe from a higher level to give the required head to operate it. The occasional submergence of the machine will not interfere with its operation, which may permit of a more desirable location where the total effect of the fall might not otherwise be obtained because of an occasional flood or high tide.

The difference in level between the water supply and the ram forms the power head. The direct line of pipe connecting the ram to the power water is called the drive pipe. The difference in level between the ram and the reservoir or tank into which the water is pumped by the ram forms the pumping head. The smaller pipe leading from the ram to the reservoir, tank, house or other point is called the delivery pipe.

In operation, water enters the drive pipe from the source of supply and flows toward the ram, where it is allowed to escape through the open working valve. When it reaches a certain velocity the working valve is suddenly closed by the force of the water. It is at this moment the ramming effect takes place and the water, being prevented in going through the working valve, which is now closed, enters the air chamber through the delivery valve, or valves. The pressure in the air chamber stops the flow of water in the drive pipe, which causes a reaction or rebound of water, producing the effect of a momentary reversal of direction of flow. This allows the working valve to again open of its own accord and water commences to flow out to the atmosphere again as it did in the first instance. This operation goes on continuously, repeating itself from twenty to several hundred times per minute, depending upon the conditions as to pumping head and power head. The supply of air in the chamber causes a steady delivery of water from the ram into the

reservoir, no matter if it enters the chamber in an intermittent way.

In the double acting ram the impure water is used as power by conveying it through the larger drive pipe to operate the machine, which forces the limited supply of purer water up through the smaller discharge pipe leading from the ram to the point of delivery.

Where Practicable.

The ram is practicable where the water supply is only eighteen inches higher than the machine, which should be located not less than twenty-five to fifty feet from the water supply point in order to secure the velocity of water requisite to work it properly. As the height of power head increases, the more powerfully the ram operates, and its ability to force water to a greater elevation and distance is correspondingly increased.

The relative height of the source of supply above the ram, and the elevation to which it is required to raise, determine the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is conveyed with a given fall. Also the distance the water has to be conducted, and the consequent length of pipes, have some influence on the quantity delivered at the point of discharge as the greater the length of pipes through which the water has to be forced by the ram the more friction there is to overcome by the machine. A fall of ten feet from the water supply to the ram is sufficient to raise water to any height less than one hundred and fifty feet above the location of the machine, while the same amount of fall would also raise water to a point considerably higher, though the supply delivered will be proportionately diminished as the height and distance increase. For ordinary purposes it is sufficient to say in conveying water, say one thousand feet, it may be safely calculated that one-seventh of the water can be raised and discharged at an elevation five times as high as the fall, or one-fourteenth part can be raised and discharged, say ten times as high as the fall or power-head applied to the ram, and so in like proportion as the fall or height is varied. Thus, with a fall

of five feet, of every seven gallons of water taken from the source of supply one gallon may be raised twenty-five feet, or one-half gallon fifty feet, or with a ten-foot fall one gallon for every fourteen may be raised to the height of one hundred feet, and so in proportion as the fall and height are varied.

The first cost of a ram is practically the only cost, and with the occasional renewal of inexpensive valves it will last a number

of years and give a service that is similar to a gravity system, but at a much lower cost of installation. Practically no attendance is required and where an economical use of the water supply is of no importance and natural conditions will permit of its use it is cheaper than any other form of water supply, for it will probably not be necessary to touch it from one year's end to another.

The Lighting of Farm Homes

The Comparative Costs of Four Systems as given

by Kimball's Dairy Farmer

TO farmers, who are looking around for improved lighting systems, there are four improved lighting systems that present themselves, viz., acetylene gas, gasoline, electricity and kerosene mantle lamps. Alcohol might be considered as a lighting fuel, but at its present price is prohibitive.

The results of comparative tests made by R. M. West, of the Minnesota Experiment Station, indicate that kerosene burned in a mantle lamp, as compared with acetylene gas, illuminating gas and electricity, is economical and efficient, and that a 16-candle power light may be maintained giving 17,000 candlepower hours for \$1; while to give the same economy alcohol would have to sell at from 3½ to 5c per gallon as compared with the present price of 59c. A kerosene mantle lamp with wick feed can be purchased at from \$3 to \$4.50, which, according to the above tests, burns satisfactorily with both alcohol and kerosene.

The results of comparative tests of the lighting values of gasoline and alcohol made by J. B. Davidson and M. L. King, of the Iowa Experiment Station, show that alcohol of 94 per cent. purity must be sold at from 11 to 17c per gallon to compete with gasoline for lighting purposes at 20c per gallon. The gasoline lamp and gasoline gas lighting systems operate on the same principle and differ only in that the latter can supply one or several lamps. Gasoline gas when properly mixed with air burns with great heat, and when burned in a mantle lamp heats the mantle to incandescence and gives a good white light. In both of the gasoline systems a few minutes must be taken for generation, during which a small quantity of gasoline is burned in a generator cup,

heating the gas supply pipe, which causes the gasoline to vaporize and form a burning mixture very readily. In the gasoline lamps the feed is by gravity or by air pressure and in the gas generators by air pressure. The gasoline lamps that underwent satisfactory tests at the Iowa Experiment Station were gravity feed lamps, using a clear, pearl-glass chimney and a 4-inch mantle with ¾ inches of the mantle exposed to heat. A gasoline lighting system is fairly safe when judgment and caution are exercised in its operation. Especial care should be taken to prevent leaks, as gasoline gas is heavier than air and settles in a layer at the bottom of the room, the top of the layer forming a highly explosive mixture with air.

Acetylene Gas.

The acetylene gas lighting system is considered safer and more sanitary. Acetylene gas is a product of the combination of water and calcium carbide. The residue, slaked lime, makes a good fertilizer. Commercial carbide yields from 4¼ to 5¼ cubic feet of gas per pound, requiring about 0.562 pound of water for complete decomposition. Acetylene gas is colorless, tasteless, lighter than air and has a pungent odor which easily enables one to detect a leak. It burns with a luminous white flame with no perceptible smoke or odor, and the light, on account of its whiteness, is easy on the eyes and very desirable for domestic use.

The results of tests made by I. T. Osmond, of the Pennsylvania Experiment Station, show that acetylene is much more sanitary than coal gas, kerosene or gasoline for lighting, since it takes up less ox-

xygen from the surrounding air and forms less carbon dioxide per unit of gas burned than any of these three.

J. D. Bowles, of the Missouri Engineering Experiment Station, estimates the total cost of an acetylene lighting system for a country home, including fixtures, installation, etc., at about \$285, with a total yearly cost of operation of about \$67. He also estimates that an installation omitting several of the more elaborate fixtures and handy devices would cost about \$225, with an annual cost of operation of about \$50. An acetylene gas lighting system requires judgment and caution in operating for safety and efficiency.

Electric Lighting.

The modern farm electric lighting system, although more expensive, is very efficient and satisfactory. It has an element of safety when properly installed and operated which the other systems do not have. The element of danger which is inherent in high voltage municipal light plants is eliminated entirely by the low voltage required to operate the number of lights sufficient for the average farm. The farm electric lighting plant consists essentially of a small gasoline engine, dynamo, storage battery, switchboard, transmission wiring, lamps, fixtures, etc. The storage battery can be charged with sufficient energy to run the entire system for at least one night, thereby eliminating the necessity of starting and stopping the engine whenever a few lights are needed. The high cost comes in the

storage battery, as one large enough to give sufficient voltage to operate the lamps on a farm is rather expensive. However, the advent of the tungsten lamp has greatly improved the situation, since one of these lamps will produce about three times the candle power that can be produced by an ordinary lamp with the same amount of electricity, making possible the cheapest kind of plant.

In designing and selecting a system an estimate should be made of the number of lamps and the highest number of lamp hours required. The storage battery should be large enough to a little more than accommodate these lamps; the dynamo should be of such size as to charge the battery against its own voltage and must, therefore, be of higher voltage than the maximum voltage of the battery. The gasoline engine should be large enough to operate the dynamo and cover its own and the dynamo's losses.

The introduction of the improved tungsten filament lamp has made it possible to greatly reduce the cost of such plants. Mr. Amrine, of the Illinois Engineering Experiment Station, estimates that a plant having 13 25-volt lamps and using a maximum of 35½ lamp hours daily requires a 15-cell, 40-ampere hour storage battery, giving a pressure of about 39 volts, a one-half kilowatt dynamo, and a two-horse power gasoline engine. This system, including all equipment, fixtures, labor of installation, etc., costs about \$550, with an average annual cost of operation of \$8 to \$10.

TO GRACIA IN HEAVEN

Too soon bereft am I, sweetheart, too soon!
 Too long and void is life to wander through
 Until the blessed God bestows the boon
 Of that last call when I shall follow you
 And blend our souls in ultimate attune—
 O love—O star of white in fields of blue!

—F. B. VROOMAN.

OUR PATTERN DEPARTMENT

Note.—An immense number of orders for Farmer's Magazine patterns arrive at the office daily. Strange as it may seem there are many who forget to sign their names, many who forget the money, many who neglect to state the size of the patterns required and many who send their orders to our Branch offices instead of to the Central office at Toronto. Ladies ordering patterns of Farmer's Magazine so as to avoid error and delay will please observe the following conditions:

First, address your letter to the Farmer's Magazine, 143 University Avenue, Toronto, Ontario.

Second, write on one side of the paper only, state clearly what you want.

Third, enclose the money.

Fourth, sign name and address plainly.

Comply with these conditions carefully and it will be our fault if you do not get your patterns within a few days after the arrival of your letter.



4847

4847—BOYS' RUSSIAN SUIT.

This suit is a little different from the common one, having a broad panel effect in front and back, and a side front closing. Galatea, linen, gingham, serge and the like are suitable materials.

The pattern, No. 4847, is cut in sizes 2, 4 and

The pattern, No. 4847, is cut in sizes 2, 4 and inch material. Price of pattern, 10c.



4361—NEAT DRESSING SACK.

The shirt-waist dressing sack is excellent for the Fall and Winter wear, the long sleeves and high neck being very acceptable. It can be made with plain or tucked front, and with plain or bishop sleeves, sateen, etc., will be pretty for a dressing sack.

The pattern is cut in sizes 32 to 44 inches bust measure. Medium size requires 2½ yards of 36-inch material. Price of pattern, 10c.



5731

5731—LADIES' YOKE DRESS.

This graceful model would develop attractively in any of the exquisite woollen materials that are being displayed for winter, and outline an effective dress which is easy of construction. This dress can be made with or without the yoke facing, and with long or short sleeves.

The pattern, No. 5731, is cut in sizes 32 to 42 inches bust measure. Medium size requires $3\frac{1}{2}$ yards of 50-inch material, with $\frac{1}{2}$ -yard of 18-inch allover. Price of pattern, 10c.



5913

5913—LADIES' DRESS.

Here is a clever costume in blue and white striped voile with blue satin collar and cuffs. The dress is stylish and smart, but quite easy to make. It closes at the back, and the pattern provides for a separate guimpe. The collar and yoke are of all-over, and the whole appearance of the garment is rich and attractive.

The pattern, 5913, is cut in sizes 32 to 42 inches bust measure. Medium size requires for the dress $4\frac{1}{2}$ yards of 36-inch material and 1 yard of 24-inch satin, and for the guimpe $1\frac{1}{2}$ yards of 36-inch material and $\frac{3}{4}$ -yard of 22-inch allover. Price of pattern, 10c.



5292—LADIES' WORK APRON.

For kitchen or studio work a large apron that completely protects the dress is necessary. Here is a good design for such a garment. It is made in princess style, and has two large pockets. The apron fastens on the shoulders. Gingham is the best material to use.

The pattern, No. 5292, is cut in sizes from 32, 36, 40 and 44-inch bust measure. To make the apron in the medium size will require $4\frac{3}{4}$ yards of 27-inch material. Price of pattern, 10c.



4635

4635—BOYS' SHIRT-WAIST SUIT.

The shirt waist suit is a favorite with all boys. The blouse is made with a back yoke and with removable collar. The trousers can be finished with or without a fly, and with legbands or elastics.

Serge or cheviot can be used to make this suit. The pattern, 4635, is cut in sizes 4 to 12 years. Medium size requires $2\frac{3}{4}$ yards of 36-inch material. Price of pattern, 10c.

OUR DRESS DEPARTMENT

Some Recent Ideas in Neckwear



One of the new mid-season milling models worn with a Shetland veil. Neckwear is inclined to be fussy and important and the collar of fine embroidered net edged with a ruffle of Valenciennes lace illustrates its prominence. With this dress is worn a guimpe of embroidered net and accordion pleated chiffon which also indicates another strong feature in dress accessories.



Neck ruche and muff of marabout and ostrich. The color is taupe grey, and the long ties are of ribbed velours.



Draped gown of deep Persian blue, plain and velvet brocaded charmeuse, with vest of blue chiffon over white. Gold passementerie masks the closing, and is repeated in the girdle effect at the waist. The sleeve is one much used for dressy gowns at present, and would seem to point the way for similar sleeves next spring. Back and front combined give a clear idea of the latest form of collar. The collar is of heavy Russian lace, and has an edge of the brocade. Note the bolero effect given the waist at the back.



Suit of novelty cord silk in black and leather brown. The vest and collar is amber faille, the fur is raccoon. The buttons are of amber glass, and the button holes bound with black. The waist of the coat blouses under a peplum fastening with a girdle effect in front. The skirt shows the scant draping now the mode. The sleeves are a little over $\frac{3}{4}$ length, and are finished with a frill of ecru shadow lace.

A Spring Millinery Hint



Advance spring millinery model on the Tain order—The underbrim is of velvet and the fancy feather is of straight ostrich.



A group of ski enthusiasts, taking a winter outing in the country. There is a growing tendency for city dwellers to spend their Thanksgiving, Christmas and Easter holidays in the country as well as the regulation summer ones.

SNOW TIME IN CANADA

By Mary Spafford

It is becoming increasingly the custom in Canada for people to spend their festive holidays—Thanksgiving, Christmas, New Year's, Easter—in the country. Especially in this time of the Yuletide celebrations. Particularly timely, therefore, is this article, "Snowtime in Canada," which describes something of the charm and beauty of Canadian rural life in the winter months. It conveys a new conception of its grandeur and presents new phases of its pleasures.

A CANADIAN country winter begins, to all intents and purposes, when preparation for it becomes necessary. In the purple twilights which mark the fore-runners of winter days, one comes in from the outside world intoxicated by the cold, fall air, and conscious mainly of but two sensations—sleep and hunger. There are lights on the supper table, and the things which taste best then are smoking-hot dishes—baked beans and brown bread; Johnny Cake; baked potatoes; and baked apples with the autumnal blush still vivid on their cheeks.

But some day, as one stacks one's beans in frowsy heaps in one's devastated garden, or gathers the last of one's tomatoes, thrillingly prophetic from the

darkening heights will fall the "honk" of the Canadian wild goose, as with unerring instinct he leads his squadron southward before the first snowstorm. However often the observer may have heard that sound, he stands with quickened pulse to watch the stately wedge-shaped throng wing by; its leader out ahead, instinct with authority—pathetically alone in his high trust.

Fainter and weaker comes back that guiding cry. Dimmer grow the swift-dimishing forms till they merge into a single, wisp-blown speck on the southern horizon, and one finds oneself staring—forsaken and left behind—into the sky where they have been, while over the dying summer a sudden, ominous shadow seems to drop, like the first

light folding of a pall. Then one realizes that the air is pregnant with winter, and unfinished tasks are rushed upon, poste-haste.

In the rural districts of Canada the mere making ready for winter is imbued with a sort of portentous excite-

earth, or fragrant balsam boughs, as an encourager of winter warmth. The more pretentious farmers, who carry considerable live stock on their farms, get the cattle down from the hill pastures, and, incidentally, experience an enlivening time in capturing the



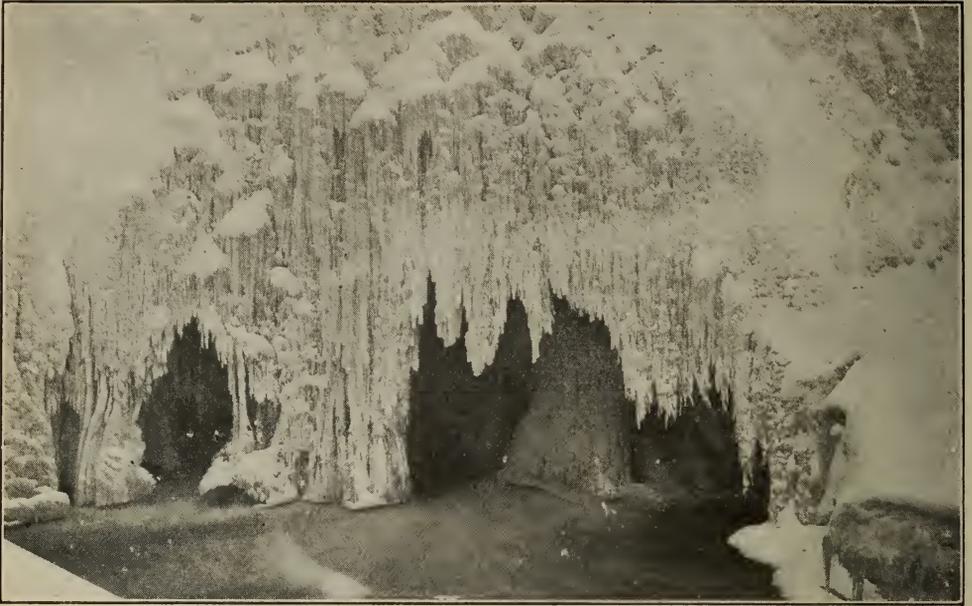
"The streams are not tight-frozen yet."

ment, where members of the human family identify their interests with those of the animal and vegetable worlds, in preparing for the great change.

If one is a farmer of modest heritage, one banks one's little house about with

"young stuff"——calves born in the pasture, which are as wild as deer, and as unapproachable.

If the farmer has a front cellar with an earth or sand floor, he subjects his lately-pulled beets and turnips to a second burial—drawing them forth as re-



Winter's artist work.

quired during the winter, and rejoicing to find them in as firm a state of preservation as when they were interred.

In the late pause before winter snows have fallen, the country housewife performs the last kind services for her garden family. She tenderly detaches the honeysuckle from its trellis support, and covers it with straw; she swathes the half-hardy roses in winter wrappings, and tucks the strawberry bed beneath a blanket of fir boughs. Along the roadsides, or on tree-bordered lawns, where the maples' gorgeous burden now lies sere and pungent, children are seen frolicking madly amid the rustling leaves, and pressing them into bags to be used as winter bedding in stables and hen houses.

Now, also, the entire family of many a farmer occupies itself with drying apples, destined for mid-winter sauce and pies. The sourest apples are best for this purpose; the variety known as the "Kentish Fillbasket" being especially well suited. The apples are pared, cored, and quartered, then strung by threaded darning needles in long white chains which are hung in loops and festoons about the kitchen stove to dry, or

are laid on trays in an open oven where they warp and shrivel till they are grotesque and leathery shapes, distorted past recognition, but fitted for keeping purposes. And dear to the heart of Canadians is the rare red apple sauce which these dried apples make, when allowed to swell the previous night, and to simmer slowly on the back of the stove for a whole day.

The first white plastering of snow is joyfully hailed by the children as an infallible sign that winter has arrived. But older heads know that between this unstable forerunner, and the Frost King's reign, come steadfast, penetrating rains, and brutal winds which range the land in a fury, and hubbly frozen roads where the earth temporarily stiffens, and blanches, to meet the first snow flakes; then backslides into mud, again.

The old saying that the snow which lasts must fall in mud, is generally correct. Some night you go to bed with the insistent wash of rain in your ears, and in the morning it is a fairy world. Every branch, and twig, and twiglet, is rimed with soft aerial puffing. The crotches of the trees hold the snowy fluffs awkwardly, as though unused to



"The slow-crawling wood teams, which groan and creak laboriously over the snowy roads—the drivers weather-bronzed; the horses often white with frost, and enveloped in a mist made by their reeking sides and smoking breath."

such dainty burdens; and the veranda posts wear huge white helmets, piled soft as thistledown. After a time, the sun looks out to ravish the white world with a gold glory, and diamonds thick as dewdrops stud the mighty, spotless blanket of the snow—great brilliant things, shot through with light!

On the edges of the streams, which are not tight-frozen yet, the naked trees shudder in a refined agony of cold, and startling the season from its new-born



"One and one-half cents per cake is paid to the ice harvesters for the great greenish squares which they cut from the parent bed."

lethargy, comes the sound of the first sleigh-bells.

The voices of the sleigh-bells. They are so instinct with variety, so imbued with associations, and memories. Sometimes they are thick with frost-rime, and ring out hoarsely, as if their tongues were furred beyond action. Sometimes they dash, silvery-clear, across the snow, in an abandonment of glee. On the wood-teams, their tones are deep and solemn; always, as befits their steady-going connection with the work-a-day world. Punctuating the monotony of November and December, come

the church oyster and chicken pie suppers; and as Christmas approaches, little cliques of village girls begin to work diligently upon dainty gifts for their friends and relatives—meeting at one another's houses with their bright work bags, while for two or three hours in the afternoon they sew and chat over the gay Christmas trifles. Sometimes the girl hostess will invite them to a real sit-down supper. Sometimes it will be five o'clock tea, with oyster patties, or cream puffs, as a toothsome innovation.

One of the episodes which we, as country Canadian children, used to associate with the short dark days of December, was "killing the pig." We would see the respectable porker gradually attain a condition of helpless corpulence. Then, in the dusky closing of some short-lived day, our unsleeping vigilance would discover a squad of men making their way around the corner of the barn, and revealing something in their uncompromising aspect which caused our hearts to flutter with forebodings. Later in the evening, still a-thrill with hor-

ror, we would see from the dining-room window a stark, white figure stretched on a sort of litter in the lee of the barn, and illuminated in a ghastly way by the flare of lanterns, while a smoking caldron stood near by, and the figures of the men flitted busily here and there.

The flashing lanterns, the blood-stained snow, the dark shapes of the men, made a scene which to us, was the embodiment of the weird and the uncanny; quite unconnected with the sausages, souse-meat and juicy roasts, which were names to conjure by in the days that followed.

There seems to be a growing custom for city dwellers to spend their Thanksgiving, Christmas, and Easter holidays, as well as their summer ones, in the country. Last winter, a jolly party of city boys and girls, known to the writer, and accompanied by a chaperone, spent the week after Christmas in a picturesque village resort which they had never seen before in its winter garb. Each day was dedicated to some out-of-door amusement, and the landlord had no cause to complain of appetites when his guests came trooping in from a snow-shoe tramp, a run on their skis, or a tobogganing expedition, with cheeks as red as holly berries, and eyes as clear as summer trout pools.

About the middle of February, we of the country expect with philosophic calmness the really pretentious snow storms of the season. The air seems full of spun glass particles, which well-nigh cut the blood out of one's face with their relentless lash. Through the white frown of the blizzard a bleary-eyed sun shines faintly, and across its pallid face go the driftings of the storm—



Winter fishermen keeping water over their "tip-up" sticks, which are driven slantwise over the ice-holes, and arranged with leather bobs which fall when the fish tug the lines attached.

shredded, phantom-like things, floating ever on and on. Two such storms generally occur in a season; three days comprising their duration, when the Frost King yields in clear-flung brightness to the hoarse voice of the little red snow-plow engine, which, brow-beetled with icicles, struggles to the rescue of a trainless, snow-submerged community.

In the country, in Canada, skating constitutes one of the orthodox winter amusements, since a lake, river, or pond, in the vicinity generally affords good



Cold weather sport—fish from under the ice.

skating at some time during the season, or can be kept cleared by the boys. One memorable Christmas, the lake behind the writer's house was frozen in a lineless, gleaming sheet from edge to edge. Ah, the rare joy of it! Five miles of glare ice floor where one's steel blades

ing on isolated farms, consists chiefly in doing the "chores," and cutting and drawing wood to sell in near-by villages. These slow-crawling wood-teams, driven by weather-bronzed men in bright toques and sashes, line the village streets in almost continuous squads on mid-



The fascinating hoar-frost mornings when the trees are fuzzy with prickly, cobweb stuff.

could clip the shimmering mirror mile on mile, in a clangorous embrace. When the very vials of atmospheric purity were unbottled, regardless of economy, and one grew drunk with the air, the wild rhythmic motion, the lust of speed!

The mid-winter work of farmers liv-

ing on isolated farms, consists chiefly in doing the "chores," and cutting and drawing wood to sell in near-by villages. These slow-crawling wood-teams, driven by weather-bronzed men in bright toques and sashes, line the village streets in almost continuous squads on mid-

gingly, or not at all, and the sledges groan and creak laboriously over it; the horses white with frost, and enveloped in a mist made by their reeking sides and smoking breath.

When a village borders on a lake or fresh-water pond, cutting and drawing ice, gives employment to a number of men. The ice-vendor lays in a supply for the following summer's trade, and often private individuals get a stock first-hand for their ice-houses; paying one and one-half cents a cake to the men who, day after day, saw the great greenish squares from the parent bed.

Other men of fluctuating and indefinite trade, constitute themselves winter fishermen, and wage a cold and tedious means of livelihood by fishing from holes cut in the ice. They generally build a little shanty in close proximity to a good fishing-ground, where they store their tools, and retire at intervals to warm their benumbed fingers, and beguile the monotony with soul-refreshing "yarns—keeping, at the same time, a sharp surveillance over their bristling grove of "tip-up" sticks driven slantwise above the ice-holes, and arranged with leather bobs which fall when the fish tug the lines attached. The fish (consisting mainly of pickerel and lake trout) are sold to the village at about ten cents a pound. The demand often exceeds the supply, as the flesh of these fish, freshly taken from the ice-chilled water of the lake, is particularly firm and sweet-flavored.

With the Canadian farmers, winter is the social time of the whole year, since then, if ever, they enjoy what is known as a "slack" season. In the villages, too, a varying tide of social life is always kept up. In a certain village known to the writer, each succeeding winter for a number of years, has brought its distinct and favorite amusement. One winter it was evening parties, where guessing contests of every description, were indulged in. Another year, the lot fell upon public dinners, given always for some ostensible reason, when the village folk—ladies, gentlemen and young people—would congre-

gate to enjoy an excellent menu, followed by speeches, toasts drunk in water, and music. It was a simple and pleasant way of bringing people together, and of promoting sociability.

Canadians are accustomed to regard winter as a single climatic condition. In reality, the most varied, and fascinating changes are rung upon the central theme. At times, the sunset colors are boiled to strongest dregs, and smeared in bloody welts, on the low south-west sky. Seen through a filter of dull-black tree trunks, over a stainless waste of snow, they seem to mark the trail of a red and fiery hand.

There are days when the winter world is dressed in the innocent baby colors of blue, and white. Such a ravishing, childish blue on the hills! Such a deepening, tender blue in the radiant sky! Such a white-swept earth, reaching away and away to the mountains!

There are the hoar-frost mornings, when the trees are fussy with prickly, cob-web stuff, and the snow is gray-gummed with a dazzling, frozen mesh.

There are the careless, inconsequent little snow storms, hardly caring whether they snow, or not. There are the fine, sifting storms which unobtrusively, but steadily, pack their tough crust, and drift the roads level. And there are the business-like snow storms, when the flakes come down nearly straight, are fair-sized, and very soft and downy. As one looks up, they appear a pale-gray color, and swarm and swirl in mighty conflict, like a tangle of mammoth mosquitoes. Sometimes a flock of snow flakes falls daintily, and separately, with the sun filtering through them—pale-gold, aerial things which spurn the ground, so lightly do they touch it.

But surpassing all these in magnificence, in wonder, in awesomeness, is the ice storm. It ushers in days that are pitiless and bitter, but beautiful as a dream. The trees stand stiffly, helplessly, in a glittering ice casing: run, as it were, in a mould of transparent sugar syrup which has cooled, and hardened on them. The sun dances cold and bright on their predicament, and a bru-

tal wind sings through them. One who has never heard the sound cannot imagine it. Those who *have* heard it, will never forget it—that awful singing in those anguished tree tops. Even the horses, as they pass beneath with sledges, look awed and startled at the wild, rasping dirge.

Following the due order of things, come, at last, our Canadian spring mornings—typical, charming, inimitable. There's nothing like them in the world! They ravish the soul out of your body in ecstasy. The air is a tonic, distilled to intoxication point. The surface layer of snow, slightly thawed by the warmth of the previous day, has frozen during the night, and will bear your weight. Places are open to you on these radiant mornings which will be inaccessible when the ardent sun has again pressed the chaste snow to its yielding; and for a few exhilarating hours you can pass an unceremonious

“time-o'-day” with the tops of apple trees, or cultivate a walking acquaintance with the submerged tips of fence pickets.

And now, if you're a housewife, with the heart of woman in you, you make “vanity,” and old-fashioned twisted doughnuts, and quivering custards, and lemon pies, for your family's delectation. And if you're a man, and a farmer, you watch with growing impatience the brown-backed ridges come through on the hill sides, for the action-inciting influences of seed-time, and spring plowing, have cast their feverish spell upon you.

From the barns the bleat of newborn lambs sounds weak and shrill, and in the blood-cells of the maples the sap is stirring. Already, the “hounds of spring are on Winter's traces,” and we are trespassing on the precincts of another season.



A snowshoeing expedition in readiness for the start.



By Grasmere

“To Idealize one Spot in Nature is Every Farmer’s Privilege.”

KEEP the poultry house dry, well ventilated and sunny.

The poultry mating pens should be arranged for this month.

Pure air is one of the best medicines in the live stock barns.

Keep the sheep in open or well aired pens, free from dampness.

Use some good disinfectant in your stock pens every three weeks.

Feed the horse a few carrots, and molasses meal this month.

If your hens do not start to lay this month, the fault is not the hen’s.

Have you named that farm of yours yet?

Do you keep any books of your farm operations?

Have you a camera and a scrap book?

Grade your potatoes before marketing them.

Nobody wants all your little potatoes mixed in the bag with the others.

All remaining useless cockerels should be fattened and sold this month.

Increase the rations of meal slightly to the fattening cattle this month.

What about organizing a Grange or Grain Growers’ branch in your neighborhood?

If you have to buy stock to make new matings among the geese and ducks, look after it this month.

If any animal shows any lack of thrift, do not trust to luck for its recovery. There is a cause. Find it.

Breed this month to get the litters in early part of May, when grass and sunshine make their advent welcome.

Use a pure bred sire every time, for defects transmit themselves far more readily than do the good points.

Arrange the sheep feeding racks so that they will get as little dirt in their wool as possible.

Give the horses regular exercise in the open. Many paddocks around the barn are an excellent thing.

The brood mares should have their shoes removed this month if they are not doing team work.

The ox and the mule get very little attention this month, but some care would make them more serviceable.

Spraying may be done on the dormant trees this month if the weather is mild enough to operate.

This is the best month of all for the taking of a farm inventory. Know where you stand each year.

The camera will teach you many things of interest from year to year in your live stock work.

The modern farmer believes in selling a good article and being honest with his buyers.

Do not be so grasping for dollars that your own family has to go away from home to taste a chicken pie.

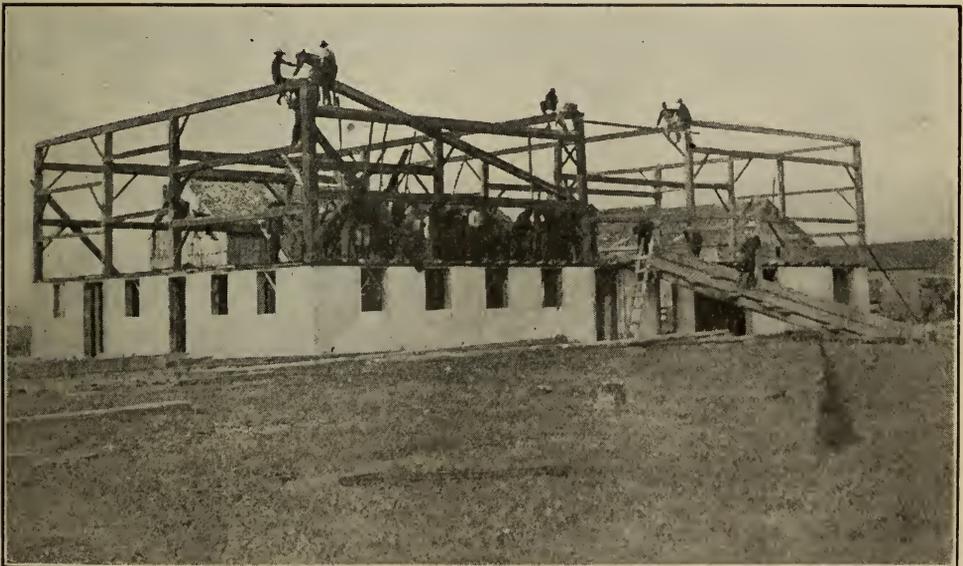
If any steer in the fat pens is not doing well, take him out and ascertain the cause.

Salt is essential to the animals during the winter. Rock salt in the manger is handy.

How do you expect to handle the hired help problem next year? The married man for the year is the best. Be careful about the disposition of the wastes from the house. Be sure the well is free from pollution.



Lifting big stones in winter.



Raising a splendid barn near Aylmer, Ontario. The owner values the sunlight among his livestock.



The boys on this farm are fond of their work.
Stacking timothy hay on a farm west of
Edmonton.

Plan to lighten the work of the farm women. Washday and other busy days are hard when there are no conveniences.

Bind your Farmer's Magazines and keep them for reference. The index in each can be pencil marked for especial reference by yourself.

Order your nursery stock this month and next. Get a catalog from all the nursery growers and find out just what you want.

Watch the young fruit trees for attacks by rabbits and mice. It may pay

to wrap the trunks of such trees as are near fence rows.

Have a sun-room if possible for the early lambs that you expect for your Easter trade. They do much better when the sun gets in.

Watch the apple cellar. See that the thermometer stands about 30 degrees above zero as much of the time as possible.

The farm family should use good apples for their own use. Otherwise you will be using rotten ones all the time.

If the weather keeps open at all, much work on the clearing of rough parts of the farm can be done this month.

That young colt is very likely to eat too much hay and straw. See that he gets, not too much roughage, but enough crushed oats and bran.

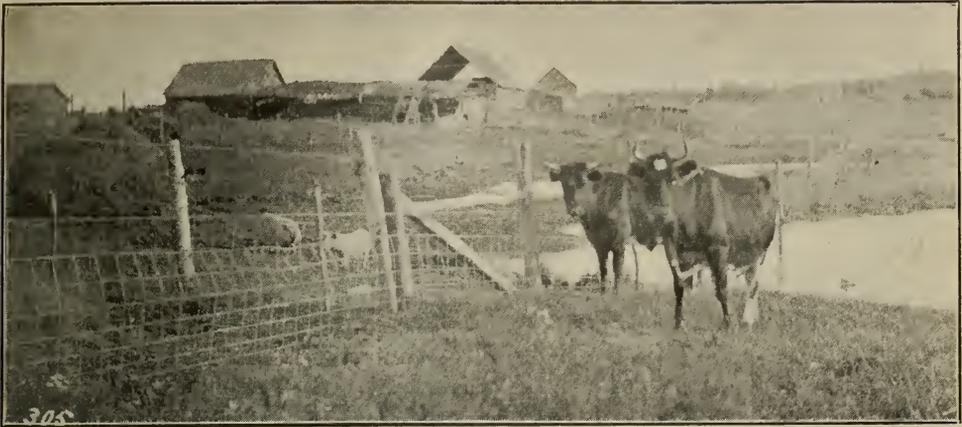
Plan the drains you intend to put in. You have had enough experience with water this past year, to tell you where they are needed the most.

What about a bathroom and running water in the farm home? There is no home more in need of these creature comforts, even more urgent than a piano.

The model farm at Guelph prepares the ensilage feeds for the cattle a day ahead. The feeder mixes pulped turnips and ensilage with cut straw and chaff.



Steers fattened in the open at Lacombe, Alta., for which the highest price was received.



A homestead view in Sask. A beginning in live stock.

The stallion must be exercised and groomed regularly, as at other times. One cannot afford to let him get out of condition. It helps his disposition also.

Pigs thrive well on alfalfa and red clover in the winter time. Soak some in hot water and try it. Even put the clover in racks and see how they will go for it.

Write the Government for bulletins on any subject on which you want information. The bulletins mentioned in the December number of Farmer's on page 71 are nearly all obtainable.

Examine the ewes for ticks. If any are found chose a good day and when sheep are in the barn, pour some good wash along their bodies where the wool has been parted. An ordinary sprinkler can with the sprinkler off is first class.

A Financial Puzzle

What farmer can send first a correct solution for this?

Tom, Dick and Harry were three young brothers living on a farm in Brookville. Their father, who raised

white Leghorns on a large scale, gave to the boys eggs in the following way:—

To Tom	-	-	-	10
“ Dick	-	-	-	30
“ Harry	-	-	-	50

The three boys started off to town with their baskets of eggs, intending to have some spending money from the proceeds. The sale was slow at first, but finished up better. However, they decided not to spend any of the money, and when the three boys again met at the supper table at their home; it was found that something really amazing had happened. The father was non-plussed and thought his boys were putting up a game on him. *In reality they were not.

Each came back with the full proceeds of his sale. Each sold the eggs in the same market at the same rate and each had identically the same amount of money. The father could not make it out. “It is impossible,” said he, “for the boy with only 10 eggs to get as much as the boy with 50 eggs.”

Yet that is what he did. How was it done?

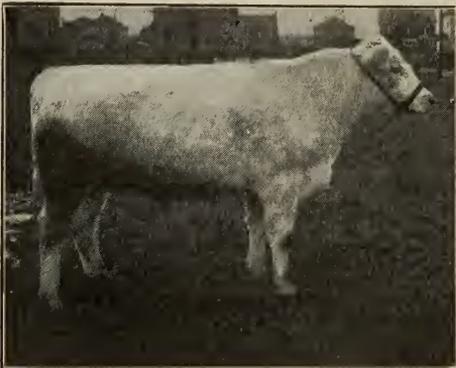
(Address all answers to Grasmere, c/o Farmer's Magazine, 143 University Ave., Toronto, Ontario.)

Fall Wheat Prospects

Special report in the U. S. crop by the Orange-Judd Farmer.

EVERY farmer in Canada will be interested in the prospects for next year's crops. The reports of the Orange-Judd Farmer show that the winter wheat crop has made excellent growth over practically all of the district this fall, and has gone into winter quarters strong and vigorous and very promising. The figures of conditions of winter wheat on December 1 show an average of 92.2, which is from three to four points above the average for a series of years, and is about six points higher than it was at this time last year. Of course, the report of condition at this early date in the history of the crop really carries very little significance, so far as probable results are concerned, except that it indicates that the plant has made a good start, and is in better than usual position to withstand the vicissitudes of the winter. The only point to be gathered from this high appearance of condition is, that in spite of a little drouth here and there and some unfavorable soil conditions in a limited territory, the general situation is that the wheat has begun its career with favorable prospects.

There is a little complaint of lack of sufficient rainfall during the latter part of the autumn in parts of Kentucky and Tennessee and in limited districts in Texas, Oklahoma and Southern Kansas. Elsewhere throughout the belt all conditions have been favorable and the growth has been so strong, particularly in the southwestern states, that the fields have been pastured



Best Shorthorn steer at the Maritime Winter Fair.



Sweepstakes cow in the 72-hour dairy test at the Maritime Winter Fair, Amherst, N.S., owned by A. McRae & Sons, of Charlottetown, P.E.I.

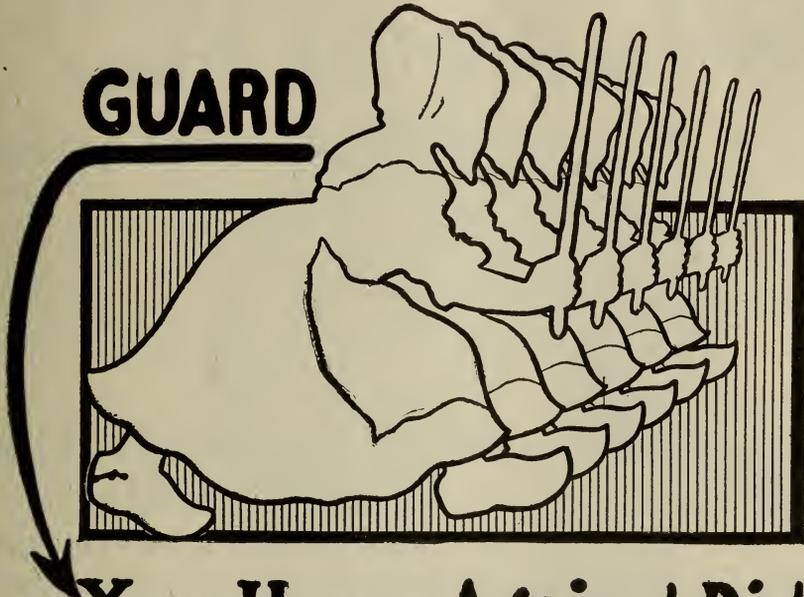
much heavier than is often the case, in order to hold back the top growth.

Comparisons With a Year Ago.

The acreage seeded to wheat in the fall of 1911 was reported at a little over 32,000,000 acres. A more complete survey of the situation proves that there was an underestimate at that time of almost a million acres in Kansas. This fact is now substantiated by the returns of the local township assessors for that state. The greater part of this under-statement represented the area that was seeded in the far western and north-western counties, where, on account of unfavorable winter conditions, followed by severe drouth during June and part of July, the rate of yield finally secured was very small, so that the acknowledgment of this underestimate of acreage for that state does not result in any very material change in the final crop of the state as previously estimated.

According to the returns of our correspondents the acreage this year is 2.8 per cent. less than the area actually seeded in 1911; this conclusion giving a total area this year of 32,551,000 acres, as the preliminary report of our correspondents.

There is a decrease in the acreage seeded in the soft winter wheat states east of the Mississippi river, and quite marked in Illinois, where the shortage is 15 per cent. Offsetting this to some extent is a slight increase in Iowa and Texas, and a material increase in Oklahoma, Nebraska and the north Pacific coast.



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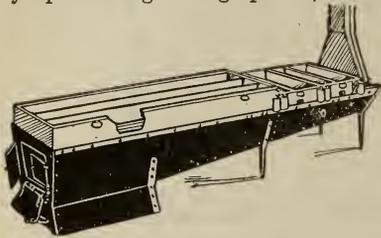
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Why not be a WINNER in this Contest.

We are giving away \$500 in Gold Cash Prizes to users of the "Champion" Evaporator. Full particulars will be mailed on receipt of inquiry.

The Competition will take place during the last two weeks of April, and the samples of syrup and sugar received will be placed on exhibit in the show windows of the "Montreal Star." Every purchaser and user of the Grimm "Champion" Evaporator may take part in this contest. Now is the time to properly equip yourself to make high-grade syrup and sugar—high-priced, and therefore profitable. Do it now before the sap runs.

State the number of trees you will tap, and we will give you price on a suitably sized outfit. Address all enquiries: Prize Contest,



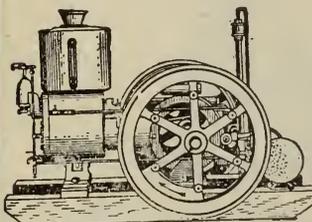
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In buying the O. W. E. & P. Co.'s lines you will get an Engine in the Stickney or Chapman that will start at Zero. A Windmill, the Toronto, with 30% more material in its legs to stand the gale. A Feed Mill that has the accuracy and efficiency of a Flour Mill. A Well Drill without Gears, friction driven, with sand lined speed of from 400 to 600 feet per minute, and you can give Luck and No. 13 a shrug and a laugh.

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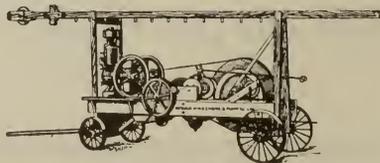
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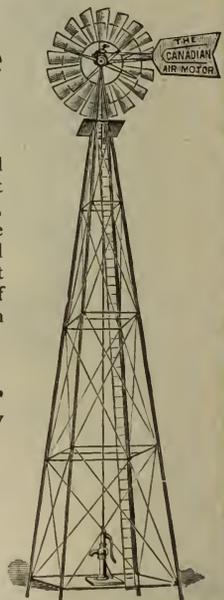
Calgary



"Toronto" Grinder.



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"Toronto" Wind Mill.

Big Ben



The Sunrisers' Club of Successful Men.

EVERY morning — about the land — there is a bunch of get-there men who are off the mattress at the first crack of a bell.

They swing down to their work with cheek aglow—with grit afresh—with eye alight—they're the Sunrisers' Club of Successful Men—most are acquainted with Big Ben.

They've left it to him to get them up in the world — and

he's done it so loyally, so cheerfully, so promptly, that he's already sleepmeter to two millions of their homes.

Big Ben's the clock for get-there men. He stands 7 inches tall, massive, well-poised, triple plated. He is easy to read, easy to wind, and pleasing to hear.

He calls just when you want and either way you want, *steadily for 5 minutes or intermittently for 10.*—He's two good clocks in one, a dandy alarm to wake up with, a dandy clock to tell time all day by.

Big Ben is sold by 6,000 Canadian dealers. His price is \$3.00 anywhere in the Dominion. If you can not find him in your town, a money order sent to his designers, *Wentox, La Salle, Illinois*, will bring him to you attractively boxed and duty charges prepaid.

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A SPLENDID LINE IS DESIROUS OF MAKING additional arrangements for representation in Canada. This line is widely advertised, very favorably known to the trade and is now carried by a good proportion of the hardware dealers in the country. additional representation is desired in Eastern and Central Canada. Box 132, Farmer's Magazine, 143-147 University Ave., Toronto, Ont. (tf)

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VENTRILOQUISM — SELF-TAUGHT. ALMOST anyone can learn it at home. Small cost. Send today, 2 cent stamp for particulars and proof. O. A. Smith, Room D73, 823 Bigelow St., Peoria, Ill., U.S.A. (3c)

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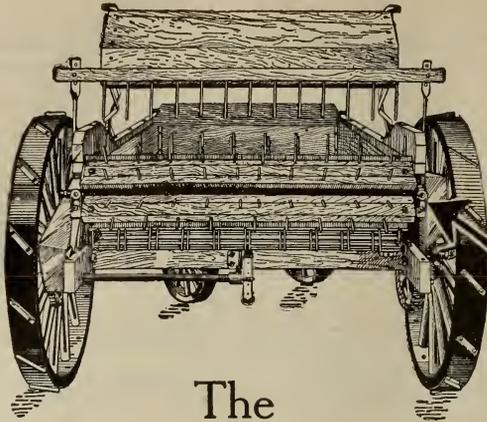
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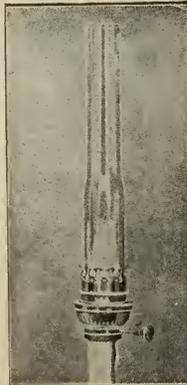
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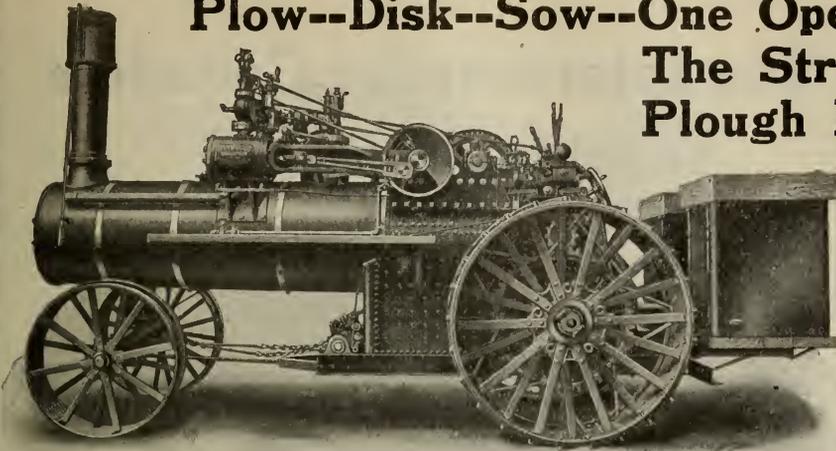
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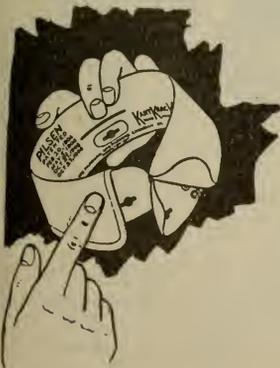
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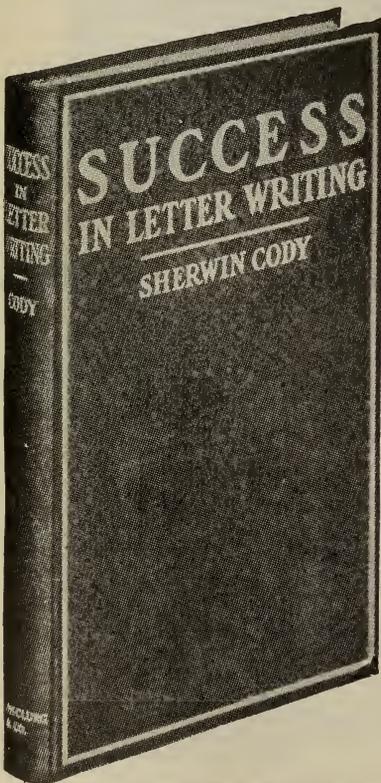


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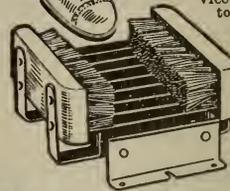
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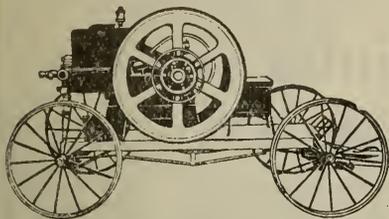
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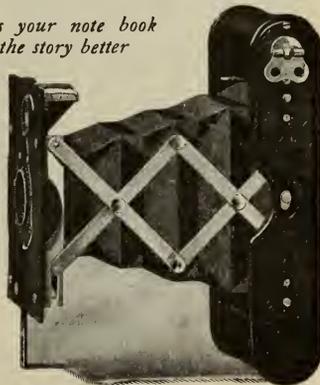
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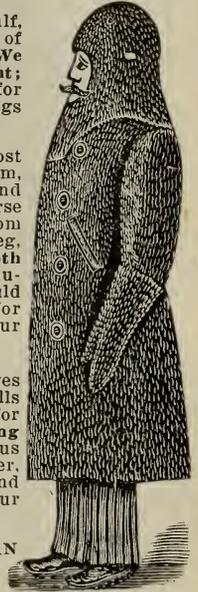
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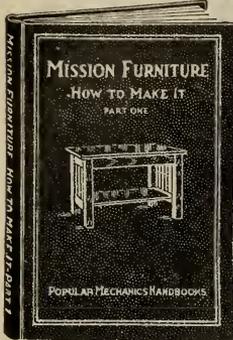
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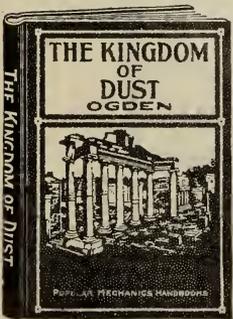
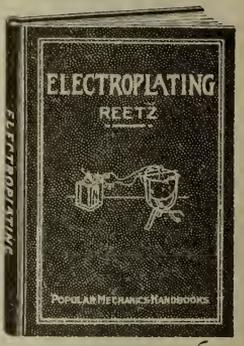
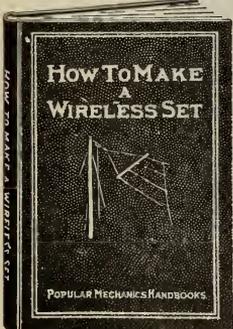
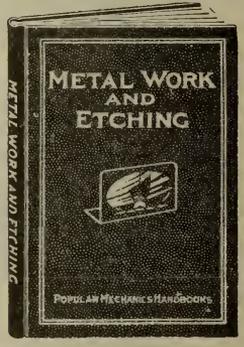
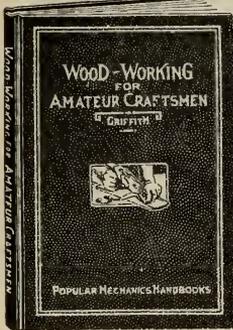
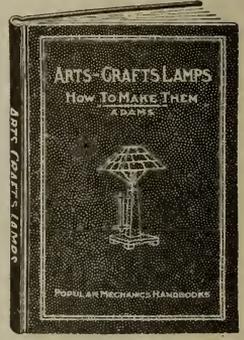
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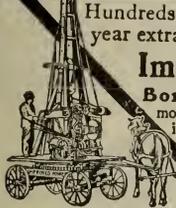
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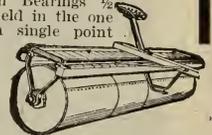
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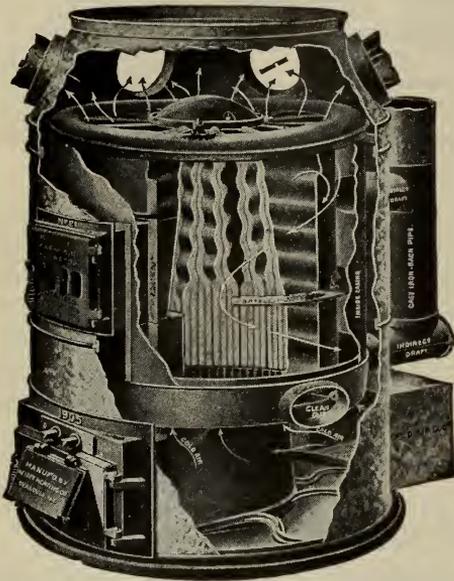
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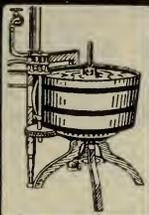
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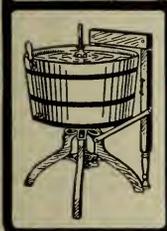
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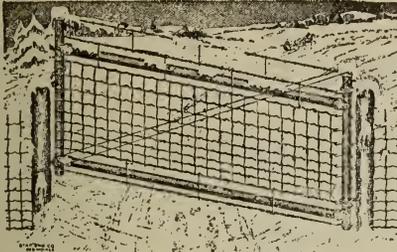


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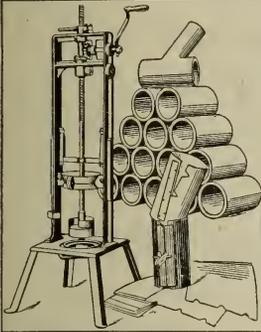
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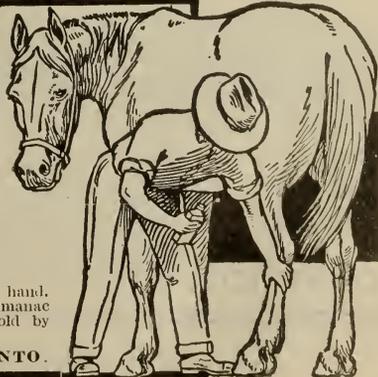
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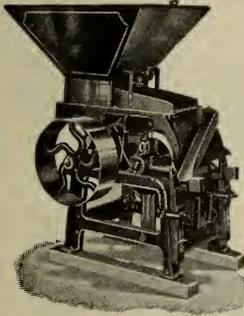
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YOUR FEED EXPENSES KEPT DOWN by the "Champion," which makes a big saving in feed. A durable machine, with



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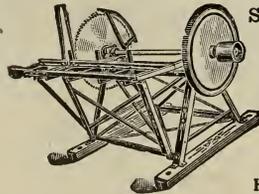
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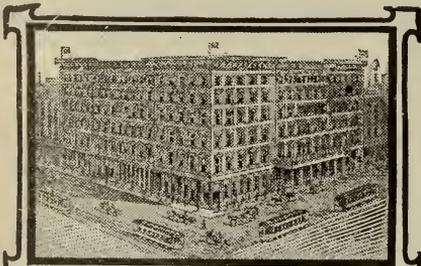
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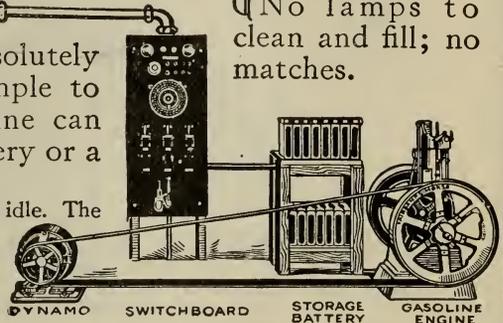
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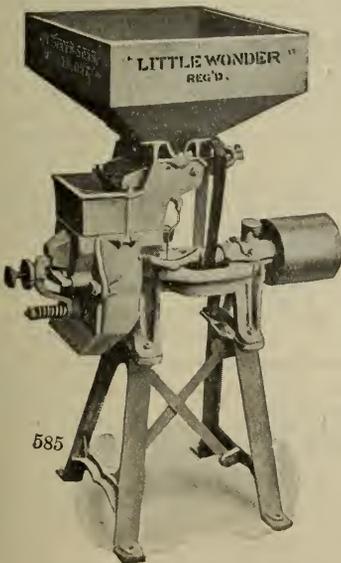
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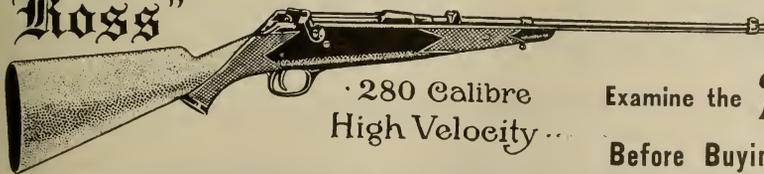
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TORONTO, CANADA

City and Real Estate Opportunities



YOUNG MAN

Before deciding to leave Ontario consider well the opportunities which she offers on every hand. Consider the various types of soils capable of producing all the products between No. 1 hard spring wheat and the tender fruits such as peaches, apricots, and also early vegetables and melons. Consider the equable climate possessed by the more southerly portions, while that of the northerly parts is to be preferred before many others in Canada. Consider carefully the transportation facilities offered for the marketing of these various products both by rail and by water; remember that Ontario is centrally situated in North America, practically surrounded by the greatest inland waterways of the world. Remember that suburban lines are being projected into various districts and every day surveys are being made for other new ones. Also remember that competition between various transportation companies is keener here than in some other places. The greatest home market in Canada is in Ontario; the great manufacturing centres are either in the Province or just on the border. New Ontario offers one of the best growing home markets on the continent. Ontario offers the greatest inducements to the upbuilding of large centres—cheap power.

She is a complete and self-sustaining Province. The southerly parts can supply the

tender products in abundance; the more northerly districts can furnish the grains, meats, dairy products, horses and the rough fodders. Internal trade is bound to be the outcome—the north will be bound to the south by an interdependence impossible in other parts of our Dominion. The south will also demand the lumber of the north, besides claiming a share in the development of the rich mineral lands.

Ontario's soils cannot be outclassed elsewhere in America. They are easily cultivated, easily fertilized, easily drained and easily obtained. Production per acre is higher in Ontario than in other parts. Intensive agriculture is the dominant note. Increased returns are the result. Thousands of acres are still undeveloped—these offer greater opportunities than do the majority of the far away lands.

Agricultural organization is finding its greatest development in Ontario. Remember this means larger prices and a better reputation. Don't leave when the boom is on, when the people are just awakening. Remember you count one in the development of these untold resources.

Remember that wealth is only part—Ontario offers the greatest social advantages; telephones, rural mail, good roads and public libraries. Remember Ontario's possibilities—do not procrastinate but consider and

For further information write

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It is to your advantage to mention Farmer's Magazine.

Facing The Future Fearlessly

By FRANKLIN O. KING

"Ring out the Old; Ring in the New. Ring out the False; Ring in the True." It Rings in Your Ears, and Well it May. Tennyson never Wrote a More Beautiful Poem, and You never Read a More Helpful One. Read It Over Again. Every Man Should Strike a Balance on New Year's Morning, even Though He May Have Been a little Off his Balance New Year's Eve. It's Easy to Turn Over a New leaf, but it Takes a Real Man to Keep it Turned. "Eternal Vigilance" is the Price, not Only of Liberty, but of Habits, Health and Happiness—Now and Hereafter. Good Resolutions will Become Realizations only when Backed up By Persistent Purpose.

How about your Balance Sheet for 1912? Haven't You Charged off a Lot of Things to "Profit and Loss" that Ought to Be On the Credit Side of the Ledger? Haven't You Frittered away a Great Deal of Your Hard Earned Cash for Petty Pleasures, or Lavish Luxuries, when You Could Have Laid By Something for the Inevitable "Rainy Day?" How much Better Off are You than Last Year, or the Year before That? True, You have "Kept the Wolf from the Door," but by a Little Economy and Self-Denial You Might have Begun the Erection of a Fortification that would Forever Free your Family From Fear of It's Ferocious Fangs.

Your Good Job may not always Last. Some of These Days a Younger Man May Fill Your Place. I said a "Younger," not a Better Man. The Gray is Creeping into Your Hair, and the Boss is likely to Forget the Splendid Things You Did—Once Upon a Time. "Yo' Ben a Good Old Wagon, But Yo' Dun Broke Down." The World Wants a Winner, and Won't Worry Along With Wornout Workers.

"Parted From the Pay-Roll" is a Little Drama in which You may Expect to Play the Principal Part Some Sad Saturday, P.M. Then the "Good Fellows" who Helped You Spend Your Money Will Likely Pass By on the Other Side, and the Only Place You can Look for Sympathy will be in the Dictionary.

Let Us, therefore, "Ring Out False Pride," and Hereby Firmly Resolve to Establish a New Record for 1913, which Will Enable You to Face

the Future Fearlessly. Strikes, Lockouts, Panics and Periods of Financial Depression Cannot Depress You, if You Will Make it a Rule to Save a Little Something Every Day. Again I Repeat It—Saving is the Antidote for Slaving.

The Best Incentive to Persistent and Systematic Saving is the Desire to Get a Home. The Best Place I Know of to Get a Home is in the Rain Belt of Gulf Coast Texas, where You can Grow Three Big Money-Making Crops a Year, and where Irrigation and Fertilization do Not Eat Up the Profits Your Hands Create.

I believe you could save Twenty-Five Cents a Day if You tried. I know you would Try if you Realized that our Growers of Figs, Strawberries and Early Vegetables clear a net Profit of \$300 to \$500 an Acre. Men have Realized more than \$1,000 an Acre growing Oranges in our Country. Remember that our Early Vegetables get to Northern Markets in Mid-Winter and Early Spring, when they command Top Prices.

One German Truck Grower on adjoining lands this spring realized nearly \$500 from three-fourths of an acre of Strawberries. You could do as well if you only Tried, and on a Ten-Acre Tract Find Financial Freedom.

The Biggest Price paid for a car of water-melons on the Houston Market this year was \$140. The car was shipped by the Danbury Fruit and Truck Growers' Association.

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Write for our Free Book, which contains nearly 100 Photographs of Growing Crops, etc. Fill out the Blank Space below with your Name and Address, plainly written, and mail it to the Texas-Gulf Realty Company, 1333 Peoples Gas Building, Chicago, Illinois. Read it Carefully, then use your own Good Judgment.

Please send me your book, "Independence With Ten Acres."



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32 Quince	1055 Peach

also 625 grape vines, 700 black and red currant and gooseberry bushes, and one and two-fifth acres of asparagus. Has fine 8-room frame house, five-roomed cottage, 1 large fruit house with cellar, two large implement houses, barn and fruit pickers' shelter. Everything in first-class condition.

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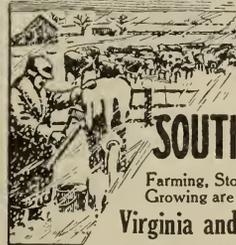
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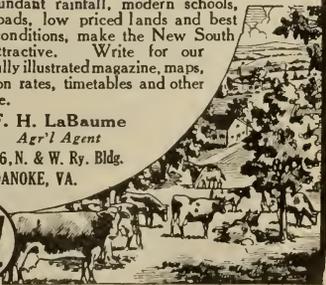
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"All of our curative agents are poison, and as a consequence every dose diminishes the patient's vitality." Professor Joseph M. Smith, of the same school, says: "All medicines which enter the circulation poison the blood in the same manner as do poisons that produce disease."

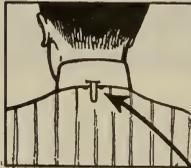
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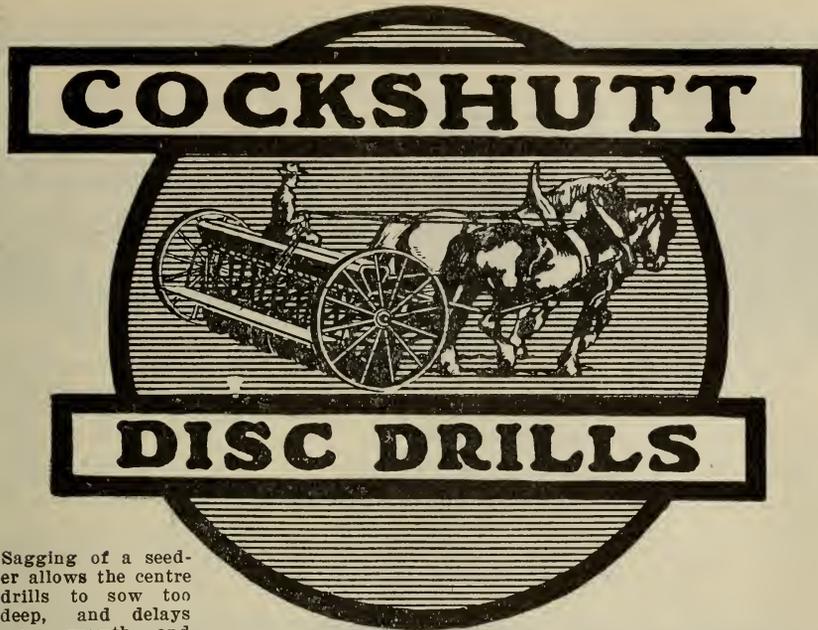
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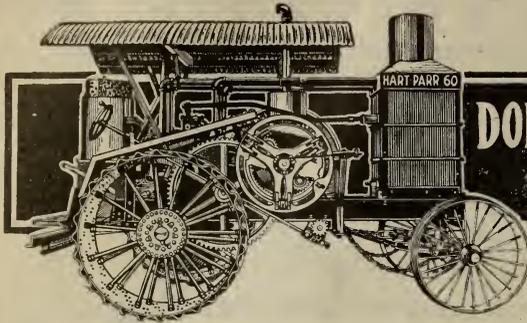
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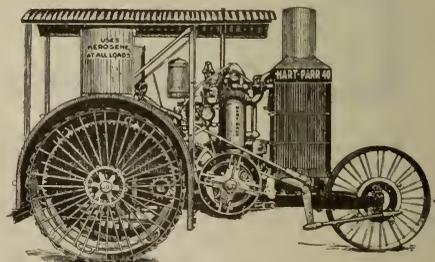
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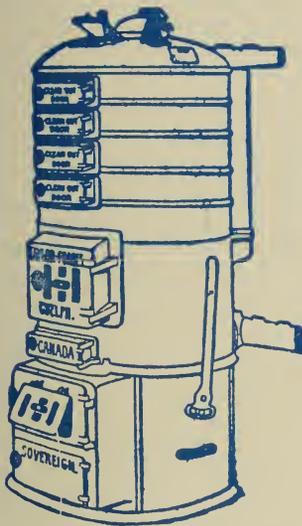
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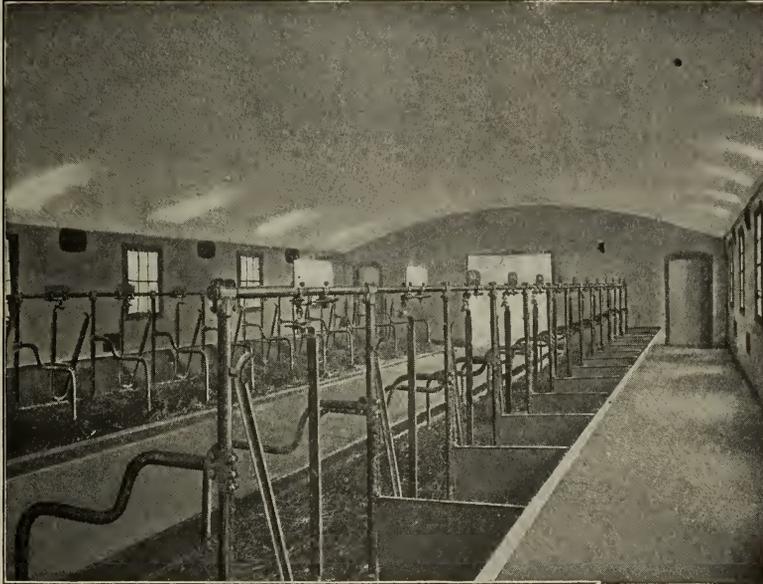
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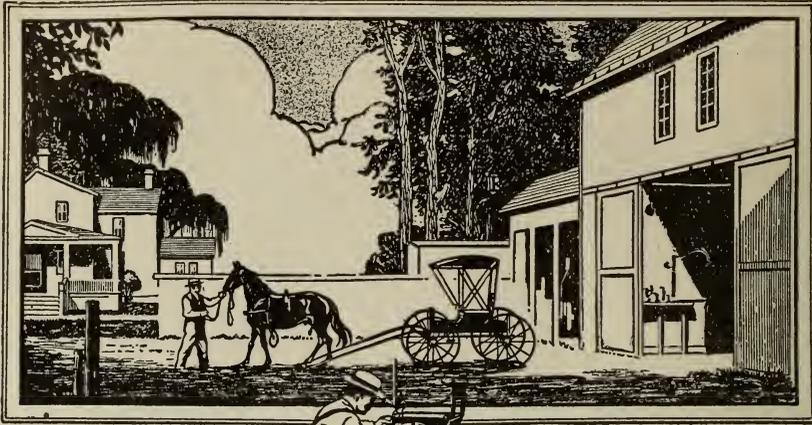
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FARMER'S MAGAZINE

VOL. V.

Toronto, February, 1913

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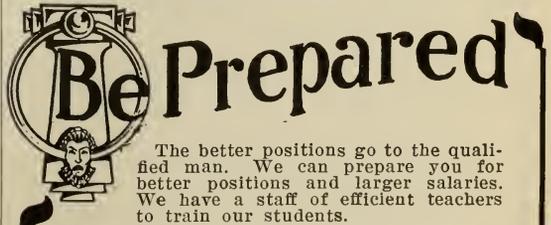
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The family does not see the cost of getting these; the eternal grind to remain in the front; the monotonous times of the big body of city employees, as well as the closed-in home surroundings. The money returns also are big only to one man in a hundred.

HEAVEN IS AROUND YOU.

Whereas on the farm, the blessings of intimate association with nature; the joy of out-of-doors, the possibilities of better business methods increasing the farm output, the general health and moral superiority of the country home, are overlooked. All this is reversed on the pages of every issue of Farmer's Magazine. The farm is dignified, the business of farming is discussed, and the independence of the farmer maintained.

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OUR SUCCESS IS GRATIFYING.

The success of the past year of the magazine has been most encouraging. Farmers in every province of Canada are reading every issue. The kindly words of praise are most appreciated.

Our new covers and the quality of the reading matter of past issues is a guarantee of future worth. Here are a few encomiums:

"Your magazine is a fine one indeed. We all like it."—Miss Robinson, Ceres of Dominion Grange.

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"I should not like to miss a copy of Farmer's."—H. Henken, New Bridgen, Alta.

"I appreciate Farmer's Magazine very much and I must have every copy."—E. W. White, Sardis, B.C.

The March issue will contain one or two articles that we have not been able to get into this issue, as well as some leading matter on orchard, live stock, poultry, market gardening, Farm House Building, and making money from chestnuts.

See that your neighbor's home gets a copy.

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SOUTHDOWN—THE CELEBRATED LEG O' MUTTON KIND

AT THE OTTAWA FAT STOCK SHOW

FARMER'S MAGAZINE

Vol. 5

TORONTO FEBRUARY, 1913

No. 4

A REVIEW OF RURAL LIFE

THE REFERENDUM ON THE NAVY

The people of Canada should have a chance to pass upon the Navy proposals by means of the referendum. No vote of the people has yet turned on this question. It is the greatest question affecting us as a nation that has ever come up in our history. And the people can be trusted.

It is this assumption of undelegated power that has brought the present agitation with Anglo-Saxon countries against the old Party systems of government, in favor of direct legislation. We have had too many instances of it in Canada. Too many corporations and parties in the state, have been granted privileges by a parliament that has had no mandate for so doing. Sir Wilfrid Laurier passed his Navy Act under such a protest. His previous elections had not hinged upon the question at all. The Grand Trunk Pacific undertaking was the main thing before the electors, under which the slogan of, 'let Laurier finish his work,' was so well used.

The present cabinet swung into power under the Reciprocity proposals. The Navy Act was strenuously objected to, by the Nationalists who had formed a coalition with Mr. Borden, on the question to the people. Such has not been done.

It is, therefore, the duty of the present Government, and a just demand on the part of the farmers in all parts, that an opportunity be given the people of Canada to speak on this question. And that voice ought to be obtained by means of a referendum. Sir Wilfrid Laurier's government coupled the Reciprocity question with their appeal to the country doubtless with the hope of swinging back into power on the strength of it. This action has beclouded the issue. Such action always will do so. The people demand that the question be submitted to them in a way that the answer cannot be mistaken.

Why do the rulers fear the voice of the people? Can not we trust ourselves to do the correct thing? Have we not as much of the average wisdom in our craniums, that has obtained in the heads of our not-above-the-average members of parliament?

We call for the referendum. The Borden Government is in duty bound to submit the whole question of a Navy to the people.

THE EMPIRE IN THE PEACE RIVER

The vision that floats before the eyes of Deputy-Minister of Agriculture, Geo. Harcourt, of Alberta, is soon to be visualized. There is a mighty empire of people coming to inhabit the Peace River country.

From the maps in his office Mr. Harcourt grows truly optimistic when he points out that the Isothermal line, that is, the lines that tell of equal temperatures over the earth's surface, run from a little south of Alaska across Alberta, North of Edmonton, dipping down into Southern Manitoba and thence into the States and crossing Ontario through the fruit belt of Niagara.

"This teaches us," said he, "that we have as good a climate up here as they have in Southern Ontario, and means that the productions of these parts will yet astonish the world. Besides we have little wind, the land has considerable timber and is underlaid with coal, oil, salt and gas."

The explanation of this, as was pointed out in the report of the Senate of Canada some years ago in its report on the Mackenzie Basin, is that the Japanese current in the Pacific, strikes Alaska, and the warm air is carried across the valley at the upper end of British Columbia. The Japanese current is as important to the West as the Gulf Stream is to the East. For this reason it is argued that the Peace River Country, into which, already thousands of settlers have gone, will support a diversified farming population that will yet be an important part of Canada.

Apple trees were planted last year 100 miles north of Edmonton and promise to grow to maturity. The last report of the U. S. Experiment Station at Sitka, Alaska, shows that the apples planted there in 1903 have ripened fruit for the first time last year. Among these is the Yellow Transparent, an apple well-known in older parts of Canada.

Over 200,000 square miles of land

near Edmonton is ready for settlement, while there is an immense hinterland even within the Arctic Circle, where wheat, oats and barley ripened in September last year.

The Alberta, Peace River and Eastern Railway Company, owning 800,000 acres of land in this district, is building a system of 1,450 miles from Hudson's Bay to the Pacific Coast. Lord Farrer V.C., a director of large railway enterprises in Great Britain, is the capitalist behind the scheme. The Canadian Northern Railway are already into the heart of the district with a splendid service. The Grand Trunk Pacific, will soon be finished to Prince Rupert. The C. P. R. which has been slow in getting into this country are about ready with their high level bridge over the Saskatchewan into Edmonton.

The first-named railway corporation are planning to bring in settlers, for a railway is little good without them. They propose to settle 1,500 experienced farmers from South Africa on these lands.

It is therefore that we reason that the future of Canada looks rosy for years. The people are coming. Money is coming.

Farmers are producing greater yearly additions to our material wealth, and so long as these conditions prevail and the mass of the people are engaged in their legitimate vocations of production and distribution, the end of the expansion is yet a long way off.

Sir Edmund Walker, of the Bank of Commerce advises caution in speculation. The curse of many Western towns has been their excessive lot-subdivision schemes whereby people of small means have been induced to buy lots, seen only on paper, and located where even, the town clerk of the place, knows not. One of the problems of civic government in the West lies in a remedying of this evil. The tax systems are along the right tack and altogether the West is in a most healthy condition for 1913.

INSIDIOUS POLITICS

The National Review, a High Tory magazine published in England, in its January issue takes a questionable means of discrediting Lloyd George and his activities on behalf of Great Britain's down-and-out classes. The article calls attention to the salary of the Chancellor and to the fact that he is building a new house and putting his son into a commercial concern in which the ex-master of Elibank is a member. The sneering references to these outward signs of creature comforts, certainly optional to every British subject, are made for the purpose of discrediting Lloyd George's work for the betterment of the common people.

The National Review by such an appeal, at once tacitly admits that there is poverty, destitution and inequality in the political and commercial life of the British Isles. With such an admission there must follow an equal responsibility for those conditions, and the National Review must regard its readers in a very pessimistic light, if it deems them quite capable of accepting such logic. But perhaps this high tory journal only circulates among the privileged classes who fatten on the inequality that exists among the population and as such are blind to the reforms that are long overdue.

Not only does this knowledge of these conditions on the part of the Review, demand some action by way of address, but it renders vicious, the attack on the minister in question by appealing to the baser passions that are always latent in a certain portion of humanity.

"With all their houses and all this money, how dare he face the poor," concludes this truly lofty and logical appeal. It smatters of the old might-have-been-sold - for - much - argument used at the beginning of the Christian Era.

Farmers in Canada know as yet little about the misery and abject conditions that prevail in the cities and rural places in Great Britain. Possibly the new



Mr. J. G. Taggart, B. S.A., District Representative for Frontenac County, who ably discussed feeding of dairy cattle at the Eastern Dairymen's Association at Kingston in January. He is a Nova Scotia boy.

comers to Canada's free land and equal opportunities will resent such appeals when it comes their turn to say if the same conditions must re-appear here. The farmers are fighting stern battles on Canadian soil. They are breaking ground as an advance guard for an industrial army that is soon to follow up. The future welfare of agriculture and of labor, depends upon the sane and righteous views of government and legislation that are held by the tillers of the soil.



THE GRAIN BLOCKADE

There is little being heard from the West this year about a grain blockade. This does not mean that the conditions there are satisfactory by any means. There is an abundance of grain yet in

the fields that cannot get cars for its transportation.

The weather is dry and cold and so there is no cry from the farms that their grain is spoiling. People in the East hear a little of what is going on in the West, and they read so many contradictory reports that they are really at a loss to know which ones are authentic. Moreover, the optimism of the West is of such stern stuff, that big losses and troubles are passed over lightly. For instance, last year, whole miles of stooked wheat could be seen rotting in the fields along the railway lines from Winnipeg West. The writer passed over farms in Saskatchewan where the blackened shocks of grain next the roadway were tossed out to clear them for the 1913 operations. Hundreds of acres of wheat were burnt up in the stook.

These farmers who lost were never heard from. No long wail of woe ever reached the outside world. Some people have remarked that a loss of such magnitude in the East would be the subject of black headlines and Jeremiads for months.

This is again the spirit of the new country. A fall down to-day, is succeeded by a spring onward to-morrow. This overlooking of oppression, and this light regard for inequalities in transportation and money advantages, is the very chance that the shark seeks to carry on his nefarious work. The economic commercial evils that the West suffers are real things and the farmers are showing that they are studying more and deeper and some day they will assert themselves.

According to F. W. Green of the Saskatchewan Grain Growers, there are many parts of that province where the grain still stands out in open bins at the stations awaiting cars for shipment, with all the available elevators full.

Prices, too, for this wheat are down to 50 cents and 60 cents per bushel to these farmers. "Why not a \$35,000,000 contribution to wipe out the fouler blotch and deeper stained debt Canada owes to Western Agriculturists," said Mr. Green. "They have made Canada

and given her a name that echoes round the world and they are carrying on an economic struggle with an entirely inadequate unpracticable storage and transportation system."



SIR JAMES AND REFORM

The Premier of Ontario has placed himself in a most unenviable position by his logical following out of the philosophy of bluff. Sir James Whitney has apparently prided himself on the fact that he could say, "no" with a sound like the crack of a doom. He had built up for himself a reputation for the autocratic disposal of debatable questions, regardless of the views of the advocates, whether from a liberal or a conservative.

In many cases this attitude is regarded by people as one of strength and wisdom. It takes a strong mind to pose as a strong man all the time. Jupiter was a God for hurling thunderbolts, and if these bolts fell contrary to the general views of rightness, or foul of the worshippers, the whole thing was settled by an advocacy of his omnipotence and his omniscience. But worship of a political head, usurping some of these attributes is denied to him by the fact of reason being enthroned in the body politic.

The latest pronunciamento from the Premier, is that he will have none of this Tax Reform movement. It is the product of the brains of a few irresponsible journalists, he says. The question of local option in tax reform, whereby, a people are to be given the right to say whether they shall be taxed for improvements on an equal basis with land values, is therefore denied Ontario, no matter how many may demand it.

A recent vote in Toronto gave an overwhelming vote in favor of it. Conservative journals in various parts of the province have been advocating this measure and have openly broken with their party on the question.

The fact is, that the majority of the Conservative party favor the retirement of Sir James from the leadership, preferring to work under the direction of Hon. Mr. Hanna. Sir James has carried his autocratic way into the caucuses of the party, as well as into all interviews from persons or departments. This question of one man rule is not at all agreeable to any democratic body of men. The Provincial Secretary has proven himself a master of diplomacy as well as one of the few cabinet members who have shown real ability in his executive and administrative work. The question of how to arrive at the readjustment is what is troubling the Conservatives of the Ontario House. If the Premier could be induced to accept the office of Lieutenant-Governor in succession to Sir John Gibson, an easy way would be open for this shuffle. Under such a much-to-be-desired rearrangement, the departments would no doubt be able to work out their own policies in a better manner, and that of agriculture especially, grow in strength.



NOT ABSCONDERS

Hearsay has often been credited with the statement that farmers were not good clients for bank loans because of their unreliability.

This whole accusation falls to the ground upon inquiry into the facts, just as does another theory that farmers' wives are the biggest suppliers of the insane asylums. Both are false. Bankers in almost every town in Canada will tell you that their losses from farm defalcations are almost nothing.

The same cannot be said of the manufacturers or other classes of the community. Dun's report in a recent issue says: "Examination of the failure returns according to occupation, shows that defaults were more numerous than in 1911 in seven of the fifteen manufacturing classes, with increases of 7 each in the iron and printing trades, 6 in earthenware, 4 in milling, 3 in chem-



Princess Patricia's sister, the Crown Princess of Sweden.

icals and drugs, 2 in machinery and 1 in the miscellaneous group."

The Dominion Government have done nothing to relieve the farm money situation. Already private enterprises are springing up, for this purpose.

Farmers must have cheaper money. They have paid 10 and 12 per cent. rates on first-class security too long. Canada, instead of leading the world in reforms, is already lagging behind the older countries in many regards. It is little wonder that the party system of government is being discredited by nearly every farm organization in Canada.



PURE ARSENATE OF LEAD

The United States Department of Agriculture has been examining the Paris Green and Lead Arsenate sent out by the manufacturers for distribution among the farmers and fruitgrowers. Advices from the Secretary of Agriculture are to the effect that several firms have recently been fined for false branding and adulteration of these goods.

It is most essential to the fruitgrowers

of Canada that Canadian goods of this kind be kept up fully to the standard that is claimed for them. Not only does the American Government demand a certain standard for all its preparations, but it requires the manufacturer to have the chemical analysis labelled on the package.

In the cases in point, the packages of Paris green and lead arsenate were found to contain considerable less amount of the active principle than the label called for.

It is just as necessary that Canada be as strict in this regard. The fruitgrower depends upon his chemicals for the success that shall attend his season's work. He is not a chemist. He has no way of determining the strength of his poisons. It is thus the clear duty of the government to watch all these goods and to promptly report any violations without fear or favor. The people must be protected against greed and deception. Just as the United States is awaking to their economic injustices, and to their subservience to the big interests, so in Canada, the mills of God are grinding.



THE GRANGE AND ITS POLICIES

The Dominion Grange has just completed another annual session in the city of Toronto. Although the attendance was less than formerly the enthusiasm and deliberations were quite equal to anything heretofore.

A forward step was taken when they decided to raise a fund to place an organizer in the field. It is felt that there should be one man who could devote his time to organization work and to the superintendence of already existing local divisions. The proposal met with a hearty response, following the reading of the secretary's report which pointed out that the present loose methods of the work were liable to lead to a total dissolution of this historic old body.

It is notoriously bad feature of farmers that they are too willing to be led and governed by others, so long as they

can criticise and yet have none of the funds to meet. They should be self-centred. They must be independent if they are to accomplish anything.

It is this one feature of relying on the outside leadership that is destroying the resourcefulness of the farmer. The Grange, if it realizes its worth, and gets rid of a considerable amount of the abstractions that fetter it, will be just the organization to develop in our young farmers those qualities of mind and tongue that will stand the whole agricultural body in good stead.

There many good resolutions endorsed. The demand for a referendum on the Navy question was unanimous. They re-asserted their demand for wider markets and for a reform in the assessment laws. Parcels Post was called for, as it would bring relief to the consumers in the city as well as return to the farm a more just proportion of the prices paid for farm products.

Yet there is something lacking in the cement that binds the Grangers together. It appears that there is no tangible connection, no questions of material advantage that claim their attentions and fire their ambitions. This side of farm organizations, has been supplied in the West by the Grain Growers, who, besides the social and educative advantages, have commercial activities that chain the members together.

It has been suggested that the Canadian Council of Agriculture should act in the formation of Agricultural Loan Banks. They could easily start some agitation for a thorough discussion in the local lodges, and outline a plan for its working. Another opportunity is in the canning business in Ontario. In fact there are a multitude of ways that the organization could engross attention and wield a mighty influence if the same amount of energy were directed that way, as is directed in the framing of resolution timbers.

Here is a splendid opportunity for a rich man who is a friend of the farm. Let him support or help to support the organizer who is to go into the field.

DESTRUCTION OF SHADE TREES

Telephone and telegraph companies in passing along country highways are too often guilty of destroying the shade trees in front of the farms. Their ruthless dealing with those trees has incensed many a farmer, who, upon protest, is met with the reply that they have the authority of the law to proceed.

This is not strictly correct. Farmers have a vested right in such things and by the common law of England, have the right to be consulted and regarded in the erection of poles in front of their property.

The same objection holds against railway companies. At present there is a great deal of construction work going on, and the construction companies entering upon the land, cut down shade trees at their will and then refuse to make any remuneration for them. Cases like this, have recently been the subject of arbitration in Ontario where farmers claim that they have been refused simple justice and have been frightened into accepting a settlement.

A recent case in New York has just been decided upon, that bears some light in this situation.

The Appellate Division of the New York Supreme Court has confirmed a judgment of the lower court, fixing what may be called a good round value of trees in that city.

A construction company doing some work on a street found that the trees hindered their progress. They thereupon cut down the trees without so much as considering for one moment their value to the owner's property.

Suit was at once brought against the company, the damages being laid at \$500 for each tree cut down. The plaintiff recovered for the full amount as the value of the trees, and the court added \$1,000 more for punitive damages. It was this verdict which was carried to the Appellate Court and has been sustained.

Five hundred dollars may seem a large sum for a tree in the city, but it



The old gun that fired the first shot in the Riel rebellion, now standing at the R.N.W. M.P. Barracks, Prince Albert, Sask. The wife of the superintendent, Major Routledge, with their daughter, Isabel, seated on the carriage, may be seen in the centre.

must be remembered that the value of the tree as kindling wood or as lumber, or even as the material for house-trim or furniture, is not the thing to be considered. The tree required many years to grow. It not only adorned the property, but it afforded health, comfort, enjoyment and protection to its owners. Its place, when destroyed could not be filled by another tree inside of fifteen, twenty or thirty years.

The loss of a shade tree in the country is equally as hurtful to many farmers. It has taken long years to produce them and it is to be hoped that Canadian courts will regard these things in as sensible a way as did the New York one.



AMERICANS COMING TO CANADA

The Labor Gazette for December, gives a statement of the Homestead entries in the Western Provinces as well as the nationalities of the people taking them up, during the month of October. These are complete for the whole of the

West with the exception of the Peace River District which would account for considerably more.

The number of people represented by entries was 5,326. Of these 190 went to Manitoba, 1,213 to Saskatchewan, 877 to Alberta and 20 to British Columbia.

Looking up their origin, it is found that 180 came from Ontario and 48 from Quebec; Canadians returning from the States 19; Americans 578; English 281; Scotch 60; Irish 28; Germans 53; Austro-Hungarians 119; Swedes and Norwegians 124, and Russians 90.

Now, the Conservative Party of Canada, made a big mistake during the last election in branding the majority of these incoming American settlers as disloyal. This talk was resented by

hundreds of these settlers in many parts of Alberta and Saskatchewan, who have come to Canada to abide by the laws in many cases, adopting from choice this life under the free government of a British nation.

Politics do queer things with many people. It is explained only on the basis that we explain the actions of the crowd or the mob. It is a psychological question. Ordinarily sensible and well-balanced, many men, during an election fight, will be carried away into the most unheard of and unreasonable actions. This calling in question the loyalty and motives of American settlers in Canada, during the last general election was one that the body of the Conservative party, no doubt, were not entirely in sympathy with. It is this renegade element in both parties that dishonors the whole.

THE GRANGE ON EDUCATION

Reviewing briefly the Education Reports of previous years, we would again call attention to the following:

(1) The advisability of improving and extending continuation class work in rural schools, of encouraging the teaching of elementary agriculture by means of school gardens and nature study, and of extending the consolidation of rural schools so as to permit of more advanced work, to the end that the work advised be carried out, recommend that the grant to Public Schools be largely increased.

(2) A reduction in that rigidity and uniformity of school work which is imposed upon us by bureaucratic control. Teachers ought to be given more liberty, and examinations should not be emphasized so much.

(3) The propriety of teaching the duties and responsibilities of citizenship, both by information concerning the mechanism of our social and political life, and by concrete object lessons given through democratic school organization.

(4) The dangers that are inseparable from the growth of military drill in our schools, tending to the increase of international antipathies and the development of a narrow sense of national self-sufficiency, mis-called self-respect. We desire especially to protest against the use of the Boy Scout movement and the Cadet Corps as means whereby to carry on the propagation of militarism.

We desire to commend the educational work of the District Representatives of the Department of Agriculture, and to express the hope that the good work which they are doing or can do, may be very widely extended. Subordinate Granges should co-operate with the District Representatives in holding meetings and in demonstration work.

We desire again to emphasize the need for more outdoor work in connection with our rural schools.

—Passed by Dominion Grange.

COST OF ELECTRICITY TO THE FARMER

Note.—Farmers in Ontario are anxious to know exactly what possibility lies in the use of electricity on the farm. Is it going to be a practical thing for them at a moderate cost? In order to shed some light on this we have secured an article from the Department of Physics at Guelph. Every farmer will find this of exceeding value to him. It begins to look as if some other form of power will have to be introduced on the farm. Is it near at hand? Farmer's Magazine will keep you posted. The following letter from Prof. W. H. Day, explains our present quest for information that really counts on the farm.

“Replying to your enquiry about the economy of electric service on the farm, I would say that last winter I conducted quite an extensive series of experiments and have since gathered other information upon this point, of which study I will give you the results.”—Editor.

By Professor W. H. Day, B.S.A.

SELECTING two motors and two gasoline engines we used them to grind oats and 3rd grade Manitoba wheat, the latter of which proved very hard to grind. In all a ton and a half of each was ground, half by electricity and half by gasoline. The position of the grinder plates was marked so that they could always be set the same for both kinds of power. The electric current and the gasoline were carefully measured in all cases. Four tests were made with each kind of power.

The average cost of grinding 100 pounds of grain was 1.98 or practically 2 cents, with gasoline at 20 cents a gallon, but if the gasoline cost 25 cents that would increase the cost of grinding 100 pounds to 2½ cents.

To determine the cost of grinding by electricity is not an easy matter. It is believed by many that a farmer should be able to buy his electricity on a meter rate and thus pay for what he uses, and no more. A meter rate of 4¼ cents per k.w.h. (kilowatt-hour) would make the grinding cost the same by electricity as by gasoline. This is equivalent to \$280 per horsepower per year if used constantly, but if used only a short time each day, it would give cheaper power than at a flat rate of

\$40 or \$50 per year. In Guelph we pay 7½ cents per k.w.h. for electricity for lighting purposes.

METER RATE VS. FLAT RATE.

But I understand this method is not as yet practicable in the country—it would require a large staff of men to read the meters, especially so, as they would be much farther apart than in cities and towns. Hence, even if it were practicable, the rate would be higher than in cities and towns. Any farming community supplied with hydro-electric power will pay for it just what it costs to deliver the power to that community. It is argued that if a meter had to be provided for every user, and a staff of men paid to read the meters, the cost of delivering the power would be increased thereby, and the price to the community increased by the same amount. Then a flat rate being claimed to be the cheaper and more practicable, it will in all probability be the method adopted, although in it there is room for some inequality. Suppose thirty users are supplied from one line, and each contracts for three horsepower, then each is entitled to 3 horsepower, twenty-four hours in the day, every day in the year. Suppose further

that ten of these men actually use their full quota of power, but that the other twenty use theirs on an average only 6 hours per day, then these twenty men are paying four times as high a rate as the others for the power actually used. In other words, the twenty are helping to pay for the power used by the ten. The blame for the inequality, of course, rests with the twenty themselves. They had the *right* to use just as much as the others, but did not avail themselves of it. On a flat rate, each user pays for the *right* to use a certain amount of power. All the users collectively must pay for the power actually used.

Understand-
standing then
that when hy-
dro - electric
power comes
to the farm-
ers of a certain
community it
will likely be
paid for on a
flat rate, let us
enquire what
that rate will
be. The Hon.
Adam Beck,
speaking at
Guelph last
winter, stated
\$50 per horse-
power per
year as an ap-
proximate fig-
ure. This esti-
mate, I under-
stand is based

on supplying twenty users from one line. I believe another later estimate has been made based on the assumption that 250 persons in a township would become users, the permanent charge for each being \$20 per year, which covers the cost of constructing the township system, the power to be supplied at \$30 per horsepower per year. Combining these rates 1 horsepower would cost \$50, two, \$80, or \$40 per h.p., three, \$110, or \$36.66 per h.p. For four horsepower the rate would be \$35 per h.p. for five, \$34 per h.p., and for six \$33.33 per h.p. But knowing the price per horse-

power does not enable us to determine definitely the price of grinding, because farmers will use their power only part of the time. Suppose a farmer who pays for one horsepower (\$50) uses the full power twenty-four hours a day every day in the year, then it costs him a shade over a half cent an hour, for work actually done. But if he uses the one horsepower only 1 hour each day (365 days) then he is paying \$50 for 365 hours of actual work, which makes his power cost him $13\frac{3}{4}$ cents an hour for one horsepower. Thus we see in computing the cost of grinding by electric-
ity we must take into consideration the

number of
hours per day
that the farm-
er will use his
power.

If he uses
the full
amount con-
tracted for all
the time for
power purpos-
es, part of
which is for
grinding
grain, then his
grinding is
done very
cheaply. On
this basis the
grinding in
our tests
would range
in cost from
.195 cents to
.293 cents



The farm buildings of F. H. Westney, of Pickering, Ont., showing the wind power used. His brother uses gasoline power, as is shown in another cut.

for 100 pounds of grain, which is from one-tenth to one-seventh of the cost by gasoline, but if he uses his power only one hour a day it will cost from 4 2-3 cents to 7 cents to grind 100 pounds, which is from 2 1-3 to 3 1/2 times as much as by gasoline. A table will show the cost under various conditions.

From this table it will be seen that in order to grind grain by electricity at 2 cents per 100 pounds, the same as by gasoline, the current must be used at full strength from 2 hours, 20 minutes, to 3 hours, 31 minutes, each and every

TABLE SHOWING COST OF GRINDING 100 LBS. OF GRAIN BY ELECTRICITY, AT VARIOUS RATES PER HORSE POWER PER YEAR, FLAT RATE.

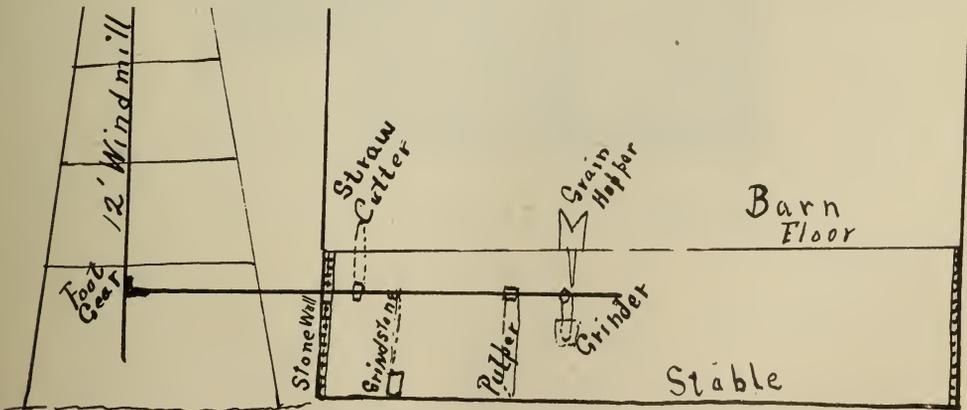
If full power is used.	Cost of grinding 100 lbs. of grain with electricity at					
	\$50 per h.p. cts.	\$40 per h.p. cts.	\$36.66 per h.p. cts.	\$35 per h.p. cts.	\$34 per h.p. cts.	\$33.33 per h.p. cts.
1st—24 hours per day .....	.293	.234	.223	.205	.199	.195
2nd—12 hours per day .....	.586	.468	.446	.410	.398	.390
3rd—6 hours per day	1.172	.936	.892	.820	.796	.780
4th—3 hours 31 minutes per day	2.000	.....	.....	.....	.....	.....
5th—2 hours 49 minutes per day .....	.....	2.000	.....	.....	.....	.....
6th—2 hours 41 minutes per day .....	.....	.....	2.000	.....	.....	.....
7th—2 hours 28 minutes per day .....	.....	.....	.....	2.000	.....	.....
8th—2 hours 24 minutes per day .....	.....	.....	.....	.....	2.000	.....
9th—2 hours 20 minutes per day .....	.....	.....	.....	.....	.....	2.000
10th—1 hour per day	7.032	5.616	5.352	4.920	4.776	4.680

day in the year. It must be emphasized that the farmer must use for power purposes or other purposes that are just as expensive, *all the power he contracts for* during the times specified, in order to get that result. If he contracted for 3 h.p. and then used only 1½, he would have to use it twice as long as shown by the table.

POWER REQUIREMENTS ON THE AVERAGE FARM.

Since making these tests I have asked a large number of farmers individually how many hours a day they could use, say, 3 horsepower. No one has placed the figure anywhere near 2 1-3 hours per day, to say nothing about 3½. Most of them have stated that they might average 1 horsepower about 1 hour a day. If such men were paying for three horsepower their grinding would cost about 10 times as dear as by

gasoline, if paying for 6 h.p. thirteen times as dear—and they could hardly buy less than three if they wish to grind, cut feed and fill silo with the motor. Indeed, these men claim that three horsepower would be practically useless for their heavier kinds of work, especially grinding and filling silo. In our tests we did some grinding with a 2½ h.p. engine, and we found it would do the work, although very slowly. The same would be true of a 3 h.p. motor; it would grind about 10 bushels per hour, judging from our tests. Whether a farmer can afford to spend his time in attendance upon such slow operations is for him to decide. The motor itself needs little attention, but those with experience in grinding know it is never safe to get very far away for any length of time—a nail may get in between the plates, or straw may block the feed, or the grain may run too fast,



Plan of F. H. Westney's wind power. The windmill is set on a 70 ft. tower. The cost, including pulleys and shafting, was \$260. The mill grinds all the grain, pulps roots, and cuts straw. Upwards of 100 bags of grain per month are ground. It will give 2½ h.p., which will drive a 12 ft. cutter box 350 r.p.m., besides driving a small blower attached. Yearly expenses are estimated by the owner, F. H. Westney, at \$12.75, which includes allowances for depreciation and interest on capital invested. Wind power is certainly the cheapest kind of power, although its greatest difficulty lies in the unevenness of the power given.

choke the motor, throw the belt, etc. But let us assume that the farmer can afford to give the necessary attendance to a 3 h.p. outfit, and that the estimate given me of 1 horsepower for 1 hour a day represents the average farm, then the grinding by electricity as already pointed out, costs about ten times as much as by gasoline. At one pint of gasoline per hour per horsepower, the usual basis, \$9 worth of gasoline would be ample to give 1 h.p. 1 hour a day every day in the year. One of the men who gave me this estimate, and who has a 3½ h.p. gasoline engine, told me his bill for gasoline during the year was only \$5. But let us be liberal and say the average farmer will require three times as much power as these men have told me, i.e., 3 h.p. one hour a day.

Here is what 3 h. p. 1 hour a day includes:

Filling silo—3 h.p. not sufficient.

Grinding—20. days of 10 hours each, using full 3 h.p., which, judging by our tests, would grind from 2,000 to 2,500 bushels of mixed grain. Farmers tell me this is more than twice the average.

Pumping—½ hour every day,

using 1 h.p. This will pump 2,500 gallons or 62½ barrels, from a well 40 feet deep or 125 barrels from a well 20 feet deep.

Cutting—3 days of 10 hours each, using full 3 h.p.

Pulping Roots—½ h.p. 1 hour per day for 6 months.

Sawing—1 day of 10 hours, using full 3 h.p.

Washing—
1-6 h.p. 6 hours per week.

Separating
—1-6 h.p. ½ hour every day.

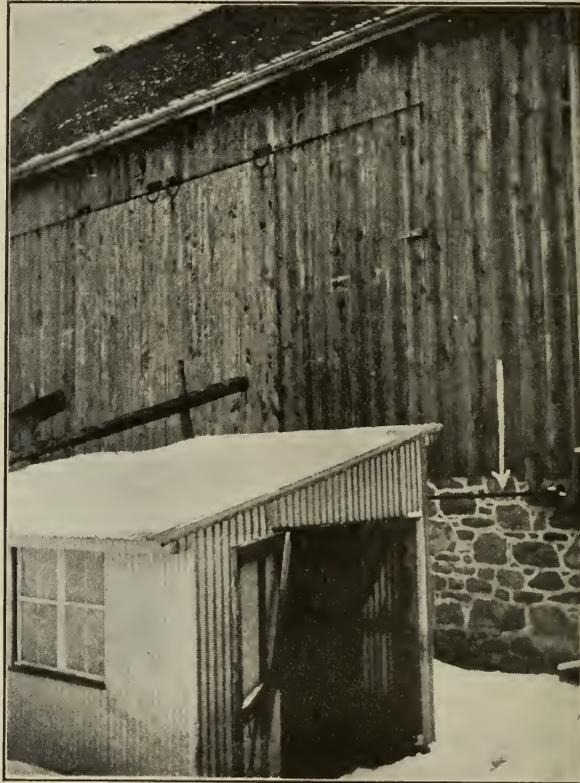
Churning
—1-6 h. p. 1½ hours per week.

Farmers will know that these estimates are liberal for the average farm

The gasoline for 3 horsepower 1 hour a day would cost \$27.

What about lighting and heating? Now twelve ordinary incandescent lamps equal one horsepower. On the average farm four

lamps three hours a day (which is the same as twelve lamps one hour a day) would probably be a liberal estimate. In the winter, more might be used, but in the summer certainly less. This adds another hour each day for our one horsepower. The average farm, however, will not use over 20 gallons of coal oil, per year, worth 20 cents a gallon, a total of \$4.00.



Showing the gasoline engine house on Maple Dale Farm, Pickering, owned by a young farmer, W. H. Westney. The arrow points to the shafting connections with the barn.

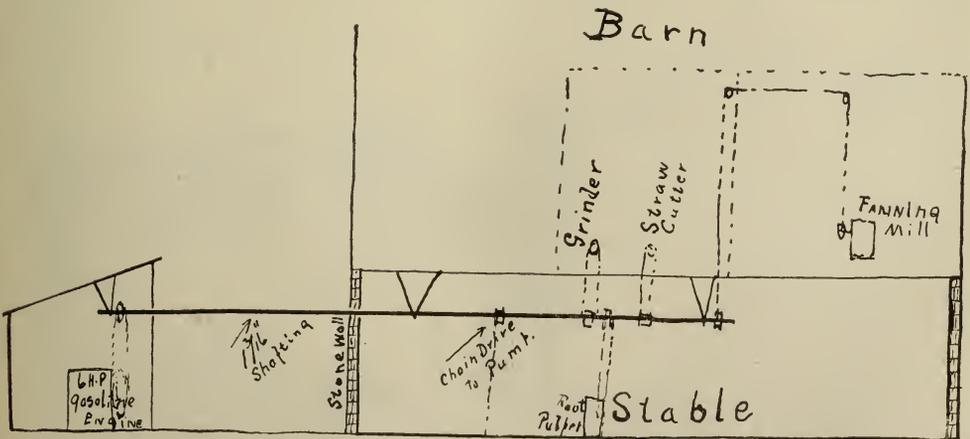
Heating still remains. It has been reported by those who are familiar with the use of hydro-electric power on the farm in Europe that the farmers of Saxony use their electricity "to saw their firewood" (Farmer's Magazine, Nov. No., p. 71, col. 1, lines 4 and 5). We may take this as conclusive proof that wood is more economical than electricity for heating purposes. However, let us see why. If we assume that 40 to 45 per cent. of the heat from coal or wood passes up the chimney then three horse-power of electricity used at full strength twenty-four hours every day for seven months will give about the same amount of heat in the house as burning 2 1-3 tons of hard coal, value \$17.50 or 5 double cords of soft wood, value \$20 or 3 cords of No. 1 hard wood, value \$21. Anyone who uses more coal or wood than the above amounts, and their name is legion, would not find three horsepower ample for his heating purposes. If he used just these amounts his fuel bill would range from \$17.50 to \$21, or say \$19.50 on the average. On this basis, i.e., 2 1-3 tons of coal, or its equivalent in wood, in 7 months the average consumption of coal per day would be 22 pounds, which would give the same amount of heat as 3 horsepower. On very cold days the consumption of coal would probably be twice the average, hence

In Ontario, the Hydro-Electric are proposing to carry their lines into the rural parts and step down the power for the use of the farmers. In their meetings in Ontario and Peel Counties, they made the following prices: A fixed charge of \$24 a year to each farmer. Then \$36 per H.P. per year. Thus 3 H.P. will cost the farmer, a year, \$132. Against this, another power company have offered farmers near Lake Simcoe. power at \$35 for the first H.P.; \$60 for 2 H.P. and \$25 per H.P. for those taking 3 H.P. or more.

on such days three horsepower would be only half sufficient, and would have to be supplemented by 22 pounds of coal, or its equivalent in wood, thus requiring a double heating equipment —both stoves and electric heaters. During the time the lights were lit or machinery run he would not, of course, get 3 horsepower of heat and would have to supplement it still further by coal or wood.

THE COMPARATIVE SUMMARY.

Thus, covering the whole field of possibility for small motors, heat and light on the average farm, we find that the



Plan of W. H. Westney's Gasoline Power. This gasoline engine is 4½ h.p., not 6, as given in the cut. Cost of outlay, including engine house, was \$275. This engine gives complete satisfaction, and furnishes all the power he wishes for, except in threshing and silo filling. He has a 1½ h.p. engine at his house which does all the wife's work. It is always ready, costs little for repairs and gasoline, and is simple in mechanism.

services to be rendered by three horsepower of electric energy can be had otherwise at the following prices:

Power, gasoline, 1 h.p. - hour a day	\$9.00	.....
Or 3 h.p. 1 hour a day		27.00
(which is the same as 1 h.p. 3 hours a day.)		
Light, coal oil	4.00	4.00
Heat, coal or wood	19.50	19.50
Total	\$32.50	or \$50.50

while three h.p. of electricity costs \$110.00, to which we must add something for the price of coal for supplementary heating.

To be sure there is much convenience in having an electric button handy to turn on the lights instantly. It remains to be seen whether this convenience will induce the farmer to pay \$110 for services which experience has shown him he can have otherwise at about one-third of that price. It may be the same here as with rural telephones — convenience coupled with some increase in comforts may count a great deal, maybe enough to lead to the adoption of electricity, despite the increased cost it will entail for power, light and heat.

Personally, I have been deeply dis-

appointed at the result of this enquiry. I was one of those who hailed the advent of hydro-electric power as destined, because of cheapness, to revolutionize power, lighting and heating methods on the farm, wherever available, but now I am not nearly so hopeful for the immediate future as before looking into the matter. I expect it will do so yet, however, when the use of current by cities, towns and townships becomes so general that the price can be made to approximate that of the gasoline, oil and wood (?) which the current is expected to supplant. Or, looking at it from another aspect, I should be quite hopeful for a rather general adoption of electric power by the farmers at an early date, if some feasible system could be devised whereby each consumer would pay for only the power actually used, the limit extending up to say 6 or possibly 10 horsepower instead of three, that is if the current could be sold by meter as we have been informed is the case (see Farmer's Magazine, December number, page 53, column two, line thirteen) in parts of Germany, where electric power is used on the farm.



This is F. L. Green's farm dairy building, Ontario Co. A complete system of farm lighting and power is furnished from a dynamo installed in his grist mill nearby and run by water power. His costs for electrical operation are decidedly cheap.

Resolutions Passed by the Grange at the Annual Session, January, 1913

RECIPROCITY:

The Dominion Grange has persistently advocated any and every movement towards freer trade, and heartily supported the Reciprocity agreement of 1911. The defeat of that agreement by the general election of September, 1911, we believe to have been secured by an unfair and irrelevant appeal to partisanship and to create international prejudice. We are still confident that Reciprocity in trade with the United States would be to the great and lasting benefit of both countries, and we are, moreover, equally confident that its realization, though it may be delayed by selfish interests, cannot be permanently blocked. We are glad to reaffirm our allegiance to that cause, and we desire to express the hope that when next the question is placed before the Canadian people it may be put in the form of a referendum, so that the public mind may not be distracted and confused by appeals to party spirit and the intrusion of wholly different questions. It is only fair to the Canadian voter that he be given a chance of giving a definite answer to a specific question.

THE BRITISH PREFERENCE:

We again recommend such a gradual increase in the British Preference as will, in the course of a few years, lead to complete free trade with the mother country. This is one of the best ways in which we can render assistance to Britain, and at the same time reduce the cost of clothing, ironware, and other manufactured articles to the Canadian people. We must confess to a feeling of amazement when we see those who are loudest in their protestations of patriotic devotion to the Empire, unwilling to extend to the British people the same market advantages that they give us. The conclusion is so obvious and so damaging that we refrain from expressing it in words.

THE TARIFF:

We would again express our belief that the protective principle should be entirely eliminated from the tariff, and that as soon as may be the public revenues be raised by direct instead of indirect taxation. An indirect tax, such as customs duties, is susceptible of gross unfairness of incidence, is expensive to collect, and is out of harmony with progressive thought. The incidence of a direct tax is patent to all, and its expenditure will therefore be more carefully watched. It is easier to collect and much more difficult to evade.

NAVAL QUESTION:

Prior to the last general election we were told by Mr. Borden that we should have a chance to pronounce upon the whole question of the Navy, if he and his party were returned to power. The public generally understood his promise to be clear and definite, and they accepted it in good faith. Now they are confronted with the prospect of handing over \$35,000,000 to the British Admiralty without any constitutional means of protesting against the same. And further, if the question is placed before the people in a general election, into which many other issues will enter in addition to the inevitable and unfortunate intrusion of partisanship, it will be quite impossible to get any intelligible verdict upon the one specific question. And even if all other questions could be, for the time, put aside, and if partisanship could be completely and immediately eradicated, we should even then be compelled to choose, as it were, between the devil and the deep sea. We have no hesitation in condemning the naval policies of both parties and reaffirming our belief that both Canada and Great Britain stand to lose heavily by either building a Canadian navy or our assisting Great Britain in maintaining naval supremacy. The "German peril," which has thrust the naval question into prominence, is largely Great Britain's own creation, being due to her expressed determination to remain mistress of the seas, and her refusal to accept the proposition made at The Hague Conference that private property should be immune from capture on sea as on land. Her acceptance of this latter proposition, to which Germany gave her consent, would have removed the whole foundation of the now popular argument that Great Britain must of necessity dominate the seas in order to escape starvation in time of war, and at the same time leave Germany

without the excuse which she now frankly gives in justification of her naval policy, viz., the necessity of protecting her growing maritime commerce in time of war. Britain's failure to accept the very reasonable proposition then made, and her continued refusal to make amends for the mistake she then made we regard as disastrous in the highest degree.

While condemning both naval policies now before the public we think that the majority should rule, and that a fair and clear pronouncement upon the whole naval question is called for. This is impossible unless the question is submitted to the electors separately in a referendum, and also impossible unless other choices besides the two now before the Canadian Parliament are submitted at the same time. That the politicians will take such contemptible advantage of our constitutional system as to deny these privileges to the Canadian electorate, we are reluctant to believe.

We demand a referendum presenting at least three choices, viz.:

- (1) A money contribution;
- (2) A Canadian navy;
- (3) To remain as we have been.

DIRECT LEGISLATION:

The blocking of tax reform in provincial politics and the prospect of being unable to vote at all intelligently upon the naval question, taken along with the growing conviction that the manner of settling the question of Reciprocity was in the highest degree unfortunate, lend special emphasis to the Grange's endorsement of Direct Legislation through the Initiative and Referendum. We have the Initiative now in the Ontario Liquor License Act, and it is working to general satisfaction. A further extension of the principle would take a great many important questions "out of party politics," and enable them to be settled largely, if not wholly, upon their own merits.

THE GOOD ROADS SCHEME:

The spending of public money to build transcontinental highways for automobile traffic we consider to be highly reprehensible. Through roads are of no use to the farming community, and it is a misapplication of public funds to apply the hard-earned money of the people to construct "coast to coast" roads which, in the very nature of the case, can be of little or no benefit to those whose earnings build them. Good roads we need and want, but they should be the average country roads leading from the farms to various market centres. Let the automobilists pay for the roads they wish to use, and let the farmer's money be applied to maintain the roads he uses. Surely this is but scant justice!

PARCEL POST:

The rapid spread of rural free delivery in Canada lends special importance to the establishment of some system of parcel post such as has been used in Germany for over a quarter of a century, or such as has been recently established in the United States. In the elimination of the middleman, in bringing producer and consumer closer together, and in cheapening the cost of transportation, a system of parcels post would be of first importance. Regular shipments of farm produce could be sent from individual growers in the country to individual consumers in the cities at a minimum cost, and various kinds of commodities of urban manufacture could be returned to the farms. A special advantage would be the collecting and delivering of all parcels. The establishment of parcel post, moreover, would furnish the people with a way of escape from the extortionate charges of express companies. The extensive use made of this system in those countries where it is in vogue leads us to expect that it would be of great advantage to the Canadian people.

We would respectfully urge the Post Office Department to investigate the workings of the system in other countries, with a view to its adoption here.

LOCAL OPTION IN TAXATION:

We note with pleasure the growth of public opinion in favor of local option in taxation, and we again protest against the injustice of denying to municipalities the right to exempt improvements from taxation if they so wish.

In this connection we would direct attention to the statement recently made on the authority of the Bank of Commerce, that the increase of taxable real estate (a large part of which is land value), in the City of Montreal during the last year has been \$120,000,000. Under present conditions most of this goes into the pockets of a few land owners, whereas it should, in justice, return to those who have created it, viz., the community. The increased taxation of land values would have the effect of expropriating a greater share of this "unearned increment" for the public treasury, and would assist in making possible the change from indirect to direct taxation.

THE NAVAL ISSUE

Note.—We have given considerable space to the discussion of the Naval Issue in the January issue. This is the biggest question that has been before our Parliament for some time, and it is fitting that our readers get a chance to hear the arguments on every side of it. Mr. Drury contended for our status quo. Mr. Thompson argued for the Borden proposals, and now Mr. Brown, who was formerly editor of the Weekly Globe of Toronto, makes a splendid argument for the Laurier policy. It is but following up the policy of Farmer's Magazine, in thus getting all sides of the case.—Editor.

By Walter James Brown, B.S.A.

THE naval debate in the House of Commons, the discussion of the issue by the Press and the keen interest manifested by the Canadian people as they talk over the question from day to day have brought out in clear relief many facts, which the farmers of this country have not failed to note. There is perhaps no other class of people in the Dominion who are weighing with greater care the advantages or disadvantages of the two policies placed so clearly before the House of Commons by the Right Honorable R. L. Borden, Premier of Canada, and by the Right Honorable Sir Wilfrid Laurier, Leader of the Federal Opposition.

While it is true that the Grain Growers Association of the Central provinces of the West have with apparent enthusiasm taken a stand against any expenditure for defence purposes, and while their views must be accorded the respect they deserve, yet it is difficult to believe that the Grain Growers have studied the questions involved with intelligent interest. Their position is similar to that taken by many people in Canada previous to 1900. Before the South African War the people of this country were so absorbed in solving the problems incident to their material achievements, and were so secure under the protection of the British Navy, that they did not concern themselves regarding the

larger questions of international relationships and were unfamiliar with the reasons that actuated responsible statesmen in building and maintaining fleets of battleships on the high seas. As soon as their attention was called to the responsibilities of national and imperial existence they began to study defence problems with avidity. In respect to these questions the farmers of Canada have not been different from any other patriotic and intelligent class in the community. Because they have been slow to speak their indifference has been taken for granted; but every farmer has a stake in the country and if the facts are presented to him with clearness, so he is capable of coming to a sound conclusion, he is always found on the side of self-respecting citizenship, and he is not afraid to assume for himself and his family the responsibilities that such a standard of citizenship involves. Certainly no one in intimate touch with the thinking men among the farmers of Ontario would agree for one moment that their views were in harmony with the Grain Growers' resolution.

The two articles in the Farmer's Magazine for January entitled "Canada and the Empire," by E. C. Drury; and "The Question of Naval Defence," by Edward William Thomson, while expressing individualistic views leave much to be desired in making it pos-

sible for the reader to reach a satisfactory conclusion on the merits of the naval issue. Mr. Drury seems uncertain in his own mind as to whether or not there should be any naval defence. The gist of his article may be summarized in the statement that, "no valid reason can be urged against giving the people a chance to decide by a referendum upon the navy question." He does not accept Borden's policy which he says is wrong, or Laurier's policy for which he says there is no need. He leaves the impression that the whole issue of naval defence or naval contribution has been "made the occasion of reckless political jockeying." On the other hand, Mr. Thomson's point of view appears to be that Mr. Borden has adopted the wisest course and notwithstanding that the money must be borrowed from Great Britain to build the ships to loan to the British Navy, such a contribution is in harmony with Canadian sentiment and is, therefore, the forerunner of a sound policy.

Mr. Drury's arguments, if pushed to their logical conclusion, would necessitate probably two plebiscites or the creation of a Third Party standing for no defence. He would like one plebiscite submitted in such form that the people might vote against any navy or any defence, then if this should carry in favor of a navy he would ask that the two policies be submitted in some form so the people could say "yes" or "no" to either. This argument for a referendum ignores the principle of responsible government, which is one of the strongest bulwarks of the British Constitution. It is only in countries where the principle of responsible government is not operative, or understood, that questions are submitted by direct vote to the whole people. According to our practice a government must announce its policy and then stand or fall by an appeal to the electorate. If there were any considerable number of people in Canada who believed that no defence of any kind is necessary they have the right to make their views known individually and collectively to their representatives in Parliament. If the

force of public opinion were clearly opposed to any defence measures the House of Commons would be aware of the fact and would so trim its sails as to secure the support of that opinion; but the question before the country is not "defence or no defence," but, how shall the defence be provided? It is a question of method, and method only. There are very few people in Canada who are unwilling to assume the responsibilities of national existence, and if the prejudices of the people in Quebec had not been appealed to by the Nationalists there would have been no opposition to the Laurier naval policy from that quarter. There are those, of course, who are opposed to defence measures because of their religious views. You cannot argue with people of this class and the best way to convince them that they are wrong is to insist on them undertaking the responsibilities of government.

The British people have tried time and again to follow the teachings of the leaders of the peace-at-any-price party, but in every case have regretted their action. Richard Cobden was not only a great free trader, but a life-long non-interventionist. He was constantly making speeches about disarmament, non-intervention, and naval retrenchment. But he systematically shirked practical responsibility for his views, and would not accept a cabinet position. He helped defeat the Derby Ministry and put Lord Aberdeen into power with a coalition cabinet. As every one knows the peace party predominated in the British Government for several years before the Crimean War. The country was hopelessly unprepared, but the incapacity and indecision of the peace cabinet brought on war with Russia. Mr. Cobden did public penance for placing his friends in power. In one of the Crimean debates he said:

"I look back with regret on the vote which changed Lord Derby's Government. I regret the result of that action, for it has cost the country a hundred millions of treasure, and between thirty and forty thousand good lives."

The trouble is that those who are opposed to all defence measures and who at the same time refuse to personally take the responsibility of putting their theories to the test are very free with their criticisms of ministers and political parties; but the alternative course which they recommend is generally something that has never been tried and that no responsible statesman is ever likely to try.

The question before the Canadian people is merely the method of providing for our defence on sea, that there may not in future years be a waste of millions of money and countless valuable lives. It is a question of insurance for ourselves, a question of police protection for Canadian and all other British commerce on the high seas, a question of doing our part as a self-respecting people in providing at least a portion of our own defence and in helping to provide for the permanent integrity and peace of the Empire to which we belong. The British Empire is not aggressive, desires no additional territory, stands for freedom and equality the world over, is the greatest promoter of enlightened civilization in the history of the world and carries a large part of "the white man's burden," because Providence has judged her capable and worthy. Canada is an important part of the British Empire. Canada is a nation and should no longer hesitate in undertaking to discharge the responsibilities and assume the duties of a nation. Providence imposes on no nation supreme opportunity that does not respond to the call of supreme duty. The duty and the opportunity now lie plainly before the Canadian people.

Every thinking farmer in Canada is trying to ascertain in his own mind which is the better policy for the country, and which will do more for the British Empire,—the policy of Mr. Borden, which means a direct contribution of \$35,000,000, which will be devoted to the building of three super-Dreadnoughts to be equipped, manned and maintained by the British Admir-

alty and used as the British Government may see fit until such times as they may be recalled to form a nucleus for a Canadian Navy; or the policy of Sir Wilfrid Laurier, which would use a similar amount of money in building two Canadian fleet units, one for the Atlantic and one for the Pacific, and carry out the same policy as the other self-governing Dominions have in hand.

The Canadian farmer realizes that proper naval defence is but a step in the evolution of our status as a nation. We provided for our land defence and our naval defence also, so far as we were able, during the War of 1812-14.

The first time that Canada was asked to participate in the naval defence of the Empire was in 1887. It was suggested that she should provide coaling stations or naval bases and assist in maintaining them. Australia responded to this appeal, but Canada did not. Sir John A. Macdonald refused because in the negotiations preceding Confederation the British Government had undertaken to provide for the naval defence of Canada if the Canadian Government would spend not less than two hundred thousand pounds a year on her land defence. From 1887 until 1902 Canada took no action in respect to her defence on the high seas.

In 1911 the representatives of Canada met the representatives of Great Britain and the representatives of Australia and they worked out together a plan for the co-operation of the fleets of the Empire, both in peace and war. In the first place they recognized the autonomy of the Dominions and their right to control their own fleets. Secondly, they delimited the areas in which Australia and Canada should fly the flag, protect the commerce, and maintain the honor of the Empire. They gave Australia a portion of the Southern Pacific, adjacent to the Commonwealth. They gave Canada the west half of the North Atlantic and the east half of the North Pacific. Australia is building the ships to fly the flag and protect the commerce in her portion of

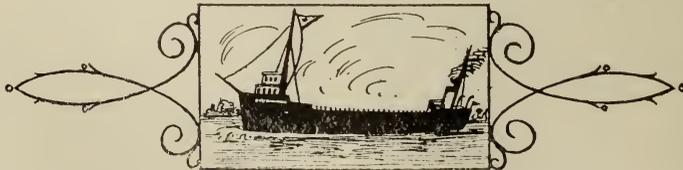
the high seas, and if Sir Wilfrid Laurier were in power Canada would be building her ships to carry out her portion of the contract also.

The Laurier policy assumed from the time it was formulated and assumes today that Canada is prepared to undertake her share of the responsibility for the defence of the Empire as far as her means will permit. Everybody agrees that we must have a navy sometime. A beginning must be made. The plans for such a beginning have been formulated. The arrangements have been made with Great Britain and Australia to carry out those plans. They are admittedly in the highest interests of this country and of the Empire as a whole; but while Mr. Borden agrees that a Canadian Navy will sometime be necessary he has left the whole question in abeyance. He has failed at this writing to say that any attempt will be made to establish a naval service in this country. He expresses the belief that it will require "fifty years" to establish such a service. The fact is that Mr. Borden is at the head of a coalition government. There are those in the country who believe that nothing should be done to provide for our naval defence. While there seems to be another group who grudgingly assent to doing as little as possible, there are a few who want a contribution of money which will be spectacular, and a very few perhaps who say, "make a contribution and build the Canadian Navy also." These elements among the Premier's followers have apparently agreed upon a compromise. The cash

contribution is the most spectacular offer possible; the building of a Canadian Navy is indefinitely postponed; the ships are to be loaned only, thus guarding local autonomy; and they are to be manned and maintained by the British tax payer, thus saving Canadians the trouble of personal service or expense. This is the policy that a self-respecting, loyal people is asked to endorse.

The Laurier policy is already embodied in the Law of the land. It means facilitating our industrial development, utilizing our own materials, establishing large manufacturing plants in this country, increasing our population, encouraging our merchant marine, giving Canadians new opportunities for service, providing training schools for our youth, and thus putting them in the way of getting the benefits of discipline, self-control, manliness and character development that have made the British blue-jacket the best sailor and the finest type of man on the high seas.

The establishment of a Canadian Naval Service is a self-respecting measure of practical Imperialism, and is in harmony with the traditions of the Liberal Party in Canada during our whole history. Such a Service will broaden the outlook of the people, give them an intense interest in international questions, develop patriotic sentiment, and enable us as a nation to remove the reproach of depending for our defence on the high seas on the ships and men of the Motherland.



HOW CANADA MAY HELP ENGLAND

By E. C. Drury, B.S.A.

A year or so ago a prominent Canadian, returned from a tour of England, made this statement,—“Britain’s greatest danger is not German Dreadnoughts, but British Breadnots.” The statement contains more than a grain of truth. Britain is in no appreciable danger of foreign invasion. In making this assertion I am fully aware of the fact that certain great British military authorities claim that there is danger. In rating the opinions of these men at their proper values, however, it is well to bear in mind that their views are likely to be biased by three factors;—first, their personal ambition, which can only be gratified by increasing military preparations, or by war itself; second, by the fact that their training leads them to measure everything in terms of military force, on the supposition that war will occur, and to ignore the conditions that make war improbable; and third, by the contempt which the professional soldier usually feels for the mere civilian, which leads him to entirely ignore the defensive powers of the latter, though history shows that, the most terrible army of defense is that composed of civilians defending their homes.

Great soldiers have rarely been statesmen, nor is it wise to entrust the affairs of any nation too largely to the professional military class. We may more safely believe the opinions of those British statesmen who assure us that Britain’s foreign relations are peaceful, and her defensive forces adequate. Circled by the protecting sea, it is as true now as when Shakespeare wrote it that

“This England never did, nor never shall
Lie at the proud foot of a conqueror
Until herself first dealt the mortal blow.”

The danger of foreign invasion, even if it be considered as possible, is, to say the least, exceedingly remote.

A REAL DANGER.

But Britain is threatened with a danger very real, very near, and more to be feared than any foreign invasion. That danger is nothing less than the physical, mental and moral degeneracy of her common people, the workers on whom after all the nation stands, due to wrong social conditions,

overcrowding in urban centres, and the press of modern industrialism. That conditions in England are very bad, no one can doubt. These words of the Bishop of London, who, as a bishop of the Established Church, which is the church of the Privileged Classes in England, can scarcely be called a revolutionary, are full of significance,—

“There are thousands of the poor wanting everything, while others have more wealth than they know what to do with. I am no socialist, but we have got to readjust the balance.”

The following quotations, which depict some of the unsatisfactory, even terrible conditions which surround the workers of England, are taken from a report published by R. L. Outhwaite in the London and Manchester Daily News of June 10, 1912, and relate to the great manufacturing city of Sheffield.

“We left the centre of the city and in a few minutes were in Attercliffe, the dark realm of the clan of Tubal Cain. Black clouds of smoke hung low, poisoning the

atmosphere, obliterating the sky; the begrimed streets, the toil-stained workers, the squalor and overpowering evidence of the gigantic and remorseless activities were suggestive of the grim brutality of industrialism. . . . In the manufacturing quarter of Sheffield one saw, on all sides, how progress was fructified in ground rents for his Grace the Duke of Norfolk. . . . We passed into the Baily Street area of back-to-back houses, of which Sheffield has 17,000, and inspected foul, evil-smelling habitations. Here death reaps a full harvest of 20 per thousand, compared with the 8 per thousand among the villas of Fulwood suburb. . . . Then we went up the slope, still on the Duke's property, into a miserably congested area where inhabited hovels are mixed up with others untenanted and in ruins. We stopped at one tumble down cottage to talk with a miner and his wife. The whole abode of two little rooms above and two below only provided the space of a small room. There was a hole through the outer wall. The rent is 4s. 9d. (\$1.24) per week, and helps to maintain Arundel Castle. . . . The burden of civic endeavor and national obligation grievously penalizes industry and cruelly taxes the struggling worker, whose wretched abode is made subject to it, while the ducal tax collector (the Duke of Norfolk), can hold 20,000 Sussex acres as an appanage to the castle on which he spent £750,000, and a territory in Scotland for the preservation of grouse."

More significant still is a recent editorial comment on the motherhood bonus feature of the new British insurance measures, recently published in the *Toronto Globe*.

"In many British industrial districts men and women are constantly employed. The earnings of husband and wife are necessary to their sustenance. The mother cannot afford the rest necessary to her own health, and the health of her newly-born child. The discouraging infantile mortality rate is due largely to the exacting employment of the mothers and the necessity which causes subsequent neglect. The conservation of humanity threatened with destruction, is the most urgent need of to-day in Britain."

A country with vast inequalities of wealth, where a Duke, and not one, but dozens, can have a castle costing millions, surrounded by a park the size of a township, with a game reserve in Scotland to boot, while the wretched workers who provide the revenues to pay for this splendor, live in death-breeding hovels; a country where the workers have not leisure even to be born decently,—such is the dark pic-

ture which shows the real danger threatening Britain.

NEED TRANSPLANTING.

The British people need transplanting, like a pot-bound houseplant. Centuries of peaceful occupation of the country, undisturbed by any real revolution, have resulted in the growth of conditions which are literally destroying the nation. It is perhaps well, in the struggle of the human race for existence, that the strong, the efficient, should reap to a certain extent the reward of their strength in attaining a position above their fellows, but when the strong use their strength to create conditions and to enact laws which preserve for their descendants, to the furthest generation, the reward of their ancestor's strength or cunning, while the children of the weak are thrust into a condition of servitude and poverty from which it is impossible for them to rise, a condition is reached which must result in the decline of all that is good in the nation. This is what has taken place in Britain.

The landed aristocracy have had for centuries past, the largest share of the law-making power. They have used this power and the power of their wealth to place themselves in a position to levy a perpetual and enormous tribute on the workers of the nation, in the form of rents. The revenues thus obtained have been used to provide luxurious livings for the favored classes, of a sort of which we in Canada can have no conception. Country castles; thousands of acres of fertile land withdrawn from cultivation to be used for private parks; vast tracts, from which the one-time peasant-workers have been expelled, used for private game-reserves;—such are the conditions found to a very large extent in rural England and Scotland. And as these conditions have grown, the population, to a greater and greater degree, have been forced into the great cities and the occupations of modern industrial life, in order to find means of existence. Here, amid unwholesome sur-

roundings, such as the quotations above given depict, and under the exacting conditions of modern factory life, which demand that both man and woman shall labor, and makes them slaves to some machine, performing over and over some little operation which allows no room for mental and physical development,—under these conditions they have become unmaned, have lost their virility. This condition, which is found in an alarmingly large section of the British people, is the real danger which threatens the British Empire.

REFORM IS SLOW.

It is true the British people have awakened to these evils, and are taking steps to correct them. But reform is slow. It will be fought relentlessly at every stage by the privileged classes, and it is doubtful if the remedy can hope to overtake the ravages of the disease. Another remedy, however, stands ready to hand, in emigration. If these people can be removed from their unwholesome surroundings and transplanted into some section of the British Empire where climatic conditions are favorable to the best development of the Anglo-Saxon race, where democratic conditions prevail, and social relations are such that they may meet their fellow-men as equals, and if, under these conditions they can be employed in outdoor occupations, they will become valuable British citizens, and while developing the natural resources and increasing the wealth of that portion of the Empire where they make their new home, will at the same time regain their mental and physical powers, and their lost self-respect. The surest and quickest remedy for the admittedly serious condition of the British people can be found in this sort of transplanting, not to do away with the necessity of reform in Britain itself, but to mitigate the evils of overcrowding till these reforms can be carried out.

CANADA'S CHANCE.

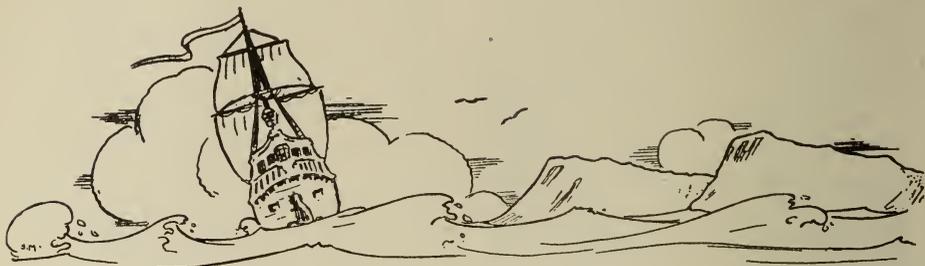
Herein lies Canada's opportunity to

serve the Empire. Of all the colonies of Great Britain, she alone has that vigorous northern climate, necessary to the best development of the Anglo-Saxon. On her wide expanses of farm lands, in her forests, on her lakes and rivers, there is room for all the overcrowded people of Britain, where they may find not only a living, but renewed vigor of body and mind, independence, and manhood.

It has often interested me to observe this gradual evolution of the British immigrant into the independent self-reliant Canadian citizen. I am not speaking of the specimens of the middle and upper classes who find their way here, generally with a plentiful stock of self-esteem, with a somewhat erroneous idea that "England owns Canada," and something of contempt for "Colonials." These people generally have the English habit of snubbing those "below" them, and kow-towing to those above them. If they survive the shock of our rough-and-tumble Canadian democracy they sometimes make good citizens, but oftener than not they vegetate in the "exclusive" circles of some little town that makes some pretensions to "society," and are not of much use, either to themselves or to anyone else. The immigrants whose evolution I would describe are those of the working class, who find their way, as "hired men" to the farms of Canada. Fresh from the land of the squire and the lord, used to calling their employer "master," they are quite prepared to touch their cap and say "sir" to him often to the decided embarrassment of that good man, who has never been used to the like. Very soon comes an awakening in this regard. The newcomer soon finds that he is not being treated quite as he has been used to. He is not looked down upon solely because he works for another, but is treated like a man, and is rated in the simple rural neighborhood, not according to his position, but according to his behavior. If he is wise, he gladly accepts the new condition and gains in self-respect and manliness. Sometimes,

however, there is another result. The new-comer cannot get rid of the atmosphere of the old land. He fancies, because his employer does not bully him, that he is afraid of him, and starts to run things. Then of course there is trouble. The old countryman who comes out to this country is generally at first, very lacking in self-reliance and resourcefulness. His employer sends him to the field to plow. An hour or two later, as the farmer is busy about something else, behold man and team coming up the lane. A bolt is lost, a plow-point broken, or perhaps

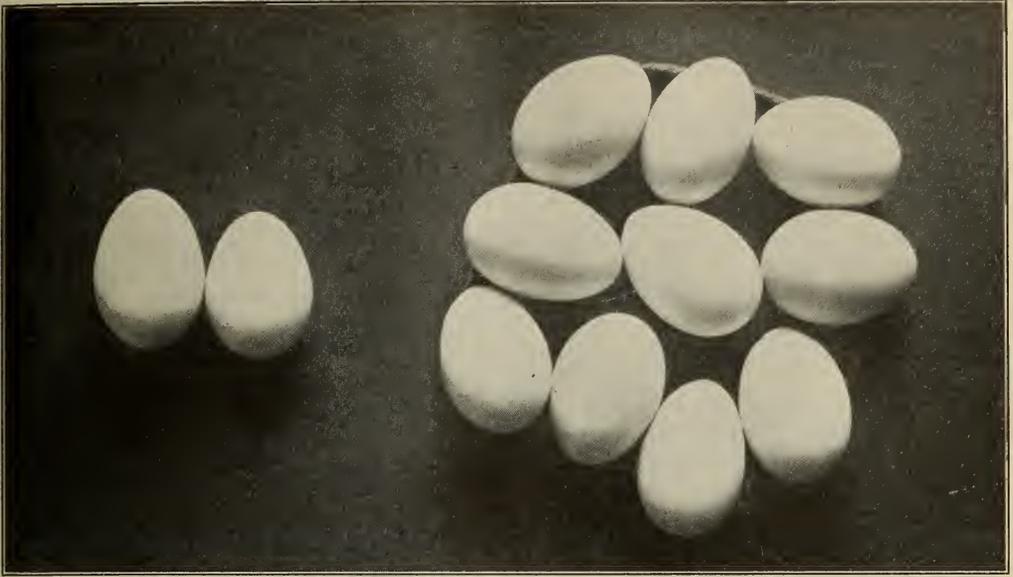
a clip has come off a whipple-tree, and he comes to report the breakage and to find out what to do about it. With some impatience the busy farmer sends him back with instructions as to how to make the repair, and an intimation that next time he had better see what he can do himself before coming to his employer. And so he learns. He gains in efficiency and self-reliance. At the end of three or four years he is no longer an English laborer, but a self-respecting, resourceful Canadian citizen.



VALUE OF MONEY

If money made the birds sing any sweeter,
 Or made the skies a brighter, better blue
 If money made a summer day completer,
 Or added to the sunset's gorgeous view
 If money made a meadow more entrancing;
 A shady lane a better place to stroll;
 If gold could add one bit to my romancing,
 On money then I'd strive to feed my soul.

—*Exchange.*



Practically two out of every dozen farm eggs are not fit for home consumption. This enormous annual loss can be controlled by better methods.

HOW UNCLE SAM'S EGGS ARE MARKETED

The ordinary farmer can make money by paying close attention to the marketing of the eggs which are produced on his farm. In Canada some movements have been made towards securing dependable eggs for the summer. The Gunns, of Montreal, some time ago inaugurated a system near Beaverton, Ontario County, something after the fashion described by Mr. Dacey. Mr. J. H. Hare, District Representative for the County of Ontario, has successfully inaugurated egg circles in that county, and readers of Farmer's Magazine tell us that during the first week in January last they were getting 53 cents a dozen at their gate for guaranteed fresh eggs. The way the United States farmers are meeting this question will be interesting news to all these readers. It will also be interesting to read the rules attached here that are used by the egg circles in Denmark, where the idea first began.

By George H. Dacy

IN MANY of our Middle states two eggs out of every dozen that are marketed from the farm are deteriorated to such an extent by the time they arrive on the central market that they have to be discarded or sold as culls or seconds. A total annual loss of about seventeen per cent. of the egg crop results in consequence of the poor grading, selection, and methods of handling market eggs. The detrimental changes

in market eggs are distributed about as follows, according to data collected by the United States Department of Agriculture:

	Per cent. loss.
Dirtyies	2 per cent.
Breakage	2 per cent.
Chick development	5 per cent.
Shrunken or held eggs	5 per cent.
Rotten eggs	2½ per cent.
Mouldy and flavored eggs....	½ per cent.

Fig. 2.

For a minute let us investigate the farm egg proposition as it is handled on the average country place. Ordinarily the farmer gathers the eggs whenever it is convenient, sometimes daily, but more often only two to three times a week. He brings the eggs to the house and keeps them until a sufficient amount have accumulated to justify a special trip to the village grocery store, where he exchanges the eggs for flour, sugar, or calico. During the sojourn of the eggs in the farm kitchen or cellar no particular care is exercised to keep the eggs in good condition. In many instances the eggs are kept in a room where the temperature is extremely high, with the result that they have arrived at a more or less advanced stage of deterioration by the time they reach the village store. In other cases the eggs are stored in a damp cellar where they become moldy. Furthermore no attention is paid to maintaining the nests in a cleanly condition; no grading or selection of the eggs is practiced nor is any premium attached to the production of white or brown eggs. Partly incubated and spoiled eggs are marketed with the good ones irrespective of their condition.

The farm eggs are produced according to happy-go-lucky, haphazard methods. Farm poultry are generally treated as necessary evils to be handled in the easiest and cheapest manner that is possible. The village merchant would often like to register a "kick" with his patrons as regards the quality of the eggs that they bring in to him, but he "dasn't" give utterance to his feelings for fear that he will lose the custom of these farmers. He is veritably bound hand and foot to accept all the eggs that the farmers offer. The merchant holds the motley collection of good, bad, fresh, stale, clean and dirty eggs until he has gathered a sufficient amount to ship to the city. In transit to the city the eggs further deteriorate. At the packing house they are assembled in great numbers and here they are subjected to grading, selection, and candling in order to ascertain their condition

and suitability for human food purposes.

FARM EGGS OFTEN BAD.

All the bad eggs are discarded and those that are not excessively spoiled are sold at cut rates. The city merchant has to protect himself against the losses that he will surely experience through the purchase of farm eggs. He does so by quoting the village storekeeper a low enough price per dozen, so that he will not lose money on the amount of bad eggs that are shipped to him. Then, in turn, the village merchant pays the farmer a correspondingly lower price per dozen for the eggs. In fact, the low price of eggs ultimately reacts on the producer. It is on this account that there is little incentive for the conscientious farmer who produces good eggs to continue his painstaking methods. He finds that his good eggs sell for the same price at the store as the bad eggs of his neighbor. It is a case of the profits of the good eggs standing for the losses of the eggs of inferior quality.

HOW CURE THIS?

"How can this difficulty be remedied?" is the natural question that confronts the progressive farmer. The solution of the problem is to pay for eggs according to their quality and condition. This method will place a premium on the production of good eggs. One of the leading poultry states of the Middle West annually loses about \$2,500,000, due to the poor quality of its eggs. Millions of dollars are annually wasted in the farm egg business on account of the average farmer not marketing eggs of standard quality that arrive on the central market in a fit condition to be used on the family breakfast table in the home of our American consumer. *Bad eggs exert a depressing influence on the market egg trade. A person who tastes a spoiled egg will refrain from eggs for some months to come.* The housewife that discovers that three eggs in the dozen that she purchased are bad, will as far as possible, shun the egg as an article of food



Alberta is giving away over three hundred roosters to encourage the poultry industry in that Province. This is a cut of the breeding station at Edmonton.

to be placed on the home menu for a long time. On the other hand good eggs tickle the palate of the consumer, and create a keen demand for more of a similar quality.

The control measures that qualify as first aids to the farm egg problem include the marketing of eggs that weigh at least two ounces apiece. It is preferable to consume lighter eggs on the home farm, and rather than to sell them at a reduced price on the city market. Only such breeds of fowl should be maintained on the general farm as lay eggs of a uniform size. The general purpose breeds including the Plymouth Rocks, Rhode Island Reds, Wyandottes, and Orpingtons satisfy this requirement. Excessively large eggs or those that are abnormal in shape should also be used on the home table, as they are easily crushed in the case and they will always grade as seconds.

THE TAINT OF DIRTY SHELLS.

Five farm eggs out of every hundred that are marketed come under the classification of "dirties." Such eggs are

stained, smeared, muddy, or covered with filth. The odor of whatever soils the egg will soon penetrate the shell and spoil or at least taint the egg itself. Clean nests, one to every five hens, should be provided on the average farm. The poultry house should be kept clean and sanitary, and the eggs should be frequently gathered in order that they may not be soiled by the dirty feet of the fowl. This is especially necessary during wet weather. Market eggs should never be washed, as such eggs rapidly take up odors and soon become stale. Eggs should be marketed in cases only, and should never be packed in bran for the trip to market, as the bran adheres to the shell and causes the eggs to be classed with the "dirties."

In the trip from the producer to the consumer about eight per cent. of the farm egg crop is broken. Checked, dented, or leaky eggs sour rapidly and have to be sold at cut prices. Eggs of this quality should be used in the farm home, while all the standard eggs that satisfy market requirements should be

sold. About \$15,000,000 worth of American eggs annually have to be sacrificed due to the growth of chicks in the fertile market eggs. This results from the infrequent gathering of eggs on the farm, and from the storage of the eggs in rooms where the temperature is excessively high. Eggs should be gathered often and should be kept in a cool, dry place until the first opportunity occurs for marketing them.

Shrunken eggs also mire up the possibility of deriving the maximum profit from the farm egg output. As one expert puts it, "Sixty-five per cent. of the contents of a fresh egg is water; and because of a porous shell, this evaporates rapidly under most conditions, resulting in a loss of weight and value. As soon as the newly-laid egg cools, an air cell appears, which increases in size as the contents shrink due to evaporation. The freshness of an egg is commonly supposed to be disclosed by the size of the air cell but this is not a reliable guide for the temperature at which the egg has been kept must be taken into consideration. Shrunken eggs may be detected by candling or by gently shaking when held at the ear. When the "gurgle" of the contents is very distinct the egg is questionable. During the summer months eggs should be accorded the same attention as butter and cream and should be marketed daily if possible. The common practice of holding eggs for a higher price in the autumn results in poor quality and serious loss instead of gain. Under ordinary conditions eggs should never be held."

WHY EGGS ROT.

Rotten eggs usually result on account of exposure to too much moisture. It weakens the shell and membranes and allows the entrance of bacteria which effect a heavy decay of the egg. Like fresh milk a fresh egg will readily absorb odors. Therefore it behooves the egg farmer not to expose his product in musty and damp cellars or in rooms where fruit, fish, or vegetables are stored. A man who is a thorough stu-

dent of the egg market and who is familiar with the farm egg question from stem to stern, recently remarked, "The sale of bad eggs has exerted a marked effect in lessening the demand and damaging the market. A great increase in the demand will follow a uniform and permanent improvement in the quality. The average farm home annually consumes about two hundred and ten dozen eggs. If the fresh eggs that were slightly damaged or were not of the right size or shape or were not clean enough to satisfy market requirements were eaten on the farm and used as a part of this consumption the egg profits of every farm would be materially increased. In the future, also, dealers promise to pay for eggs on the quality basis and this should mean an increase in value of the egg surplus of from ten to fifteen per cent."

A CO-OPERATIVE CONCERN.

In Minnesota the marketing of farm eggs has been reduced to a practical and profitable basis through the medium of co-operatively disposing of the eggs through the local creameries. The creameries accept the eggs of a standard quality on about the same basis as they take in whole milk or cream. In some places the cream gatherer who journeys through an assigned part of the district collects farm eggs as well as cream at the farms along his route. In other instances the farmers deliver the eggs to the factory or at some central warehouse from which they are consigned to the transportation companies. Some of the egg producing districts have gone so far as to organize co-operative marketing societies. The aim of all this endeavor is to induce the farmer to improve the quality of the farm egg crop and this end is accomplished by buying the eggs on the quality basis.

The creamery at Barnum, Minnesota, has been particularly successful in its operations in the handling of farm eggs and its system of management is quite typical of that followed by the twenty-five factories and egg selling associations that at present are operating in the



The crating of eggs. Little eggs, checks and dirties are reserved to be used on the farm tables. Full size, clean, uniform eggs of the same color are packed in the case.

Gopher state. This creamery has over two hundred and fifty egg patrons, in fact, one man finds that it pays him to drive over fourteen miles in order to sell his eggs to the factory. At this factory the farmers deliver their eggs daily with their whole milk. They receive an average price of from five to ten cents more per dozen for their eggs than the general market quotation as a result of their producing eggs of a uniform quality of freshness and wholesomeness.

RULES FOR FARMERS.

According to the rules of the creamery the farm eggs must be delivered at the factory when they are not over eight days old. The eggs must be gathered from the nests on the farm twice a day: they must be of uniform size; they must be clean; and they must be stored in a cool, dry place until they are taken to market. The brown and white eggs must be separated and packed in individual dozen cartons and marked. In addition, each egg must be stamped with the serial number of the farm that produced it for identification purposes in case the egg is bad when it reaches the consumer. The carton is marked with the name of the factory from

which the eggs are marketed and it also contains the brand or trademark of this creamery as well as its guarantee that all the eggs contained in the package are strictly fresh. The farmer pledges himself not to sell any of the eggs marked with the creamery company's trade mark to anyone but the creamery.

One of the principal reasons for branding the eggs is to establish a reputation for the output of a certain creamery so that the eggs will be purchased by the brand or trade mark just as is the case in the marketing of fruit. The purpose of the creamery or egg association is to secure a grade of clean, uniform, and dependable eggs of reasonable freshness for use in the dietary of the American consumer. The factory furnishes to each of its egg patrons a small rubber stamp for marking the eggs with the name of the creamery, its brand, and the serial number of the producer. In addition it supplies the farmer with cartons in which he may pack the eggs. By means of the producer's number, bad eggs can be traced. The farm that markets inferior eggs is first fined and on a second offence it loses its right to market eggs

through the creamery any longer. In consequence the farmers are obliged to produce good eggs as they know that their product will be discredited and refused if it is poor.

The carton or package that contains one dozen eggs carries the guarantee from the creamery:

**This Package Contains
One Dozen Guaranteed Fresh Eggs**

BARNUM CREAMERY CO.,

Manufacturers and Dealers in Eggs, Butter,
Pasteurized Cream and Ice Cream.

BARNUM - - - MINNESOTA

Note.—Eggs in This Package, if They Have
Our Trade Mark On Them, Are Guaranteed
To Be Strictly Fresh, Clean, and Full Size,
and if Found Otherwise We Wish You Would
Do Us The Favor To Report It, Giving The
Number Found On The Egg.

Barnum Creamery Company.

The farmer gathers the eggs twice a day and after grading and selecting them he packs the marketable ones in cartons ready for their trip to the factory. At the creamery the egg buyer examines the eggs brought in by each countryman and if they are satisfactory he immediately gives the farmer a check in payment for the product. At the factory the cartons are packed in thirty dozen cases and shipped to the city of Duluth where they are marketed with a large grocery company. The eggs are not handled at the creamery as reliance is placed in the patrons' honesty to that extent. It costs the creamery about one-half a cent to one cent a dozen, including the expense of the cartons for handling the eggs. During the last two years of operation only two complaints have been registered with the creamery on account of bad eggs. In Duluth a fine reputation has been established for the brand of eggs marketed by this creamery. People come from the most distant portions of the city in order to buy eggs at the grocery store that handles this guaranteed brand.

The following table shows the amount of eggs marketed per month and the

price they brought at the Barnum creamery during a recent year.

Month.	Eggs marketed	Aver. price.
January	630 doz.	35.6 cents
February	1,329 "	25.9 "
March	1,771 "	19.0 "
April	2,069 "	18.2 "
May	2,445 "	19.8 "
June	1,725 "	20.0 "
July	1,509 "	22.7 "
August	1,898 "	24.5 "
September	1,562 "	25.1 "
October	507 "	27.0 "
November	229 "	37.4 "
December	810 "	40.0 "

THE DANISH CIRCLE.

It is worthy of note that the co-operative system of egg marketing and the selling of eggs through the creamery originated in Denmark where co-operative endeavor in practically every branch of agriculture has been developed to its intensive limit. The rules of the Danish Farmer's Co-operative Association popularly termed a "Circle" are of so much significance that I give them verbatim from a recent translation:—

1. The "circle" belongs to the Danish Co-operative Egg Export Association, and has to submit to its statutes in force at any time.

2. Members are accepted on application to the officers of the "circle." They pay 13.5 cents each as a fee to the main association.

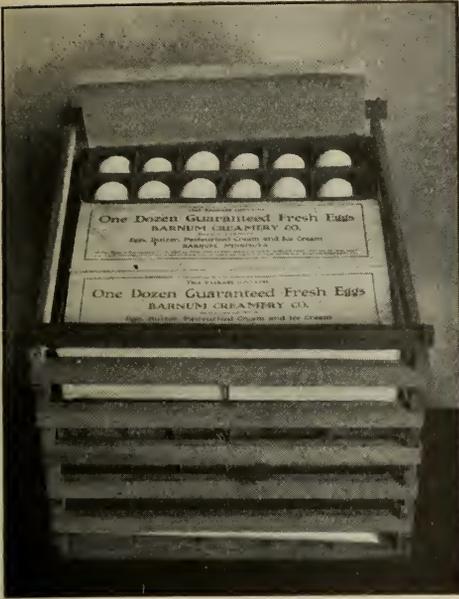
3. Every member is without any special declaration, under the laws of the "circle," as they now are, or as they may legally be amended.

4. Members have to deliver all eggs produced by their hens—home consumption, setting eggs, and accidentally found ones excepted—in the manner and on the days decided on by the officers of the "circle." This obligation holds good for one calendar year at a time.

5. No eggs older than seven days may be delivered; transgression of this rule, as well as the delivery of stale eggs, is punished by a fine of \$1.35 imposed by the directors of the main co-operative association, and may be increased to \$2.70. One-half of the fine goes to the main association, and the other half to the local "circle." The decision of the main directors cannot be appealed.

6. The eggs must be carefully collected every day, and in the hot season twice a day at least. Accidentally discovered eggs (stolen nests), must not be delivered. Artificial eggs only may be used as nest eggs, and the hens must be kept from the nests at night.

7. Only clean eggs may be delivered, and they must be protected against the sun, rain



Eggs of the highest class packed in cartons ready for delivery to the consumer. Such eggs command a premium of three to eight cents per dozen above the general market price.

and frost by the members, as well as by the collectors.

8. The members may only deliver eggs to the "circle" from their own hens; transgression of this rule leads to a fine of 6.75 cents for the first time, and 13.5 cents per pound for the second time of any such unauthorized deliveries.

9. The membership list of the "circle" must show the number, the name, and the position of each member, and the number on the list must be the same as that with which he stamps his eggs. Every member receives — on the payment of 5.4 cents — a rubber stamp with ink and pad. The number of the "circle," as well as that of the mem-

ber, appears on this stamp, and each egg must be plainly stamped on the big end.

10. The egg collector can only accept eggs that are clean and which are plainly and neatly stamped.

11. The "circle" directors may temporarily refuse to accept eggs from a member, and a member may be expelled by a majority vote at a general meeting, or by the directors.

12. The necessary capital for paying cash on delivery of the eggs of the members is provided by a loan, the members of the "circle" becoming responsible for this loan which is paid to the egg collector, who has to provide a satisfactory bond.

13. The eggs are paid for on receipt at the price set by the "circle" directors. Whatever more the eggs may net is only paid to the members, after retaining a sufficient amount for the working capital according to the views of the "circle" directors.

14. Notice of withdrawal is given to the "circle" directors, but only so as to take effect at the end of the business year. Withdrawn or expelled members have no claims on surplus reserve funds or other assets of the "circle," and they have to return their stamp, without compensation, to the "circle" chairman.

15. The work of the directors is to take care of the business of the "circle" in the best manner possible, thus seeing to it that the eggs are delivered to the association in the condition demanded. They appoint and discharge the egg collector who, usually is paid 27 cents per hundred pounds for collecting the eggs.

16. The "circle" sends a delegate to the meeting of the general association.

17. In case of an eventual dissolution of the "circle," any possible surplus — after settling all liabilities — is to be divided between the members, in proportion to the eggs delivered by them during the past year.

18. Formerly the main office printed the weekly quotations to be paid by the "circles," but now they are mailed every week privately.





THE LITTLE HOUSE.

*The little house, so low and grey,
Stands silent in the clinging snow;
About its roof the willows sway,
In lonely wonder, to and fro.*

*The rose-vines, shorn of leaf and flower,
Creep up the windows, small and old,
And quite in keeping with the hour,
The pine trees' sorrows are unrolled.*

*The little house you chose with me,
All silent in the winter's night!
It calls and will not let me be,
While friendly mists bedim my sight.*

*God keep you, little house of grey,
She called you "dear, and quaint and old"—
Perchance she'll miss you some glad day,
Ah, then, your sleeping heart unfold!*

—Amy E. Campbell.

THE DODDS-SINDERS—AT HOME

Note.—The Dodds-Sinders stories will run in Farmer's Magazine during February, March and April. Almost every reader has known of some family that has suddenly acquired wealth and has tried to at once attain social prominence in the town or city. This story is a humorous experience of just such a fortunate or unfortunate Canadian family. The three issues will deal with the Dodds-Sinders at home, abroad, and on their return.—Editor.

By Ed. Cahn

THE doorbell rang just as James, butler to the Sinders family, was in the midst of a graphic account of how Miss Birdie Sinders had managed to overturn a plate full of soup into her young man's lap the evening before. He had reached the most dramatic part of his story, there was a broad grin upon the faces of all his hearers and James was too much of an artist to stop upon the very brink of a climax.

He continued and the bell sounded again, but not until he was rewarded by a howl of laughter from the Jimpkin's butler, Mrs. Jimpkin's maid, all the Sinders' servants and Jones' valet assembled in the kitchen and disposed around a table decorated with several bottles of Sinder's best imported beer, did he make any move to answer.

As the echoes died away after the second summons, James donned his coat, pulled down his cuffs and assuming his professional air of funeral gravity picked up the solid silver card tray from a corner of the stove and leisurely proceeded to the discharge of his duty.

Mr. Sinders, finding himself to be in bad odor with his family, had taken refuge from their wrath in the library, that vault-like home of learning in the most expensive bindings, arranged upon the shelves in a sort of checkerboard effect that Sinders thought and freely said was "swell and neat."

All the books in black bindings were together, those in grey beneath, flanked a little below by those in green and red. Sinders had been to considerable pains

to find shades enough to continue the idea upon all four walls of the big room and had not spared expense, even going to the lengths of having a stack of city directories rebound in sky blue to fill out a corner.

But, even in the midst of his literary kaleidoscope, Sinders was not happy, for he had nothing to read.

Mrs. Sinders and the girls carefully examined every book and magazine that came to the house and had, ever since the awful day when Mrs. T. T. Byble had found nothing but fashion plates and five numbers of the Pinkun and seven of a horrible Yankee Police Gazette on the library table.

Sinders had been sitting gloomily smoking and wishing himself poor again when the first summons came. He sprang up and was making for the door when he recollected that he now had a butler to open doors and so even that small pleasure was denied him. At the second ring he began to hope that James had fallen down the cellar stairs and broken his superior neck and to wonder if he did not now have sufficient excuse to offer Sally for answering it himself.

Then it flashed upon him that in a reckless moment that day he had invited old Donald Hicks to call upon him and have a pipe whilst they talked over the old days. He shuddered at the thought of a visit from Hicks upon such an evening. He would just tip him the wink to make himself scarce

since the Missis and the girls were in such critical humors.

Sinders scrambled out of the enormous chair in which he was half buried and hastened across the slippery polished floors toward the door. He trod as warily as a cat upon hot bricks but a rug with all the fiendish treachery of the Persian slid beneath him and all but laid him low. At this instant he heard James approaching and promptly gave way to downright panic.

He would have sworn before all the K.C.'s in Canada that he who stood without the portal was none other than Donald Hicks, stewed of course, for was it not close on to ten p.m.; had not Donald made a modest clean-up at Porcupine, and who, with brains in his head, putting those things together could doubt but what he had employed every shining moment in an energetic attempt to put himself outside of all the moisture to be had in the city—far famed as the most virtuous in Canada?

Hicks was unconventional at all times but at ten in the evening of a festive day! Well, he must be headed off at all costs. What might he not say to the painfully correct and formal James? What sort of a shindy would he not kick up right there on the doorstep? St. George Street, hearing it, would elevate its already lofty nose and Sally and the girls—

Sinders bit his under lip and swore a miner's oath to reach that door first.

Alas, thanks to the slippery floor and the cursed Persian he had lost too much time. He heard his butler sliding back the door and entering the hall. He had seen his employer leaping from rug to rug down the long vista of the rooms and, knowing that if he allowed him to open the door he would hear from Mrs. Sindere without fail, hastened his pace to a dog trot.

"Hi'll hawnsir, sir!" he said, but Sindere still kept on.

"The old fool is getting deaf," thought James and mended his pace. Sindere not daring to raise his voice lest Sally should overhear, increased his pace and so, master and man ran noth-

ing more nor less than a foot-race to the door.

Thanks to the butler's handicap, Sindere won by a nose and opened the door.

Sure enough, there stood, or rather leaned, friend Hicks, very much the worse for wear and showing every sign of distress in visage and eccentric apparel. He was shedding copious tears and vainly endeavoring to dry them upon the hard and unresponsive surface of all that remained of a three-dollar derby hat.

The verandah light was bathing this operation in a golden glow and the departing guests at the house across the way were showing marked signs of interest.

One glance was enough to reveal to Sindere the futility of asking Donald to depart. He must remove him from the public gaze come what might. He reached for Donald's collar with one hand and for the light switch with the other.

His friend's untimely lurch forward confused him and so he not only failed to put out the verandah light but jerked Hicks into a hall as dark as the inside of a blind man's hat.

James, mystified by all this, had retired a few feet and stood waiting, partly for orders but mostly in order to hear what was to happen next.

The slamming of the front door and Donald's incoherent greetings brought Mrs. Sindere rustling to the head of the stairs.

"James!" she called, alarmed at the darkness and the strange voice.

"Yes, madam," said James from the gloom.

"What's the trouble? Turn on the lights! This instant!"

"Yes, madam."

"No, sir!" hissed Sindere desperately.

"Nozzer lady lost in the fog," observed Hicks. "I'll shing to keep 'er company." And raised his voice.

"Shut up!" roared Sindere.

"Turn on the lights!" called Mrs. Sindere furiously.

James started for the switches. Sin-

ders pushed Hicks toward the library; he protested and tried to go the other way. Mrs. Sinders ran down the stairs just in time to meet all three at the foot of them. There was a head-splitting collision and they all fell in a heap, the four-hundred-dollar grandfather clock, which had just that day been sent home from Byryre's and forgotten in its new place, crashing over upon them.

There was a shower of glass, the chimes sounded wildly and then they untangled themselves.

"Beg pardon, sir," said James.

"Police!" croaked Donald. "It's a raid!" Mrs. Sinders began to scold vehemently, and what Sinders said could never be repeated.

The girls came running, the French maid excitedly telephoned for the police, the neighbor's servants remained in the background but missed none of the details and Donald, separated from the debris of the grandfather clock, was thrust into the library and onto the lounge to sleep it off and be out of harm's way. Instead of subsid-ing, however, he amused himself by pulling down books and endeavoring to throw them back into place after the manner of a game of quoits.

After all this, of course, no power on earth could save Sinders from the interview with Sally and the girls which had been impending all evening. He answered the numerous questions of the policeman who came in answer to the maid's call, and bribed James into a promise of silence, under the impression that he was the only dangerous witness, and then he meekly obeyed orders and joined his wife in her sitting-room.

Nora and Birdie were there, too. He saw that they had recently been weeping and his heart softened, until he noticed that they both wore the gowns whose exaggerated cut had provoked him to stern criticism earlier in the evening.

He sat down before his better five-eighths, jauntily crossed his legs and thrust his thumbs into the arm-holes of his vest.

His wife looked at him witheringly until he could bear it no longer.

"Sally! As sure as my name's Sandy Sinders I——"

"Don't call me Sally. And your name is not Sandy. You are S. Hobson Sinders, or at least you used to be, but the girls and me have decided that from now on you and us are the Dodds-Sinders. Your ma's folks were Dodds and good people in the old country and everybody knows I was a Dodds, and my family can't be beat in Canada, so we are Dodds-Sinders from this out."

"But everybody calls me Sandy. All the boys——"

"Don't interrupt! It's bad form and 'Sandy' is vulgar."

"The boys, miners like that Hicks, we are not going to know any more. They're bad form."

Seeing the downcast look upon her father's face Birdie handed him a card upon which was engraved "Dodds-Sinders." "See here, pa, it looks swell."

He looked at it doubtfully.

"What's this here mark?"

"It's a hyphen."

"Hi—hife—Dodds, line between Sinders, eh? I'll keep this, Birdie, and learn it before I spring it on anybody."

Mrs. Sinders sighed impatiently. "There you are again, using slang. I tell you Dodds-Sinders we will never get anywhere or be anything until you get refined."

"Well, Sally, Sarah I mean! We don't need to be refined. We've got plenty of money. We have one of the swellest houses, and the swellest clothes and——"

"Yes, and nobody will look at us because everybody calls you Sandy and slaps you on the back, and folks like Hicks come and make a show of us. Everybody has heard about how your ma insisted on doing the cooking herself even though I have a high-priced French chef in the kitchen, and she would call him "Cheffie" and gossip with the Jimpkin's maid over the back fence."

"Well, ma can make better tea-biscuit than that chef and you used to

gossip with everybody up in the mines."

"Oh, be still! Porcupine's society don't count. We are millionaires now. I want Nora and Birdie to have some chance."

"So do I."

"Well, for pity's sake then, pa, don't order any more 'cuisine' at a restaurant."

"Say!" exclaimed Dodds-Sinders, interested at last, "I could see from that waiter's face that something was wrong. I heard Bob Short say the cuisine at that hotel was fine. I was tired of all the queer stuff we've been getting for to top off with and so I says to him, 'Bring along a big order of that there cuisine.'"

Nora, divided between laughter and tears, explained, but her father was still doubtful.

"I don't know, Nora. Bob Short is up to date. He said it and he ought to know."

"Him know!" cried Mrs. Dodds-Sinders. "Why, his pa was nothing but a barber."

"You don't say! How do you know?"

"I heard Mrs. Toppe-Nyche say he was a barbarian and his father before him. So you see you can't go by what he says."

"Um, maybe, but I could buy and sell the Toppe-Nyches and they don't live on such a swell street either. I don't see why you set such store by them."

"They're in society, real society, and they know lords and earls and everything in England," answered Mrs. Dodds-Sinders.

"Pa, we are going to England."

"What for?"

"For culture."

"What's that? Don't they keep it here?"

The silence that greeted this question, and the hopeless expression upon three feminine faces made Dodds-Sinders realize that he had made one more mistake. He grinned unhappily.

Nora sprang up and ran to throw her arms around him.

"Dear old dad. This is not your

lucky day. I'll tell you. Ma and Birdie and I have spent a lot of money furnishing up this house like a palace and hiring all these saucy servants and trying to get into the best society, but we can't do it while we are so ignorant of what's the right thing to do, and have, and say, and go to."

"We think that your way of making money is a good way to get what we want if we just use it right. When you first landed in the mines you didn't know quartz from railroad iron and instead of trying to prospect right away, you hired out and learned from the beginning up—didn't you?"

Dodds-Sinders nodded and smoothed Nora's bonny brown head with a diamond-decked but still horny hand.

"Well, we have tried to learn this society life from the top; it don't work, and so we are going over to England where they really know how, and see if we can't pick up a few points."

"Then we will come back here and we will see who turns up their nose at us!" cried Birdie.

"All right, me girls. Go along. I'll pay the bills and never hol—complain. Yer ma can't say I ever denied her a thing I could give her, but look out you don't come back so culturated that I don't know you at all."

They all laughed.

"You are going along, Sam, right along. You need cultivation as much as we do."

"But Sally, dear, I'm too old to be learning new tricks."

Oh, no, you're not; you're only forty-seven.

"I wish I was ninety."

"It wouldn't save you."

"I wish you'd tell me why you——"

"I'll teach this town that Sarah Dodds-Sinders always gets what she goes after."

"All right. I'll go along and watch the fun."

"Mercy!" exclaimed Birdie, "what a queer odor! Something must be burning."

Dodds-Sinders gave a gasp and dash-

ed down to the library followed by his family.

There, on the hearth-rug before the fire, lay Donald Hicks fast asleep, beside him were two gold fish and a third, impaled upon the papercutter, was toasted to a turn.

They looked at their unconscious guest with various expressions and finally Mrs. Dodds-Sinders spoke.

"Samuel, please don't make any friends like Hicks in London. It's a good thing we are sailing next week."

"I'll be awful lonesome over there,

Sarah. Can't I take along a valet for company?"

"Certainly! The very thing."

"All right. I'll sober up Hicks. He needs culturating too and me and him could have some fun I bet you."

"I bet you can't!" chorused three indignant voices.

Dodds-Sinders, left alone, sank into a chair beside Hicks. "You lucky pup," he said enviously. "You ain't got a copper to your name and ain't never going to have. I wish you was me and I was you."



SUPLIANT

Grant me, dear Lord, the alchemy of toil,
 Clean days of labor, dreamless nights of rest,
 And that which shall my weariness assoil
 The sanctuary of one beloved breast:

Laughter of children, hope and thankful tears,
 Knowledge to yield with valour to defend,
 A faith immutable and steadfast years
 That move unvexed to their mysterious end.

—Alan Sullivan.



Milking in summer on the open fields in good weather in Denmark. In bad weather the shelter tent is used.

DISTRIBUTING COPENHAGEN'S MILK

Note.—Canadian farmers are often of the opinion that the Anglo-Saxon way of farming is not surpassed by that of any other people. Such farmers often receive a rude shock when they read that many foreign people are solving these questions in a more up-to-date manner. We have learnt a great deal from the Dutch, the Germans, and the Danes, and a knowledge of what they are doing for the production of clean milk will be interesting. Mr. Kilgour is living in Copenhagen, and writes especially for Farmer's. This description is given from a personal knowledge in that city.—Editor.

By W. Y. Kilgour

THE Copenhagen Milk Supply Co., has been chosen for the theme of this article, because, though, there are others equally important, and one, the Tripolium, is the largest in Denmark, the Copenhagen Milk Supply Co., is the first society in the world for the distributing of pure milk.

Thirty-four years ago, the sanitary conditions of dairies in Copenhagen were very bad. Cows were fed on the refuse of distilleries, the stables were dirty, and without light or ventilation and there was no inspection. In the country, conditions were about the same. Milk was treated with borax or bi-carbonate of soda, to prevent its souring, and to conceal its age, as it was hawked about the streets from door to door.

Then occurred the incident which led to the formation of the society. A merchant of the city, a Mr. Qunni Rusck,

in 1878 heard one of his workmen complaining that he could not get milk for his sick child, unless he also bought brandy (the distilleries generally kept cows and sold milk) Mr. Rusck's indignation stirred him to immediate action. The company started with a very small capital (£500) and Mr. Rusck as director-general has continued to manage the steadily growing enterprise without any remuneration.

All the milk comes from 40 selected farms grazing together about 5,000 cows. These figures are, of course, subject to modification, as the numbers naturally vary. The best milk is supplied at the same prices as ordinary milk. Infant's and children's cost more.

AT THE DEPOT.

A visit to the company's milk depot will impress the visitor with the well-nigh perfect manner in which the milk

is handled, and the absolute cleanliness. This cleanliness is also extended to the farms. Any deviation from the street rules being punished by withdrawal of the offender's name from the company's list.

The milk arrives by train, which runs alongside the landing platform on the society's premises. It comes in special vans belonging to the company, and is contained in sealed cans. From these vans the milk cans are run to the weighing machine, note being taken of weight and name of the sending farmer.

They are then opened, and a sample from each is examined by smell and taste by a woman expert. These experts can detect at once the slightest taint. Other samples are scientifically tested and suspected milk is set aside.

After this has been done the cans are emptied through a sieve into vats. Near these is another filled with a mixture of 2 parts of ice and 1 part salt and water. This mixture is pumped into the coolers which stand about 12 feet high, over which coolers, the milk is also pumped, leaving them at a temperature of 40 degrees Fahr. It then runs into an enamelled tank, where it is forced through filters of linen and fine gravel, the latter being sterilized every day after use.

Finally it goes into large tanks from which it is drawn at 3 a.m. for distribution in the company's special vans. It is not pasteurized at all. The objection is that it is impossible to tell when the milk has gone bad, as the process of pasteurization kills everything that is good as well as bad in the milk, including the lactic acid bacilli.

Children's and infant's milk is, however, pasteurized, the infants' milk being specially treated. All cows supplying that milk are tested for tuberculosis.

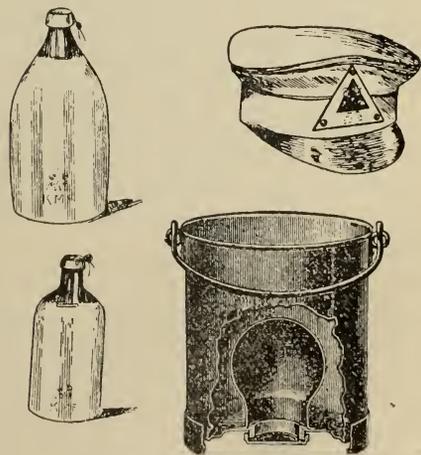
The milk is separated from the cream by steam-driven Alfa Separators, the cream flowing over cylinders filled with ice, and leaving them at a temperature of 35 degrees Fahr. The half skim (Halo skimmet) milk containing $\frac{3}{4}$ per cent. of butter is cooled in the same

manner, by running it over a larger cylinder. It is sold at half the price of whole milk.

In another room at a long tin-covered table, twelve women dressed in the regulation white uniform, stand, bottling the cream which has been separated twelve to fifteen hours previously.

This cream is fed from a tank in another room over the coolers, and into an enamelled vat, thence drawn through pipes into the filters, and from them into a large bottling machine. This machine consists of small cylinders open at the top, corresponding to the number of discharge pipes below. Each cylinder holds the exact amount required for each bottle, they rise and fall, filling automatically. When full, each opens a valve at the top of the discharge pipe to which a bottle is attached.

The revolution of the vat, brings the bottle round to a woman who equalizes the amount, and passes them to another who, by means of a rubber sheathed mallet swiftly drives in the corks, and the bottles go on to other women who fasten the leaden seals round the neck of each, as a guarantee of the quality, and also of the place of origin. There are three grades of cream, Nos. 1, 2 and



In this cut will be seen drawings of the whole-milk bottle, the cream bottle, the dairy man's cap, and the Busck milk pail used. You will note in the milk pail the receptacle for the ice in the bottom of the pail.

whipping, all of which are dealt with separately.

THE HYGIENIC MILK PAIL.

The infants' milk is all milked on to ice at the farms. The milk is passed through a sieve outside the cow house immediately after milking, and taken to premises specially fitted up for the purpose, where it is aired and cooled. The milk, after arrival in Copenhagen, and examination by experts, is cleansed by means of the Rusck filter, bottled and kept cool.

The milk pail, which is an invention of Mr. Rusck's, consists of a cylinder steel pail, in the bottom of which is placed a pear-shaped copper receptacle, which is closed by means of a flat lid under the bottom of the pail, this lid can be screwed off and on by means of a large screw key.

When the pail has to be used, it is turned upside down, the lid of the receptacle is unscrewed, and the latter, through a small wide funnel, is filled with a mixture of 1 part ice, and 3 parts crushed ice or snow and salt.

The lid is then screwed on, and the pail is ready for use. The ice and salt in the cavity causes the milk which is milked straight into the pail to be at once materially cooled. The milk thus loses at once its cow heat, and any micro-organisms which may have got into it during milking are destroyed.

SPECIAL MILKING PREMISES.

The other improvement which Mr. Rusck introduced was the providing of special milking premises on one of the estates which supply the children's milk.

These premises, situated in the vicinity of the cow house, consist of a well-lighted and well ventilated room into which the cow is let through an outer room where the final brushing has taken place. In the milking room, the maid, in a clean white dress, first wipes the cow's udder with a damp cloth, then washes her hands prior to the beginning to milk.

The milk from the Rusck pail is

poured through a milk filter into a large can which stands in a tank with ice, where the milk is quickly cooled to about 5 degrees centigrade.

WIRE STANDS.

The accompanying illustrations give a good idea of the wire stands, which by help of another society are made and sold to the poor. They hold from 6 to 10 bottles, and are retailed for about 4c each. Each one holds sufficient milk to supply the children for a day. The younger the child, the greater the number of bottles in the stand. The mother sets the bottle into tepid water and when sufficiently warm, affixes a rubber teat, and the baby is happy.

Special boxes are provided in which the stands can be sent sealed and packed in ice all over Denmark, and they will keep for more than 48 hours. 16,000 bottles have to be dealt with by this society between 10 p.m. and 1.30 a.m. on every night of the year, Christmas included.

WASHING BOTTLES.

The method of washing the bottles and cans is interesting. The cans are placed on an inclined wheel at an angle of 35 degrees, the wheel is then given a half turn and the cans are dipped into lime water which is made very strong. They are then removed and held over steam, by means of which they are dried more quickly, and are less liable to rust. The noise in this room is very great.

The bottle cleaning is done in a similar manner except that the wheel is not used, and soda is substituted for the lime water.

BUTTER MAKING.

The churning is carried on in another part of the building and is shut off by glass partitions from any connection with the outside. The large churns hold each 350 Hs. (Danish) of cream, this cream stands in long narrow tanks, kept at an even temperature by means of ice, for ripening purposes. The wooden churns, power driven, are



The arrival of the milk train from the farms. The engine would be a curiosity on our Canadian railways.

daily scalded out with hot water and soda.

The butter, of which about 600 Hs. are made daily, is rolled and worked on circular revolving tables, by means of a roller attached to a central spindle.

The unsold milk is converted into cheese, and there is likewise a large business done in buttermilk. In 1910, 3,000 quart and pint bottles were distributed every day at about 3 cents per quart.

The milk is distributed as follows: 200 cans are sent to the hospitals, each containing 100 Hs. Some goes to the three shops belonging to the company, and the rest is sold to customers.

THE VANS.

The vans used in distributing, are specially built for that purpose. The cans of whole, or skim milk, are placed on either side of the front of the vehicle, and locked up in such a position that the milk can be drawn through taps which are dust proof. It cannot be reached in any way by those in charge of the van. Over the taps is written the quality and price of the milk. At the back are trays which fit the cans that hold the cream, the children's and the buttermilk, the prices of which are over the door.

These trays are covered with ice in summer. The driver of each van, who is responsible for everything connected with the sale and return of the milk, has under him several boys who carry the milk into the customer's houses. These boys, who must be over 12 years of age, and the man, are dressed in special uniforms. The boys are well looked after and great care is taken to have them civil and obliging, they are also prevented from wasting their wages.

With single exception of the horse brushing machine, which is electric, the motive power comes from a 35 H.P. Diesel motor burning raw oil. The ice-making machine is also connected with the motor.

CORPORATION CONTROL.

It has been suggested that the milk supply of the large cities should be taken in hand by the corporations of those cities, and that in such a manner the health of the community and especially of the children could be better preserved. It seems feasible, and no doubt will be considered some time in the future. Denmark in her great dairies has shown how it can be done privately at least.

I quote from a portion of the rules which every dairy farmer must sign. They speak for themselves.

1. "All provender given to the cows must be perfectly fresh, and in good condition, free from anything that could communicate any abnormal odor or color."

2. "In summer the cows must be turned out to graze, and given nothing but grass and clover."

3. "Only in case of necessity may the cows be given dry forage and chopped barley, and then only in the open air. It is forbidden to keep them stalled during this portion of the year. The farmer must arrange with the society as to the nature of the food he proposes to give during the winter, and must adhere to the following rules."

A. "Roots—carrots and beetroot in proportion of 36 litres (1½ bushels) per cow, but only on condition that they are mixed into at least 5 lbs. (Danish) corn, bran and cake. Cows which supply milk for infants may be given roots in proportion of ½ bushel."

Turnips, cabbage, swedes, and the tops of turnips or Kohl rabi may not be included in the food."

B. "Cake—Only oil and sunflower cake may be used in proportion of at most 1 H. (Danish) with not less than 5 Hs. corn and bran. Cows supplying milk for infants may not have cake."

C. "All refuse from distilleries is forbidden."

D. "Before stabling the cows in the autumn, the tails, hind quarters, and udder must be shorn."

E. "Milk from recently calved cows may not be supplied during the first fortnight after they have come into milk. The society also refuses to take the milk of sick cows, or of cows which do not give more than 6 litres per diem."

TREATMENT OF MILK.

"The milking must be carried out with the greatest care and cleanliness. The conditions are:

1. "The milkers, during milking, must wear a special dress, and be provided with a towel to use when they require to wash their hands."

2. "The byre must be well lighted especially between the cows in such a fashion that the milker can do his work properly."

3. "Immediately after milking the milk must be passed through a metal sieve covered with a clean and fine linen cloth."

4. "Thereafter the milk must be at every season of the year be passed through a refrigerating apparatus which lowers the temperature to 41 degrees Fahr. It must be kept at this temperature until it leaves the farm."

5. "The removal of manure must be carried out in the morning after milking, and be finished in the afternoon at least an hour before the evening milking."

6. "The farmer must have in store always a fresh supply of ice of at least 30 Hs. of ice to every 100 litres of milk."





Miss Nette

by
Mabel Burkholder.

The fact that we make frequent use of Miss Burkholder's stories is in itself proof that we regard them highly. She has done some excellent work for Farmer's both in the way of articles and short stories. In a recent extended tour of the Canadian West, Miss Burkholder gathered material for a great deal of manuscript. The story, "Miss Nette," is an outcome of the trip.

"THAD!" I called from the doorway of our shack; "Thad Balfour, here is a visitor to see you!"

The young giant, who had just finished taking his daily plunge in the gelid waters of the Northern British Columbia stream on which our prospectors' camp was located, sprang to his full height on the river bank and treated me to a scornfully incredulous laugh.

"A visitor for me? None of your joshing, Dicky!"

"Come all the way from Vermont," I finished teasingly, as I turned my back on him and re-entered the shack.

The last word changed his expression materially. The look of incredulity faded, giving place to a hope, almost too great, too joyous, to be trusted. Vermont was home to Thad. Was it possible that some of the long-lost home folks had hunted out his mountain fastness and come with greetings from friends?

I understood the reason for the critical scrutiny to which he was subjecting his features, as he rubbed and twisted at his hair before a tiny pocket mirror. Vermont was to him the home of all refinement and elegance. Whoever it was that had come all the way from the old state to visit him must not be too badly disappointed in the mountain scapegrace.

Thad's naive efforts at toilet-making on the river bank amused me. As if artificial aid were necessary to enhance

the beauty of that tall, well-knit figure, with its superabundant life, with its elastic step, with its forceful shoulders and fair head so proudly poised!

Presently he came swinging up the river path, whistling a little erratic tune under his breath, a trick that was characteristic of him when under feeling. At his back lay the tree-belted valley through which the rapid river swirled; above the bare mountain peaks stabbed the sky. Everywhere the hand of the Master-Artist had moved almightily in broad, forceful strokes. It spoke well for Thad's individuality that he was not dwarfed by his surroundings. He fitted into his setting like a picture into its frame.

Perhaps he had made a pretty shrewd guess at the identity of the visitor, for he went straight to an elderly gentleman seated near the window and gripped his hands joyfully.

"Dad!"

"Well, well, Thad," exclaimed the stranger, "is it really you?"

"Do not say I have changed past recollection," protested Thad.

To my surprise Thaddeus Balfour senior was looking his son up and down with keen disapproval.

"You have been living a rough life for the past six years, Thad."

"Yes?"

The word was put half interrogatively. The word "rough," as applied to a man has two meanings. While

Thad's hands were horny, his clothes coarse, and his fight with elemental nature stern and unyielding, he was conscious that he had kept his inner nature as tender as a girl's.

The old man got up and walked the length of the room, as if its limited dimensions cramped him. Obviously he was accustomed to more spacious halls with more elaborate furniture. In the course of his wanderings he kicked over a primitive stool, which Thad graciously picked up and restored to its usual corner.

"It's not as if such a life was necessary," said the visitor, a note of irritability creeping into the suave voice.

"No. I must say I adopted it by choice," admitted Thad, quite at a loss to see whither all these preliminaries were tending.

The old gentleman sat down again and locked his pudgy hands over his knee. It seemed as if every movement was designed to show how much of a gentleman he was. He never sat down without looking in disgust on the humble seat he was forced to use; and he never rose up without stepping gingerly about as if in fear of the floor going through with him. He never opened his coat without displaying his diamond shirt-stud; he never folded his hands without leaving his heavy seal ring on top.

"Did you say that all were well at home?" Thad inquired politely.

"Aunt Harriet is dead."

"Ha! The lady with the estate at Navarre—eh? She must have grown extremely wealthy by this time. And did she to the end refuse to adopt or select an heir? Well, Governor, I hope you are benefited by her will."

"You are Aunt Harriet's heir," announced Thaddeus Balfour in weighty tones.

"I? The saints preserve us! You're joking, Dad"

"You are the sole heir to Aunt Harriet's money and estates, valued at four hundred thousand dollars. But there is a condition attached—one extremely easy of fulfilment, I must say."

"Reel it off, Governor," said Thad dizzily.

"It is that you consent to settle down at Navarre, and marry the young lady whose lands join on the south. She is a distant relative, and it was Aunt Harriet's dearest wish that the two estates should be joined, as they were in her great-grandfather's time. This condition your aunt believes easy of accomplishment, as in the old days, before your infatuation for the West, you lost no opportunity to make love to Miss Clarice Martin."

An expression bordering on a grimace crossed Thad's expressive features.

"Does Clarice still do wool-work? Have you any idea how many cushion-tops she has by now?" He was properly crushed by his father's look, but not before his tongue had formed the words: "I suppose she still has her cats."

"With her wealth joined to yours, you come into possession of about three-quarters of a million of money."

"Pfu!" whistled Thad; then suddenly, "Does the lady—does Clarice expect this of me?"

"She has many suitors of course," said the old man, unwilling to undervalue the girl who had been selected for his son's wife. "But no doubt she sees the expediency of the arrangement."

Suddenly into the clearing bounded a horse, a mettlesome little thing, which did considerable dancing on its hind feet and then took an unaccountable notion to stand on its nose and put its hind feet in the air. On the broncho's back sat a girl who kept her position with amazing ease.

From the moment of her appearance Thad never took his eyes off her.

The old gentleman followed his gaze uneasily. The girl had slipped lightly off the horse, which now stood rubbing his nose against her shoulder. Her bright, sun-kissed face was fully turned towards the house. Her skirts were short and her boots correspondingly high, while down her back hung two magnificent braids of dark hair.

The old man's face whitened at Thad's look.

"Don't tell me you have got tangled



“The girl had slipped lightly off the horse.”

up with some dusty Siwash maiden," he muttered.

"I was not intending to tell you any such thing!"

Thad's fist had clinched angrily, but before he could say more the girl was at the door.

Thad! Dicky!" she cried exultantly, "I have conquered the broncho! He is going to travel at a splendid gait."

Then she noticed the stranger standing in the window.

Thad advanced graciously. There were times, under stress of feeling, when the blue blood of a dozen generations of haughty ancestors drove him to most magnificent action. His lordly manner suggested the throne room of a monarch rather than a shack in the heart of the mountains.

"Father, this is Miss Nette, Boss Mc-phail's daughter."

"Ah—h!"

The old man eyed her suspiciously over his glasses, as if in strong doubt of the ancestry which had bequeathed on her that brown complexion and those dangling braids of dusky hair.

Miss Nette was courageous—no braver soul was ever clothed with woman's form. But she quailed and drew back a step under that piercing scrutiny. A shiver of fear, as if she saw some dire misfortune pending, chilled her blood and blanched her cheek under the tan. Thad moved toward her as if for protection.

"Dicky," she said inconsequentially, the quaver in her voice perceptible only to me, while the profile toward the stranger was cold and proud, "if my father is coming home to dinner you and I should be in the kitchen."

I went obediently. She knew she could count on me to the last limit of my powers. I was her relative. I had fought battles innumerable in her name. I loved her more than most relatives are supposed to love, and she knew that too, though I never pained her by putting it into words. It was all impossible. I was making a fight for health there in those vast, silent northern mountains, and sometimes it was Nette who soothed and petted me,

while at most times her strength on the river or on horseback was greater than mine.

No reference was made by either of us to the unexpected visitor. A subdued hum of conversation, now rising to the pitch of excitement, now falling to the depths of concentrated earnestness, was all allowed to go unnoticed.

Presently Thad merged and took a hasty course across the corral, saddled his swiftest horse, mounted and rode away. Nette watched him in fascination.

"Dicky, where can Thad be going?" she asked.

I had no idea.

Just then Thaddaeus Balfour senior stood in the doorway.

"What called Thad away so suddenly?" I made bold to enquire.

"I am sorry to have to inform you that a messenger has just made him acquainted with a serious accident down at the camp," was the reply.

The girl turned to him a scared face.

"My father!" her trembling lips uttered.

The human monster regarded her suffering with a remarkable degree of indifference.

"It is true, Miss—er, Miss Nette that your father's name was mentioned as among the injured."

Already, with the decision of the mountaineer, Nette had regained mastery of herself. She dropped her cooking utensils and flung off her apron.

"We will go by the river way, Dicky," she said, commanding me as usual. "It will carry our canoe down swiftly, no matter how long it takes us to get back. I will put the boat in to the water, while you find out exactly where the accident took place, and if we can carry anything down that will be of use to the wounded."

I was preparing to follow the flying figure, which was already almost to the river's edge, when a hand was laid heavily on my shoulder.

"Don't get excited, young man! There is no hurry."

Old man Balfour was close behind me, and when I turned to look into

his face I saw a very curious expression there.

"No hurry—with the boss injured so far away from home?"

"You will not find him seriously injured."

I faced the man sharply, the truth pressing home on me.

"Is he injured at all?"

"He is not," came the response with astounding coolness. "It was a story I invented myself to separate my son from his dusky enchantress," he laughed harshly, "and I must say I am pleased with the success of the experiment."

"But Thad?"

"I set him on an errand in an opposite direction. He has almost decided to go, and the girl shall not hang around with her soft ways."

My blood rose. When I looked down he was holding out a handful of bills—bills of such a high denomination that I had only seen the like once or twice in my life before. He was trading on my poverty and sickness. He was bribing me to carry out my part of the nefarious scheme.

I took the bills and flung them flat in his face. Probably I hurt him, for he rubbed an eye as if a sharp corner of paper struck the ball.

"If you want more," he was saying, "if you want more to give to the—the little native—you see I mean to treat her fairly—"

Then I found my speech, though my tongue was still thick with rage.

"I mean, sir, that you shall take back those insinuations concerning the young lady's ancestry. She shares with me the honor of belonging to one of the most respected families in this province."

"Oh, perhaps—perhaps. I was too hasty. But I feel deeply on the question—deeply. Can't you see what a monstrous mistake—what a mesalliance—for a girl of her education, her position—"

"I agree with you," I whipped in, as I turned on my heel, "that it would be a monstrous mistake to expose my cousin to the degradation of connecting herself with a family of your calibre.

I will join with you, sir, in preventing such a calamity."

Nette was waiting with what patience she could muster by the riverside.

"This way?" she asked. "Five miles down to Cory's Landing? And then strike out into the bush?"

Absently I answered, "Yes, yes, yes," to all her questions.

She looked at me sharply, but said never a word. Soon the canoe was racing past the trees at a dangerous speed. Nette knelt stiffly erect in front, with the paddle poised.

In the few moments of embarking I had weighed a score of arguments. The thought uppermost in my mind was to tell the girl the truth. And then came the desire to spare her, to shield her, not to allow the old dragon to gloat over her suffering. That consideration finally outbalanced all else. For I knew she loved Thad, and I knew the crushing effect the news would have on her intensely loyal nature. Thad should have known it, too. He had never actually declared his love, but he had won hers. He was quite free—hers be the grief. The shimmer of gold was in his eyes. Good fortune had shown him to be a crawling, invertebrate thing.

During that swift run we indulged in no conversation. In an incredibly short time we were pulling up at Cory's Landing.

"Which way now?" asked the girl, considering the trails which led off from the tiny wharf.

I took her hand gently.

"Nette, my little girl, sit down."

She sank obediently down on a huge boulder and looked at me with suddenly dilating pupils.

"Dicky, what is it? You know something. Is he dead?"

I don't know how I told her. After the first suspicion entered her mind she was quiet enough. She listened apathetically, her fingers lying listlessly in her lap, and her underlip caught between her teeth.

An early evening gloom was already purpling the hills. The customary sounds of the forest were lulled to

sleep for the afternoon was warm. I stumbled on with my story, my voice the only sound that broke the unnatural stillness. I dared not take her in my arms to comfort her. No one could do that but Thad, and he was throwing away what to me was the most priceless treasure on earth.

Presently she looked up into my face with dry, lustrous eyes.

"You shall not blame him, Dicky," she said, with a piteous quiver in her voice. "His father only brought him to a true realization of his position. And it is not hard to guess by his manner what was his former position by birth and education. And she" the brave voice faltered, "she can do those things too."

"What things?" I demanded hotly. "Embroider cushions and tend to cats? That is all the accomplishment she is said to have!"

Nette put her hand over my lips.

"He never realized before that I didn't know how to make or to wear pretty clothes, that I am just a little sun-browned mountain girl, with hair in braids—"

"If he had realized it sooner, and saved for you your peace of mind, and for himself the name of a gentleman--" I began hotly.

"Listen! What was that?"

Our attention was arrested by a noise on the mountain slope above us, a noise of loose falling stones, of hoof-beats on the trail.

"A horse," I said. "No, two!"

A stone loosened and clattered away into the abysmal depths. The two horses were coming down the trail at a tremendous rate. It was playing with death to ride at such a pace on the high ledges.

I had already made a fairly shrewd guess who the riders were. The Bal-fours, senior and junior, were making their way to the boat landing at the head of the lake ten miles away. They were racing the afternoon steamer, which only stopped a minute there on its southward journey. It was bold of them to double up on our tracks, but they were sorely pressed for time.

I knew the same surmise was shared

by Nette, for she stiffened, as a creature instinctively will when made aware of the presence of an enemy. She stood almost touching my shoulder, yet there was no suggestion of my supporting her. Her wide eyes had caught the amethystine gloom of the hills, and her lips were slightly parted.

"Ah!"

The horses had turned the curve of the road. One was a powerful gray, the other a little bay broncho with a dare-devillish look. The little broncho was riderless!

"It is Thad on his grey mare," I exclaimed; "and he is leading your broncho."

Nette spoke never a word, until the rider reined in close to us.

"I knew you would be here," Thad said briefly, looking quite past me to the girl who was meeting his ardent gaze with steady eyes. "I mean to take you with me over to the head of the lake."

"I mean not to go!" flashed Nette. "I mean to go home with Dicky. I hardly think my company would be appreciated at the head of the lake."

He looked down at her and laughed.

"So you heard, did you? I was almost hoping that some of the disgraceful details might be kept from you. But it is better that you should know how they tempted me with all the arts of Satan. Perhaps you don't know though that I was caused to ride ten miles away on a useless errand to keep me from talking it over with you, or from seeing your face. For a few awful minutes my father saw me weaken. He took the advantage and extracted from me a promise that I would meet him at the boat landing at five o'clock. God help me! I meant to keep my word."

"You must keep it," breathed Nette. I wondered how her voice could sound so cold when I knew the love in her heart.

But he only laughed and stooped from his saddle until his face was almost on a level with hers.

"Keep it? Certainly. But you are going with me, Nette."

"I am going home."

"You are not going away from me, Nette. That is fixed and settled for all time to come. The one hour that I tried to live without you was madness of the brain. It was a kaleidoscopic dance before my eyes of seven hundred and fifty thousand separate dollars."

"Dicky, what did I say about going home? You are not usually so slow."

How long would the little girl persist in her pride? Was it possible that she meant what she said? Though her heart break in the process, would she undertake to show him that her family pride was as great as his own? I was growing distinctly uneasy, and I fancied Thad's swarthy cheek was pale.

Then a sudden thing happened. Thad stooped and put his arm around her, lifting her from the ground. Then wheeling his horse abruptly, he set her down on the back of the broncho which had been browsing a few feet away. When he saw that she had grasped the

reins, as a good horseman instinctively does, he gave the broncho a gentle slap on the flank which caused it to bound up the hill.

At first I was frightened. Then I saw that Nette was laughing through the tangle of curls that fell around her face. Ah, it was right—right that she should go with him! So would they go to the end of life. While I would be alone, always alone to the end. Tut! I must not brood over it. It was the happiest misery I had ever experienced. I had never thought it was possible that I should be so satisfied to see anyone take Nette away from me.

"But why are you going to the head of the lake?" I called after them.

"Well, you see," said Thad in reply, "I made a solemn promise to be there. There's a certain good bishop lives across the lake whom I have long wished to see. Nette and I have no objection to accompanying the pater that far on his journey. I never told him I would go all the way!"

Model Concrete Farm Buildings

A SET of thirty models of all-cement farm buildings and miscellaneous structures for use upon the farm recently made a most interesting exhibit occupying about 400 square feet. The plan was to exhibit such concrete work as could be successfully constructed on the farm and to demonstrate it in the simplest manner possible to every one who might be interested.

The use of concrete blocks was shown in a wall 3½ feet high, while the widely discussed concrete furniture, consisting of two tables and four chairs, a bench and two small milking stools were also exhibited.

All the models were built to the scale of one inch to the foot. A farm residence was displayed measuring 22

inches wide, 36 inches deep and 28 inches high.

To the rear of the residence were located the following models in the order named: cistern, well-house, and wind mill, a dog house, smoke-house, ice-house, garage, carriage and wagon shed, horse and hay barn with watering trough adjoining, dairy, cow barn, with silo, and elevated water tank, circular watering trough and masonry base adjoining the concrete approach to the second story of the barn, which was intended to be utilized as a root cellar. Following these was a corn crib and granary and lastly a chicken house which completed the equipment.

The exhibit was first shown at the Chicago Cement Show.

THE DAIRY SHORTHORN

Note.—Frequent references have been made in Farmer's Magazine to the usefulness of the Dairy Shorthorns on the average farm, in Canada. Last April we had an article on this subject, which has met with considerable favor, not only in the East, but in the Prairie Provinces. Since then the Ontario Government has tried to import a few Dairy Shorthorns for their farm at Guelph, while the Alberta Government have already secured the best Dairy Shorthorns that are to be procured in Canada for their experimental work in that province. Mr. Smith lives on the Bouteyre Ranch, near Penhold, Sask., and his opinions on the subject, as contained here, are worth reading, since he came from Northern England, where he was surrounded with Shorthorn society.—Editor.

By Joseph Smith

MY attention has been drawn with interest to the papers which have appeared from time to time in the Farmer's Magazine for the past year on the subject of "The Dairy Shorthorn Cow," which subject to my mind does not appear to have proper attention paid to it by the press or by the governments.

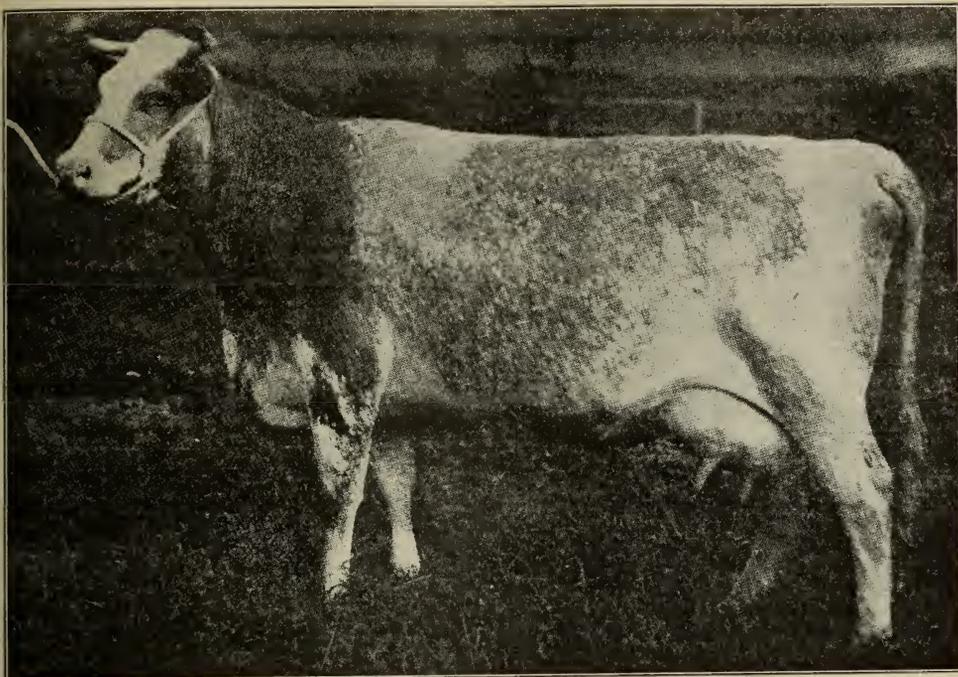
In this Western country there are so many rising towns that the difficulty of supplying milk and dairy produce to rapidly increasing population is becoming more and more pronounced. This opportunity has afforded the champions of the various special dairy breeds to push the sale of their favorites, of which they have not been slow to avail themselves. Now, without calling in question the merits of any other kind, I wish to emphasize the claims to merit of the Shorthorn cow of the dairy type.

It doesn't seem to be generally known or recognized that the Shorthorn was originally a dairy animal in almost exclusive use for hundreds of years on the farms of the Northern counties of England, and their milking properties were improved and developed by the care and attention given them by the dairy farmers and the monks who inhabited the monasteries situated in the rich valleys of the North of England, where they had access to rich pasture and pure streams of water.

THE MONKS OF BYLAND.

The Monks were generally the scientists of their time and took an interest in advanced agriculture. Most of these Monasteries had glebe lands or farms attached, which supplied the bodily needs of the inhabitants and brought them in a revenue. I lived for years before coming out to Saskatchewan on a farm which had formerly belonged to the Monks of Byland Abbey which *for seven hundred years was renowned as a dairy* and wheat growing farm. From forty to eighty milk cows were kept. All were of the original Shorthorn type. In my father's time, this number was greatly reduced, and feeding or fattening Irish cattle was largely resorted to, with less satisfactory results, in the long run.

It was because of their superior qualifications as beef producers that the Shorthorns were chosen by the Coates, the Bates, the Booths, the Collings and the Cruickshanks, to develop into a beef producer and for some years almost exclusive attention was taken in this form of development until they awoke to the fact that they were sacrificing two of the most useful characteristics of the breed, that of milk producing and stamina. Many dairymen who had bought in order to improve the quality of their stock found that



The Dairy Shorthorn Cow, Bertha 13. A winner at the English shows and a type of the animal that would greatly enrich the mixed farms of Canada.

they were sacrificing the milking power and in consequence a dairy Shorthorn society was established and many fanciers and practical men went in for pedigree Shorthorns of dairy type with a view to preserve and develop the old milking properties.

Now we have side by side, first the old dairy strain in the valleys and dales of Yorkshire, Durham, Westmoreland, Cumberland, etc. The registered improved dairy Shorthorn, and the Shorthorn for beef purposes only, from which the Shorthorn breed on this side of the water has been established and from which it is continually being recruited.

BEEF, NOT MILK, WAS WANTED.

I do not wonder that there should be manifest on the part of dairymen in this country such prejudice against the Shorthorn when the general experience has been limited to such specimens as have been brought in by the ranchers and others for beef purposes. Until recently, beef has been all the cry. You

cannot change the results of the early circumstances suddenly. It takes time to do it and I know of no quicker method than importing a quantity of first-class pedigreed Shorthorn dairy breeding stock from the old country.

The beef question is an acute one just now. Prices are high and many farmers who have the old style of beef cattle do not care to sacrifice them in order to go in for the so-called dairy types which are not as good for beef production. If a genuine dual purpose cow were available such as the Shorthorn dairy type alone can lay claim to, the question would be a great way nearer to be solved, for at the same time as she is producing a good flow of rich milk, she can raise a calf on the prairie which at three years old will weigh 1,300 or 1,400 lbs.

THE MILKERS OF ENGLAND.

The Shorthorn cow in the old country has proven to be the successful competitor of all other breeds both in the show-ring at the London Dairy Show,

and on the farm for supplying milk and butter to the innumerable large towns and cities of the old land. Moreover nearly 90 per cent. of the cows that breed are used for that purpose in England. This will show the farmers and dairy men of that country are no theorists, but practical men who know their business. It is sufficient proof that more attention should be paid to this breed and greater facilities afforded by our governments for the improvement of the breed on the average farm of the country. The Dairy Shorthorn is the great pioneer cow. She would have kept this dear meat question away from our doors, had she been more numerous on our Western farms.

SOME 1912 RECORDS.

A celebrated Shorthorn herd in Ohio reports recently some milk and butter records from their special dairy herd. During the last 20 years 78 cows in this herd have made 151 yearly records above 8,000 pounds, that average 9,328.8 pounds. Of this number 64

have made 130 records above 8,000 pounds, that average 9,450.79 pounds, and 72 records above 9,000 pounds, that average 10,167.2 pounds.

Twenty-eight cows have records above 10,000 pounds, including Rose of Glenside with the world's Shorthorn record of 18,075 pounds of milk and 735 pounds of butter. Her average for seven years in succession was 9,417 pounds. Her dam made two records above 9,000 pounds, and had an average for six years of 8,239 pounds. Her grandam had a record of 10,043 pounds, and an average for eight years in succession of 8,426 pounds. One of her daughters made a record that year of 11,539 pounds at five years of age. She now has an average for six years in succession of 8,966 pounds. Another daughter has a record of 9,158 pounds; a half-sister has a record of 15,215 pounds. This is one of the many instances proving conclusively that Shorthorns possess a dairy inheritance that may be transmitted from generation to generation by careful mating.

Replacing Devastated Forests

During the past year Uncle Sam gathered enough Douglas fir seed to plant 750,000,000 trees. The seed was planted on burned-out tracts of the National reserves that had been devastated by fires in the past three years. Forest fires were unusually destructive during the summer months of 1910 and 1911, despite the large army of rangers constantly on patrol. At least 20,000 acres of the finest timber in the National forests were burned. A very great portion of this was planted to fir seed last fall, and, according to the reports of district forest superintendents, the young trees have sprouted up through

the soil. If all goes well they will be full grown firs in twenty-five to forty years.

In order to secure the seed, an especial appeal was made to the boys and girls of Washington and Oregon, where the Douglas fir abounds, for fir cones, and many lads made from two to three dollars per day gathering them. Three methods were followed: First, the cones that squirrels had cut down and dropped were picked up; second, they were taken from standing trees; third, they were gathered from felled trees. The greater quantity was picked up from the ground.

THE POWER OF THE HOME JOY

The following contribution by Dr. Marden is a companion article to "Home Joy Killers" which was published in *Farmer's* in January. The "Power of the Home Joy" makes a pleasing contrast to the former. Both articles constitute chapters of a new book which Dr. Marden is to issue shortly on "The Joy of Living."

By Dr. O. S. Marden

SOME of the happiest homes I have ever known, ideal homes, where intelligence, peace and harmony dwell, have been homes of poor people. No rich carpets covered the floors; there were no costly paintings on the walls, no piano, no library, no works of art. But there were contented minds, devoted and unselfish lives, each contributing as much as possible to the happiness of all, and endeavoring to compensate by intelligence and kindness for the poverty of their surroundings.

What a pitiable sight to see a man struggling with all his might to pile up a big fortune, and yet utterly neglecting the very thing for which he was born—self-enlargement and happiness shared with wife and children.

The majority of men do not realize how little it takes to make a woman happy. She will put up with most everything, poverty and all sorts of hardships and make a cosy, comfortable home out of any kind of a hearth if her affections are satisfied. But if her heart is not fed, she will wither, and the best thing will die out of her, even though she live in a palace and be surrounded with regal luxuries. No amount of money will compensate a true woman for the lack of affection and appreciation expressed by her husband in a multitude of little attentions and considerations.

Gold can buy and furnish houses but no money ever yet bought or made a home; yet what wealth of tenderness, of self-sacrifice, of kindness, of peace

have transformed the humblest dwellings into treasure-houses of the heart?

The young husband should remember that a girl sacrifices infinitely more for the man she loves than he does for her, and he should study to prevent early disappointments. If both husband and wife could do this for each other, the divorce courts would be without business.

It should be the great aim of young married people to keep the commonplace out of their lives and maintain not only love, but the expression of it in a hundred delicate, winning ways. In happiness at home lies the strength of both.

Not sentiment alone but practical adjustments will count for harmony and satisfaction. A level-headed husband should try to avoid every possible means of friction, and there is no better way of avoiding a large part of it, than by forming an actual partnership in which the wife runs the household in her own way, just the same as he runs his business without the wife's interference. The home should be regarded as the wife's, and she should manage it to suit herself. If she wishes to ask her husband's advice, all well and good, but there should be an understanding that the home is absolutely the wife's domain, that it is under her exclusive control, and she should be made to feel as independent in her realm, as the husband is in his. A great deal of the friction in the average home centres around financial matters,

and could be avoided by a simple, definite understanding, and a business arrangement about household finances.

As a rule, it is a very rare man who can spend money for the home so wisely and with as good taste as can the wife.

Fortunately it is becoming more and more customary for men to allow their wives a certain proportion of the income every week or month, and to let them run the household as they see fit, and pay all expenses without any question being asked as to where the money went to. The wife pays the provision bills, the servants' salaries, buys the clothing for the family and pays her own personal expenses. She will delight in her independence. Disputes are not as liable to arise as when money is doled out to the wife by piecemeal.

When freedom and joy are the wife's share, they become the children's heritage. A happy childhood is an imperative preparation for a happy maturity.

We have all seen children who have had no childhood. The fun-loving element has been crushed out of them. They have been repressed with "don'ts" and forbidden to do this and that so long that they have lost the faculty of having a good time. We see these little old men and women everywhere.

Children should be kept children just as long as possible.

The little ones should be kept strangers to anxious care, reflective thoughts and subjective moods. Their lives should be kept light, bright, buoyant, cheerful, full of sunshine, joy and gladness. They should be encouraged to laugh and to play and to romp to their heart's content. The serious side of life will come only too quickly, do what we may to prolong childhood.

The child that has been trained to be happy, that has been allowed free expression to his fun-loving nature, will not have a sad or gloomy disposition. Much of the morbid mentality which we see everywhere is due to stifled childhood.

The home ought to be a sort of theatre for fun and all sorts of sports—a

place where the children should take the active parts, although the parents should come in for a share too. You will find that a little fun in the evening, romping and playing with the children, will make you sleep better. It will clear the physical cobwebs and brain-ash from your mind. You will be fresher and brighter for it the next day. You will be surprised to see how much more work you can do, and how much more readily you can do it, if you try to have all the innocent fun you can.

We have all felt the wonderful balm, the great uplift, the refreshment, the rejuvenation, which have come from a jolly good time at home or with friends, when we have come home after a hard, exacting day's work, when our bodies were jaded and we were brain-weary and exhausted. What magic a single hour's fun will often work in a tired soul!

Have music in the home.

Music tends to restore and preserve the mental harmony. Nervous diseases are wonderfully helped by good music. It keeps one's mind off his troubles, and gives nature a chance to heal all sorts of mental discords.

"Music gives a soul to the universe, wings to the mind, flight to the imagination, a charm to sadness, gayety and life to everything. It is the essence of order, and leads to all that is good, just and beautiful."—PLATO.

"The man that hath no music in himself

Nor is not moved with concord of sweet sounds

Is fit for treasons, stratagems and spoils."

Happiness should begin in the home. The family gathering around the table for the evening meal should be full of chat and cheerfulness. The children should bring to the table their happiest moods, the best manners.

Swallow a lot of fun with your meals. The practice is splendid. It is the best thing in the world for your health. It is better than swallowing dyspepsia

with every mouthful of food. The meal time ought to be looked forward to by every member of the family as an occasion for a good time, for hearty laughter, and for bright, entertaining conversation. The children should be trained to bring their best moods and say their brightest and best things at the table. If this practice were put in force *it would revolutionize American homes and drive the doctors to despair.*

Who could estimate what civilization owes to man's dream of a happy home of his own! What an incentive to man in all ages has been this vision of a home of his own! It is this picture which holds the youth to his task, buoys him up in times of hardship and discouragement. This picture of a home, this vision of a little cottage and some fair maiden waiting at the door—this home vision has ever been the great incentive of his struggles, the greatest incentive of all mankind.

To multitudes of people home is the only oasis in their desert life.

What will men not do for the sake of the home? They cross oceans, they explore continents. They endure the heat of the Tropics and the cold of the Arctics, they explore mines in the wilderness, cut themselves off from civilization for years for the sake of the home.

Home is the sweetest word in the language. It has ever been the favorite theme of the poet, the author and the artist. History is packed with the achievements of men for the sake of the home. The inventor, the discoverer, in all ages has been sacrificed for the home.

Take this vision of home out of a young life, and how empty, meaningless, incentiveless, it would become. It is this vision of home that enheartens the poor struggler and enables him to bear up under his daily dry, dreary drudgery. It is this dream of a home that holds up the heart of the worker and gives him the courage to bear all sorts of inconveniences and to perform most menial and disagreeable tasks. That vision of the home that he has, or the far-off one that he is to found, makes all the difference between despair and hope. It is this vision of a home that makes multitudes of earth's toilers endure all sorts of hardships amid want and woe. It is the dream of "a home of my own" that has lifted multitudes of youths out of obscurity. There is no spur on earth which has had anything like the influence over man that this home vision has. The thought of his home and wife and children, dearer to him than life, keeps vast multitudes of men grinding away at their dreary tasks, when they see no other light in the distance.

If there is anything in this world that requires the spirit of joy, it is marriage and home making.

Half the misery in the world would be avoided if people would make a business of having all the joy they can at home.

"Now for Rest and Happiness."
 "No Business Troubles Allowed Here."
 These are good home-building mottoes. The home joy is the greatest power for good in the world.



GRANDMA

Sometimes all that is required to make a story is a single incident. It need not be a very unusual one, either—that depends somewhat on the characters involved in it. That is what we have in this story by one of the most successful American writers. "A little white slip of a thing"—a salesgirl—gets six pairs of silk stockings. That is the incident; out of it is evolved a little story of business life—direct, simple, earnest; one that cannot fail to interest and influence the reader.

By Temple Bailey

UP TO THE TIME that Cræsus Plain bought six pairs of silk stockings over the counter of his own huge department store from a little white slip of a thing with frightened eyes, the Recording Angel had made few black marks on the page of his soul's history.

But when Cræsus asked, "May I send them to you?" and looked at the palpitating little salesgirl with eyes that held a meaning, the Recording Angel set down these words, underscored and emphasized, "Woe unto you, scribes and Pharisees, hypocrites!" for Cræsus Plain stood high in church circles and passed the plate on Sundays.

There were six pairs of stockings, as I have said, all black, but black with a difference, for on two of them pink rose-buds rioted over the instep, on two more forget-me-knots were intertwined, and the wickedest pair of all had red heels.

And the little white slip of a thing, whose name was Mary, shivered and shook as she put them into a box, and said, "Hush," to her country-trained conscience, and with her lips, "How kind you are!" Then she addressed the box to Grandma, because she did not want the bundle-wrappers and the cash-girls to know that they were hers.

Now Grandma was not Mary's real grandmother; she was simply a little old lady who lived across the hall in the same shabby tenement, and kept house for her daughter's son, who was young

and strong and the last of his race, and who had the grace to realize his obligation to keep Grandma out of the poor-house.

When Mary reached home that night, Grandma was at her door. "I guess there's a mistake;" and she dangled the wicked red heels before Mary's eyes. "Nobody would send me silk stockings."

"They're mine," Mary said steadily. "It isn't a mistake."

"Well, they're real pretty, dearie," Grandma quavered. Her heart was like lead. Only once had Mary spoken of Cræsus Plain. He had asked her to lunch with him and to ride afterwards in his automobile. Mary had said, "No." But now—surely Mary's four dollars a week could not compass silk stockings at four dollars a pair?

Mary gathered up her gay trophies and went across the hall to her own room. Grandma sighed, and the sigh seemed to beat against Mary's closed door. But it remained closed while Mary got out a box of crackers and a bit of bacon and a frying-pan, and spread a napkin on a corner of the table. As she worked, she had a vision of another table—pink-lighted with wax candles, with a glitter of glass and silver, and of herself in a crystal-beaded gown of white tissue which she had seen on the third floor of Cræsus's big store. The face of the man on the other side of the table was blurred. It was not of him that Mary thought, but of the things

that he could give her. She thought of a set of ermine, of a gold-meshed bag, of a sapphire-studded bracelet, of a diamond star—how wonderful they had seemed in the store—how much more wonderful to wear them!

Grandma's voice brought her back to realities.

"I've got a nice hot supper, dearie," she said. "You come over."

Mary stood in the open door. She was white and slim, and straight as a forest pine, and young enough to please even Cræsus Plain.

"I'm not hungry," she said, for, with that pink-candled vision, what to her was a pot boiling on the back of Grandma's stove?

"You come," Grandma pleaded. "Bob can't get home till late; and I am alone."

So Mary put away her frying-pan and tucked the stockings out of sight and went over to Grandma's room, where the clean curtains shut out the spring twilight, and shut in a lamp-lighted picture of comfort. A bird sang in a little gold cage, there was a rag-carpet on the floor, a geranium in the window, and on the round black stove the dinner-pot boiled and bubbled.

And when they had partaken of the good food, Grandma brought out a basket of socks and sat on one side of the lamp while Mary sat on the other and they talked of Mary's day.

But not a word did Mary say of Cræsus Plain. And so her story was like French history with Napoleon left out; or a Norse legend without the Vikings; or a fairy tale without Prince Charming; or Red Riding Hood without the Wolf!

And Grandma knew it.

So presently she began to talk of Grandpa. "The spring makes me think of him."

There was silence after that. Mary's mind was on the crystal tissue and the diamond star; Grandma's, on the old-fashioned garden and a young lover's vows.

"On such a night," Grandma dream-

ed aloud, "I said 'yes,' and we were always poor, but we were always happy."

Mary looked at her across the nimbus of the lamp's glow. "Nobody is poor and happy in these days."

"He picked a bunch of the first violets. I have them yet in my Bible," sighed Ancient Romance.

"And he left you to die in the poor-house," was the unspoken challenge of Modern Sophistication.

Then Bob came in hungry. He nodded to Mary, and flushed with boyish self-consciousness.

Grandma served a big dish of the stew. Bob had a little bunch of wild violets. He handed them to Mary. "I picked them," he said. "They grow on a bank behind the foundry."

Mary pinned them to her blouse, and the vision of the diamond star and the crystal tissue faded.

Grandma watched the pair. Then she questioned, "Why don't you two take a walk? Mary looks white from staying in."

When they had gone Grandma nodded alone in the dimness. The curtains flapped in the warm spring wind. The bird tucked his head under his wing and slept. The noise in the streets came up faintly.

In the Park, facing the river, Bob and Mary sat and looked at the golden lights above the water and at the little moon above the lights. Then Bob said, "I love you, little Mary," and Mary answered. "Don't—You may kiss me once, Bob—dear; but I couldn't be poor."

And Bob went home later, bitter and bruised, and hating his poverty.

And the next morning Grandma tied on her little plain bonnet and shabby old shawl, and, in some Providence-protected way, reached the West Side and Cræsus Plain's store.

Now Cræsus's door was closed more strictly than the gates of Heaven against such as Grandma.

"You can't see him," said the office-boy, and everybody else to whom Grandma applied.

"Well, at least, you'll let me rest," said Grandma; and because she smiled

when she said it, the office-boy smiled back, as everybody else smiled when Grandma looked at them.

And when Cræsus Plain came out a little later, he saw Grandma smiling, and he stopped and asked, "Is there anything I can do for you?"

"You can give me ten minutes of your time;" and grandma stood up in her plain little bonnet and her shabby old shawl and was ushered into Cræsus Plain's private office.

And when they were alone, she opened the box that she carried, and laid on Cræsus's desk a pair of silk stockings with red heels, and a pair with rose-buds on the instep, and a pair on which forget-me-nots were intertwined. Then she looked at Cræsus Plain, and he turned red and white.

And he muttered, "I didn't mean anything."

"If you don't mean anything," said Grandma tartly, "stop doing it!"

Thus was the great Cræsus Plain arraigned like a schoolboy before Grandma, who had, as you might say, one foot in the poorhouse!

"Stop doing it," said Grandma again, "and let her marry the boy who loves her."

"I thought I'd give her a good time," said Cræsus Plain.

"A good time for a girl like Mary ought to mean youth and love. When it means anything else, it is because

some old man has forgotten the things his mother taught him."

There was a mirror opposite Cræsus's desk, and it showed a man well set up, well groomed, and well preserved, so Cræsus frowned at Grandma's adjective, and then he laughed, and with that laugh the evil spirit which had possessed him fled.

"If all women were like you, we wouldn't forget," he said gallantly.

"And now"—Grandma rose and pushed the stockings towards Cræsus Plain—"how will this affect little Mary?"

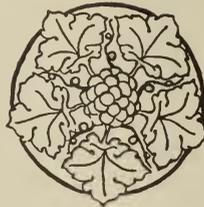
Cræsus Plain rose also. "If you mean that I'll take it out on her," he flamed, "I'll have you know that I may be a fool, but I am not a cad."

Grandma held out her hand. "All men are fools," she said, but she said it smiling, so Cræsus forgave her.

Then he made her go to lunch with him. And he told her about his mother, and they parted wistfully.

And when Mary married Bob, Cræsus Plain sent her a wedding present, not of silk stockings, but of good table-linens and flat silver and solid, substantial furniture, such as a father gives his daughter.

And whether Mary lived happily ever after or not, she at least lived righteously, and perhaps the Recording Angel divided the credit between Cræsus and Grandma, but I like to think that he gave it all to Grandma.





A Wentworth County gathering of the Women's Institute.

DOMESTIC SCIENCE CARRIED TO THE FARM

Note.—Women's Institute workers will be intensely interested in this article by the well-known Superintendent of Ontario Institutes. It tells of the recent new movement meeting with such success in Ontario, that of carrying to the farm women in their local centres, the good things that heretofore have been possible only to the few who could attend the colleges. The Women's Institute movement in Ontario is the greatest movement that has been inaugurated in that province for the uplift of the farm home.—Editor.

By Geo. A. Putnam, B.S.,A

THE directors of education in our schools and colleges are attaching more and more importance to Domestic Science. The special efforts along this line by Y.W.C.A.'s, technical schools, ladies' colleges and private schools, have, for the most part, reached only our young women. What about the great band of women (young, middle aged and old) who cannot take advantage of the above mentioned facilities, but who are desirous of learning something of that science which has made such great progress during recent years and which can be made of special value even to women who have had many years of experience in directing the activities of a household?

A brief history of the development of the Women's Institute work in Ontario indicates the interest which mature wo-

men of responsibility take in efforts towards their instruction along Domestic Science lines; they also accept with appreciation directions as to how they may be mutually helpful in the discussion of the every day responsibilities which are theirs.

Some thirty years ago systematic instruction to farmers—the giving of lectures by agricultural scientists and practical farmers in the rural districts—was inaugurated. From the beginning, the women living on the farm took more or less interest in these lectures and read some of the articles appearing in the Departmental publications, especially those bearing upon dairying, fruit growing, poultry raising, gardening and other activities in which women on the farm are specially interested. An evidence of their appreciation was

shown in the request for a separate organization to deal with only those features of work with which women are directly concerned. As a result, what is known as the Women's Institutes of Ontario had their beginning and have expanded until *we now have over 700 separate organizations with a membership of 22,000.* While their activities from the first embraced all that is implied in "The Objects of Women's Institutes":—"The objects of Women's Institutes shall be the dissemination of knowledge relating to domestic economy, including household architecture, with special attention to home sanitation; a better understanding of the economic and hygienic value of foods, clothing and fuel, and a more scientific care and training of children with a view to raising the general standard of the health and morals of our people," much has been added in recent years. Food values, cooking, preserving, hygiene, feeding of invalids and children, training of children, literature in the home, beautifying the home, etc., were considered from the first, but of recent years child welfare in its broadest sense, social questions, civic improvement, business methods for women, laws governing women and children, school improvement, rest rooms for women, in fact all matters which have for their object the betterment of home and community conditions have been added to the list of their good works.

Having taken up Domestic Science to a limited extent through isolated lectures and by unsystematic study, the members became impressed with its value and asked that provision be made for giving them systematic instruction along these lines. The first attempt to give groups of women living in the rural district such instruction was undertaken in the fall of 1911 at the following places where classes of at least twenty-five were formed, and at two points, Caledonia and Dunnville, evening classes were held for the benefit of the High School girls:—Cayuga, Dunnville, Delhi, Hagersville, Caledonia, Canfield. The average attendance at the classes was thirty-five, and at one point the attend-



MISS D. I. HUGHES,

Demonstration Lecturer in Sewing and Cooking.

ance was over seventy-five. The lecturer, Mrs. C. H. Burns, a graduate of Macdonald Institute, Guelph, spent one day a week at each point for a period of fifteen weeks. The course embraced the following list of Demonstration Lectures:—

REGULAR LIST.

1. Fruit—Typical methods of cooking; combinations; different ways of serving fresh fruit.
2. Vegetables—Fresh, starchy and dried.
3. Milk Soups, puddings and combinations, with especial relation to infant, children and invalid diet.
4. Cereals and Cheese—Various methods of cooking: their high food value compared with other more expensive foods.
5. Eggs—Correct methods of cooking; variations on methods; storage.
6. Tender Meats—Roasting and broiling; the correct cuts; food value compared with other meat cuts and other foods.
7. Tough Meat—Braised dishes, stews and soups.
8. Substitutes for Meat—Nuts, beans, fish.
9. Baking powder—Breads.

10. Yeast Bread and Fancy Breads.
11. Cake and little cakes.
12. Puddings and Desserts.
13. Salads—Preparation of the ingredients, dressings, etc.
14. Poultry—Drawings, trussing, roasting, fricassee, etc.
15. Invalid Cookery — Liquid diet, semi-solid, etc.

OPTIONAL LIST.

1. Vegetables, fresh, starchy and dried.
2. Made-over Dishes.
3. Gelatine Dishes.
4. Hot Weather Foods.
5. Breakfast Dishes.
6. Fireless Cookery.
7. Frozen Dishes.

Altogether the experiment was most encouraging and in the fall of 1912 we offered the Institutes not only a Demonstration Lecture Course in Cooking, but also one in Sewing, and one embracing both Cooking and Sewing. The full Sewing Course embraced the following:

- 2 lessons on needlework
- 2 lessons on shirt waists
- 2 lessons on skirts
- 2 one piece dresses
- 2 accessories or combinations.



MISS ETHEL M. CHAPMAN,
Demonstrator in Cooking.



MISS GERTRUDE GRAY,
Demonstration Lecturer in Cooking.

while the combination course in Cooking and Sewing is indicated by the following list:

COOKING AND SEWING COURSE.

SEWING.

1. Adjusting patterns, cutting and fitting.
2. Fitting one's self.
3. Waists.
4. Skirts.
5. Plain Sewing.
6. Underwear.
7. Children's Clothing.

(OPTIONAL LIST) Sewing.

1. Fancy Waists.
2. Girl's Dresses.
3. Dresses.
4. Household Sewing.
5. Fancy Work.

COOKING.

1. Fruits.
2. Salads.
3. Vegetables.
4. Desserts.
5. Cheese and Cereals.
6. Tender Meats.
7. Tough Meats.

(OPTIONAL LIST) COOKING.

1. Soups.
2. Egg and Milk.
3. Left Overs.



MRS. N. H. ALTENBURG,
Demonstrator in Sewing.

4. Frozen Desserts.
5. Paper Bag Cookery.
6. Cakes and Little Cakes.

NOTE.—Any lecture in the Optional list may be substituted for one in the regular list.

The Institutes taking advantage of this work are required to:—

1. Provide for any necessary local printing and advertising.
2. Provide a room or hall *suivable* for the lectures, equipped with the necessary chairs, tables and cookstove; also to see that the hall used is properly cleaned, lighted and heated.
3. Provide all materials for demonstration work.
4. Provide an assistant who will become responsible for the opening of the room, do the necessary local marketing, and clear up and clean the demonstration tables, dishes, etc.
5. Guarantee the sale of twenty-five (25) course tickets at \$1.00 per ticket.

6. Appoint some person who will be required to keep an exact record of the attendance, in addition to those holding course tickets, at each

session and report the same to the teacher within two weeks after the close of the course.

7. Pay the \$25.00 charged for the course and one-half of the receipts above \$25.00, whether payments be on account of course tickets or single admissions, to the teacher and secure a receipt from her for the same

8. The Institute concerned is at liberty to sell course tickets in addition to the twenty-five required and also to admit members and others to single lectures at ten cents per person.

The Department of Agriculture agrees to:—

1. Provide all portable equipment, except the necessary tables, chairs and one cookstove.
2. Defray the cost of the teacher's board, lodging and railway and other transportation.

3. Provide one teacher for the five or six Institutes, who will (a) Give fifteen demonstration lectures in Domestic Science or eight lectures in Home Nursing, or ten lessons in Sewing, one each week, the date and subject to be according to the schedule agreed upon between the Institutes concerned and the Department. (b) Instruct each local assistant in her assistant and marketing duties. (c) Furnish her assistant with written directions for any local marketing or special preparation, at least one week before they are needed.

The courses already held and the ones now in progress have clearly demonstrated that the women on the farms and in our smaller towns and villages value the opportunity which has been afforded for instruction in Domestic Science and Domestic Art. Women with responsibilities in the homes are ready and anxious for instruction in these lines. At a comparatively small outlay the whole rural population of the province could be similarly served. Is there any good reason why the women who have never had the opportunity of instruction in Domestic Science or Domestic Art should not be given the advantages of instruction without coming to the cities.

THE SMOKE BELLEW SERIES

WONDER OF WOMEN--Part III

By Jack London

XIII

It was a morning, stark still, clear blue above, with white sun-dazzle on the snow. The way led up a long, wide slope of crust. They moved like weary ghosts in a dead world. No wind stirred in the stagnant, frigid calm. Far peaks, a hundred miles away, studding the backbone of the Rockies up and down, were as distinct as if no more than five miles away.

"Something is going to happen," Labiskwee whispered. "Don't you feel it—here, there, everywhere? Everything is strange."

"I feel a chill that is not of cold," Smoke answered. "Nor is it of hunger."

"It is in your head, your heart," she agreed, excitedly. "That is the way I feel it."

"It is not of my senses," Smoke diagnosed. "I sense something, from without, that is tingling me with ice; it is a chill of my nerves."

A quarter of an hour later they paused for breath.

"I can no longer see the far peaks," Smoke said.

"The air is getting thick and heavy," said Labiskwee. "It is hard to breathe."

"There be three suns," McCan muttered hoarsely, reeling as he clung to his staff for support.

They saw a mock sun on either side the real sun.

"There are five," said Labiskwee; and as they looked, new suns formed and flashed before their eyes.

"By heaven, the sky is filled with

suns beyant all countin'," McCan cried in fear.

Which was true, for look where they would, half the circle of the sky dazzled and blazed with new suns forming.

McCan yelped sharply with surprise and pain.

"I'm stung!" he cried out, then yelped again.

Then Labiskwee cried out, and Smoke felt a prickling stab on his cheek so cold that it burned like acid. It reminded him of swimming in the salt sea and being stung by the poisonous filaments of Portuguese men-of-war. The sensations were so similar that he automatically brushed his cheek to rid it of the stinging substance that was not there.

And then a shot rang out, strangely muffled. Down the slope were the young men, standing on their skis, and one after another opened fire.

"Spread out!" Smoke commanded. "And climb for it! We're almost to the top. They're a quarter of a mile below, and that means a couple of miles the start of them on the down-going of the other side."

With faces prickling and stinging from invisible atmospheric stabs, the three scattered widely on the snow surface and toiled upward. The muffled reports of the rifles were weird to their ears.

"Thank the Lord," Smoke panted to Labiskwee, "that four of them are muskets, and only one a Winchester. Besides, all these suns spoil their aim. They are fooled. They haven't come within a hundred feet of us."

"It shows my father's temper," she said. "They have orders to kill."

"How strange you talk," Smoke said. "Your voice sounds far away."

"Cover your mouth," Labiskwee cried suddenly. "And don't talk. I know what it is. Cover your mouth with your sleeve, thus, and do not talk."

McCan fell first, and struggled wearily to his feet. And after that all fell repeatedly before they reached the summit. Their wills exceeded their muscles, they knew not why, save that their bodies were oppressed by a numbness and heaviness of movement. From the crest, looking back, they saw the young men stumbling and falling on the upward climb.

"They will never get here," Labiskwee said. "It is the white death. I know it, though I have never seen it. I have heard the old men talk. Soon will come a mist—unlike any mist or fog-frost or smoke you ever saw. Few have seen it and lived."

McCan gasped and strangled.

"Keep your mouth covered," Smoke commanded.

A pervasive flashing of light from all about them drew Smoke's eyes upward to the many suns. They were shimmering and veiling. The air was filled with microscopic fire-glints. The near peaks were being blotted out by the weird mist; the young men, resolutely struggling nearer, were being engulfed in it. McCan had sunk down, squatting, on his skis, his mouth and eyes covered by his arms.

"Come on, make a start," Smoke ordered.

"I can't move," McCan moaned.

His doubled body set up a swaying motion. Smoke went toward him slowly, scarcely able to will movement through the lethargy that weighted his flesh. He noted that his brain was clear. It was only the body that was afflicted.

"Let him be," Labiskwee muttered harshly.

But Smoke persisted, dragging the Irishman to his feet and facing him down the long slope they must go.

Then he started him with a shove, and McCan, braking and steering with his staff, shot into the sheen of diamond dust and disappeared.

Smoke looked to Labiskwee, who smiled, though it was all she could do to keep from sinking down. He nodded for her to push off, but she came near to him, and side by side they flew down through the stinging thickness of cold fire.

Brake as he would, Smoke's heavier body carried him past her, and he dashed on alone, a long way, at tremendous speed that did not slacken till he came out on a level, crusted plateau. Here he braked till Labiskwee overtook him, and they went on, again side by side, with diminishing speed which finally ceased. The lethargy had grown more pronounced. The wildest effort of will could move them no more than at a snail's pace. They passed McCan, again crouched down on his skis, and Smoke roused him with his staff in passing.

"Now we must stop," Labiskwee whispered painfully, "or we will die. We must cover up—so the old men said."

She did not delay to untie knots, but began cutting her pack-lacings. Smoke cut his, and, with a last look at the fiery death-mist and the mockery of suns, they covered themselves over with the sleeping-furs and crouched in each other's arms. They felt a body stumble over them and fall, then heard feeble whimpering and blaspheming drowned in a violent coughing fit, and knew it was McCan who huddled against them as he wrapped his robe about him.

Their own lung-strangling began, and they were racked and torn by a dry cough, spasmodic and uncontrollable. Smoke noted his temperature rising in a fever, and Labiskwee suffered similarly. Hour after hour the coughing spells increased in frequency and violence; and not till late afternoon was the worst reached. After that the mend came slowly, and between spells they dozed in exhaustion.

McCan, however, steadily coughed

worse, and from his groans and howls they knew he was in delirium. Once, Smoke made as if to throw the robes back, but Labiskwee clung to him tightly.

"No," she begged. "It is death to uncover now. Bury your face here, against my parka, and breathe gently and do no talking—see, the way I am doing."

They dozed on through the darkness, though the decreasing fits of coughing of one invariably aroused the other. It was after midnight, Smoke judged, when McCan coughed his last. After that he emitted a low and bestial moaning that never ceased.

Smoke awoke with lips touching his lips. He lay partly in Labiskwee's arms, his head pillowed on her breast. Her voice was cheerful and usual. The muffled sound of it had vanished.

"It is day," she said, lifting the edge of the robes a trifle. "See, O my lover. It is day; we have lived through; and we no longer cough. Let us look at the world, though I could stay here thus for ever and always. This last hour has been sweet. I have been awake, and I have been loving you."

"I do not hear McCan," Smoke said. "And what has become of the young men that they have not found us?"

He threw back the robes and saw a normal and solitary sun in the sky. A gentle breeze was blowing, crisp with frost and hinting of warmer days to come. All the world was natural again. McCan lay on his back, his unwashed face, swarthy from camp-smoke, frozen hard as marble. The sight did not affect Labiskwee.

"Look!" she cried. "A snow bird! It is a good sign."

There was no evidence of the young men. Either they had died on the other side of the divide or they had turned back.

XIV

There was so little food that they dared not eat a tithe of what they needed, not a hundredth part of what they

desired, and in the days that followed, wandering through the lone mountain-land, the sharp sting of life grew blunted and the wandering merged half into a dream. Smoke would become abruptly conscious, to find himself staring at the never-ending hated snow-peaks, his senseless babble still ringing in his ears. And the next he would know, after seeming centuries, was that again he was roused to the sound of his own maunderings. Labiskwee, too, was light-headed most of the time. In the main their efforts were unreasoned, automatic. And ever they worked toward the west, and ever they were baffled and thrust north or south by snow-peaks and impassable ranges.

"There is no way south," Labiskwee said. "The old men know. West, only west, is the way."

The young men no longer pursued, but famine crowded on the trail.

Came a day when it turned cold, and a thick snow, that was not snow but frost crystals of the size of grains of sand, began to fall. All day and night it fell, and for three days and nights it continued to fall. It was impossible to travel until it crusted under the spring sun, so they lay in their furs and rested, and ate less because they rested. So small was the ration they permitted, that it gave no appeasement to the hunger pang that was much of the stomach but more of the brain. And Labiskwee, delirious, maddened by the taste of her tiny portion, sobbing and mumbling, yelping sharp little animal cries of joy, fell upon the next day's portion and crammed it into her mouth.

Then it was given to Smoke to see a wonderful thing. The food between her teeth roused her to consciousness. She spat it out, and with a great anger struck herself with her clenched fist on the offending mouth.

It was given to Smoke to see many wonderful things in the days yet to come. After the long snow-fall came on a great wind that drove the dry and tiny frost particles as sand is driven in a sand storm. All through the night the sand-frost drove by, and in the full

light of a clear and wind-blown day, Smoke looked with swimming eyes and reeling brain upon what he took to be the vision of a dream. All about towered great peaks and small, lone sentinels and groups and councils of mighty Titans. And from the tip of every peak, swaying, undulating, flaring out broadly against the azure sky, streamed gigantic snow-banners, miles in length, milky and nebulous, ever waving lights and shadows and flashing silver from the sun.

"Mine eyes have seen the glory of the coming of the Lord," Smoke chanted, as he gazed upon these dusts of snow wind-flung into sky-scarfs of shimmering silken light.

And still he gazed, and still the bannered peaks did not vanish, and still he considered that he dreamed, until Labiskwee sat up among the furs.

"I dream, Labiskwee," he said. "Look. Do you, too, dream within my dream?"

"It is no dream," she replied. "This have the old men told me. And after this will blow the warm winds, and we shall live and win west."

XV

Smoke shot a snow-bird, and they divided it. Once, in a valley, where willows budded standing in the snow, he shot a snowshoe rabbit. Another time he got a lean, white weasel. This much of meat they encountered, and no more, though, once, half-mile high and veering toward the west and the Yukon, they saw a wild-duck wedge drive by.

"It is summer in the lower valleys," said Labiskwee. "Soon will it be summer here."

Labiskwee's face had grown thin, but the bright, large eyes were brighter and larger, and when she looked at him she was transfixed by a wild, unearthly beauty.

The days lengthened, and the snow began to sink. Each day the crust thawed, each night it froze again; and they were afoot early and late, being

compelled to camp and rest during the midday hours of thaw when the crust could not bear their weight. When Smoke grew snow-blind, Labiskwee towed him on a thong tied to her waist. And when she was so blinded, she towed behind a thong to his waist. And starving, in a deeper dream, they struggled on through an awakening land bare of any life save their own.

Exhausted as he was, Smoke grew almost to fear sleep, so fearful and bitter were the visions of that mad, twilight land. Always were they of food, and always was the food, at his lips, snatched away by the malign image of dreams. He gave dinners to his comrades of the old San Francisco days, himself, with whetting appetite and jealous eye, directing the arrangements, decorating the table with crimson-leafed runners of the autumn grape. The guests were dilatory, and while he greeted them and all sparkled with their latest cleverness, he was frantic with desire for the table. He stole to it, unobserved, and clutched a handful of black ripe olives, and turned to meet still another guest. And others surrounded him and the laugh and play of wit went on, while all the time, gnawing hidden in his closed hand, was this madness of ripe olives.

He gave many such dinners, all with the same empty ending. He attended Gargantuan feasts, where multitudes fed on innumerable bullocks roasted whole, prying them out of smouldering pits and with sharp knives slicing great strips of meat from the steaming carcasses. He stood, with mouth agape, beneath long rows of turkeys which white-aproned shopmen sold. And everybody bought save Smoke, mouth still agape, chained by a leadenness of movement to the pavement. A boy again, he sat with spoon poised high above great bowls of bread and milk. He pursued shy heifers through upland pastures and centuries of torment in vain effort to steal from them their milk, and in noisome dungeons he fought with rats for scraps and refuse. There was no food that was not a mad-

ness to him, and he wandered through vast stables, where fat horses stood in mile-long rows of stalls, ever seeking and never finding the bran-bins from which they fed.

Once, only, he dreamed to advantage. Famishing, shipwrecked or marooned,

time there was no intruding presence to whisk the meal away. At last—so he dreamed within the dream—the dream would come true. This time he would eat. Yet in his certitude he doubted, and he was steeled for the inevitable shift of vision until the salmon-



"Beside the fire, within arm's length, sat Shorty."

he fought with the big Pacific surf for rock-clinging mussels and carried them up the sands to the dry flotsam of the spring tides. Of this he built a fire, and among the coals he laid his precious trove. He watched the steam jet forth and the locked shells pop apart, exposing the salmon-colored meat. Cooked to a turn—he knew it; and this

colored meat, hot and savory, was in his mouth. His teeth closed upon it. He ate! The miracle had happened! The shock aroused him. He awoke in the dark, lying on his back, and heard himself mumbling little, piggish squeals and grunts of joy. His jaws were moving, and between his teeth meat was crunching. He did not move,

and soon small fingers felt about his lips, and between them was inserted a tiny sliver of meat. And in that he would eat no more, rather than that he was angry, Labiskwee cried and in his arms sobbed herself to sleep. But he lay on awake, marvelling at the love and the wonder of woman.

* * * * *

The time came when the last food was gone. The high peaks receded, the divides became lower, and the way opened promisingly to the west. But their reserves of strength were gone, and, without food, the time quickly followed when they lay down at night and in the morning did not arise. Smoke weakly gained his feet, collapsed, and on hands and knees crawled about the building of a fire. But try as she would, Labiskwee sank back each time in an extremity of weakness. And Smoke sank down beside her, a wan sneer on his face for the automatism that had made him struggle for an unneeded fire. There was nothing to cook, and the day was warm. A gentle breeze sighed in the spruce trees, and from everywhere, under the disappearing snow, came the trickling music of unseen streamlets.

Labiskwee lay in a stupor, her breathing so imperceptible that often Smoke thought her dead. In the afternoon the chattering of a squirrel aroused him. Dragging the heavy rifle, he wallowed through the crust that had become slush. He crept on hands and knees, or stood upright and fell forward in the direction of the squirrel that chattered its wrath and fled slowly and tantalizingly before him. He had not the strength for a quick shot, and the squirrel was never still. At times Smoke sprawled in the wet snow-melt and cried out of weakness. Other times the flame of his life flickered, and blackness smote him. How long he lay in the last faint he did not know, but he came to, shivering in the chill of evening, his wet clothing frozen to the re-forming crust. The squirrel was gone, and after a weary struggle he won back to the side of Labiskwee. So pro-

found was his weakness that he lay like dead through the night, nor did dreams disturb him.

The sun was in the sky, the same squirrel chattering through the trees, when Labiskwee's hand on Smoke's cheek awakened him.

"Put your hand on my heart, lover," she said, her voice clear but faint and very far away. "My heart is my love, and you hold it in your hand."

A long time seemed to go by, ere she spoke again.

"Remember always, there is no way south. That is well known to the Caribou People. West . . . that is the way . . . and you are almost there . . . and you will make it."

And Smoke drowsed in the numbness that is near to death, until once more she aroused him.

"Put your lips on mine," she said. "I will die so."

"We will die together, sweetheart," was his answer.

"No." A feeble flutter of her hand checked him, and so thin was her voice that scarcely did he hear it, yet he did hear all of it. Her hand fumbled and groped in the hood of her parka, and she drew forth a pouch that she placed in his hand. "And now your lips, my lover. Your lips on my lips, and your hand on my heart."

And in that long kiss darkness came upon him again, and when again he was conscious he knew that he was alone and he knew that he was to die. He was wearily glad that he was to die.

He found his hand resting on the pouch. With an inward smile at the curiosity that made him pull the drawstring, he opened it. Out poured a tiny flood of food. There was no particle of it that he did not recognize, all stolen by Labiskwee from Labiskwee—bread-fragments saved far back in the days ere McCan lost the flour; strips and strings of caribou-meat, partly gnawed; crumbles of suet; the hind-leg of the snowshoe rabbit, untouched; the hind-leg and part of the fore-leg of the white weasel; the wing, dented still by her reluctant teeth, and the leg of the snow-

bird—pitiful remnants, tragic renunciations, crucifixions of life, morsels stolen from her terrible hunger by her incredible love.

With maniacal laughter Smoke flung it all out on the hardening snow-crust and went back into the blackness.

He dreamed. The Yukon ran dry. In its bed, among muddy pools of water and ice-scoured rocks, he wandered, picking up fat nugget-gold. The weight of it grew to be a burden to him, till he discovered that it was good to eat. And greedily he ate. After all, of what worth was gold that men should prize it so, save that it was good to eat.

He awoke to another sun. His brain was strangely clear. No longer did his eyesight blur. The familiar palpitation that had vexed him through all his frame was gone. The juices of his body seemed to sing, as if the spring had entered in. Blessed well-being had come to him. He turned to awaken Labiskwee, and saw, and remembered. He looked for the food flung out on the snow. It was gone. And he knew that in delirium and dream it had been the Yukon nugget gold. In delirium and dream he had taken heart of life from the life sacrifice of Labiskwee, who had put her heart in his hand and opened his eyes to woman and wonder.

He was surprised at the ease of his movements, astounded that he was able to drag her fur-wrapped body to the exposed, thawed gravel bank, which he undermined with the axe and caved upon her.

* * * * *

Three days, with no further food, he fought west. In the mid third day he fell beneath a lone spruce beside a wide stream that ran open and which he knew must be the Klondike. Ere blackness conquered him, he unslashed his pack, said good-bye to the bright world, and rolled himself in the robes.

Chirping, sleepy noises awoke him. The long twilight was on. Above him, among the spruce boughs, were ptarmigan. Hunger bit him into instant action, though the action was infinitely slow. Five minutes passed before he

was able to get his rifle to his shoulder, and a second five minutes passed ere he dared, lying on his back and aiming straight upward, to pull the trigger. It was a clean miss. No bird fell, but no bird flew. They ruffled and rustled stupidly and drowsily. His shoulder pained him. A second shot was spoiled by the involuntary wince he made as he pulled trigger. Somewhere, in the last three days, though he had no recollection how, he must have fallen and injured it.

The ptarmigan had not flown. He doubled and redoubled the robe that had covered him, and humped it in the hollow between his right arm and his side. Resting the butt of the rifle on the fur, he fired again, and a bird fell. He clutched it greedily and found that he had shot most of the meat out of it. The large-caliber bullet had left little else than a mess of mangled feathers. Still the ptarmigan did not fly, and he decided that it was heads or nothing. He fired only at heads. He reloaded, and reloaded, the magazine. He missed; he hit; and the stupid ptarmigan, that were loath to fly, fell upon him in a rain of food—lives disrupted that his life might feed and live. There had been nine of them, and in the end he clipped the head of the ninth, and lay and laughed and wept he knew not why.

The first he ate raw. Then he rested and slept, while his life assimilated the life of it. In the darkness he awoke, hungry, with strength to build a fire. And until early dawn he cooked and ate, crunching the bones to powder between his long-idle teeth. He slept, awoke in the darkness of another night, and slept again to another sun.

He noted with surprise that the fire crackled with fresh fuel and that a blackened coffee-pot steamed on the edge of the coals. Beside the fire, within arm's length, sat Shorty, smoking a brown-paper cigarette and intently watching him. Smoke's lips moved, but a throat paralysis seemed to come upon him, while his chest was suffused with the menace of tears. He reached

out his hand for the cigarette and drew the smoke deep into his lungs again and again.

"I have not smoked for a long time," he said at last, in a low, calm voice. "For a very long time."

"Nor eaten, from your looks," Shorty added gruffly.

Smoke nodded and waved his hand at the ptarmigan feathers that lay all about.

"Not until recently," he returned. "Do you know, I'd like a cup of coffee. It will taste strange. Also, flapjacks and a strip of bacon."

"And beans?" Shorty tempted.

"They would taste heavenly. I find I am quite hungry again."

While the one cooked and the other ate, they told briefly what had happened to them in the days since their separation.

"The Klondike was breakin' up," Shorty concluded his recital, "an' we just had to wait for open water. Two polin' boats, six other men—you know 'em all, an' crackerjacks—an' all kinds of outfit. An' we've sure ben a-comin'—polin', linin' up, an' portagin'. But the falls'll stick 'em a solid week. That's where I left 'em a-cuttin' a trail over the tops of the bluffs for the boats. I just had a sure natural hunch to keep a-comin'. So I fills a pack with grub an' starts. I knew I'd find you a-driftin' an' all in."

Smoke nodded, and put forth his hand in a silent grip.

"Well, let's get started," he said.

"Started hell!" Shorty exploded. "We stay right here an' rest you up an' feed you up for a couple of days."

Smoke shook his head.

"If you could just see yourself," Shorty protested.

And what he saw was not nice. Smoke's face, wherever the skin showed, was black and purple and scabbed from repeated frost-bite. The cheeks were fallen in, so that, despite the covering of beard, the upper row of teeth

ridged the shrunken flesh. Across the forehead and about the deep-sunk eyes, the skin was stretched drum-tight, while the scraggly beard, that should have been golden, was singed by fire and filthy with camp-smoke.

"Better pack up," Smoke said. "I'm going on."

"But you're feeble as a kid baby. You can't hike. What's the rush?"

"Shorty, I am going after the biggest thing in the Klondike, and I can't wait. That's all. Start packing. It's the biggest thing in the world. It's bigger than lakes of gold and mountains of gold, bigger than adventure, and meat-eating, and bear-killing."

Shorty sat with bulging eyes.

"In the name of the Lord, what is it?" he queried huskily. "Or are you just simple loco?"

"No, I'm all right. Perhaps a fellow has to stop eating in order to see things. At any rate I have seen things I never dreamed were in the world. I know what a woman is . . . now."

Shorty's mouth opened, and about the lips and in the light of the eyes was the whimsical advertisement of the sneer forthcoming.

"Don't, please," Smoke said gently. "You don't know. I do."

Shorty gulped and changed his thought.

"Huh! I don't need no hunch to guess *her* name. The rest of 'em has gone up to the drainin' of Surprise Lake, but Joy Gastell allowed she wouldn't go. She's stickin' around Dawson, waitin' to see if I come back with you. An' she sure swears, if I don't, she'll sell her holdin's an' hire a army of gun-fighters, an' go into the Caribou Country an' knock the everlasting stuffin' outa old Snass an' his whole gang. An' if you'll hold your horses a couple of shakes, I reckon I'll get packed up an' ready to hike along with you."

THE END



Winona School, Wentworth County, Ontario, in the midst of the fruit country. There is no pessimism taught by these surroundings.

OUR GOOSE GRASS SCHOOL YARDS

Note.—A perusal of Ontario's Annual Report of Women's Institutes reveals the energy that many women of various parts of the province are putting into the better country life movement. Many rural schools are being ably assisted in their improvement efforts by the Women's Institutes. There are hundreds of schools yet that are little better than barns, with surroundings that degrade rather than uplift. A visit to our Canadian woods, where trees, and the wild things run riot, has in it more of cheer than comes to the scholars of our day schools. Such things should not be. If the "little red schoolhouse" cannot show better things, it must go. This article by Miss Moffatt is the second. The first, which has been much commented upon by trustees and teachers, appeared in the last October number.—Editor.

By M. D. Moffat

THE watchword of the Boston Public School Art League reads as follows: *"It is the ideal of this League to make the schoolhouse a Temple, worthy to receive and fitted to inspire the children of all the people to the dignity of free citizenship in this Republic."*

Isn't a resolution like that enough to foretell dignity, power and achievement for any organization forming it? How many schoolhouses have you seen in Canada which you could dream of calling *Temple, worthy to receive and fitted to inspire* the children of the Canadian people to the dignity of free citizenship in this Dominion?

Is there any other building whose appearance outside and inside is better calculated to "take the heart out of a body," than the little Noah's Arkshaped rural schoolhouse? Can you imagine anything more dejected and forlorn, with "I'm dying for some one to love me," written all over it—from the worn-out doorstep and faded-paint trimmings to the May-weed and goose grass in the yard.

"Still, sits the schoolhouse by the road
A ragged beggar sleeping;
Around it still the sumachs grow,
And blackberry vines are creeping.

"Within, the master's desk is seen
 Deep scarred by raps official;
 The warping floor, the battered seats,
 The jackknife's carved initial."

So sang the Poet Whittier. But then it was a New England school which looked like a ragged beggar—not a Canadian one and it was long ago, not in these enlightened times. You see it at intervals everywhere as you drive through the country or as you gaze from a train window and, that instant, if you have ever taught in one, you look the other way. It has been grovelling in the grub stage long enough. It is high time for it to be metamorphosed into a glorified body with great liberty, capable of perpetuating life, not stagnation. Lift it up. Set it on a foundation high enough for it to see over the fence that it may look the passers-by squarely in the face, and leave no cause to be ashamed of itself.

A WAKE-UP CLUB WANTED.

This is the Era of Associations, Clubs and Combines. The day of the one-horse power is gone, its place being taken by the thousand horse-power. Man finds no stronghold in Independence but in Interdependence. The Evils and the Goods of the World are mighty. So must the Force to move them be mighty. You can get what you want when you want it, provided you All want it and All work for it. The time of the Beginning of New Things is at hand for the Primary schools, now that women are taking an interest in and taking a "hand" in things outside their own homes. One may expect the betterment of many conditions which have been long neglected; and one of these is that of the Little Red Schoolhouse. The Church has its Ladies' Missionary Society and its Ladies' Aid. Why cannot the School also have a Ladies' Aid, or, as the Director of Agriculture calls it, A School Progress Club? But the work of the Church is religious. So is the work of the School. Training children to make the full use of their power and the best use of their lives is

truly religious. There is work enough to be done about the rural school to keep a club busy for years.

Many city schools have organizations for this purpose. Toronto has, among others, the Western Ave. School Association of Mothers and Teachers, and Howard Park Educational Association, also of mothers and teachers. Doesn't that sound well? There is great hope for a superior type of future Canadian citizens when the mothers and teachers work together. Too frequently mothers have misunderstood teachers. Quite as frequently teachers have expected too much from mothers, not thinking that mothers have the same problems with the children that teachers have and find them no easier; because children are Beings with Wills to be reckoned with at home as well as at school. The mothers make it their duty to see that the School and surroundings are in proper condition for the housing and the education of their children. They plan the methods by which to raise funds for better school equipment and undertake the work themselves.

THE OLD WITCH AT THE WELL.

Mothers should think of the school room as part of their home. The attention paid to kitchens has been out of all proportion to their value. There isn't a woman on a farm who doesn't scrub her painted or oiled floor once a week, and mop it, if not every day, at least every wash-day, while this other room in which her children spend the days of eight important years, is scrub-



This same dull schoolhouse appearance "calculated to take the heart out of a child."

bed once a year. Who knows but that the ill-health of many a country mother and father is due not to overwork, but to the days when they sat with drooping shoulders over a desk calculated to induce deformity, inhaling air, foul with the breaths of forty children and laden with dust that was too thick ever to settle? Fortunately mothers are no longer satisfied to send their children to school merely fed and clothed. They want to be sure that there is no Old Witch at the Well stealing them away in their absence. There is much truth in a Fairy-tale.

A School Progress Club should first of all, provide the school and itself with a name, Summerdale S.P.C., or Fairfields S.P.C.—then, with the regulations of the Education Department regarding school premises and equipment, to find out how far short their's comes. It can also get bulletins on Improving School Grounds. These should be studied.

Every mother in the section should belong, even if she cannot attend often. Girls who are through with school and are living at home should belong. Their help is needed. The trustees should be honorary members. Their consent must be obtained for every undertaking but trustees have always been careful to carry out the wishes of the people. If the school is new the problem is easy. It is one of beautifying, and increasing equipment. If the school is old, but well-built, it needs to be raised and have a basement built. If it is old and quite unfit there is but one fate for it. In the

old provinces it may be expedient for two sections or more to join. Two school sections in Hastings County, Ont., did this recently, building a pretty two-roomed school with a large basement for a play-room. The land of the site was drained and levelled, a lawn made and vines planted. A neat wire fence enclosed the grounds.

AN UP-TO-DATE SCHOOL.

A new school should be planned so that it can be used for social gatherings. It should have lamps. It should have a smaller room at the back separated from the school-room by sliding doors that they may be thrown into one at any time. The smaller room can be used as a teacher's private room, as a library, as a study-room for the older scholars and "Club Room for the S.P.C. The S.P.C. meeting at school will discover many wrong things that otherwise might not come to their notice. Many uses can be found for it. In lighting the school-room no window should ever be facing the teacher. A teacher subject to headaches from bad lighting can't be efficient. If the children are to be well taught the teacher must be kept well as far as the people can do it. The basement should be divided into two play-rooms besides the furnace room. Girls and boys should not play together unless the teacher is with them.

If there is one blot on a civilized community it is the condition of the outdoor closets of the rural school. They are in nearly every case filthy, and always with some unclean writing or cutting. One would think the children belonged to orientals or savages and had not been taught the decencies of life before they were six years old. Ask any one of thousands of teachers about this and the reply will be a look of disgust. Who is to blame? Everybody is to blame, least of all, the teacher. It is absolutely impossible for a young girl just out of school, to deal with such things alone. And people, like ostriches with their heads buried in sand, ignore this state of things just because it is disagreeable. The children discover that this is



S. S. No. 6, Raleigh and Dover, in Kent Co., used in the evenings by the young peoples' society. Needless to say this is a live rural neighborhood.



The Lockaber School, near Miniota, Manitoba. This school has a telephone, a flag, curtains and blinds on the windows, and is like a home inside. Visited by the editor of Farmer's Magazines last autumn.

something they are not brought to account for and the evil is done. Beautify the interior of your school as you like. Supply all the elevating influences you can. Your efforts are in vain so long as there is anything unclean about to leave its mark. An S.P.C. should face this evil and efface it. The closets should be in the least conspicuous part of the yard. The screens should be covered with vines in summer. But permanent natural screens should be made by planting spruce or cedar trees and caring for them till they are well established. The buildings, if not of brick, should be made of dressed, matched lumber and the outside painted dark, red, green, or brown.

INSIDE THE SCHOOLHOUSE.

The interior should not be left to spiders and mud-wasps but should be finished with dressed, matched boards, ceiling and all. It should be lighted and ventilated. The *whole* interior should be given two coats of *white paint* (not whitewash) followed by a coat of white enamel. Eight inches at the bottom of the seats and walls should be painted black, where the children's

boots touch. The seats should have covers fastened on with hinges. The doors should have hinges and locks in good repair, be furnished with keys and be locked by the teacher *every night*. When the enamel becomes soiled with dust or finger-marks it can be washed when the school is cleaned. Since the closets of city schools have been painted white there has been no attempt by anybody to mark them. It is like lessening crime by lighting the streets. "Honor and Beauty are on the side of restraint." When the children are taught the laws of life by their parents truthfully according to their understanding, fearlessly and reverently, and when their play-time is occupied by supervised games and the school garden, the unclean thought will have little chance of a lodging-place.

SET CHILDREN ON FIRE.

Have the grounds ploughed up. If the soil is clay, put in drainage. Level the ground and plan some arrangement for it. Make a wide flower-border the whole length of the front fence. Don't spoil the playground by putting small flower-beds in the middle. Seed the playground thickly with Blue Grass and Dutch Clover. Buy a lawnmower. Have the lawn rolled. Weed it. Feed it. Seed it until there is heavy sod. Plant Boston Ivy by the school wall. If there is an old shade tree, preserve it. Plant new trees. Reserve part of the ground for the school garden. This does not need to be large. Some of the new school gardens are too large. One argument against the school garden is that it is neglected at mid-summer, and the home garden is the thing. Children must be taught by a qualified teacher by means of the school garden before they are competent to manage a home garden. Especially when to some of them their father's whole farm is an example of "How Not to Keep the Plot." You've seen farms like that. Set children on fire with any project and they will find a way, "like Sentimental Tommy."

A small boy having been told about

taking care of a school garden suggested at once that he could ride down on horseback sometimes in the holidays and attend to his plot.

The yard should have a good strong fence all round it and a close neat garden wire fence in front, close enough to keep the noses of animals from nipping the flowers. A strip of sod could separate the flower border from the fence and permit seed-sowing on both sides, and high enough to keep them from reaching over. The gate should receive particular attention. Both posts should be in good condition. The gate should have strong hinges and should be padlocked *every night*. Let the gate be left open *once* and all the work of beautifying the yard may be ruined for the year. That is why the majority of teachers do not attempt to have flowers or vines. The young men of the vicinity go to the school yard for a game of football occasionally and the gates are left open by somebody. Let them jump the fence if one will not be responsible for locking the gates. Gates of city school yards are locked every night.

POOR SCHOOLS--POOR FARMERS.

How can children ever be taught to do anything well when they see nothing well done around them. The building they work in is only a makeshift not fitted for its great duty. They have to see better things than they have

known if they are to aspire to anything better. Our future citizens cannot but "acquire a school-taught standard of dirt and carelessness." A boy who at school is daily accustomed to a gate in danger of tumbling from a decrepit post, or to doors on the outbuildings parting with their hinges and refusing to shut, will be satisfied with the same state of things when he has a farm of his own. His fences and barns will always be out of repair, his gates tumbling to pieces, his cattle breachy and his neighbors, enemies.

A man would be considered an idiot in these modern times if he persisted in harvesting his grain with a cradle and threshing it with a flail. Yet these instruments are no more inadequate or out-of-date than the two-or-three generation old schoolhouse is in the equipping of this generation's boys and girls for their life. Recollect the maxim that used to be memorized from the old reader.

"When a task's to be begun,
With some judgment view it,
Never idly wish it done,
Begin at once and DO IT."

Remember: There is, that scattereth, and yet increaseth; (farmers know that) and there is that withholdeth more than is meet, but it tendeth to poverty.



Vineland school, Lincoln Co., and School Garden.



You do not have to climb up a 24-foot ladder to pick the Okanagan apples.

HOW APPLES WON \$4,000

A customary rejoinder for an Easterner, in discussing British Columbia apples, is that their apples may have the color and size, but they have not the flavor. Now, a visit to the orchards of the Okanagan has proven to our satisfaction that they have all these qualities. No more perfect specimens of apples are to be seen. The appearance and color is most attractive, and the flavor of an Okanagan McIntosh Red is something to remember. The great need of the British Columbia apple growers is for co-operation among the producers so that their goods can be placed in the right markets at the right time.

By F. M. Chapman

The big red apple is a product of enthusiasm. Nature, in her wild vagaries, develops no such glory. The brilliant red of the lovely McIntosh is a distillation of suns, dews and visions. Its loveliness of flavor, aroma and appearance rivals the fabled apples of gold in those gardens so faithfully watched by the nymphs of the Hesperides. And Hercules is not the only admirer that has plotted for their capture.

Down in the mountain-locked valley of the Okanagan, where fable might well have painted its modern myth, this crimson temptation hangs rich and lustrous like rubies in a monster pendant of the embattling Rockies. Here the adventurous

Anglo-Saxon, discovering the riches of the soil and climate, has built for himself a veritable paradise of wealth and beauty. Here the big red apple grows as nowhere else. Here the McIntosh, the Jonathan, the Spy and the King revel in the radiance of perfection.

A peculiar geniality pervades the air. An indefinable charm breathes its spell on the dweller and seems to fill his spirits with the same rosy views of life and the same golden hopes that distill in the Jonathan its royal blood, and in the Grimes its gold. Men everywhere in the valley are lovers of the out-of-doors. They have been at-



They thin their fruit, but as the trees bear so young the limbs often have to be supported.

tracted to this spot by its charm, and to live under its spell for a time is to be forever dissatisfied elsewhere.

Some such praises as had been sung led me to visit this charming apple land during the sunny days of last October. Like the frost upon pumpkin, the cold upon the hills had touched all nature with her loveliest green, gold and crimson. October beneath Okanagan skies is exquisitely beautiful, and I enjoyed the royal display quite as much as if it had been staged for my visit.

IN A MOUNTAIN VALLEY.

A trip from Sicamous Junction on a branch line of the pioneer railway in these parts brought me in the early morning through a winding tree-covered valley past growing towns and villages, to the city of Vernon, where the hum and stir of prosperity and the tortuous channel of the Grey Canal spoke great things in fruit production.

Not far from town is the celebrated Coldstream estate owned by Lord Aberdeen and Mr. Buchanan, the celebrated distiller of Scotland. A real estate office is fast inducing settlers, and a prosperous community on the estate seven miles from town already enjoys its own progressive municipality.

Two or three miles on and the train pulls up at the head of the beautiful Okanagan Lake, a narrow ribbon of blue water, set among the mountains that rise almost perpendicularly in places, from its bosom. Steamers await us, and a most enjoyable trip towards the south reveals many small settlements with their cosy red-roofed cottages and cultivated orchard rows up the hill-sides.

POCKETS OF POSSIBILITIES.

Kelowna is situated about half way down the lake on the west side, and is a city of fast growing importance,

built upon the water's edge, apparently pushed there by the surrounding hills. A closer acquaintance, however, reveals the deception of the perspective, for 65,000 acres of rich land encircles the place or stretches off, in various angles around the upland prominences. Further down the water Peachland, Summerland and Pentiction lie in the midst of similar, if not as extensive, pockets of orchard possibilities. We were in the garden of the gods. The red apple's isolation was to us no longer. Almost sacrilegiously we, motored up the bench land road, planted feet on the grey soil of

of cosy architecture, surrounded by their five or ten acres of growing orchards, around the foothills on the best of roads, and up over the lower bench lands, the same stories of wealth and productiveness were reiterated.

MADE WEALTHY IN APPLES.

"Over yonder," said Mr. DeHart, "is a twenty-five acre farm owned by an Italian who came out with the Roman Catholic missionaries a quarter of a century ago as assistant to the bishop. He was given this grant of land and to-day he is worth his hundred thousand."

THE SCORE CARD.

"The score card shows the basis upon which the awards were made. The judge assumed that the principal purposes of this exhibit was to bring out the features of attractiveness and commercial value. To this were added the factors of quality and extent of exhibit. Naturally, the number of varieties included in the exhibit had an important bearing upon the result."

"The fine displays were difficult to judge. After passing upon them by using the score card system, they were examined again from the general impression made upon the visitor. This latter method corroborated the finding of the former."

*Signed (Prof.) John Craig.
Horticulturist, Cornell University*

the irrigated gardens and bore from the heavily laden McIntosh eight-year-old trees their delicious burdens. The joy of intimate personal touch with such fruit that had cast a shadow over the Hood River, the Wenatchee and Yakima Valleys, upon their own stamping ground at Spokane, a few years before, was heightened by the fact that the driver of our McLaughlin-Buick was my old friend Frank DeHart, the man to whose indomitable not-to-be-beaten courage the winnings of that year have forever placed British Columbia fruit in the forefront of the world's big red apple worship.

A trip among the many fruit farms of this section, past many residences

"Up here," as we rounded a pine-clad rocky ridge, "lies the celebrated fruit farms of the Kelowna Fruit Lands Company." And suddenly came into view on these rich lower benches, a mile long stretch of young apple trees clean cultivated, vigorously foliaged, and charmingly regular in their lines, a vision of fruit prosperity that no picture has as yet exaggerated.

"This land cannot be bought as it is paying such big dividends from its fruit. The trees bear at four years of age and continue bearing regularly every year, provided the same care as you see is given it, and the apples are thinned each year. Its soil is practically inexhaustible, being filled with

the phosphates, nitrates and potash of ages' wash from the eternal hills."

"Talk \$2,000 an acre to the owners and they would laugh at you. Why, a Mr. Renfrew, of Toronto, purchased forty acres of raw land down yonder," and our guide pointed off towards the north-east, where the trail leads its way behind the mountains towards Vernon, "for \$30,000, and he has since planted orchards and built that attractive red-tiled bungalow you see there to the right among the pines."

THE DELICIOUS MCINTOSH.

McIntosh trees on an estate farther up the government-made road, for the

"Yes, Frank, but the land is nearly all taken up and the prices are too high now for dividends."

"Are they? Take 108 trees of McIntosh to an acre. Get an average of \$10 per tree this year from an intelligent handling and marketing of the fruit, and you have an income of \$1080. The expenses of raising, then, is not great. You see we have no worms. You will not find a wormy apple even in the discarded ones under the trees. Yet we spray to prevent any fungus attacks. Will not this income justify land at \$2,000 an acre?"

"That looks good to me, but what about the five years' wait for fruit?"

FINE OKANAGAN APPLES.

"I congratulate you upon your success at the National Apple Show in Spokane. Your individual exhibits, as well as the District exhibit from Kelowna, have established the fact that British Columbia can compete with the world in the matter of apples.

"I regret that the Canadian apple growers in the East did not compete. Not that I would expect them to surpass the efforts of British Columbia; but nevertheless I think that they could have done something to show that Canada as a whole can produce the best apples in the world."

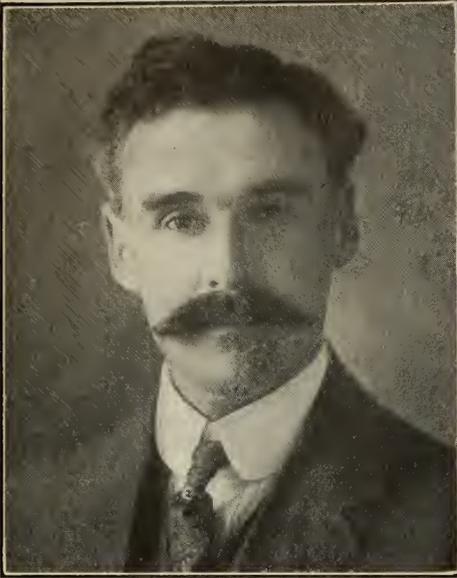
To F. R. E. De Hart,
Kelowna, B. C.

A. McNeill,
Chief Fruit Division, Ottawa

Provincial Government builds all the roads in British Columbia, were standing red with their big apples. The temptation to explore was too great, and from a tree on the border, where its branches swayed out over the cement boxes of the irrigating canal, some of the most delicious and most perfect apples were picked. "These trees," said the ex-mayor, "were loaded with fruit and netted the owner \$14 each this year. You sum up what an acre will do when the trees grow only 20 feet apart and you will see that the returns are good enough to warrant some of your eastern farmers from Ontario County, where we were boys together, in selling all they have and coming out to this land of promise."

"You can raise potatoes and vegetables of all kinds enough to pay interest charges and support yourself moderately well. I tell you, five acres of land will support a family. And we have families! Last year there were thirteen cases of twins and a bunch of triplets on the banks of the Okanagan," humorously asserted this optimistic Ontario expatriate.

The journey back to the town by another route revealed continued surprises. The old mission was past where tobacco culture was in full swing. A visit to the tobacco barns, with their drying racks and slow fires, revealed the long leaves of the weed in orderly array. A little further on the old Inn, now venerable with its



MR. F. R. E. DEHART,

of Kelowna, formerly Mayor of the town, and the man who won such signal honor for Okanagan apples at Spokane.

history, stood beside the trail, where several old apple trees, stripped of their fruitage, seemed ready for the winter's dormant stage.

"These are the first apple trees in this place," Mr. DeHart pointed out,

"and they are perhaps 50 years old and still bearing choice apples."

This fact was of much interest, as we were beginning to doubt whether the soil would keep on with this production of winning reds. The trees were certainly healthy and spoke volumes for the future of the apple business in this section.

THE GREAT WIN AT SPOKANE.

Having heard of the winning of \$4,423 by our apple friend at the Spokane National Apple Show a few years since, we dug out the story of how he became interested in the work which carried to British Columbia generally such signal honor.

The Okanagan had been producing apples of superior quality from the time that the pioneers at the south end of the lake had accidentally discovered that such qualities were possible in their fruit. But there had been no attempt to tell the world that it was pre-eminent. F. R. E. DeHart left Ontario some twenty years ago, settling near Indian Head, Saskatchewan, where he wheat-farmed on a big scale. Having made fairly well, and filled with a wanderlust and a desire for new fields of endeavor, as so many West-



Near the Mission they raise splendid tobacco, and the oldest apple trees stand near this field.
—Photo by Hudson.



This is typical of the newer fruit lands in all the mountain valleys of B. C.

erners are, he located with a company of others in the Kelowna district, then only a few houses on the water front. His company purchased a big block of the land and resold it for orchard purposes to many incoming, opulent, and educated men for homes in this California of Canada. He later went into the nursery business to supply the trees for the planting, and proved how easily it was to grow all kinds of trees. His own lawn is a perfect forest of trees and shrubs of rare bloom and leaf, growing as fast in one year as they do in three or four in Eastern Canada.

The beauty of the apples and their perfect shape made him cast envious eyes on the big apple show at Spokane, where the celebrated Oregon and Washington Valley apples were being pitted in combat for the championship of attractiveness and quality.

DECIDES TO BEARD THE LION.

Opinions of local dealers, growers and others were sought, but no one was enthusiastic over the proposition except a friend, one James Gibb, the expert packer of a local fruit shipping firm. A visit among the growers secured the best boxes of apples in their orchards, while from his own orchard Mr. DeHart took several boxes of the choicest.

Now there were obstacles in the way that would have killed the same proposal if made by an easterner. Railway freight rates were almost exorbi-

tant. The fruit had to be handled twice to reach the show. Besides, it meant personal care and attention en route.

But the idea gained its day. He set to work. The fruit was assembled and selected. So that when he left Kelowna he had 72 boxes of fruit. He arrived in Spokane a week before the show and emptied his boxes out in a packing room provided by the management where they were repacked by Mr. Gibb. Six days in all were taken in this careful pack, but there was the skill that fairly stamped the prize money.

One of the particular beauty spots of the exhibit was the class that called for two boxes, two barrels, two plates, etc. These were set in all the beauty of plush, silver, roses and ribbons. This created much favorable comment and was only beaten by the sentimental yet unique display of Wenatchee apples set into an American flag with all the stars and stripes fully pictured.

THE COMPETITION WAS KEEN.

There were apples on exhibition from New Mexico, Georgia, North Carolina and New York, besides all the adjacent Western and Northern States. Buyers and apple dealers from Europe and all America were present. The judges were well known and expert horticulturists, such as Prof. Craig, of Cornell, Maxwell Smith, of British Columbia, and representatives from the Iowa, Ore-



An orchard in which the trees have been largely grafted to better fruit. Note the clean cultivation.

gon, Washington, Montana and Idaho colleges.

The awards surprised even the optimistic exhibitor from Kelowna. That an individual from Canada could enter their lists and carry away \$4423 in prizes and the cream of the glory was almost too good to be true. The newspapers next day told the story and British Columbia generally congratulated the plucky man from the mountains for his unusual yet most creditable winning.

WINS OVER \$100 A BOX.

These prizes, when he started to count them, amounted to 13 firsts, 1 second, 1 silver cup and two medals.

They amounted to the astonishing total of \$4423.00. When he repacked his apples he had 43 boxes on exhibition and thus it is seen that the prize money netted him over \$100 a box. In writing of the event the day after the show, the Vernon News ably edited by a Mr. Jas. McKelvie, who came from Toronto twenty-five years ago, had this to say:

“No such triumph as this has ever been achieved by any district in any country; and the heartiest congratulations of British Columbia will go out in unstinted measure to the energetic and progressive fruit growers of Kelowna. To Mr. F. R. E. DeHart, too much praise cannot be given.”





The House- Keeper's Journal

By Dorothy Dot

Note.—This is the conclusion from its January number. Our Housekeeper fell into a dream on New Year's Day, and fancy took her into the future, where women vote, become members of Parliament, and perhaps Fellows and Bachelors of every University.—Editor.

DECEMBER 16.—Many people make their Christmas cakes weeks before. The Housekeeper makes hers when she is ready. This year she was ready to-day. Do you ever put molasses into a Christmas cake? If you are a cooking-school graduate you will involuntarily turn up your nose at this question and stare slightly rudely, if not simply surprisedly, while you ejaculate "Oh! Horrors!" Don't look like that. The Housekeeper didn't put any into hers.

Speaking of molasses reminds one of a story: A colored boy had been attending an industrial school in the South and had learned, among other things, English. Upon spending a holiday at home he overheard a younger brother at the table ask for some 'lasses on his "piece." The scholar undertook to correct him. "You should say "molasses" not "lasses." "Well," retorted the youngster, "how could I ask fo' mo' 'lasses when I hain't had any yet?"

Does it remind you of cooking-school when you sit down to "figger" out the eighth of a recipe? The Housekeeper

uses the half of this for a Christmas cake for her family.

1 lb. butter
1 lb. sugar
1 lb. currants
1 lb. raisins
¼ lb. mixed peel
½ lb. blanched almonds
2 T. cloves (ground)
2 T. cinnamon
2 T. allspice
2 T. nutmeg
T = teaspoon

9 eggs or 6 eggs + ¾ cup milk, coffee or orange juice.

Measure 4½ cups flour but don't use it all.

N.B.—Don't be too hopeful of success. The eggs are cold storage eggs—yea, even the very best of cold storage eggs, with the air-cell as big as a fifty-cent piece!

A farmer came into the grocery to-day with three dozen new-laid eggs and asked seventy cents a dozen for them. When, oh when, shall the Housekeeper have courage to start that little poultry farm she speaks of so often? Seventy cents a dozen forsooth! The hens are

getting a few commercial ideas stirred in with the wet mash. Maybe! But you can guarantee that the hens see very little of that seventy cents. Otherwise they would lay more eggs for Christmas.

Which is easier to remember, the rule for baking a cake or the rule for finding the true remainder? They are something similar—the process being multiplying, adding and dividing. Attend to the firing first. Have fuel enough for an even heat. Arrange the stove draughts so as to heat the oven. Grease the cake-tins. Bring together on the table all the ingredients of the cake. Cut the peel fine. Chop the raisins. Wash the currants. Blanch the almonds. Measure the dry ingredients first with the measuring-cup. Cultivate the habit of economizing in the number of dishes you use. Measure flour into sifter. Add spices. Add pinch of salt. Sift all two or three times. Cream the butter. Add sugar gradually. Add beaten eggs. Add wet and dry ingredients alternately while beating the whole. Add fruit, peel and nuts last. Pour into tins and bake. Also you need a small boy sitting on the end of the table helping himself to currants, raisins and nuts, cleaning out the remains of oranges and licking certain spoons and dishes. You have also to bake a little cake in a tin for him by himself if you want success with your own.

JANUARY 1. — This is the municipal election day. The Housekeeper is

a five-year-old elector. Well she remembers her first visit to the poll! How important she felt! How was she to know for whom to vote? Oh, she read the newspaper for a few weeks before to see whom her party paper was "backing up" and she noticed particularly who nominated the candidates and formed her conclusions that way. As for by-laws she had to ask a man's advice about some of them. She isn't such a suffragette that she wouldn't give in to the men that far. The polling subdivisions were in school-houses. When she reached the door she did not know to which room to go. But she rallied her fast-fleeing wits and followed the—'scuse me—"spit." It proved an infallible guide. She walked up to the "poll" and announced that she had come to exercise the right of a respectable citizen. The "poll" turned the leaves of his book, checked off her name and said "Five," to another "poll," his assistant. The assistant tore off five sheets from as many different-colored pads, initialed them and handing them to her said, "You will find a pencil on the window-sill." She proceeded to the window where she drew the saw-horses in the places contemplated. After folding the ballots carefully, initials outward, she duly deposited them in the ballot-box. Then buttoning her glove she was bowed out by an officer and the Housekeeper had voted. Needless to say that all her men were elected.



THE GENTLE ART OF COOKERY

Note.—Miss McKenzie is a Western girl. She lives on a thousand acre farm near Edmonton. Last summer she attended the McDonald College at Guelph for a course in domestic science, after having been under the tuition of a good mother for several years. Her writing here, then, will be of interest to every farm home, where cooking is so essential a part of the day's program. She will be pleased to answer or have answered any questions our readers may submit to her to the office of the Magazine.—Editor.

By Jean McKenzie

COOKERY—what a fascinating theme! Of what interest to the average feminine mind from the days when with a large apron festooned about her small figure, the little girl kneels on a stool beside the bakeboard, flouring with strict impartiality the scrap of dough entrusted to her tender-mercies, and her own face? This is her apprenticeship. Later on, when such childish delights have lost their charm, what normal girl is not seized with the candy-making craze? Every new recipe must be tried, and the results, which sometimes vary a little in quality, are fed to the long suffering family. But do not pity them too much, they usually survive and never refuse to taste the next batch.

But the time comes when the young cook wants to try *real* dishes, and what a proud day it is when she makes her first cake, and it is a success. After this, there is nothing that she dares not attempt, at least, and after many lessons, the glad day comes when she is left in charge while the presiding genius of the kitchen takes a holiday, usually, well-earned. What if our new cook, elated by her important position, essays some fearful and wonderful dishes, which are not all unqualified successes? The experience gained, the self-reliance which is called out, will inevitably stand her in good stead when she graduates from her training, into a house of her own. Under no circumstances can she ever have cause to regret

her knowledge of household science, which will be of a practical, and not a theoretical order. *After all the talk now-a-days about cares for women in the business or artistic world, who will say that a homelike home, or a carefully planned, well-cooked and daintily served dinner, is not a work of art, and just as much an achievement as any accomplished by the successful woman of business?*

The following recipes are true and tried ones, ones which refused to be spoiled even during the first attempt of an ambitious young cook, and I can conscientiously recommend them as being most reliable. I'm sure they will only require one trial to become favored with all. The first one comes to me from an old country friend, in whose family the recipe has been handed down for generations.

SPICED BEEF.

Take fourteen pounds of the thick rump of beef, one-half pound of brown sugar, one ounce of saltpetre, one-quarter pound of whole allspice (pounded) and one pound of common salt.

Method of Doing It.

Rub the sugar well into the beef, and let it lie for twelve hours, then rub the salt petre and allspice, both pounded, over the meat, and let it remain for another twelve hours; then rub in the salt. Turn it daily in the liquor which forms, for a fortnight, then remove the bone from the meat, fill the cavity with suet, bind the round in shape with tape, place in a deep stone crock, or granite kettle, pour the liquor over it, add one quart of water, cover closely, and bake in a moderate oven for four hours. Leave to cool in the liquor. This is to be served cold, sliced thinly. You will find this a pleasant change from the plain cold meats, and it is very nice in sandwiches as well.

BOSTON BAKED CHICKEN.

Cut up a chicken as for fricassee, and to each pound of meat, allow two tablespoons flour, one scant half teaspoon salt, and a dust of pepper. Mix these well, and roll each piece of chicken in it, pack closely in a large bean-pot, and cover with boiling water. Bake for three and one-half hours, put on a cover as soon as it boils. Serve in the dish in which it was baked.

SLICED CURRANTS.

7 lbs. currants; 3 tablespoons cinnamon; 5 lbs. brown sugar; 3 tablespoons cloves; 1½ pts. vinegar.

METHOD.

Pick over the currants, wash, drain and remove stems. Put into a preserving kettle, add sugar, vinegar, and the spices tied in a muslin bag. Heat to boiling point, and cook slowly for one hour. Store in a stone jar, and keep in a cool place. Spiced currants are a delicious relish to serve with cold meats.

If any of my readers have a weakness for the four o'clock cup of tea, or want some dainty little wafers to serve at a seception, I know they will be delighted with

ORANGE WAFERS.

Ingredients—One cup butter; one-half cup sugar; two egg-yolks; two tablespoons cold water; one-half teaspoon baking powder; grated rind of one lemon.

Flour to make a very stiff dough. Be careful to work in flour until the dough will absorb no more. Roll out very thin, cut with a suitable round cutter not larger than two inches in diameter, and bake in a quick oven.

FILLING.

Two cups icing sugar, moistened with the juice of one orange, and one-half lemon. Add two teaspoons of melted butter, and work until very smooth. Put two of the little wafers together with a generous layer of this between them. For variety, fill half with orange filling, and the rest with a rich chocolate icing. These are very delicious to serve with tea.

OLD-FASHIONED SCOTCH SHORTCAKE.

Ingredients—One cup butter; one cup sugar; one cup lard; four cups flour.

METHOD.

Cream the butter and lard together thoroughly, and work in the sugar gradually. Next add the flour, a little at a time, working it in well

before adding the next lot. It takes a great deal of time to get this worked in, and moist enough to roll out. You must just persevere and do not add any water, as it spoils the shortness of the cake. It is best to knead it between the fingers, as one does bread. When it is well mixed, and can be rolled, roll out to about three-quarters of an inch thick, cut in squares, triangles, or any fancy shapes, and crinkle the edges between the thumb and forefinger, or with a fork. Place on a baking sheet, and bake in a moderate oven until a golden brown color.

DROP JOHNNIES.

Ingredients—One-half cup sugar beaten well with one egg; one-half cup of cream; one and one-half teaspoon soda; one tea-spoon salt; one grated nutmeg.

Thicken with flour to a very stiff batter. Drop into hot fat, not more than one-half teaspoon at a time, and fry to a golden brown, the same as fried cakes. Do not fry to increase the size of the Johnnies, for you will find that they will turn out beautiful round balls, but alas, quite raw in the middle. These are very simply made, and are very different in flavor from the ordinary doughnut, and in appearance as well, and will appeal readily to the children.

ICE-CREAM CROQUETTES.

A novel way to serve ice-cream at an evening entertainment.

Ingredients—Three cups rich milk; three eggs, or six-egg-yolks; one pint cream; two cups sifted and rolled macaroons; ond and one-fourth cup sugar; one-half teaspoon almond extract; one teaspoon vanilla.

Make a custard of milk, egg and sugar. Remove from fire, chill, add cream and flavoring. Stir in the powdered macaroons and freeze hard in three parts ice to one part salt. Have ready some coarsely rolled macaroons, scoop out the cream, and serve with a sauce of preserved strawberries or raspberries.

ORANGE DELIGHT.

Slive very thin, rind and all, three very large seedless oranges, and one large lemon. Pour over them eleven tumblerfuls of water, and set away for twenty-four hours, then boil slowly for one hour. After boiling, add four pounds of granulated sugar, and set away for twenty-four hours longer. Then boil for one hour and twenty-five minutes. Pour into tumblers, and set away in a cool place covered with paraffine. This will keep indefinitely, and is very nice for breakfast, served with hot biscuits or muffins.



Haymaking in the Peace River Country.

FARM INFORMATION IN BULLETINS AND BOOKS

By The Editor

WHEAT IMPROVEMENT.

The average yield in Michigan for 1910 and 1911 as reported in the year book of the Michigan Department of Agriculture was eighteen bushels per acre. Wheat number 60,101, which is a selection from the American Banner, yielded 42.8 bushels per acre on an average for two seasons. So reads a bulletin on the above subject of Frank A. Spragg, which is issued by the Michigan Agriculture Station at East Lansing and contains a lot of valuable information along the lines of wheat production. The bulletin will be of especial value to farmers in the prairie Provinces.

CORN CONTESTS.

The United States Bureau of Plant Industry, in circular Number 104, gives a concise account of the corn selection clubs of the United States. Every farmer should have a seed-corn breeding plot by the head of his crops. Considerable information is given in this bulletin which can be had by addressing the above office at Washington, D.C.

THE HONEY BEE IN POLLEN COLLECTING.

The United States Department of Agriculture issues a bulletin number 124 under the above caption. It is edited by Dr. Casteel, who, by illustration and explanation tells how the honey bee works in securing its supply of pollen. Bee-raisers in Canada will find this bulletin to cover the subject to their satisfaction.

SOME NEW APPLES.

Just as the work of developing new varieties of apples is pushed at the Experimental Farm at Ottawa so the New York experimental station at Geneva have found out some very interesting things about the new varieties of apples obtained from known parents. For instance, the Courtland is a large apple of the McIntosh type. It is in season from November to February and promises to be a good one commercially. Its two parents were, that old standby, the Ben Davis, and the McIntosh. A full description of these varieties is contained in this bulletin. The same experimental station has just issued its report on the inspection of feeding stuffs which gives the analysis of all the leading stuffs in use in the country.

THE EXPERIMENTAL FARMS OF CANADA.

A handsome booklet has been issued by the Government Printing Bureau at Ottawa for the purpose of being a guide to the experimental farms and stations in their department. It contains a map showing the locations of the farms, photographs of the various places and descriptions of the work in each department of the several farms. The bulletin is written in a concise manner. There is no useless and verbose language used. Thus the student of agriculture has the subject with his wishes treated right under his thumb in a moment's notice. It can be obtained by writing to the Agricultural Department at Ottawa.

DAIRYING ON THE FARM.

The Department of Agriculture in Ontario have issued a bulletin on this subject which is edited by Professor Dean, of the O. A. C. While various subjects are treated by other writers. It treats of such subjects as the farm dairy, cheese making, farm butter making, cream separators, the care of milk, soft cheese-making, milk and cream testing, and the selection of dairy cows. While it gives the form used for dairy and individual cow records as well as the score card used at the Farmer's Institute meetings. It can be had by writing to the Department of Agriculture, Toronto.

HARDY ROSES.

The rose may well be considered the queen of flowers but unfortunately there are many parts of Canada where only a limited number of the hardiest varieties can be successfully cultivated. For this reason many who would grow roses are debarred from doing so because of a lack of knowledge of which are the most hardy sorts and the treatment that should be given them. To supply this information in readily available form, the Dominion Horticulturist, Mr. W. T. Macoun, has prepared a pamphlet of a dozen pages entitled "Hardy Rose Culture in Canada." It is designated Pamphlet No. 9 of the Experimental Farm and may be had free by applying to the Publications Branch, Department of Agriculture, Ottawa.

The pamphlet treats in a very practical manner the culture of roses under the following heads: site and soil, plants and planting, cultivation and watering, manuring, pruning, winter protection, insects and fungus enemies and how to treat them. Then follow lists of the best varieties of the various classes with a brief description of each as regards form, color and fragrance. In the preparation of this treatise the conditions in all parts of Canada were kept in view so that prospective rose growers in every province may receive valuable information from its pages.

THE EFFICIENCY OF BORDEAUX.

The efficiency of Bordeaux mixture in preventing certain cherries of certain plants is depending upon several factors. These are dealt with in a bulletin number 265 issued by the United States Department of Agriculture at Washington. Every person who is using spray machine will find this pamphlet to be a really helpful one to them.

FOREST CONDITIONS IN NOVA SCOTIA.

The Commission of Conservation have just issued a book on this subject. A hurried glance over the work shows that the Commission have gone into the subject on forest growth in Nova Scotia in an exhaustive manner. It is found out that a great deal of Nova Scotia is barren of trees and practically valueless and it is now one of the important problems facing those who direct the forest policy of the Province to introduce seed

bearing trees into these areas and to protect them from fire. A number of half-tone illustrations appear in the book as well as a complete set of maps. This can be had by writing to the Commission of Conservation at Ottawa.

THE JEW IN AGRICULTURE.

The work of the Jews in agriculture in America has been brought to the attention of readers through the efforts of Mr. Leonard G. Robinson, general manager of the Jewish Agriculture Society, New York City. This book of 100 pages takes up the whole question of Jewish colonization and the work of various philanthropists in their colonies. It is interesting to know that in old Palestine the spirit of modern progress is working wonders in agriculture. This subject was drawn to the attention of the people who attended the Dry Farming Congress at Lethbridge last fall, when Dr. Aaronsohn delivered an address on the subject of his work on the experimental station near Jerusalem.

ALASKA AGRICULTURE.

The annual report of the Alaska Agriculture stations has just been issued by the United States Department of Agriculture. It will be interesting to a great many people to know that ripe apples were produced for the first time at the station at Sitka from trees planted in 1903. One of these varieties were the Yellow Transparent. They also grow many other small fruits to perfection. The report has some photographs showing the various fruits and fruit trees. One interesting photo is that of an early Richmond Cherry tree laden with fruit. Another shows a cabbage weighing sixteen pounds. In fact, this country away up North grows a great variety of farm products which is well told in this bulletin. It can be had by writing to the above department.

THE CARE OF MARKET EGGS.

W. A. Brown, B. S. A., of the Department of Agriculture, Ottawa, has reviewed the whole question of the marketing of eggs in bulletin Number 16. It is well illustrated showing the stages of deterioration that an egg passes through and how to detect stale eggs. One illustration shows the wide variation there exists in the size of eggs. One dozen showed a weight of 16 oz., while another showed a weight of 25 oz. Specific instructions are given at the close of the article to the farmer, the merchant, the buyer, the railway company, the dealer and the consumer which will be worth reading by every person interested. Send for a copy to the above department.

TRIPLET CALVES.

The main Agricultural station at Orono, Maine, U.S.A., in bulletin Number 204, discusses this question. The bulletin gives a detailed description of a set of Triplet Calves produced by a cow with a hereditary tendency towards multiple gestation. The bearings of the case on the same general problems of practical and theoretical animal breeding are much discussed. Farmers interested in this discussion can obtain a copy by writing to this station.

THE GRAPE-BERRY MOTH.

This is the subject of a bulletin Number 116 issued by the United States Department of Agriculture. The moth is an insect enemy of the grape of long-standing in the vineyards of the Lake Erie Valley. Fred. Johnson, and A. G. Hammer, assistant Entomologists, have thoroughly gone into the subject and reported their findings with illustrations in this bulletin. Persons who have had any trouble with this pest will do well to get a copy of this bulletin. As is usual, this pest has a parasite. A picture of it is given in the bulletin.

SOIL CONTENTS.

The United States Department of Agriculture Bureau of Soils Division in bulletin Number 88 have reported upon exhaustive experiments in the matter of organic acids in the soil. The student of Agriculture who has taken a little notice of chemistry would do well to read this bulletin.

BEET-SUGAR IN UNITED STATES.

The American Beet-Sugar industry has been reviewed in bulletin Number 260 issued from the Department of Washington. It goes into the whole subject of beet raising and its allied industries. It can be obtained by writing to the above department.

MARKETING OF FARM PRODUCTS.

So much has been written about the high cost of living and the prices for farm products to the consumer that many will be tired of reading works on this subject. The man who is anxious to make money out of the soil from his productions will find it to his advantage to read report Number 98 on this subject prepared by George K. Holmes, Statistical Scientist of the Department of Agriculture, Washington, D.C. A great deal of meat will be found in the report from all the various co-operative associations and exchanges operating in the United States. It can be had by writing to this department.



Sig. 3.

OUR PATTERN DEPARTMENT

Note.—An immense number of orders for Farmer's Magazine patterns arrive at the office daily. Strange as it may seem there are many who forget to sign their names, many who forget the money, many who neglect to state the size of the patterns required and many who send their orders to our Branch offices instead of to the Central office at Toronto. Ladies ordering patterns of Farmer's Magazine so as to avoid error and delay will please observe the following conditions:

First, address your letter to the Farmer's Magazine, 143 University Avenue, Toronto, Ontario.

Second, write on one side of the paper only, state clearly what you want.

Third, enclose the money.

Fourth, sign name and address plainly.

Comply with these conditions carefully and it will be our fault if you do not get your patterns within a few days after the arrival of your letter.



NO. 6062—CHILDREN'S FROCK.

This dress may be made with high or low neck and with long or short sleeves. It fastens at the front and collar, cuffs and wide belt are made of contrasting material.

The pattern, No. 6062, is cut in sizes 2 to 8 years. Medium sizes will require $2\frac{1}{2}$ yards of 36 inch material and $\frac{5}{8}$ of a yard of 27-inch contrasting material.

Price of pattern 10 cents.

5696—GIRLS' DRESS.

This dainty little dress is a modified sailor model with the popular Gibson plaits at front. It can be fashioned with long or short sleeves and with plaited or gathered skirt. Serge, cashmere or any of the wanted wash fabrics can be utilized.

The pattern 5696 is cut in sizes 6 to 12 years. Medium size requires $3\frac{1}{2}$ yards of 36 inch material and $2\frac{3}{8}$ yards of braid.

Price of pattern 10 cents.



4650—LADIES' HOUSE DRESS.

The dress we illustrate is one of the simplest. It has Gibson tucks at the shoulders in both front and back and these extend all the way to the belt. The closing is at one side of the waist. The sleeves are the plainest of leg o'mutton shape and full length.

The pattern 4650 is cut in sizes 32 to 42 inches bust measure. Medium size requires 8 yards of 27 inch material.

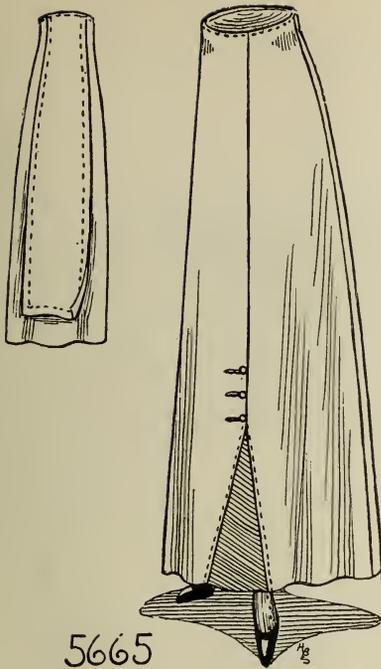
Price of pattern 10 cents.



5479—LADIES' DRESS.

Here is an attractive frock which can be made with high or Dutch neck, long or short sleeves and three piece skirt. It can be fashioned of checked gingham, percale or serge.

The pattern 5479 is cut in sizes 32 to 42 inches bust measure. Medium size requires 6 $\frac{3}{4}$ yards of 27 inch material with 2 $\frac{1}{2}$ yards of insertion. Price of pattern 10 cents.



5665

5665—LADIES' FOUR-GORED SKIRT.

This stylish skirt is appropriate for dressy occasions. It is a four-gored model closing at the left side of the front and has the clever new panniere at the back. This panel is stitched partly down the length, but hangs loose a few inches above the bottom. At the front of the skirt a triangle-shaped piece of contrasting goods is set in at the bottom.

Panama, serge or broadcloth may be used.

The pattern, No. 5665, is cut in sizes from 22 to 30 inch waist measure. To make the skirt in the medium size will require $3\frac{3}{8}$ yards of 36 inch material.

The pattern can be obtained by sending 10 cents to the office of this paper.



5562

5562—LADIES' WAIST.

In this dainty model we have one of the more dressy styles which will be excellent as part of a three-piece suit.

The shoulder is of kimono cut, with a group of tucks arranged bretelle-wise across it. There is a gore on the under side of the sleeve and along the underarm seam of the dress and a fancifully shaped yoke.

Chiffon, marquisette, net, messaline, crepe de Chine and other soft fabrics are suitable for this waist.

The pattern 5562 is cut in sizes 32 to 42 inches but measure. Medium size requires $1\frac{3}{4}$ yards of 44 inch material.

Price of pattern 10 cents.

OUR DRESS DEPARTMENT



Skirt of checked mixture cloth, showing the introduction of pleats at one side of the front and back panel and the stitched belt that is newer than the high waist.



Dress of linen, showing new Russian tunic in heavy embroidery. This dress shows the new tendency to Eastern fashions.

ON THE FARM ⁱⁿ FEBRUARY



By Grasmere

February on the Farm

A farmer is now face to face with practical problems of another year. He has to look ahead and plan how he can best prepare for the coming spring and summer's work. This brings us the question of the farm office. It is becoming to be recognized by all up-to-date farmers that an office in his house or in a heated room in some other part of the buildings is of first importance. It gives the farmer a sense of the importance of his work. It enables him to have all the facts of his farm work under his thumb. It tends towards business methods, a thing that is mostly desired on a great many farms.

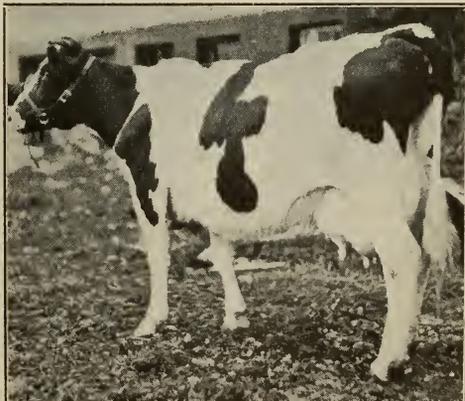
Clean the Seed

This month will furnish plenty of idle time on many Western farms for the preparation of the seed grain for the seed-drills which will likely be running in the latter part of March. It will pay to hand-pick a lot of this grain. This operation can be done

quickly. Weeds are far too common in the West as well as the East.

Harvesting Ice

In Eastern Canada the ice harvest has so far this season been an unsatisfactory one this year. Owing to the open season the ice ponds have not been frozen to the thickness that farmers like to see before securing their ice.



Champion Holstein cow at the Dairy Test, Eastern Ontario Live Stock Show, 1913.

However, there is a good part winter yet to come and it will mean that you will have to be ready to take out your supply quickly and at short notice. A speaker at the Dairymen's Convention in Ontario, stated that only ten per cent. of the farmers of Middlesex County, which is looked upon as one of the big dairy counties, were using ice for the cooling of milk. The importance of ice in the dairy industry ought not to be overlooked by our farmers.

House Building for 1913

Many farmers will doubtless be erecting new houses during the coming year. Now is the time to make every preparation on paper for the work so that the most can be done for the money expended. It will be interesting to note the article which will appear in the March issue by an architect. This gives a plan of a farm house at a moderate cost. Too many of our farm buildings are awkwardly built and make no provision for proper heating and water installation. The wife who has to do the work in this house should be the first person consulted in the planning.

The Poultry on the Farm

Owing to the mildness of the winter the poultry have been giving better results and the price of eggs is lower than last year. The main thing in success depends upon proper ventilation, cleanliness, and the freedom of the fowls from dampness and drafts. The use of incubators is growing more common. The March issue of Farmer's Magazine will give the experience of a farm woman in the handling of chickens hatched in the incubator. The failures in many cases have been due to the ignorance and carelessness of the operators. The farm poultry can be a valuable side line for every farmer. The success that is intended the co-operative egg circles is something that you should inquire into. Mr. J.

H. Hare, B.S.A., of Whitby, Ont., is completing a system for this county that will mean thousands of dollars to the farmers there. You will note the article in this issue on this subject.

Cattle Feeding

Feeders of fat cattle for the Eastern market should have their cattle in fairly good shape now. They will find the keeping of them up to this mark and at the same time gaining a little, a very easy proposition. Increase will have to be made in the feeding of concentrates. Oil cake is perhaps the best for this purpose. Molasses Meal is a fine thing to keep the animals in condition. For dairy cattle enough feed should be given to supply sufficient protein. The cow needs one pound of protein daily per 1,000 lbs. of weight for her bodily support. If she is giving milk she will need two lbs. more of protein for every 50 lbs. of milk daily. This protein is best supplied by giving oil cake. All dairy cattle should have an abundance of roughage, as all ruminants are better when they are kept full.

Test the Corn

Many stands of corn were lost or nearly so, last year, owing to the poor germination qualities of the seed used. The Corn Growers have been urging farmers for some time to test their seed. This is easily done if a little care is taken. It is well to have your seed shipped to you now in the ear, if possible. Director Grisdale, of Ottawa says that the Leaming and the White Cap Yellow Dent are the varieties of fodder corn which are giving the best results. The real corn belt lies in south Western Ontario and a few other varieties are doing well there.

That Financial Puzzle

I have received several correct answers to the Financial Puzzle given in the January Number. Several others submitted solutions that were indeed

ingeniously made out, but which neglected to take into account the fact that the eggs were sold in each transaction with each lad, at the same rate.

Correct answers were received by the following in the order named:—D. Barr, Jr., Renfrew, Ont.; Stuart Nisvet, Wyoming, Ont.; G. W. Robertson, Iroquois, Ont.; and Gerald Van Blairicom, Picton, Ont.

The correct solution is as follows:

The first buyer on the market pays 1 cent for 7 eggs. Tom can sell him 7, Dick 28, and Harry 49. This leaves

Tom with 1 cent, Dick with 4 cents and Harry with 7 cents.

The next buyer pays 3 cents an egg and finds Tom with 3, thus giving him 9 cents; Dick has 2 and gets 6 cents; while Harry has 1, getting 3 cents.

Total amounts received by Tom came to 10 cents, to Dick 10 cents and to Harry 10 cents.

It will thus be seen that this has come about in a legitimate and quite possible way. The moraliser will probably be able to solve the whole difference between the rich and poor from this instance.

IDEAS FOR FARM BUYERS

WE all buy manufactured goods, and wisdom demands that we read the catalogs issued by the manufacturers. Reputable firms live up to what they claim in their catalogs. This department gives a review of the recent catalogs issued by the firms who are manufacturing up-to-date goods for the farm.

As the name of Hornsby is so well known by agriculturists throughout the British Empire, we feel sure that their Engines will be welcomed in the Dominion.

The C. C. Shoemaker Co., Box 1126 Freeport, Ill., have just published their 1913 catalogue, which is a combination of catalogue and almanac. It describes their incubators, and gives many helpful suggestions in poultry raising. Every reader should have a copy of it.

The Alberta Incubator Co., Box 937, Mankato, Minn., are sending out their 1913 catalogue, which is very complete, and shows the improvements made in the incubator line. Along with each incubator goes their Ironclad Guarantee and 60 days' trial. This catalogue will be gladly sent to any address.

The Sovereign Construction Co., 608 Lumsden Bldg., Toronto, are issuing their booklet on Ready Cut Houses. It illustrates, with fine half-tone cuts, different styles of houses. A plan of each house accompanies the illustration. With the material for each house goes a guarantee covering the quality, fit, and safe arrival of all material. Every farmer contemplating building should have this catalogue.

We learn that Richard Hornsby & Sons, Ltd., Grantham, Eng., with a Canadian office at 212 McGill St., Montreal, have concluded negotiations with the Holt Mfg. Co. for the sale of Tractors for farm and other uses throughout the Dominion. The Montreal office will be continued and will have charge of the sale of their other Internal Combustion Engines for farm use.

The Lisle Mfg. Co., Box 563, Clarenda, Iowa, through their catalogue, are calling attention to the opportunities offered for money-making through operating their Well Drillers. This catalogue is highly illustrated, showing the machine operating in Canadian territory at 45 below zero. Instances are given where Canadians are making from \$85 to \$100 per week with these machines, over and above operating expenses. A card to this company will bring their catalogue to you. It is free.

Our attention has been called to the General Catalogue as issued by the Asbestos Manufacturing Company, Limited. This booklet is printed on heavy paper, with numerous half-tone illustrations of the Asbestoslate Shingles and Asbestos Corrugated Sheathing, as manufactured at their plant, Lachine, P.Q. It is surprising to note the great number of pleasing effects which can be obtained by the use of this material, although we understand that the style generally employed for farm buildings, is that known as the French or diagonal method. The Asbestoslate Shingles laid according to this method are very reasonable in price when it is remembered that they are absolutely fireproof and waterproof, and, in fact, practically everlasting.

They would seem to be the best kind of insurance when placed upon the roof of a farm house, barn or stable. This catalogue is sent free, upon application, and any one interested in Fireproof Roofing would do well to address a request to Dept. F, Asbestos Mfg. Co., 705 E. T. Bldg., Montreal.

THE JOY OF MODERN TRAVEL

By HARRIS K. ADAMS

THE old Swiss Lady who traveled up the mountain side from her humble valley home, and who remarked—"Goodness sakes I did not know the world was so big," was not so much of a back number as the ordinary Canadian may be disposed to call her.

Her mountain climb was difficult and tiresome. Physical conditions were severe and the way seemed long. Had she stepped into the comfortable cabin of the inclined railway her ideas of distance would have been wonderfully modified.

The solving of transportation problems has been one of the big features of the past century. A man has to be a long ways removed from the ordinary pale of commerce to be even as isolated in his seclusion, as was this Swiss woman of yesterday. Yet we have isolated lives in the modern world to-day, despite the opportunities before us. Some individuals have not placed themselves in line with this march of progress. They are working to-day with a pick where they should be using a steam shovel.

I ran across such a man in a heart of a good agricultural district not twenty-five miles from the big city of Toronto. He was a prosperous farmer of forty years, strong and happy. He had no modern power improvements on his farm, or had he traveled five miles from his home in his life. He was farming with the old methods as much a hermit as were the storied recluses of ancient Europe. This man has never been on a railway train. A slow traveling Clydesdale horse or his sturdy own limbs constituted his transportation system. Thus a trip to the

neighboring village for supplies meant a half-day of time, and much physical inconvenience.

In contrast with this man, the business man travels five times this distance to reach his office for the day's work in the morning and looks upon the operation as a trivial one. These two stories tell accurately the whole development in modern travel. Space has been annihilated. The bodily discomfort has been reduced to a minimum, so that it is not the number of miles a man travels but the physical handicaps under which he moves that determines the distance.

No better illustration of the wonderful development of travel facilities and mechanical power can be had than from a trip over the splendid C.P.R. system that crosses Canada. To entrain at the Eastern side of the country at the beginning of the week, and to spend the weekend by the quiet waters of the Pacific, after having witnessed the grandest scenery of mountains, plains and water with all the diversified interests of commerce, manufacturing and agriculture, is a pleasure that cannot be fully described in the pages of any magazine. Even the photographs do not reveal the wonders of such a trip.

Not the least pleasing feature is the removal of all discomforts in passage. The traveler has the same conveniences, the same enjoyments, and the same seclusion that he has in his own library or den, is his home on the farm or in the town.

We boarded the C.P.R. Vancouver express at Toronto on the 1st of last Oc-

tober with a ticket that read via Saskatoon and Edmonton with a return via the Crow's Nest Pass, and the Kootenay.

The splendid coaches, the magnificent Pullman cars with a library observation car were at our disposal. The comforts of a home and the little attentions for convenience and amusement which had apparently been made the subject of study on the part of the Company, made it possible for the ordinary routine of our lives to be uninterrupted even to the matter of correspondence, the daily news taken from bulletin, and the afternoon tea with

The menus are also reasonable in price and the service the best that can be put up. It was also worthy of remark that the dining room service on the train was so good that many persons expressed themselves as enjoying its service far more than they did that of the leading hotels in the average towns, and that at a lower cost.

At Vancouver the express runs alongside of the dock where the big C.P.R. boats from the Orient tie up. Here also the Princess line of steamers load for the Coast points and Victoria. The same ex-



Lake Louise at Laggan, Alta., on C.P.R.

friends who told of the glories of the various parts of the world they hailed from.

From the observation car the enjoyment of the scenery en route was perfect. Columbia the eagerness of the people, the impelling principles of business and the enthusiasm everywhere manifested, is in splendid keeping with the magnificent and mighty works of nature seen on every side.

One cannot speak too highly of the hotel accommodation wherever the C.P.R. has built a hotel. These are furnished with the same disregard of cost in the desire to cater to the comforts of the people.

cellence of service is a feature of all their boat service so that the passenger comes to look upon the letters C.P.R. as a guarantee of satisfactory conditions of travel. It is the same in the Okanagan Valley and On the rear platform one could breathe the invigorating ozone from the hills and the plains; one could feel the sweep of the prairie winds from the fields of wheat and sunshine; one could revel in the glorious Chinook at the foot-hills, while the gorgeous path through the rockies was a continual kaleidoscope of surprises and wonderment. Words cannot picture the sensations of such a trip. Within view from Calgary are the snow-capped rock-

ies to the west. We pass through the Gap by the Three Sisters of Canmore, and Wind Mountain and on between the tremendous uplifts of stratified rocks broken out of the crust of the earth by the Great Artist. Until at an altitude of 4,520 feet we stop for the night at the beautiful Banff Park where surrounded by the mountains, the glories of such an existence burst upon you overwhelmingly.

The next morning from the cosy bunga-

by the use of the descriptive Annotated Time Tables all the passengers appreciate this trip because of the interest that is attached to knowing the names of the peaks and the rivers with the descriptions and history of the surrounding parts.

The tremendous expense that this Company has gone to, to provide comfortable and quick passage over the mountains is indeed a wonderful tribute to modern science and humanity. The one



Interior C.P.R. Observation Car.

low station, we once more take train for as beautiful a day's journey as nature has ever prepared for the tourist. The highest part of the Rockies is reached; beautiful valleys are passed; immense mountain peaks are skirted and at Field one stops for a time to enjoy the grandeur of Mount Stephen and Mount Field from the comforts of the railway company's palatial hotel at this point.

Going on down the Kicking Horse Pass into the Canyon of the Fraser, is a succession of delightful views. By the kindness of the guides on the train and

example of the cork-screw tunnel under Cathedral Mountain, will suffice to show the magnitude of the enterprise. The length of the tunnel is one-and-a-quarter miles and the length of the cutting outside of the tunnel is seven miles. They have reduced the grade from 4.5 of their first track to 2.2. The work cost \$1,500,000. It took 1,000 men with complete steam equipment nearly two years to do the work. They used seventy five car-loads of dynamite. Steam shovels were operated by compressed air and worked their way from both ends of the tunnel.

So accurately has science reduced these calculations, that in every case they met exactly.

Nevertheless to insure speed to the traveling public on this series of tunnels they now use two engines where formerly four were used. Many of these engines now burn oil instead of coal, so that the tourist on the rear platform is not troubled with the flying cinders.

At the Pacific Coast after a winding trip down the Fraser river the scenery is most delightful.

Perhaps the most home-like hotel on the continent is that of the Empress, situated opposite the splendid Parliament Buildings on the water front at Victoria. The traveler meets not only with every

and the tamarac, turning them to living gold; in the crevices of the rock, the thickly-lined huckleberry bushes flamed in red; the native spruce and pine stood emerald green against the rocky ridges. The scene was most charming and every passenger was delighted with the magnificent appearance of this beautiful yet almost barren landscape upon which the sun smiled in all its brilliance.

From the Investor's standpoint the trip over this line is one that is bristling with opportunity. The traveler is in constant touch with enterprising news from all parts of the world and he usually succeeds in getting a great deal of useful information about the several localities through which he passes, by contact with the men who really know the conditions in these



Farm Scene, Western Canada.

convenience and comfort but enjoys the society of business men and tourists from all over the world so that as one sits in the splendid corridors enjoying his magazine or his conversation he becomes a better educated man by reason of the stories that charm him and the ideas that are gathered from men of other climes and races. Truly the C.P.R. has proven to us that travel is a liberal education.

Looking back over the trip, we find another feature that is outstanding. What is commonly regarded as the barren wastes of Northern Ontario, the land of the stunted poplar, as Premier Whitney once described it, becomes a picture of beauty on memory's wall. In the early morning of October the frost had just touched the leaves of the poplar, the birch,

parts. He is therefore in a better shape to talk more intelligently about investments than the majority of the men, whose lives are fixed in these places. He can size up the bigness of the situation. He gets a grasp of things as they are, and can apply the vision of his broader outlook, to the detailed stories that he hears. He can arrive at conclusions as others have done in their accumulations of fortune.

As a development of agriculture, the C.P.R. is a most aggressive and persevering agency. We do not wish to imply that the C.P.R. is a big philanthropic corporation. Philanthropy never made enterprises worth having. What is better still, they have applied business wisdom to the development of agriculture in every part through which they have passed. Especi-

ally, is this marked, in their land operations around Calgary in the Irrigation district at their big Natural Resources building which has lately been enlarged. They maintain an elaborate staff of agricultural experts who are working upon the problems of the farmer and the soil. Farmers are made welcome at these offices and any help that this department can give to him by way of increasing his returns, is gladly done. Their recent move in engaging Dr. J. G. Rutherford, former Live Stock Commissioner for Canada, has marked them as foremost in extension work in scientific up-to-date agriculture.

Another move remarks them as pro-

practice is being discouraged by the C.P.R. by offering to small farmers the help that they have.

Reviewing the whole system of the C.P.R. travel everyone must be struck with the wonderful expansion of this system and with the intricate knowledge they possess of local conditions and the painstaking attention, they are putting to all parts of their system whereby the burdens of the public in matters of transportation are being lessened. The encouragement that is being given to the legitimate enterprises and to the development of the country that has followed the laying of the steel across the contin-



C.P.R. Empress Hotel, Victoria, B.C.

gressive. They are going to loan the farmers money on long term payments. The farmer can get money up to \$2,000 for twenty years at 6 per cent. If desired, they will furnish the farmer with live stock and poultry and give him the best knowledge of their agriculture experts from their headquarters or from their demonstration farms throughout their holdings. The C.P.R. recognizes that there is a big feeling in Western Canada against the buying up of large tracts of land by Companies to be rented out for the sake of making big profits to an absentee bunch of landlords. This

ent is most marvelous. In a country where politicians only a short time ago, stated there would be not enough business to pay for the grease on the axles, there is to-day the throbbing of a mighty empire with the distant hum of approaching millions.

The building up of Canada will for ever have associated with it, the expansion of the Canadian Pacific Railway. This big National enterprise has gone into the wilderness and made its brambles give place to wheat, its loneliness to joyful homes, and its rivers to float a nation's commerce.



MEERSCHAUM

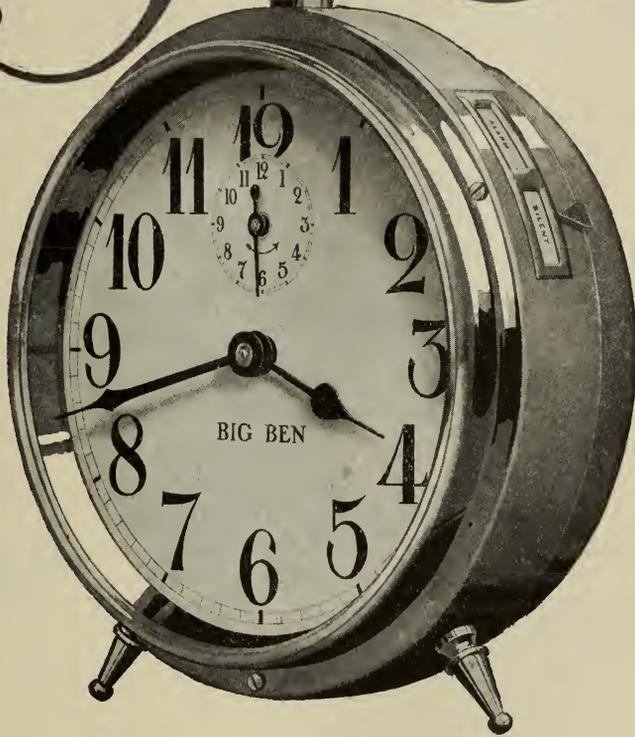
an absolutely pure
cut plug

Smoking Tobacco

A blend of choicest Virginia and Carolina tobaccos—the natural leaf, unflavored—sweet, cool, mellow, satisfying.

ASK YOUR DEALER

Big Ben



For that sleep jinx

For that thing that tries to chloroform you in the morning— for that other fellow that pulls the covers up around your neck—claims five minutes won't matter, then double-crosses you and lets you sleep twenty:

For a pleasant on-time awakening, a velvet-like shaving, a Sunday-like breakfast— for a good hard day's work that will put feathers in any old bed— for a little spare time around

the evenings and a little play with the little ones:

Big Ben—seven inches tall, two good clocks in one. A rattling good alarm to wake up with, a rattling good time-piece to tell time all day by.

Great easy winding keys that almost wind themselves—big, bold hands and figures you can see at a glance in the dim morning light—big, jolly, deep toned voice that greets you on the dot on your drowsiest mornings.

Rings just as you want, five straight minutes or every other half minute for all of ten minutes.—Sold by 6,000 Canadian dealers gladly.—His price is \$3.00 anywhere. Made in La Salle, Illinois by Westclox. If you can't find him at your dealer's, a money order sent to them will bring him to you attractively boxed and duty charges paid.

From Profits or Losses?—continued

This is inconsistency.

The truth is, printed advertising is a vital force in *every* business, just as is the "silent" advertising of a product's quality or a merchant's service.

When you employ the Printed Word as your solicitor in the Court of Public Opinion, you build good will for your product or service—a good will that results in profit.

If unrepresented at this Court, your interests are as unprotected as though, when involved in a law suit, you failed to "enter an appearance" and the case is decided against you—by default.

So it is clear you pay for advertising—one way or the other. If you pay it wages, it will work *for* you.

If you refuse its offers of service, it will work *against* you, in just the measure of its employment by your Competitors.

So you *are* paying for advertising either out of your profits or by your losses.

Advice regarding your advertising problems is available through any good advertising agency, or the Secretary of the Canadian Press Association, Room 503 Lumsden Building. Enquiry involves no obligation on your part — so write, if interested.

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Get this off your mind

Cut out the fret and stew about tongue-biting tobacco.

This applies to you, Mr. Pipe Smoker: also to pipe-shy men who have had their tongues broiled—and to men who never did dare smoke a pipe because every puff was agony. Also to cigarette smokers whose taste has been worn out by *chaff* brands! Now, gentlemen, for a short piece of change buy the 2-oz. tin of Prince Albert. Jam it into your pipe or roll up a cigarette. Light up! Smoke it hard, smoke it fast—red hot! Be as mean to it as you can. *Just try to make it burn your tongue!* It won't!

PRINCE ALBERT

*the inter-national
joy smoke*

hits a high spot in pipe tobacco. There's some class to it. And stick a pin right here. *No other tobacco can be like Prince Albert, because it is produced by a patented process which we absolutely control!*

Try the imitations! We want you to know yourself just how much Prince Albert tobacco has on 'em all. Get the question settled—get it right off your mind!

G. T. I. Q.—which means "Go to it Quick!" Enjoy a pipe as you never enjoyed one before. Why, men, do you realize what it means to smoke four or five pipes full at a sitting and never even have your tongue tingle?

Most Canadian dealers now sell Prince Albert in the tidy 2-oz. red tin. If your dealer does not handle it, tell him to order from his jobber. Leading Canadian jobbers are now supplied.

R. J. REYNOLDS TOBACCO COMPANY
Winston-Salem, N. C., U. S. A.



More Milk! You can feed your cows straw without any grain, and they will live. But they won't produce as much milk. You can stuff them with corn, bran, ensilage, or hay. But they won't produce half as much milk as though fed on "BARTLETT'S FARMER BRAND" FANCY CHOICE COTTON SEED MEAL (41 to 48% Protein)

Why? Because they are deficient in PROTEIN, the milk-producing element. They contain a small amount, but not enough. "Farmer Brand" supplies Protein at less cost than any other feed.

Two pounds of "Farmer Brand" per day, added to your home-grown feed, will cut down the feed bill and produce nearly twice the amount of milk.

We have agents and shipping stations all over Canada. Prices \$32.00 Ton Lots F.O.B. Sarnia or Woodstock; \$33.00 Toronto; \$34.00 Peterboro. Send cash or draft with order.

ASK FOR FREE BOOK, "FEED FACTS"—IT'S VALUABLE.

THE BARTLETT CO., 400 Hammond Building, DETROIT, MICHIGAN

The Housewife has Reason to be Proud

of her baking when REINDEER FLOUR is used, and the family look forward to mother's baking day. REINDEER FLOUR is a SPECIAL BREAD FLOUR which makes a sweet, wholesome bread, that is simply irresistible.

TRY IT ON BAKING DAY.

REINDEER FLOUR CAN BE OBTAINED AT MOST OF THE BEST GROCERY STORES.

PETERBOROUGH CEREAL COMPANY

SIMCOE ST.

PETERBOROUGH



TRADE MARK

Take a Scoopful of Each—Side by Side

Take "St. Lawrence" Granulated in one scoop—and any other sugar in the other.

Look at "St. Lawrence" Sugar—its perfect crystals—its pure, white sparkle—its even grain. Test it point by point, and you will see that



Absolutely Best



Absolutely Pure

is one of the choicest sugars ever refined—with a standard of purity that few sugars can boast. Try it in your home,

Analysis shows "St. Lawrence Granulated" to be "99 99/100 to 100% Pure Cane Sugar with no impurities whatever."

"Most every dealer sells St. Lawrence Sugar."

THE ST. LAWRENCE SUGAR REFINERIES, LIMITED, MONTREAL

65A

The hardest
things clean
easiest with

Old Dutch Cleanser



Many uses &
full directions
on large
sifter can 10¢



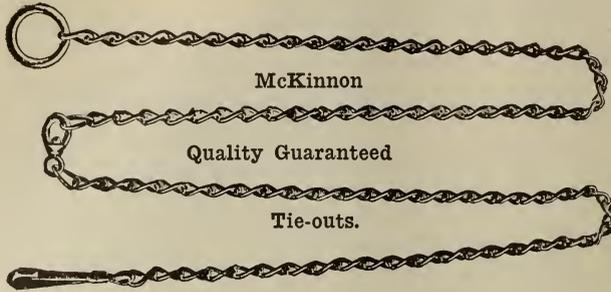
Made in Canada.

Electric-Welded Chain

Made in Canada.



Before Welding.



McKinnon

Quality Guaranteed

Tie-outs.



After Welding.

Electrically welded from highest quality drawn steel wire; actually tested before being shipped; lighter yet stronger by 25% than any other make of equal size; McKinnon Electric-welded Tie-outs represent the highest value possible to secure.

Guaranteed to you by the makers.

25% Stronger

Insist on McKinnon Guaranteed Chain

Handled by all Leading Jobbers

Made by

McKinnon Chain Co.
St. Catharines, Ont.

Sold by all Leading Dealers



RATS ARE DOOMED

MODERN CHEMISTRY TRIUMPHS

"Extermino" has made unnecessary the existence of rats—the most effective agency in the world for the destruction of rats—No odor, no scheduled poison. Prominent agriculturists and health officers testify regarding its excellent results. Equally effective for mice, moles, cockroaches, etc.

SAMPLE TIN 25 CENTS MAILED FREE. INVENTORS AND SOLE MANUFACTURERS:

The "EXTERMINO" CHEMICAL CO., Montreal, New P.O. Box 774

3 FEEDS FOR ONE CENT

This is all it costs you to keep your stock in prime condition with the world's most famous animal tonic—

International Stock Food

Every cent invested in this wonderful health-giver, brings back dollars in strong, healthy horses, cows, sheep and hogs.

Careful tests show that 4 quarts of oats and the regular feed of INTERNATIONAL STOCK FOOD will keep horses in better condition than FIVE quarts of oats without it.

INTERNATIONAL STOCK FOOD will make your cows gain 1 to 4 quarts of milk per day. Nothing like INTERNATIONAL STOCK FOOD to fatten animals for market. Your hogs need it. Ask your dealer for it.

We have a copy of our \$3,000 Stock Book for you. Send us your name and address, and tell us the number of head of stock you own.

INTERNATIONAL STOCK FOOD CO. Limited
TORONTO ONTARIO

TESTIMONIAL
Hayfield Sta., Man., Nov. 15, 1911.
International Stock Food Co. Ltd.
Toronto, Ont.

Dear Sirs,—I want to say that your Stock Food is all right. I have had more good from its use than any other kind I ever used, and do not care to start winter feeding without it. Please ship as soon as you can to Carroll. Yours very truly (signed) JOHN ROGERS

63

MENTION THIS PAPER.

The Secret of Big Crops Is In the Seed



CARTER'S TESTED SEEDS

Are the Big Crop Seeds. They possess the power of giving wonderful results, due to long pedigree, careful selection, purity of strain and thorough resting. They produce as good results in Canada as anywhere else in the world, and every gardener and farmer in this country should try them for himself. The most successful growers of

**GROWN FROM
CARTERS
TESTED SEEDS**

Flowers, Vegetables, Roots and Lawn Grass

throughout the British Empire are users of CARTER'S TESTED SEEDS. That

these seeds are perfectly adapted to Canadian Soils and Climate is proven by practical tests all over the Dominion for many years past. Order your spring needs from Toronto office.

ILLUSTRATED CATALOGUE FREE

Address Dept., 1

PATTERSON, WYLDE & CO.

Sole Agents for Canada
133 King Street East
TORONTO

1913
CATALOG
SENT
FREE

WRITE TO-DAY



St. Agnes Church, Megantic, P.Q.

DURABLE — FIRE-PROOF HANDSOME

It is very doubtful if any other roofing will give perfect protection for as long as will



for, made of Portland Cement and Asbestos, these shingles are practically indestructible.

No other roofing can better guard your building against fire, for Asbestoslate Cement Shingles are, in their very nature, absolutely fire-proof.

Scarcely any other roofing is so handsome as Asbestoslate Cement Shingles.

WRITE FOR BOOKLET F

ASBESTOS MFG. CO., LIMITED

Address E. T. Bank Building, - Montreal
Factory at Lachine, Que. (near Montreal)

THE HERBERT RED RASPBERRY

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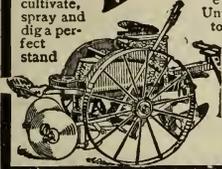
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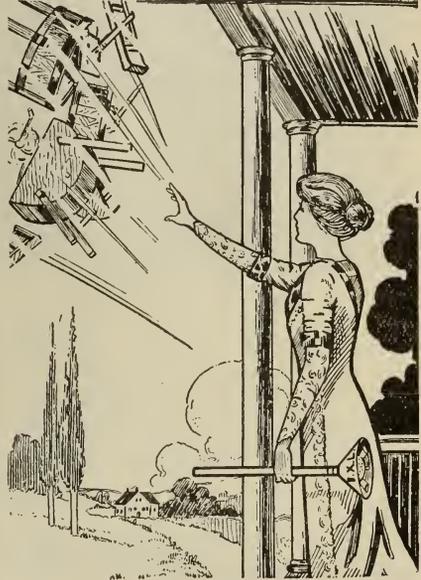
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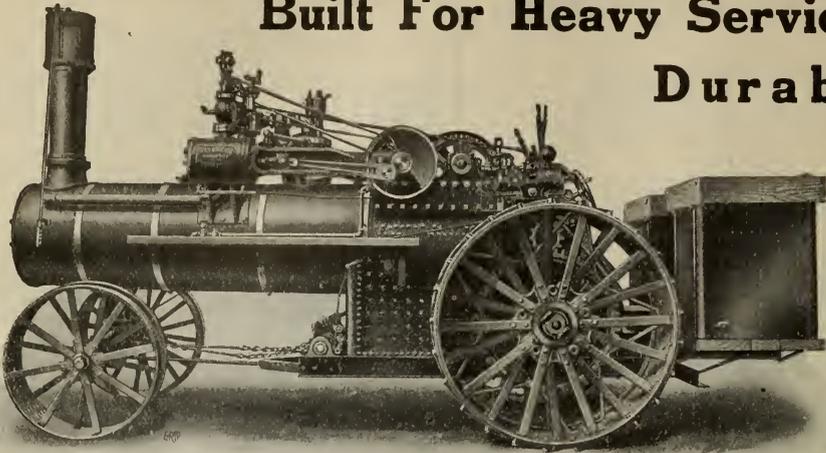
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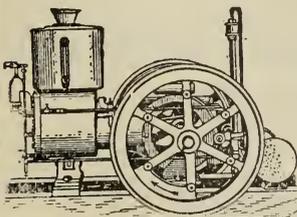
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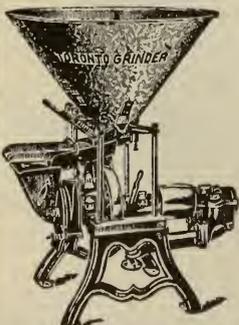
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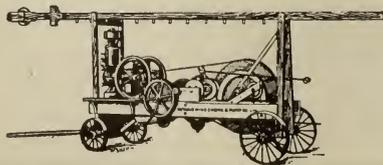
Ontario Wind Engine & Pump Co., Ltd.
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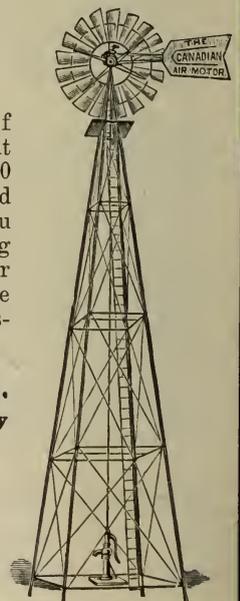
"Stickney" or "Chapman" Engines.



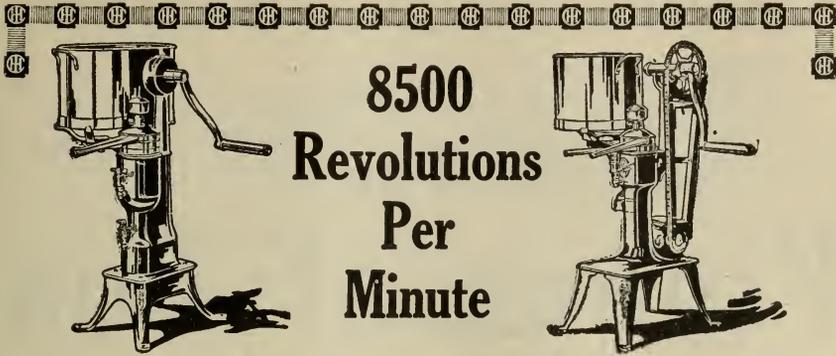
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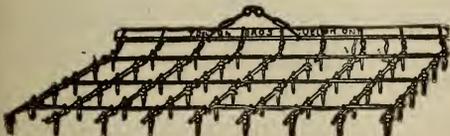
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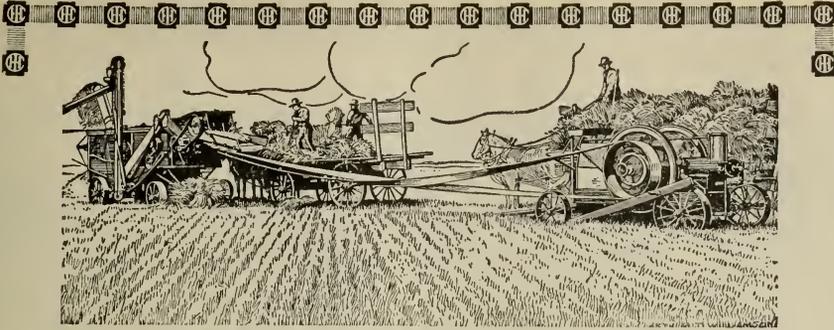
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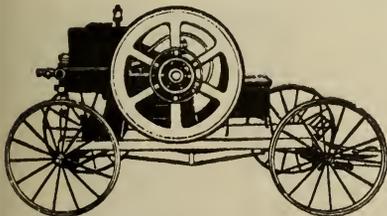
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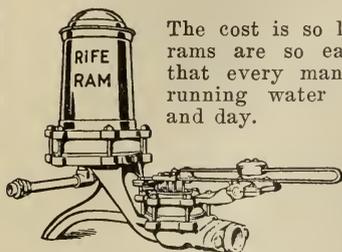
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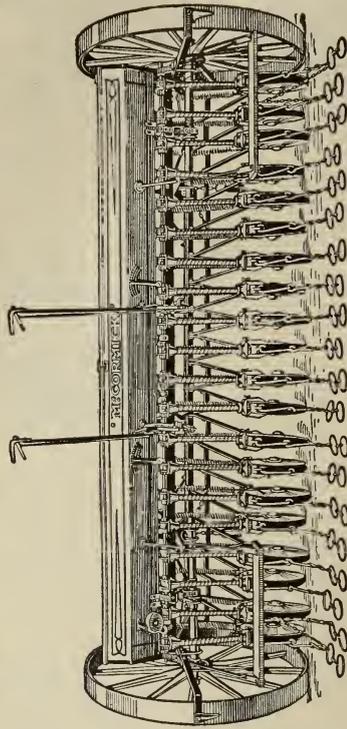
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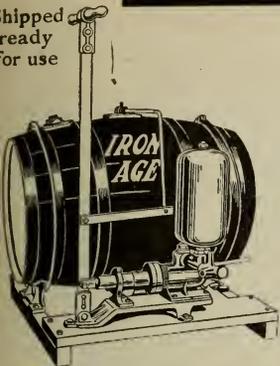
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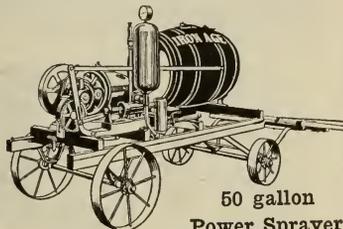
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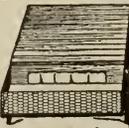


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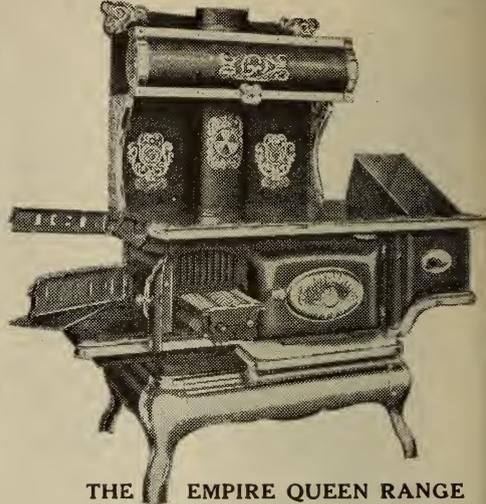


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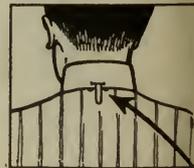
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The Smart Collar for Particular Men



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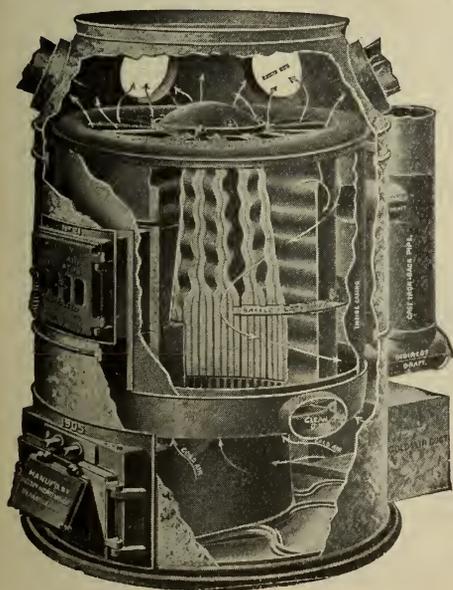
The smart collar for particular men is the S. D. Collar. In every respect like a linen collar without the disadvantages of linen. No laundering required. S. D. Collars can be cleaned in a minute with a wet sponge. No odor of rubber, no breaking or cracking like rubber collars. They are perfect **water-proof** linen collars. Just the collar you want. Made in linen, gloss or dull finish.
Sizes 12-18. Price 25c each.

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IF YOUR DEALER CANNOT SUPPLY YOU WRITE US, AND WE WILL SEND LATEST STYLE BOOK. ENCLOSE MONEY FOR COLLARS REQUIRED. STATE SIZES REQUIRED.

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One owner of a Kelsey says: "In place of another heater I installed last season a Kelsey. The season's saving in fuel was astonishing and, at the same rate, I calculate to pay for its cost in less than five years." The

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—brings in fresh, pure air, full of oxygen, from the outside, warms it and distributes it in your rooms at a saving of 20 to 30% in coal bills. The very fact that the Kelsey ventilates as well as heats makes your coal bills less because much less coal is required to heat a ventilated house? Did you know that?

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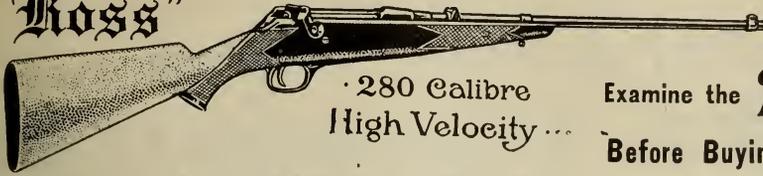
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Experts in Europe and America admit that the Ross .280 High Velocity is the best of modern arms. It combines the flattest trajectory, greatest accuracy, and most smashing power, with the strongest and fastest of actions. At Bisley, in 1911, it absolutely distanced all competitors, winning almost every first place in the long range match rifle competitions, and first and second in the aggregates, while the regular Military Ross won the King's, the Prince of Wales', the Territorial aggregate, etc., etc., etc. Ask your dealer to show you the "Ross" High Velocity, which, despite its quality, sells at only \$70.00. Let him get one on to show you if he has not one on hand—you should not miss a chance of owning one. THE ROSS ILLUSTRATED CATALOGUE GIVES FULL PARTICULARS—WE SEND IT ON APPLICATION. Other styles sell at from \$25.00 up. Every one guaranteed.

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The Acme of Comfort

is assured to every wearer of

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COLLARS AND CUFFS

They have the same dull finish, texture and fit as the best linen collar, and won't wilt or crack. "Challenge" Collars can be cleaned with a rub from a wet cloth. Always smart, always dressy. If your dealer doesn't sell "Challenge" Brand send us 25c. for collar or 50c. for pair of cuffs. You'll be delighted.

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Contain all the latest improvements and
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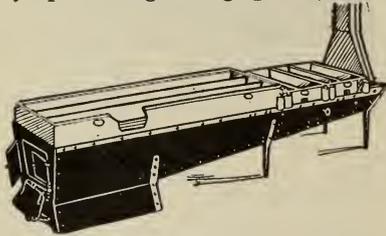
TORONTO, CANADA

MAPLE SYRUP MAKERS ENTER THIS CONTEST \$500 in Gold Cash Prizes

Why not be a **WINNER** in this Contest.

We are giving away \$500 in Gold Cash Prizes to users of the "Champion" Evaporator. Full particulars will be mailed on receipt of inquiry.

The Competition will take place during the last two weeks of April, and the samples of syrup and sugar received will be placed on exhibit in the show windows of the "Montreal Star." Every purchaser and user of the Grimm "Champion" Evaporator may take part in this contest. Now is the time to properly equip yourself to make high-grade syrup and sugar—high-priced, and therefore profitable. Do it now before the sap runs.



State the number of trees you will tap, and we will give you price on a suitably sized outfit. Address all enquiries: Prize Contest,

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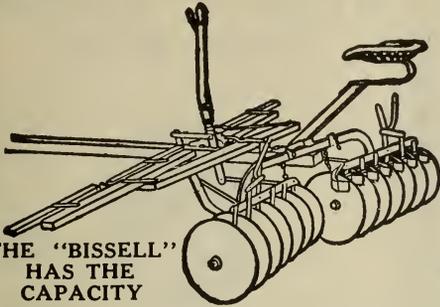
Fattens and Increases the productive power of your poultry.

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Beware of Imitations Sold on the Merits of Minard's Liniment



THE "BISEL" HAS THE CAPACITY

Because of its capacity, time after time the "Bissell" Disk Harrow has done double the work in field competition against all competitors, under the same conditions.

The special shape of the "Bissell" plates cause them to enter the ground naturally and turn the soil easily. Steel scraper blades meet the Disk Plates chisel fashion, and keep the plates clean of trash by movable clod irons—the only Harrow that has this feature.

Anti-friction balls (40) are used in the bearings, on every "Bissell" Disk.

The seat is placed back on the Harrow, so that the weight of the driver when riding balances over the frame and removes neck weight. The hitch is well back, making light draught.

Search the Continent over and you will not find a Harrow with such cutting capacity, easy draught and correct proportions as the "Bissell." A POSTCARD TO DEPT. Y WILL BRING YOU A FREE CATALOGUE.

T. E. BISEL CO., LTD., Elora, Ont.

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has no terrors for me - It's simply my delight

Even Professional Dyers can't equal my Perfect Results That's because I use



It's the Cleanest, Simplest, and Best Home Dye, one can buy--Why you don't even have to know what Kind of cloth your Goods are made of. So mistakes are Impossible.

Send for Free Color Card, Story Booklet, and Booklet giving results of Dyeing over other colors. The Johnson-Richardson Co., Limited, Montreal.



THE PLAYTIME WASHER

Means a saving of money to the farmer and his wife. The time and energy spent over the wash tub could be employed more profitably in some other way. It might mean more and better butter, poultry, fruit and eggs. The "Playtime" is adapted to either hand or power operation. In either case it eliminates the HARD work of washing and saves wear and tear on the clothes.

Ask your dealer to show you the "Playtime" or send to us for full information 109

Cumner-Dowse Ltd., Hamilton, Ont.

== \$300.00 ==
IN TWO MONTHS

THIS is what one of the circulation representatives of Farmer's Magazine earned in commissions during the months of August and September last year.

You can secure a position in your town similar to the one which enabled this man to earn the \$300 by writing to

The MacLean Publishing Co.
141-149 University Avenue
Toronto

Why Men Keep Young

Nothing is more common than to call this the young man's era. And so it is—but not altogether in the sense in which the expression is generally understood. Couple with this expression the one to the effect that a man is as young as he feels and the situation is put in a clearer light.

Lord Strathcona was by no means a young man when he finally attained wealth and prominence, and yet what a notable example to every Canadian is "Canada's Grand Old Man"! The achievements of this great man who is such a potent factor in the advancement of Canada among the nations is traceable not alone to his opportunities, but to his virility, energy and unceasing effort.

Only health and strength could permit a man so well along in years to do so much.

In sharp contrast to the modern-day active man—active up to well advanced years is the man of yesterday. A generation ago men and women were looked upon as "getting along" at an age which we to-day consider as the very prime of life. Because they felt old they were old—old before their time and counted out in the race.

To-day the modern man is slow to acknowledge age and slower to show it. This, too, although his pace is greater, the tax on his brain and body heavier than was dreamed of years ago, and the amount to be accomplished beyond measure.

Health is the one indispensable adjunct to this twentieth-century activity. To feel young a man must be well. All the organs of the body must perform their natural functions regularly. The stomach must extract strength from meals too often eaten hastily. The liver must secrete its essential fluid and work in unison with the rest of the digestive system.

There is no time for ill health, no room for the unhealthy. To the well man age is a far-off thing. To the broken down dyspeptic age is knocking at the door, no matter how young in years he may be.

Clearly the care of the digestive system should be the first consideration with us all. For upon this care rests the whole structure of accomplishment. To keep the liver and stomach normal is to prevent a train of disorders so devastating to health and spirits that life, when afflicted with them, seems not worth the living and full efficiency in business is impossible.

To Parmelee's Vegetable Pills, perhaps as to no other remedy, will be given credit by thousands of grateful users for their age-repelling good health.

Parmelee's act gently upon the liver, stomach and bowels. They are carefully compounded of mandrake, dandelion and other ingredients equally efficacious for trouble in the digestive tract, and their use is never attended by those distressing results usually associated with unreliable preparations.

At this season of the year Parmelee's Vegetable Pills will be found particularly valuable. As spring comes on, the general bodily condition is usually at its lowest ebb. The bowels get sluggish and lazy, and, as a consequence, food is retained in them, ferments and causes much sickness and misery. Various disease germs attack at this time, and to throw them off a healthy condition of the digestive system is a first essential.

No one should let a spring go by without a box of Parmelee's Vegetable Pills at hand for frequent use. As a preventative, as well as a remedy, their value has been proven for many years.

They can be had from dealers everywhere in 25-cent boxes within the reach of everybody. Prepared only by Northrop & Lyman Co., Limited, Toronto.

Wilson's Invalids' Port Wine

(a la Quina du Perou)



is a rational preparation that has the hearty support of the modern physician. It is a superb brain and nerve tonic that successfully combats the depressing effects of sudden and unseasonal changes in temperature which exhaust the most robust unaided organism. Doctors know!

Prepared from the rich juice of selected Oporto grapes and extract of the Peruvian Cinchona Bark—absolutely no alcohol or other harmful ingredients are added.

Ask YOUR Doctor

BIG BOTTLE

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FARM DAIRYING by Laura Rose \$1.50. Covers the Dairy Business most thoroughly from the farmer's standpoint Miss Rose is a recognized authority, having taught for years at the Ontario Agricultural College and lectured very extensively. Indispensable to the practical dairyman the teacher and the student.

THE PRACTICAL COUNTRY GENTLEMAN by E. K. Parkinerson, \$1.25. Deals exhaustively and authoritatively with the planning of buildings, storing of water, care of stock, crop rotation, etc. Just the book for the farmer who cannot attend college, or for the city man taking up farming who lacks experience.

Either of these excellent books will be sent to any reader on receipt of two new yearly paid in advance subscriptions to FARMER'S MAGAZINE.

The MacLean Publishing Co.,
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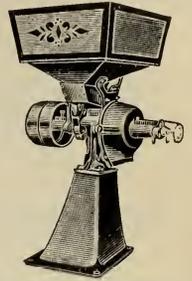
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COMFORT SOAP

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Save the wrappers.
The oftener you use it,
the more you like it.

POSITIVELY THE LARGEST SALE IN CANADA

IT WAS MADE FOR YOU

The **KantKrack** Coated Linen Collars are linen collars waterproofed so that they may be sponged off at any time. They fit easily and comfortably on the neck. Note the flexible lips at the front, which relieve all strain, and the patented slit at the back, which prevents pressure of the button on the neck. The reinforced buttonholes never wear out.

Ask your dealer for **KANTKRACK** Collars, or send us 25c. with style and size.

One grade only and that the best.
THE PARSONS & PARSONS
CANADIAN COMPANY
Hamilton, Ont.



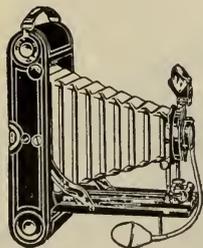
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Full fashion Cashmere Middy Blouse, a new creation that will meet with exceptional favor. Gives a charming grace to the figure and has a neat appearance enhancing the charm of the wearer.

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We are anxious to appoint a capable man in your district to represent Farmer's Magazine.

In all parts of the country hundreds of energetic men are representing our publication supplementing limited home incomes, or, in other cases, making this work their only vocation. Some of them earn more than managers of leading concerns.

The work is enjoyable, keeping you out of doors and in touch with the activities of the community. You will not be a canvasser, for as a representative of Farmer's Magazine you will be received as one of the successful, capable men of the community. Consequently your success is assured from the very start.

On each order, new or renewal, you will receive a definite commission, so that your salary will be gauged entirely by your efforts. No previous business experience is necessary. We coach you and co-operate with you at all times. If you will write us to-day, we will gladly tell you further about the work.

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Farmer's Magazine,

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whether you will make a satisfactory job of your painting. The many opportunities for renovating your home during the "STAY IN" months of winter should be seized upon when you are assured of the most satisfactory results by using

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Montreal Established 1858 Vancouver
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The greatest thing for keeping tab of your stock is the METAL EAR LABEL, with owner's name and address and any numbers required. Metal Ear Labels for Sheep and Cattle are inexpensive, practical, simple.

Send name and address and get free sample and circular.

Send a postcard to-day, sure.

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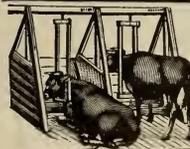
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BOOK ON

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and Almanac for 1913 has 224 pages with many colored plates of fowls is true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about INCUBATORS, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. ONLY 15c. C. C. SHOEMAKER, Box 1126, Freeport, Ill.

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Henry H. Albertson, Burlington, N. J., writes: "My new Stanchions add greatly to the comfort of my cows."

WHY TORTURE
yours with rigid stanchions? Send for specifications of inexpensive yet sanitary cow stable to

WALLACE B. CRUMB, F3, Forestville, Conn., U.S.A.
Canadian orders filled from Canadian factory.
All correspondence should be addressed to the home office.
State in inquiry if you prefer booklet in French or English.

City and Real Estate Opportunities



YOUNG MAN

Before deciding to leave Ontario consider well the opportunities which she offers on every hand. Consider the various types of soils capable of producing all the products between No. 1 hard spring wheat and the tender fruits such as peaches, apricots, and also early vegetables and melons. Consider the equable climate possessed by the more southerly portions, while that of the northerly parts is to be preferred before many others in Canada. Consider carefully the transportation facilities offered for the marketing of these various products both by rail and by water; remember that Ontario is centrally situated in North America, practically surrounded by the greatest inland waterways of the world. Remember that suburban lines are being projected into various districts and every day surveys are being made for other new ones. Also remember that competition between various transportation companies is keener here than in some other places. The greatest home market in Canada is in Ontario; the great manufacturing centres are either in the Province or just on the border. New Ontario offers one of the best growing home markets on the continent. Ontario offers the greatest inducements to the upbuilding of large centres—cheap power.

She is a complete and self-sustaining Province. The southerly parts can supply the

tender products in abundance; the more northerly districts can furnish the grains, meats, dairy products, horses and the rough foddors. Internal trade is bound to be the outcome—the north will be bound to the south by an interdependence impossible in other parts of our Dominion. The south will also demand the lumber of the north, besides claiming a share in the development of the rich mineral lands.

Ontario's soils cannot be outclassed elsewhere in America. They are easily cultivated, easily fertilized, easily drained and easily obtained. Production per acre is higher in Ontario than in other parts. Intensive agriculture is the dominant note. Increased returns are the result. Thousands of acres are still undeveloped—these offer greater opportunities than do the majority of the far away lands.

Agricultural organization is finding its greatest development in Ontario. Remember this means larger prices and a better reputation. Don't leave when the boom is on, when the people are just awakening. Remember you count one in the development of these untold resources.

Remember that wealth is only part—Ontario offers the greatest social advantages; telephones, rural mail, good roads and public libraries. Remember Ontario's possibilities—do not procrastinate but consider and

For further information write

DIRECTOR OF COLONIZATION

PARLIAMENT BUILDINGS

HON. JAS. S. DUFF, Minister of Agriculture

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THE FINANCIAL POST OF CANADA
TORONTO

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"No superior in point of literary merit and in judicious editing." Emphatically the magazine for the thinker and the worker."

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MACLEAN'S MAGAZINE

143-149 University Ave.

Toronto

Intelligent Industry Insures Independence

By FRANKLIN O. KING

The Man Who tries to Kill an Elephant with a Pop-Gun is on a Par with the Person who would plan to Pulverize a Peanut with a Pile-Driver. Both may be Terribly in Earnest, but Neither has a Correct Idea of the Eternal Fitness of Things. Fools Spoil their Tools when they try to Reap Results without Rules. Like the Horse on the Treadmill—They Are Walking Fast, but not Getting Anywhere, in Particular. The Untrained Man, with only Brute-Strength to commend Him, is up against a Hard Proposition in this Day and Age of Specialized Supremacy.

In other Words, the Man who Knows How to do one or two things well, has most everybody else "on the hummer," when it comes to Competition. Emerson said:—"The Man who Makes the best Mousetrap will find a Beaten Path to his Door, even though he Live in the Midst of a Forest." I am not so Sure about the quotation, but it simply bristles with Truth, like Quills on the Ridge-pole of a Fretful Porcupine. The Man with the Hoe would make more "dough" if he used Modern Methods to Reap and to Sow.

The Business Man makes the Best Farmer, because he Applies Business Principles to Buying and Selling, as well as to Growing his Crops. His Creed is Simply to make a Two-Dollar Bill grow where only a "One-Spot" grew before, and with all Due Respect to the Yokel who is Merely Multiplying Blades of Grass, I think the Business Farmer has the Bulge.

The Mechanic, the School-teacher, the Doctor, the Lawyer and the Day-laborer are all "Business Men," when it comes Right Down to it—"Even as You and I." Most of Them have had Training in the "School of Hard Knocks," and Know How to Listen when "Money Talks." It only requires the Application of Brains in Order to make the Earth most Anywhere Bloom with Life.

Ben Franklin said, "He who by the Plow would Thrive, Himself must either Hold or Drive." The Man who is Really in Earnest will absolutely make good on a Small Farm, if he will only Put his Shoulder to the Wheel, and say "Put." Work Wins—It Always Wins, but Industry and Intelligence are Irresistible and Invincible.

Since Investigating Conditions in the Rain Belt of Gulf Coast Texas, I have no Fear of Old Age or Poverty, because I Know I can Take Up a Few Acres down there and be Absolutely Independent. I am Firmly Convinced that with Average Intelligence and Average Industry, any Man who is now Working His Head off in the North to make a Bare Living, where they Snatch one Crop between Snow-Storms and Blizzards, can soon Lay Up a Nice Bank Account in the Winter Garden of America. Come to the Land of Least Resistance, where You can Grow Three Big Money-Making Crops a Year on the Same Soil and Without a Dollar's Worth of Expense for Irrigation or Fertilization.

I believe you could save Twenty-Five Cents a Day if You Tried. I know you would Try if you Realized that our Growers of Figs, Strawberries and Early Vegetables clear a net profit of \$300 to \$500 an Acre. Men have Realized more than \$1,000 an Acre growing Oranges in our Country. Remember that our Early Vegetables get to Northern Markets in Mid-Winter and Early Spring, when they command Top Prices.

One German Truck Grower on adjoining lands this spring realized nearly \$500 from three-fourths of an acre of Strawberries. You could do as well if you only Tried, and on a Ten-Acre Tract Find Financial Freedom.

The Biggest Price paid for a car of watermelons on the Houston Market this year was \$140. The car was shipped by the Danbury Fruit and Truck Growers' Association.

We are situated within convenient shipping distance of Three Good Railroads and in addition to this have the inestimable Advantages of Water Transportation through the Splendid Harbors of Galveston and Velasco, so that our Freight Rates are Cut Practically in Half. The Climate is Extremely Healthful and Superior to that of California or Florida—Winter or Summer—owing to the Constant Gulf Breeze.

Our Contract Embodies Life and Accident Insurance, and should You Die or become totally disabled, Your family, or anyone else You name, will get the Farm without the Payment of Another Penny. If you should be Dissatisfied, we will Absolutely Refund your Money, as per the Terms of our Guarantee.

Write for our Free Book, which contains nearly 100 Photographs of Growing Crops, etc. Fill Out the Blank Space below with your Name and Address, plainly written, and mail it to the Texas-Gulf Realty Company, 1389 Peoples' Gas Bldg., Chicago, Ill. Read it Carefully, then use your own Good Judgment.

Please send me your book, "Independence With Ten Acres."



Two Texas Gulf Coast Products.

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Farming, Stock Raising and Fruit Growing are highly profitable in Virginia and North Carolina

Because of mild winters, long growing seasons, good markets and high prices for farm produce. \$15.00 an acre and up buys improved farms and old plantations near railroad stations on the Norfolk & Western Railway

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CANADA

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On account of the ill-health of the proprietor, Mr. C. W. McCalla, St. Catharines, the farm is to be sold. It is the best kept farm in the Niagara District, and lies two miles from St. Catharines. It consists of fifty acres of sandy loam, practically all in bearing fruit, consisting of:—

825 Apple	125 Cherry
250 Plum	555 Pear
32 Quince	1055 Peach

also 625 grape vines, 700 black and red currant and gooseberry bushes, and one and two-fifth acres of asparagus. Has fine 8-room frame house, five-roomed cottage, 1 large fruit house with cellar, two large implement houses, barn and fruit pickers' shelter. Everything in first-class condition.

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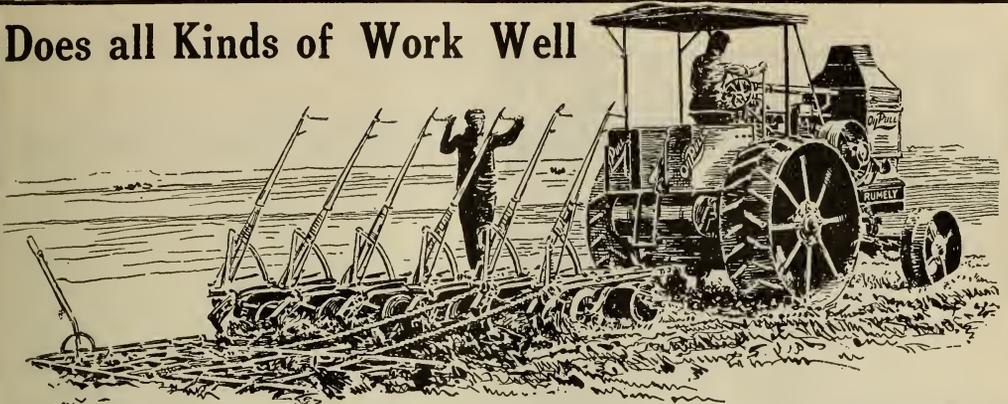


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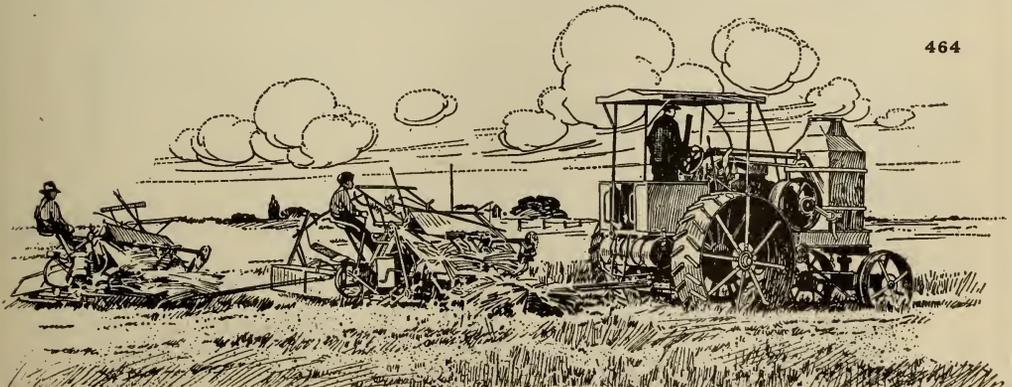
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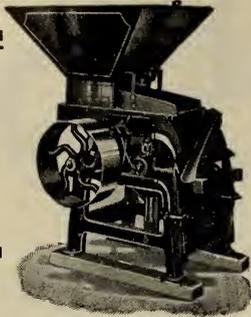
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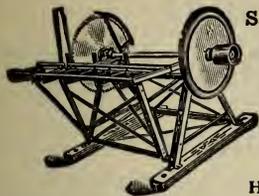
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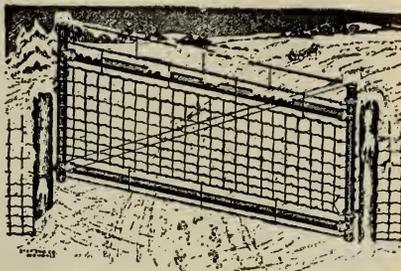
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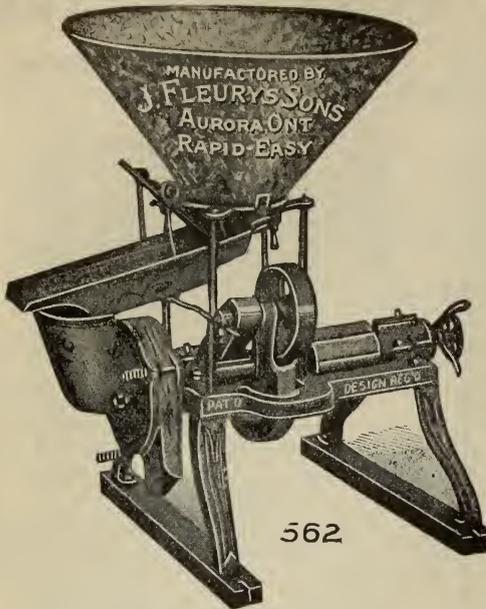
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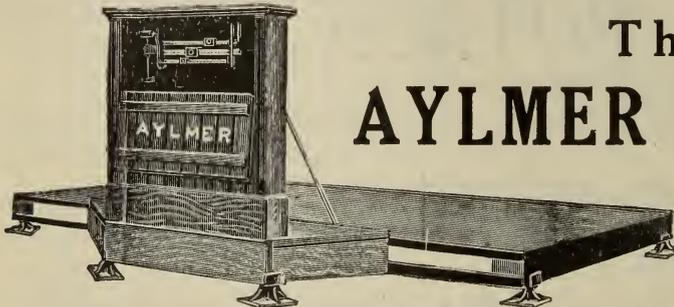
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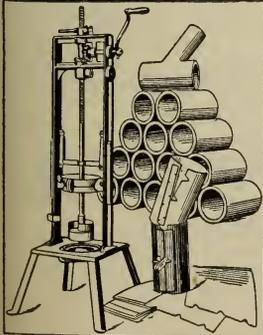
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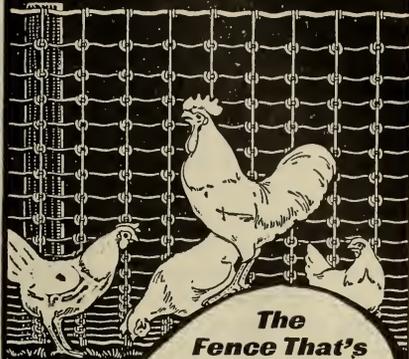
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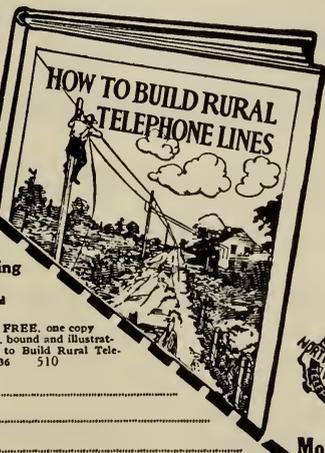
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The Northern Electric is the instrument on the wall of nine out of every ten telephone users in Canada.

Let Us Explain To You How To Interest Your Neighbors

THE first step in getting started, is to enthruse your neighbors and get them all in with you. When you have read "How to Build Rural Telephone Lines," you will have a mass of information at your finger ends that will enable you to place positive, definite facts before your friends, to enthruse them with the idea of a self-maintaining, community-owned system and to make everybody around you anxious to help. All it needs to get a telephone system started, is for some one progressive man to start the ball rolling. With the information that we will place at your command, you can get everything organized in short order.

There Will Be A Telephone System In Your Locality — Get Posted

SOONER or later someone is going to start a telephone system in your community, just as systems are being started every day in farming centres throughout the Dominion. When this subject comes up, you will want the full particulars before you. Now is the time for you to post yourself. The book tells you everything and, if you are interested, we will be glad to send it to you free. Do you care to sign the coupon and send it to us now?

THE Northern Electric AND MANUFACTURING CO. LIMITED

Manufacturer and supplier of all apparatus and equipment used in the construction, operation and maintenance of Telephone, Fire Alarm and Electric Railway Plants. Address our nearest house

236

Montreal Toronto Winnipeg Regina Calgary Vancouver

Progressive Jones says:

“Get Bumper Crops From Worn-Out Soil”

SCORES, yes hundreds, of my farmer friends have got bumper crops from soils they thought were worn out. They now swear by

Harab FERTILIZERS

One of them, A. Robinson of Rosemount, tells me that he used Harab Fertilizers on potatoes and turnips without any manure on the land, which was very old and poor. He got a bumper crop and is more than satisfied. Another man, D. J. Ferguson, got a grand crop from very light land that had been hard run by tenants.

Friend, if you have some poor land, some worn-out soil, don't be discouraged. Harab Fertilizers will make that soil yield bumper crops, and make you happy, or my name isn't Progressive Jones.

Harab Fertilizers are natural Fertilizers, manufactured from blood, bone, trimmings, etc., of animals slaughtered at the immense Harris Abattoirs. To these are added Potash and just enough quick-acting Nitrates and Superphosphates to start the plant off with a vigorous growth.

The cost of using Harab Fertilizers is small. The results are big. Write to The Harris Abattoir Co. for their booklet. It gives the information you want to know.

Yours for bumper crops

Progressive Jones

The Harris Abattoir Co., Limited, Toronto





First Class, Rapid Telephone Service Means Prosperity —Ask “Kellogg Users”

Our No. 2696 Rural Line Wall Set (picture above) is unsurpassed for operating on heavily loaded lines—Latest design.

We thoroughly believe we have the best farm instrument on the market. It contains:

Generator—5 Bar, giant in strength. 33 per cent. more powerful than any other on market.

Transmitter—Standard Local and Long Distance, one million in operation.

Receiver—Unbreakable-steel, reinforced shell and cap if specified.

Ringer—standard 1600, rings clearly and distinctly on heavily loaded lines.

Hookswitch—firmly attached to backboard. Best adjustment of controlling spring, No trouble with friction of parts.

Cabinet—Quartered sawed oak or walnut, finely finished, dovetail joints.

Contacts—pure platinum in hookswitch and generator.

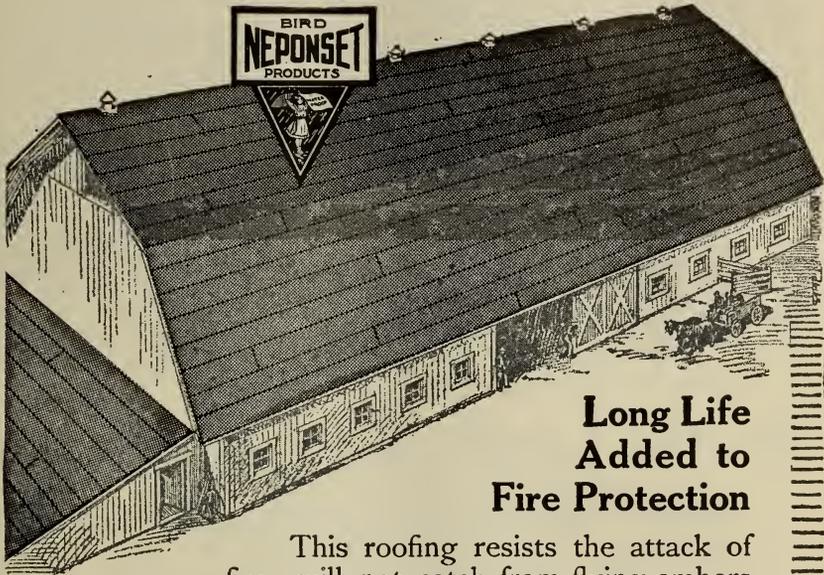
You exchange managers who are intent upon giving your patrons the best service should know about our equipment. WRITE US TO-DAY.

Kellogg Switchboard and Supply Co.

Main Office and Factory CHICAGO

Canadian Branches

Regina, Sask.—R. S. Deering. - - - Winnipeg—Houston & Co.



Long Life Added to Fire Protection

This roofing resists the attack of fire—will not catch from flying embers or sparks. Saved a barn when a house burned within 30 feet. It wears as long as old-fashioned wooden shingles. The name is

NEPONSET PAROID ROOFING

No Metal to Attract Lightning or to Rust Out

You make a direct saving when you buy it. Every seam is cemented water tight—no leaks, nor repair bills, nor damaged crops. Poor stock and poor machinery are bad investments. Roofing of short life is also a bad investment.

When you buy NEPONSET Paroid you are backed by the good judgment of Governments, of leading Railways, as well as that of good farmers. Backed by years of hardest wear in every climate. Write today for dealer's name and new

Blue Print Barn Plans—FREE

Plans of barns that appeal to the pride of every Canadian farmer.

NEPONSET Roofings are made in Canada.

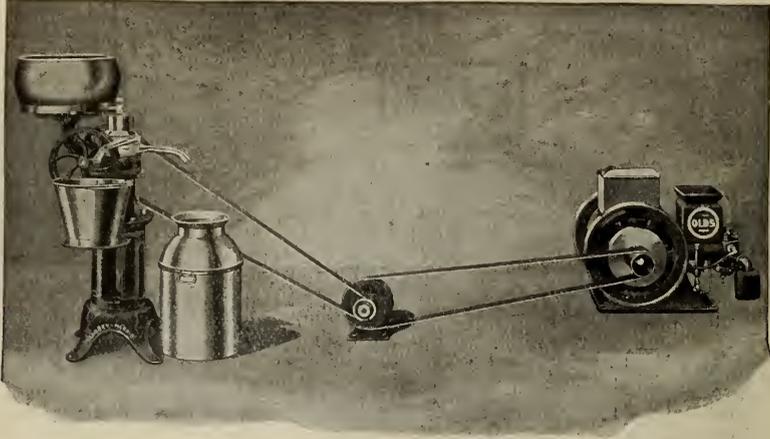
F. W. BIRD & SON, 69a Heintzman Building, Hamilton, Ont.

(Established 1795)

Winnipeg

St. John N. B.

Vancouver, B. C.



For the Large Dairy or the Small, the Massey-Harris Separator is the One to Buy.

If you require a large Separator to be driven by power, we have just what you want—and, if you keep only a few cows and want a small hand power machine, you will get the same satisfaction from a Massey-Harris of a smaller size.

Close Skimming, Ease of Operation and Convenience of Handling are strong points of this Separator.

SKIMS CLOSE

Because it has exceptionally large skimming surface, all of which is utilized, and because there are no conflicting currents of milk and cream — each has clearly defined channels.



EASY TO FILL

Because the supply can is waist-low.

EASY TO TURN

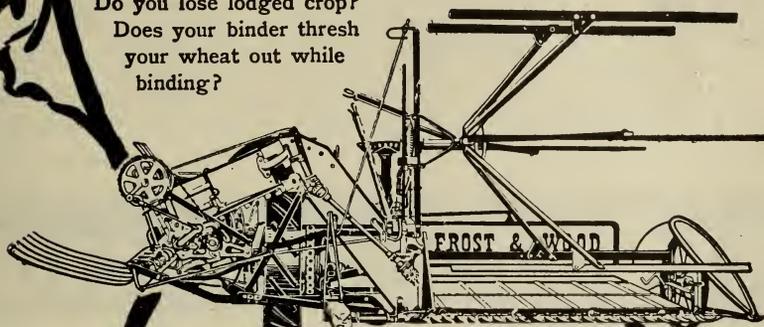
Because the milk is speeded at the centre of the Bowl, and because of the scientific design and mechanical construction.

EASY TO CLEAN

Because everything is easy to get at.

FROST & WOOD BINDERS GET ALL THE WHEAT

Do you lose lodged crop?
Does your binder thresh
your wheat out while
binding?



THE famous Frost & Wood is so perfect in balance that when down grain is encountered the table can be readily tilted and the reel thrown forward to pick up lodged crop. The operator does not have to strain or stretch to make the adjustments — every lever is convenient and easily adjusted.

No matter how tangled the straw, it is elevated smoothly and swiftly. This is because the canvasses automatically adjust themselves to heavy or light crop.

And on the deck the straw is sent to the packers steadily—no bunching or crowding, so ripe grain is not threshed out of the heads. From the standing crop to the sheaf, Frost & Wood Binders do not waste any grain.

THE FROST & WOOD COMPANY LIMITED
SMITHS FALLS
Montreal St. John, N. B.

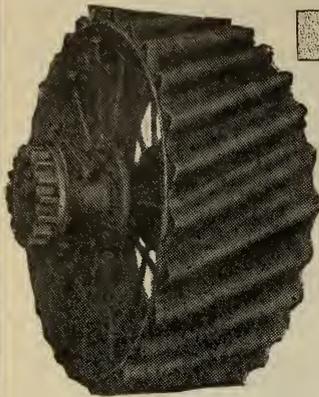
Sold in Western Canada and Western Ontario by the 100
COCKSHUTT PLOW CO. LIMITED
BRANTFORD WINNIPEG

GET OUR BOOK

SEND to-day for our "Binder" Book, and learn every detail of the Frost & Wood machine. The roller bearings mean speed and light draft. The eccentric sprocket means a tightly-bound sheaf without strain on machine or team. The perfect elevator design prevents threshing or choking. The steel framework is braced to withstand rough land.

This is as near an ideal binder as you can buy. It has 70 years of skill and knowledge behind it.

Get the book to-day.



Tire Rolled Flat, 192" Long.

Lugs Rolled Flat, 252" Long.

The illustration represents the tire and lugs of a Hart-Parr "60" drive wheel, rolled flat, like a ribbon, with the lugs placed end to end. In this form, the tire is 192 in. long and the lugs 252 in. long. The difference in favor of the lugs is 60 in., showing clearly that they have 31% greater surface contact.

BIG POWER FOR SPRING WORK

The size and quality of your 1913 harvest will depend largely on the start you give your crops this spring. The earlier the start, the better the crops.

So this season, if you have a lot of spring plowing and seeding to do, don't depend on horses. Don't start with the odds against you, and realize, too late, that your power supply is sadly over-taxed and inadequate. You need big, dependable power all year 'round, but you need it most in spring. You get it, too, if you own a

HART-PARR OIL TRACTOR

It furnishes you the combined power of 5 men and 15 to 30 horses. It will plow 25 to 30 acres a day, full plow depth. Work day and night and plow 50 to 60 acres daily. If it's sod to break or stubble to plow, with a Hart-Parr Oil Tractor you can jump right into your spring work as soon as the ground is fit to plow, and stay with it until every furrow is turned and the last seed safely in its bed. The tractor does each operation in quick succession, without delay. Perfect plowing and a seed bed, ideal for seed germination and growth, result. You finish weeks ahead of your neighbor who plows with horses. And this early start may mean the difference between profit and loss when your crops finally reach the elevator.

FIRST ON THE JOB IN SPRING.

Unlike tractors with smooth-tired drive wheels, fitted with wedge-shaped lugs, a Hart-Parr Tractor doesn't cut into the ground and dot it with a network of small holes, with hard packed soil between. The drive wheels are equipped with wonderful wave-formed lugs which afford 31 per cent. greater surface contact than any other form of lug. (See illustration No. 2.)

These lugs clean perfectly in soft ground and afford a bulldog grip without injuriously packing the soil. They do not chop up the ground, but roll over it. Harrows, drills, discs, etc., cut the lug marks at right angles and thoroughly stir up the soil, leaving it in fine condition. These lugs really enable a Hart-Parr Tractor to work on ground so soft that it would force other tractors to stand idle for many days; in fact, you can put this "Modern Farm Horse" to work as soon as spring opens up.

This is only one of the many features that make Hart-Parr Oil Tractors the best tractor value on the market.

FARMERS! INVESTIGATE THIS BEST OF ALL TRACTORS AND BEST OF ALL SERVICE.

We want to send our brand new catalogue and other literature to every Canadian farmer who ought to do tractor farming, but is still using horses. We want them to know why our tractors operate successfully on cheapest kerosene. We want them to learn of the advantages of our oil-cooled engine. We want to show how our expert service really serves; how our quick delivery of repairs protects against serious delays and loss.

Write to-day for your share of this literature.

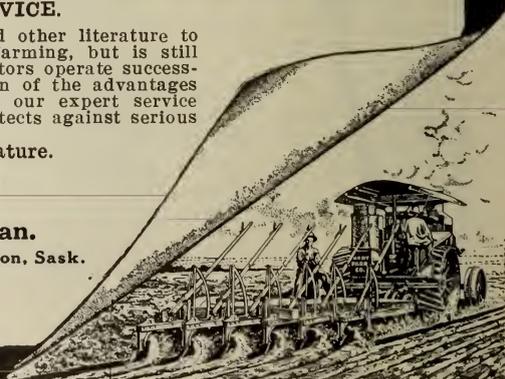
HART-PARR COMPANY

42 Main St., Portage la Prairie, Man.

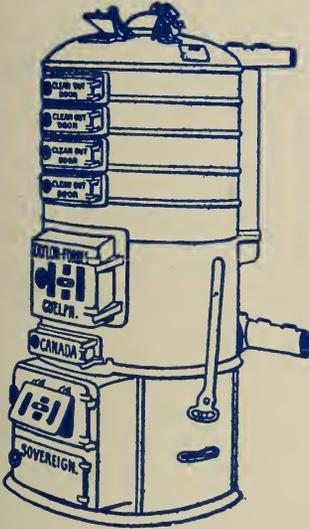
1626 8th Ave., Regina and 67 West 23rd St., Saskatoon, Sask.

THE CHAPIN CO. 

335 8th Ave. West, Calgary, Alberta



You would be comfortable with a "Sovereign"



If your home is not comfortably heated this wintry weather, take a note of it now and resolve to make an improvement in the Spring.

The modern method of heating is by the hot water system, and the "Sovereign" is the most efficient, economical and substantial of the several makes of boilers that time has proved to be the most reliable.

Consult us about your heating plans. Most of your time, during the winter season, is spent indoors, and as the heating of your houses affects the air you breathe, the matter of house heating is something that should receive very particular attention.

TAYLOR-FORBES COMPANY LIMITED

Makers of "Sovereign" Hot Water Boilers and Radiators

HEAD OFFICE AND FOUNDRIES:

GUELPH - CANADA

BRANCHES AND AGENTS IN ALL CITIES

Thousands
and Thousands
of Canadians



Know This
Trade Mark



DO YOU?



¶ The above Trade Mark represents an institution that has kept pace with the development of Canada and is itself peculiar to Canadians, who have for over sixty years been buying A.R.C. Brand Gloves, Mitts, Moccasins, and Sheepskin Coats.

¶ We are still adding to our already large factory, because we are making **new** friends each year and retaining the old. Our **old** friends have been getting sixty years' solid comfort and warmth from A.R.C. goods and our **new** friends have the benefit of our sixty years' experience.

¶ Our continued success is due to the fact that A.R.C. Goods give satisfaction, service and comfort—**value for value**. Made in Canada to suit Canadian conditions. We wish to introduce A.R.C. goods to our new Canadian friends that they, too, may enjoy the satisfaction and comfort of Clark's goods.

Look for the Trade Mark A.R.C. on gloves, mitts, moccasins, sheep lined, corduroy, duck and leather reversible coats, sheep lined driving sox, working and out shirts.

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TWENTY CENTS A COPY

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MACLEAN PUBLISHING COMPANY

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TORONTO

MONTREAL

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Fairy Soap

Pure-White
The oval Cake

☞ You cannot judge the quality of Fairy Soap by its price.

We put into it the best oils and fats obtainable, and the only thing we could add—if we were to sell it at 25 cents—would be high-priced perfumes, which would lend nothing to the quality or efficiency.

☞ Fairy is the only white, floating soap that is made in the oval shape, and this alone makes it far more desirable than the old-fashioned oblong bars.

☞ For the toilet and bath, there's no soap so good as Fairy.

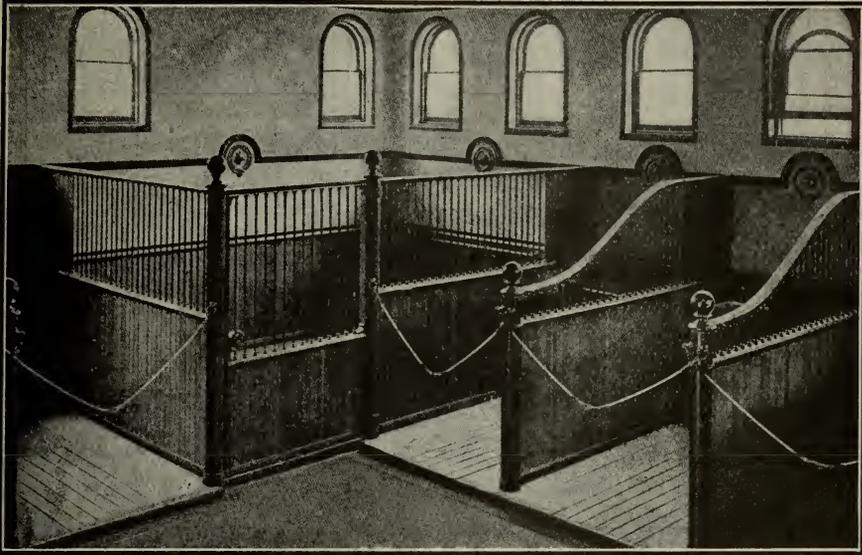
For
Toilet and
Bath

"Have You a
Little 'Fairy'
in Your Home?"

THE
N. K. FAIRBANK
COMPANY
LIMITED
MONTREAL



You Can Equip Your Horse Stable Like This at a Very Low Cost



The BT Iron Horse Stable Fittings will add greatly to the appearance and durability. If you use BT Iron Stall Partitions and Iron Stall Posts, you will have a stable that you may well be proud of, and the beauty of it is, your stable will look well, not alone when finished, but for years to come.

BT HORSE STABLE FITTINGS

THE BT IRON STALL GUARDS

are made of $\frac{1}{2}$ -inch iron rods secured in a heavy frame. They allow the sunlight to flood every corner of the stable, thus adding greatly to the brightness and appearance. They cannot be broken or in any way disfigured by the horses. Once in place they never need repairing.

BT IRON STALL POSTS

add greatly to the durability of the stable. No amount of battering will disfigure them.

We also make Steel Stalls and Stanchions

THE BT IRON STALL POSTS are grooved to receive the stall partitions, and so save much time in constructing the stable.

THE BT IRON FEED RACKS AND ADJUSTABLE MANGERS

allow the dust to escape from the hay. We make open and closed mangers in a variety of different designs. They can be adjusted for different widths of mangers.

WRITE FOR CATALOGUE.

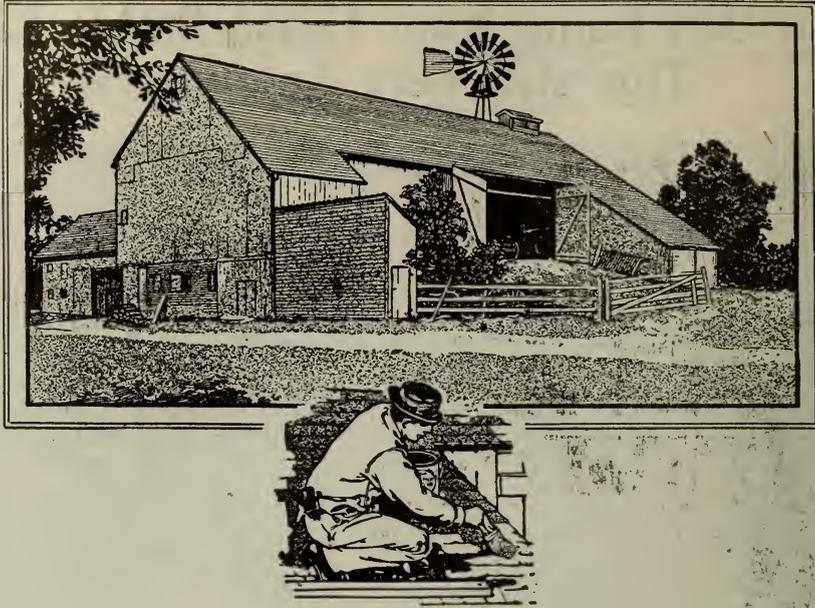
It will pay you well to get our catalogue and prices, and find how cheaply you can equip your stable with up-to-date Iron FITTINGS.

Feed and Litter Carriers, Waterbowls.

WRITE FOR OUR CATALOG "G," WHICH
DESCRIBES OUR DIFFERENT LINES

BEATTY BROS., Ltd., Fergus., Ont.

It is to your advantage to mention Farmer's Magazine.



The Time To Paint Is Now

Painting is important, not only because it makes your buildings look better and so raises their value, but more important because it protects them from the wear and tear of the weather. A few dollars spent in paint occasionally, saves many dollars spent in repairs or new buildings later on.

Look over this list and see what you need this spring to put your property in good shape.

SWP—Sherwin Williams Paint (Prepared) for buildings. You will find SWP on the homes of prosperous farmers, because they know it is the best paint value their money can buy.

S-W Wagon and Implement Paint for all kinds of farm machinery, tools and wagons.

S-W Buggy Paint gives a finish that protects your rigs from the wear and tear they are put to.

S-W Varnish Stain and S-W Family Paint for brightening up furniture and wood-work about the house.

THERE IS A SHERWIN-WILLIAMS AGENT IN YOUR TOWN



SHERWIN-WILLIAMS PAINTS & VARNISHES

THE SHERWIN-WILLIAMS Co. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

FARMER'S MAGAZINE

Vol. 5

Toronto March 1913

No. 5

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Edited by Frank Mackenzie Chapman

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Your Best Shopping Guide

SUPPOSE there were no advertisements—what a worrying task shopping would be! Think how you would miss the helpful information that now guides you to select the best goods, and to know the shops where they can be best obtained.

How difficult to make up your shopping list without first knowing something about the goods you need, or the store that sells them! Your shopping would be all experiment. You would pay out a lot of money during the slow process of learning by experience how to avoid disappointment and dissatisfaction.

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Have You Figured It Out?



that all successful people have one thing in common — industry — and those who would be successful to-day must be industrious, applying their spare moments to the acquisition of knowledge. Industrious in work, industrious in play, not too much of one or the other, but the proper proportion of each. Industry can be misapplied—scattered. Concentrate in your study; for business success take a course in a reliable school—THE KENNEDY SCHOOL can give you the required training which will help you to become successful Specialists in Bookkeeping and Stenography.

Write for our Prospectus, containing full detailed information, sent to you on receipt of a post card.

THE KENNEDY SCHOOL

570 Bloor Street West - - Toronto



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A course of forty lessons in the history, form, structure, and writing of the Short-Story, taught by J. Berg Eesenwein, Editor Lippincott's Magazine.

Over one hundred Home Study Courses under professors in Harvard, Brown, Cornell, and leading colleges. 250-page catalog free. Write to-day.

The Home Correspondence School
Dept. 253, Springfield, Mass.

Dr. Eesenwein

WANTED—SALESMEN AND SALESWOMEN

Hundreds of good positions now open paying from \$1,000.00 to \$5,000.00 a year. No former experience required to get one of them. We will teach you to be a high grade Traveling Salesman or Saleswoman by mail in eight weeks and assist you to secure a good position where you can earn good wages while you are learning Practical Salesmanship. Write today for full particulars and testimonials from hundreds of men and women we have recently placed in good positions; also list of good positions open. Address Dept. S

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306 Kent Building Toronto, Ontario

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The Financial Post of Canada is the recognized authority on Canadian investments.

Each week it gives much exclusive information respecting Canadian companies; also reliable news on bond and stock issues, mining stocks and real estate conditions.

The INVESTORS' INFORMATION BUREAU is free to subscribers and answers by letter all inquiries about investments. Write for sample copy and special subscription offer.

THE FINANCIAL POST OF CANADA
TORONTO

MUSIC TAUGHT FREE

HOME INSTRUCTION

Special Offer to Our Readers

In order to advertise and introduce their home study music lessons in every locality, the International Institute of Music of New York will give free to our readers a complete course of instruction for either Piano, Organ, Violin, Mandolin, Guitar, Banjo, 'Cello, Brass Instruments or Sight Singing. In return they simply ask that you recommend their Institute to your friends after you learn to play.

You may not know one note from another; yet, by their wonderfully simple and thorough method, you can soon learn to play. If you are an advanced player you will receive special instruction.

The lessons are sent weekly. They are so simple and easy that they are recommended to any person or little child who can read English. Photographs and drawings make everything plain. Under the Institute's free tuition offer you will be asked to pay only a very small amount (averaging 14 cents a week) to cover postage and the necessary sheet music.

No one should overlook this wonderful offer. Tell your friends about it—show this article to them.

The International Institute has successfully taught others and can successfully teach you, even if you know absolutely nothing whatever about music. The lessons make everything clear.

Write to-day for the free booklet which explains everything. It will convince you and cost you nothing. Address your letter or postal card to International Institute of Music, 98 Fifth Ave., Dept. 498-B, New York, N.Y.

Your Best Shopping Guide—continued

Thanks to the high standard of present-day Advertising, no person needs to shop at random. The advertising columns of a magazine give you just the information you require to make your best selection of goods or store. Leisurely, in the comfort of your own home, you can plan and decide upon the purchases in view.

Magazine advertisements are the finger-posts on the road to right buying. They are quick and safe guides to the places and goods most worthy of your patronage.

Advice regarding your advertising problems is available through any recognized Canadian advertising agency, or through the Secretary of the Canadian Press Association, Room 503 Lumsden Bldg., Toronto. Enquiry involves no obligation on your part—so write, if interested.

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—Hon. Elihu Root, in the U.S. Senate, on the debate on the Panama Canal Tolls.

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WINNIPEG



In the home of the Clydesdale. A stable scene in Scotland.

FARMER'S MAGAZINE

Vol. 5

TORONTO MARCH, 1913

No. 5

THE BOY IN AGRICULTURE

Note:—Here is something new. The importance of the Boy in Agriculture has never been properly estimated in Canada. After the writer had been asked to handle this subject, a speaker at the Corn Show in Essex a few weeks ago, made a plea for fuller work among the farm boys. We believe that our agricultural departments will yet devote more of their educational work to the boys and girls. Mr. McGillicuddy is well known in many parts of Canada, on the lecture platform.—Editor.

By Thomas McGillicuddy

IN agriculture, the boy has arrived. He has been a long time coming. His way has been as tortuous as that of a wild grapevine, and at times his reluctant steps lagged distressingly.

To bring the boy into general agricultural work and study, all manner of efforts have been made. He has been bullied and bribed, cuffed and coaxed, pinched and patted, whipped and wheedled; yet scarcely a foot has he voluntarily gone forward until very recently.

He at one time was, figuratively speaking, held by the nose, while nauseous doses of a text-book of forbidding terminologies relating to agricultural chemistry, botany, and biology were forced down his unwilling throat, in order to give him a taste and enthusiasm for farming.

Yet, the boy has actually arrived in agriculture, open-eyed, open-hearted, and open-handed: open-eyed, for he is looking upon a farm life in a new light; open-minded, because he is now regarding agricultural instruction with a sympathetic understanding; open-handed,

for he is ready, even eager, to seize hold of the hoe handle and wield it as proudly as if it were a field marshal's baton. And a field marshal, indeed, the boy on the farm is destined to be, albeit not one who will leave the land bare and barren, and men maimed or missing, after a desolating war; but, rather, as one who, mastering the secrets of the soil and its cultivation, and of plant and animal life, gathers his forces together in a campaign whose victory means smiling and productive fields, and a vigorous, prosperous, and contented humanity.

Early methods of imparting a knowledge of agriculture to the boy were more or less a failure because they largely lacked that most important of all things in teaching known as "the point of contact." There was too much book and not enough boy in the mind of the pedagogues. They were unwisely endeavoring to interest him in agriculture at the very beginning by forcing him to memorize a lot of learned and (to him) rather meaningless

phrases. It was the old story of putting the cart before the horse. Or, to change the figure, the system resembled a Chinese dinner, which starts with the desert and ends with the soup; but, unfortunately, in this case many of the nuts were too hard for the boy to crack. The new methods of interesting the boy in farming, as will be described further on, make him so enthusiastic in his work that he will hunt for definitions and analysis on his own account. And when the boy reaches for the book of his own accord he is very likely to read it to profit.

Ex-Governor W. D. Hoard, of Wisconsin, personally known to hundreds of Canadian dairymen, in an introduction to "First Principles of Agriculture," said the following very plain words in relation to rural pedagogy as practised up to very recent years:

"Our teachers, even in the country district schools, unwittingly educate the farm boy and girl away from the farm. If they seek to inspire in them ambition in the pursuit of knowledge it is for the purpose, as they say, of encouraging them to 'rise in the world.' We must take hold of the children of our farmers in their home schools, and there show them that the problems of the farm are great enough to enlist all the brain power they can summon."

Mr. Avern Pardoe, Legislative Librarian, at Toronto, recently discussing the question of how to keep the boy on the farm, half cynically remarked to the writer that the cure for the trouble could be prescribed in four words: "Close the High Schools." This rather radical opinion he endeavored to justify by claiming that these secondary schools were educating—or, rather half-educating—too many farm lads from the land, and these should not be maintained by the State.

But this somewhat Carlylian dictum, good, perhaps, as touching former conditions, loses its force considerably in the light of recent advances in agricultural pedagogy. For it happens that the Ontario Department of Education and Agriculture have at last awakened not only to the needs, but also to the capacity, of the boy in agriculture, and these important branches of govern-



Jerry Moore, Champion Boy Corn Grower of the United States. He raised 220 bushels on one acre in 1910. He was recognized by President Taft.

ment are now co-operating in a well-planned system calculated to interest and develop the farm boy in his life work.

For several years past Professor S. B. McCreedy, Director of Elementary Agricultural Education for the Province, has been training public school teachers in agriculture at the Summer School (and for fuller terms) at Macdonald Institute, Guelph. This work of agricultural college extension for rural school teachers has not been in vain, for his well-known enthusiasm has been contagious. But as well as training school teachers, he has had many books on agriculture placed in public school libraries, has greatly encouraged Nature Study Classes and Home and School Gardens, and has also helped many rural schools to make collections of seeds, flowers, plants, grains, weeds, etc. He has taught many formerly mere bookish teachers how to do things pertaining to agriculture, and shown to others the how and the why.

Professor McCreedy, in briefly contributing to this article shows that his heart is in the right place as regards the boy in agriculture when he writes:

"The aim of our work is to bring about the teaching of agriculture in the 5,000 rural schools of Ontario. This is a square deal for the country boys and girls! This to enable them to live happier and more useful lives! This to bring a higher regard for education and to influence the status of the country teacher and the country school!

And by agriculture we do not mean a new subject but a new direction, a new method, a new spirit, a new school!"

Boys, like sheep, are gregarious; they will go in flocks. In the language of the street, the boy, whether he dwells in the city or in the country, is an innate gangster. Call the gang a "club" and it gives an air to the affair, although the latter word has not always had an attractive meaning to the lad. For be it known that the father and the teacher of the boy were too often apt to wield against him the club punitive, and love for agriculture as found in either the field or the text-book cannot literally be pounded into a genuine boy. But there is also the club with its social

allurements and its human magnetic power; and for that reason it is better to offer to the boy the club collective than the club corrective.

But the boy has another powerful instinct which fits in just here.

"Johnny," asked the Sunday School teacher, "would you like to go to heaven?"

"What's doing there?" was the eager reply.

There's the thing in a nutshell. Your real boy wants to be where they are doing things; and in order to encourage him to do things, and to do them in company with "some of the other fellows," the various agricultural boys' clubs and short courses—the new agricultural instruction for the boy whether he attends day school or not—are right at hand for him. And the farm boy is responding splendidly to this opportunity, which appeals so powerfully to his two compelling instincts of fraternity and activity.

The first path to the field of a higher practical agricultural endeavor on the part of the boy in this country was blazed by Dr. J. W. Robertson, first president of Macdonald College, Que., one of the leading figures in Canadian



Archie Hare and his pony. He rides two miles to school in Aylmer, Ont.



The top picture:— A jolly lad among his potatoes and corn.
 Middle picture:— Two egg-circle lads.
 Bottom picture:— Isn't this a jolly fellow with a hoe.

agriculture. The story is briefly told by Mr. T. G. Raynor, an expert in the Seeds Division of the Department of Agriculture, Ottawa, in the following reply to a request from the writer for an opinion as to how the boy was responding to the work of his branch:

"A good deal has been done, and much more can be done, to interest the boy in the farm along the lines suggested. For instance in 1900, Dr. James W. Robertson, Chairman of the Conservation Commission, started the Macdonald-Robertson Seed Competition, in which boys and girls of eighteen years and under were allowed to compete all over the Dominion. Some 800 started, and about 400 finished out the three years. They were to select the best heads of wheat or oats they could find in the open field; at first enough to sow a quarter acre plot; second year they selected from that quarter of an acre plot, and the third year also. The results were an increase in yield per acre of 10 bushels of wheat in the three years, and about 20 bushels of oats. The outcome of this competition has been the organization of the Canadian Seed Growers' Association, which is growing in numbers and in usefulness each year.

"Through the generous gift of R. B. Whyte, of Ottawa, there was organized and carried out a very successful Potato Growers' Competition for farm boys during last summer. The boys were sixteen years and under. They carried on a very successful competition and twenty-four of them showed their exhibits at the Richmond Fair. It was a revelation to the people in itself, and a great interest was aroused in many parts of the country because of it. It is to be continued next year again. Colonel Whyte gave \$100 for medals and prizes, and duplicated it again this year.

"A number of the District Representatives in agriculture also have been doing good work in the public schools by encouraging the children to grow some kind of farm or garden crops and showing their products at a school or fall fair. It has created a great deal of interest on the part of children and their parents."

This reference to the county agricultural representatives brings us to the most modern and practical system of rural pedagogy. The schoolmaster is abroad in a new garb. You may call him a dominie in shirt-sleeves. He is a sort of junior McCready and Robertson rolled into one, putting in individual work. In fact, he is a composite

of a High School teacher, a Farmers' Club lecturer, a land surveyor and ditcher, and orchard pruner and sprayer, a live stock judge, a seeds expert, and a fraternity organizer. In the very best sense he is an agricultural Pooh-Bah. While he has a headquarters he is considerable of a tramp, although the most practical and helpful of peripatetics. He is the latest product of the Ontario Agricultural College, and his work was first suggested by Sir James Whitney, on the principle that "if the mountain will not come to Mahomet then Mahomet must go to the mountain," which reminds one that there is a mountain township in the Premier's own constituency. Sir James' idea was to utilize the High Schools for agricultural instruction for those who were at too great a distance from the Guelph College, or who could not afford to attend that institution for a regular term. At the same time these bright young college graduates spend a good part of their time among adult farmers, giving what counsel and practical aid their special training had fitted them to bestow.

There are thirty-one of these agricultural representatives spread over the counties of the Province. C. F. Bailey, Assistant Deputy Minister of Agriculture, is their particular mentor and guide. He is much pleased over the way in which these young men are reaching the youth on the farm, and is especially enthusiastic over the success of the School Fairs directed by them. The agricultural exhibits by the boy and his sister at these shows do credit to all concerned, and give a happy augury for the future of our county fairs. Under the immediate direction of Mr. Bailey and his representatives, young men under twenty-five years of age may enter county competitions for growing the best crop on one acre of land, both yield and cost of raising to be considered. As a reward, the winner in each county is given a two weeks' course in live stock and seed judging at the Ontario Agricultural College, all the expenses of travel, tuition, and board being met by the Department of Agriculture. Some of the



Prize cockerel at a school-fair in Ontario.

competitors are boys as young as sixteen, and they make their elders move in deciding who is to make that free outing to Guelph. In all this very practical work of the agricultural representatives Mr. Bailey has the heartiest encouragement and co-operation of the Minister and Deputy Minister of Agriculture.

In making the following special contribution to the subject in hand F. C. Hart, the energetic agent of the Agricultural Department in Waterloo county, voices the opinions of both the Department and his fellow representatives as to the bigness of the boy in the agricultural problem:

"I am of the opinion that in future the most valuable educational work in connection with agriculture will be done through the younger people rather than with the older farmers.

"We have been holding forth on better agriculture in Ontario for forty years or more, and we have not accomplished all that we hoped for, and perhaps it has been because of the fact that we have been preaching and to men. In the future we will have to "show" the boy. In the work



Stock Judging Contests in Essex County.
Photo by W. E. J. Edwards.

that has been done in Waterloo County so far, there is every indication that the boy will respond much more quickly than the man has done. He is making use of the Farmers' Club; he attends all the sessions of the Short Course; he delights in doing things in connection with the Rural School Fair; he wants to know why and how (the man simply wants to know what to do). It will be difficult to do too much for the boy and the girl in the open country.

“During our Short Course here in Galt last week, a dozen or more of the boys who are connected with neighboring Farmers' Clubs attended every session of the course and were as much interested as were the men, and this in spite of the fact that the course was organized more for the men than for the boys.”

In the Essex district W. E. J. Edwards is doing splendid work with the boy in Corn Clubs and other agricultural features. One of the striking things at the Corn Growers' Convention held at Chatham a year ago was a judging contest by young lads, which elicited the following warm and suggestive eulogium from the eminent American agriculturist and specialist in corn growing, Professor R. A. Moore, of Madison, Wis., who was present on invitation:

“As I look at the class of boys that you work I feel that you are starting in the right direction. We have been getting at the boys too late in life, and after they have been educated away from the farm. We glory in our wonderful system of High Schools, and yet we can hardly find a boy upon the farm who has had a complete course in the High School. We have been educating the boys away from the farms. Now we are establishing agricultural schools to educate the boys for the farms. When I saw these young boys studying corn with you, I thought it was well worth my while to come from the State of Wisconsin to see them cutting open a kernel and studying the germ and the different parts of the kernel. Some men think there is not very much to study about an ear of corn, but there are mysteries about it that require the most profound study.”

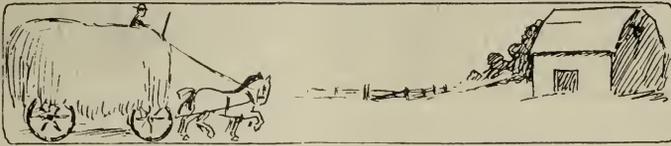
It will be observed that Professor Moore stands right beside Mr. Pardoe as to the past influence of the High Schools upon the boy on the farm.

But somebody may ask: “Is there not a danger of making too much of the boy on the farm?” Such a questioner cannot know very much about either the boy or the farm. Two years ago the United States Secretary of Agriculture brought two lads from South Caro-

lina to Washington, and presented them with diplomas, because Jerry Moore had raised 228 bushels of corn to an acre (the world's record for yield) at a cost of 43 cents a bushel, while his companion, Archie Odom, had raised 177 bushels to the acre at a cost of only 23 cents a bushel, thus showing a world's record for profit per acre of corn. Young Moore appeared before the Agricultural Committee of Congress and was listened to with careful attention by that body while he explained how he had raised his extraordinary crop.

And only a few weeks ago twenty-five boys, State prize-winners in the corn raising contests, were brought all the way to Washington and kept for a week, to receive diplomas and tell of their successful methods. Now note carefully the real reason why the United States Government is encouraging these boys. The 1912 corn crop of the twelve Southern States increased in total yield over that of 1909—since the Boys' Club entered the field by more than 200,000,000 bushels!

In agriculture, on both sides of the international line, the boy has arrived.



Push On or Go to the Bottom

Supposing a Boston youth should start to walk to California, but should stop and play along the way with every boy he met, and when questioned by one who knew him as to why he was loitering and wandering from the route, when his destination was the Pacific Coast, should reply: "Oh, I don't believe in hard work and the strenuous life. I believe we were made to enjoy ourselves. I shall see California all right, but I'm not going to kill myself in trying to get there on schedule time! I'll take it easy and have all the fun I can on the way." This boy goes along the line of least resistance. He plays and he lies by the wayside, wanders here and there out of his course, until his resources are exhausted and his strength gone, and California seems farther away than when he started.

Every youth who reads this will say that is a ridiculous, hypothetical case; yet many people are doing practically the same thing. They don't prepare themselves for anything definite in life; they jog along in a go-as-you-please

fashion, and then wonder why other people succeed and they don't.

The failure of a great many people is due to the fact that they do not appreciate the value of things which assist in attaining success. They think that success is merely a question of waiting for the big opportunity of their lives, and seizing it when it comes with little regard for preparation or training for it. They do not realize that every hour of every day in their lives is either moving them towards that which is worth while or away from it; that there must be a constant and perpetual pushing towards a definite goal or they never will get anywhere.

A successful career is like a great boulder which a man pushes up a hill, and which is as large as one can move. It is a steep up-grade all through life, and when you take your shoulder from the stone, it begins to go back, and if you let go altogether, it goes to the bottom. One must keep pushing or roll down hill.

DR. ORISON SWETT MARDEN.

WHEN THE BREEDERS GATHER

By Onlooker

THE first week in February was Breeders' week. The annual meetings of the livestock association of Canada, and of many Provincial Associations, were held then. Toronto and Montreal were the two places of meeting, with the big majority in the former city.

Horsemen, cattlemen, sheepmen and hogmen deliberated for a few hours in their annual parliament. Many of these gatherings were merely matters of routine. The appointment of Fair Judges, delegates to exhibitions, election of officers and the payment of fees occupied the major portion of their short sessions.

Others were real centres of discussion. Besides enthusing their members with new zeal in the building up of their particular breeds, they instituted matters of policy that will mean much for the country as well as for the livestock men.

The strongest societies of all breed societies, are the Clydesdale Association, the Holstein Breeders', the Shorthorn Breeders' and the Ayrshire Breeders'. Each of these has a large membership and a fat treasury. Yet many smaller organizations were as full of genuine enthusiasm and dealt with as far-reaching questions. The Jersey Breeders, the Berkshire Breeders, the Yorkshire Breeders and the Sheep Breeders were much alive.

To touch on the outstanding features of this Breeders' week one must note a few of their resolutions, that remain in our memories.

In the Clydesdale meeting, the motion of Wm. Smith M.P., of South Ontario, for the establishment of a national livestock show in Canada, has received much attention.

It is felt that there should be some central exhibition which the breeders could look upon as peculiarly their own. The Royal and the Highland in the Old Country and the International at Chicago are the models. Freight on exhibits would have to be paid. What do the people think of it? Farmer's Magazine wants to hear from you.

The Shorthorn men did what a few years ago, even the seconder of their resolution, would have regarded as rank heresy. W. A. Dryden, son of the late Hon. Jno. Dryden, moved, and Robt. Miller seconded, a motion to introduce a record of performance into their breed affairs. It is felt that the milking Shorthorn has come to stay. Farmer's Magazine is peculiarly gratified with this proposal, for it has been our proposal for some time. The West were almost unanimous in this. Peter White, K.C., the retiring President, sees his recommendations of last year, bearing fruit. The good work is only now begun.

Hon. Martin Burrell, Canada's Minister of Agriculture, (and by the way, he is making good, for he knows what he wants, and better still, draws good men to his aid) ran foul to some general beliefs, when he made the statement that Bovine Tuberculosis was communicable to humanity. He said that 20 per cent. of the cases of children's infection were directly traceable to cattle. He held to his ground, quoting German, American and English authorities. He also justified the action of the Federal Government in placing an embargo on purebred cattle entering British Columbia. Such cattle must pass the tuberculin test.

The Jersey Breeders are a jaunty lot of men. They love their Channel

Island cow. They proposed that cities should get richer milk, by a general regulation that milk should contain at least $3\frac{1}{2}$ per cent. butter fat. The Jersey cow often gives 6 per cent. milk. Some heifers with big milk yields and phenomenal butter yields are reported in this year's Record of Performance for the breed. There were also made some strong statements against the Guelph Winter Fair tests. "Place us on a fair fighting basis," said they, "and remove undue influence at the College, and let us fight it out on a cost of production basis, and we will give any cow in the world a race for the first place."

The Holstein men had a splendid banquet, and enjoy a nice surplus.

They do not have their business done by the National Live Stock Records. They are now fighting reciprocity of regulations with the American association. Although they refused last year to appoint a \$2,500 secretary in Prof. Dean, this year they made a young man secretary with a salary of \$2,800. The black and white cow is adding to her admirers yearly.

Shires, Percherons, Ponies, Hackneys, Thoroughbreds, hogs and sheep were orderly throughout. Each breeder believed in his hobby. Interlocking of directorates occurred in some cases. Some meetings clashed with others, but on the whole the outcome was satisfactory.



J. Lockie Wilson, in the Ontario Department of Agriculture, is doing good work in crop competitions. The field crops are being made more interesting to the average farmer.

PERCY HODGETTS: APOSTLE OF FRUIT

By W. A. Craick

A FEW years ago on the occasion of the Hon. James Duff's annual Christmas treat to the senior members of his department, a count of heads showed that no fewer than five officials had been born in the county which the Minister himself had honored with his nativity. Since then, owing to changes and desertions the little group of Simcoeites, like the nigger boys in the nursery rhyme, has dwindled down to two, of whom one is Percy Hodgetts, director of the fruit branch, and the other is H. A. Macdonnell, director of colonization.

By what strange concatenation of events P. W. Hodgetts ever took up the profession of boosting fruit growing as his life work, is known only to the gods. It was and is a calling entirely at variance with the family traditions of the Hodgetts. One may count up at least seven members of the family who are or have been connected with the banking business. His father is manager of a bank in St. Catharines; a brother manages a bank in Omemee; another brother is accountant in the head office of a bank in Hamilton; while two uncles and two cousins make up the respectable total of an obviously banking family.

But life in St. Catharines at a time when more and more attention was being paid to fruit-growing possibilities of the Niagara district was calculated to inspire dreams of wealth to be made out of the cultivation of the luscious peach and the juicy grape. Young Hodgetts, picking peaches in his father's back yard, conceived the notion that cultivation of a fruit farm was to be preferred to existence in a stuffy bank, however much social dignity might flow from the latter connection. He cut adrift from the family traditions and went to Guelph. That was in 1894, in the seventeenth year of his age.

When Percy Hodgetts entered the institution, the old O.A.C. was in a period of transition. Specialization was the order of the day, and a new regulation was in force requiring a student on completion of the regular course to continue as a specialist in some department of agricultural science before obtaining his degree. The St. Catharines youth, when it came time for him to decide on his specialty, naturally selected horticulture, and when he graduated in 1897 was the first specialist in this subject to pass the examinations.

He did not leave the O.A.C. at once. College days had somewhat altered his outlook on life and the determination to own and run a fruit farm had been modified by experience. He was content to advance by easy stages, and when he was offered a fellowship in the biological department under Professor Harrison, now dean of agriculture at Macdonald College, he accepted the position with alacrity. Following this post-graduate year at Guelph, he spent a season working on a fruit farm near St. Catharines—not his own as yet—and then went on an exploration trip to Alberta and British Columbia. It was a sorry time out around Edmonton when he arrived at that outpost of civilization, and instead of buying half a dozen sections which he might have had for a song, he turned his back on the golden West and hied him back home. The opportunity to make a fortune was his, had he only known it, but he missed it.



Mr. Percy Hodgetts in his office in the new wing of the Parliament Bldgs., Toronto, Ont.

Three years of somewhat ignominious employment followed in the shops of an electric supply house—the dream of the fruit ranch all evaporated, but the talents of the young horticultural specialist had not been forgotten. Professor Hutt over in Guelph remembered him and one day invited him to join him as assistant in his department. From this post to a useful position in the Department of Agriculture in Toronto was but a step. Dr. Creelman, then in charge of half a dozen departmental activities at the legislative buildings, secured him as inspector of fumigation appliances and nursery stock and, when the Doctor went to Guelph in 1904 and the work of the department was divided up, the fruit work fell to the lot of Mr. Hodgetts. Later, under the regime of the Hon. Nelson Monteith, he received his present designation as director of the fruit branch.

Mr. Hodgetts is still far on the sunny side of forty, and is young in spirits and appearance. A picture of him would disclose a man of slight build, rather thin face and bright expression. He is a familiar figure at farmers' conventions, especially if his pet subject of fruit is down on the programme for attention, and is in constant requisition for banquets, fruit shows and meetings of fruit growers' associations. He is on the road almost as much as a commercial traveler, and rarely a week flits by but that he must pack his grip and journey east, west, north or south to attend to the various duties of his office.

The duties aforesaid have become numerous and onerous, and a further subdivision is becoming more and more necessary. In fact, two new offices have been created under Mr. Hodgetts to take care of special developments—that of provincial entomologist and provincial apiarist, and there is little doubt that more specialization will be needed in the future.

What does Percy Hodgetts do? In the first place, he works day and night to help the fruit growers of Ontario improve their product and then sell it. This result is being achieved in devious ways and by innumerable devices. At the beginning of it all there is the work at the experimental stations. Officially, Mr. Hodgetts is secretary of the advisory board (of which President Creelman is chairman), which looks after fruit station work. When he took hold there were fourteen of these stations in operation; there are now only two, not including the fine experimental fruit farm at Vineland, on which the Government has spent in the neighborhood of \$125,000. The closing down of the stations has not been due to any desire to save expense, but simply because they have served their purpose and in future all necessary work will be done at Vineland.

Next, there is the work in connection with the supervision of nurseries, a task which is growing more important as new regulations are being put in force both in Ontario and elsewhere requiring a rigid examination of all stock. The exports of nursery goods by Ontario are considerable and the necessity of having every tree certificated demands most careful inspection. This is where more assistance has been needed, leading to the appointment of Mr. L. Caesar, lecturer in economic entomology at Guelph, as provincial entomologist with charge of the entire work of inspection both of nurseries and orchards. Incidental to this is the special investigation of new varieties of insect pests, which calls for the help of the expert.

Then again, Mr. Hodgetts has had a busy time organizing the demonstration orchard work, which has had an important bearing on the industry in Ontario during the past three years. Starting with four or five orchards, the work has been extended until forty orchards in different parts of the country are under the care of the department's experts. Excellent results have been obtained from this practical way of showing farmers modern methods of running orchards, especially in the County of Simcoe, where the campaign was inaugurated.

Akin to this has been the sending out of the demonstration trains during the past two summers, by which novel means many farmers were interested in better methods of cultivation who would not otherwise have been reached. And also the campaign now in full swing looking towards the more general use of boxes for packing instead of barrels. Three men have been engaged in demonstrating box packing during the winter months with gratifying results.

However, it is one thing to show farmers how to produce better goods; it is another matter to secure markets for the consumption of their products. It has become one of Mr. Hodgetts' most important functions to act as sales manager for the fruitgrowers of the province. Results are being achieved in a variety of ways. There is the exhibition work in the old country, which has become an excellent means of introducing Canadian varieties to the attention of the British consumer. There is the work of the market commissioners in the

Canadian West, two of whom were in the field last season, studying the conditions and advising the department of freight rates, prices, sales, quality of goods and the sort of product being shipped in from competing provinces or states. There is the organization of the co-operative shipping associations, of which there are now forty-two in existence in the province, with new ones being formed at frequent intervals. In this connection, Mr. Hodgetts acts as secretary of the central body, the Co-operative Fruit Growers of Ontario, which gives promise of developing into a powerful factor in the selling of fruit.

Yet another considerable slice of the Director's time is taken up with caring for the needs of the Ontario Fruit Growers' Association, with its membership of sixteen hundred progressive farmers. He has been secretary of this body for quite a number of years, and has seen it grow to its present proportions from a much less influential position. The local exhibition work in connection with this association and the smaller affiliated bodies is a useful direction through which to promote sales.

Up to November last, Mr. Hodgetts had a pigeonhole in his desk for the papers of the Ontario Beekeepers' Association, of which he was secretary up to that time. Now the apicultural work has been separated and made the care of a specialist, who acts under the supervision of the Director. This specialist is Mr. Pettit. To give some idea of the scope of the work entrusted to him, it may be mentioned that last year the services of sixteen inspectors were required to examine the apiaries of the province for traces of disease.

The catalogue of Mr. Hodgetts' activities might be continued still farther, but the foregoing will give some idea of the duties imposed upon him and will prove that not all Government officials repose on beds of roses. Those associated with him in the work of the Department find in him an energetic official, always on the job, a careful student of the various problems that come up for consideration, a well-qualified expert in the special subjects handled by the fruit branch, and a man who is able to go out and talk to the farmers intelligently and with appreciation.

Next to the pleasure he derives from studying fruit raising, Percy Hodgetts takes delight in photography. He is an excellent hand with the camera and his collection of prints shows many well-handled subjects. The Department has been generous enough to furnish him with a good up-to-date equipment, with which he has done splendid service. Some of his pictures, enlarged and framed, have been used profitably in advertising the fruit-growing capabilities of the province.

And the boy who wanted a fruit farm of his own has at last got his wish. A couple of years ago three members of the Department took the plunge and bought a farm near Clarkson, Ont., between Toronto and Hamilton. They divided it up into three portions and of one of these Mr. Hodgetts is now the happy possessor. Here he is now residing permanently, going in and out from the city on the train. And here he can work out all manner of fruit-growing stunts to his heart's delight, besides taking up such other lines of agriculture as he may fancy. He can also experiment in solving the problem of how to bring the producer and consumer closer together and reduce the high cost of living, a subject in which he is much interested. Having brought him thus far on the highway of life, we can leave him to continue those undertakings, both departmental and private, in which he is now so busily involved.

IS CANADA HELPING ENGLAND AS SHE COULD ?

By E. C. Drury

In my former articles I have pointed out the facts and conditions which render any contribution to, or participation in the Empire's naval defense by Canada at the present juncture, doubtful in value and dangerous in tendency. I have also endeavored to show that the chief and greatest danger threatening Great Britain is not that of foreign aggression but of internal decay, due to the burden imposed upon her industry by an idle and rapacious land-owning class, and the consequent bad conditions surrounding the labor classes, due to—1st, Overcrowding in urban centres; 2nd, The too strenuous conditions of modern industrial life which forces the woman, the mothers of the race, away from their proper domestic duties into shop and factory; and 3rd, Poverty. Further, I have shown that Canada, because of her climate and natural resources, has the unique opportunity of taking these degenerating British laborers and by transplanting them to her fields, her forests and her fisheries to recreate in them the vigor and resourcefulness which have made the Anglo-Saxon race dominant. It shall be the scope of the present article to inquire whether Canada is following the policy best adapted to the accomplishment of this end, and to suggest the steps which should be taken with that end in view.

It is clear that if Canada is to render to the Anglo-Saxon race, and to the British Empire her best service—the regeneration of the race—her policies must be so shaped as to correct the evil tendencies which obtain in Great Britain. Great Britain's danger arises, as we have seen, not from foreign aggression, but from the evils resulting from too large a percentage of the people deserting the land and flocking to the cities.

In 1901, (the last census returns available to me) there were but 23 per cent. of the British people living in rural districts, the remaining 77 per cent. being inhabitants of cities. This has resulted in a serious loss, not only to the virility and stamina of the people, but to the defensive strength of the Empire. For to quote the words of Sir Horace Plunkett, who has made an exhaustive study of the question, "*The English owed their commercial supremacy to the*

fighting qualities of the old yeoman class." Canada must seek to develop her fields, her forests, her fisheries, not only because these are immense sources of national wealth, but because, in these outdoor industries lies the road to the rejuvenation of the Anglo-Saxon people. Such a policy, if it can be carried out, will be of greater service to Great Britain, and the collection of nations, which, for want of a better name we call the British Empire, than the creation and maintenance of a whole fleet of Dreadnoughts.

HAVE AIDED THE CITYWARD FLOW.

In the past our policy has not been directed to creating and maintaining a rural population. Possibly because our early development was very largely rural and possibly because of the reflected influence of the industrial revolution in Great Britain and the United States in the latter half of the last century,

our concious efforts have been directed, during the past 35 years, towards the creation of an urban rather than a rural population. During the time the slogan uttered from the platforms of both parties throughout the length and breadth of the land has been. "*No nation has ever become great as an agricultural nation only.*" And so a tariff, designed to allow the workers in urban industries a higher price for their products, and consequently to encourage these industries, was introduced by the Conservative party in 1878, and though it was loudly denounced by the Liberals before they came into power in 1897, was continued by them when in force. Another change of government has left the same policy in force. That it has been successful in its avowed objects, the creation of urban centres, cannot be disputed. In 1881, the census taken at the beginning of this period of artificial stimulation of urban industries, the rural population of the Dominion was 3,674,868, while the urban population was only 649,942, or in other words there were approximately 6 persons living in the country, or in small country villages to 1 living in towns or cities.

In 1911, the rural population is 3,924,394, and the urban 3,280,448, or, for every 4 persons living in towns and cities there are only 5 living in the country, or in small country villages. During the last census period, from 1901 to 1911, a period when immigration was at its greatest, and when the farm lands of the West were being opened up at an unprecedented rate, the increase in rural population for the whole Dominion was but 574,878, or 17.16 per cent., while urban population increased by 1,258,645, or 62.25 per cent. Most of the older provinces show a decided decrease in rural population, and even in Manitoba, a province almost wholly agricultural, and whose farm lands are not yet settled, the increase in rural population was but 70,511, while the urban population increased by 129,892. So that it would appear, in spite of the fact that our farm lands are our greatest natural resource, and are yet only partially occupied that

from some cause or other we are rapidly becoming an urban community, and, instead of retaining our people on the land, and thereby helping to supply the greatest need of the British Empire, a vigorous Anglo-Saxon yeomanry, we are suffering from the same disease that England is suffering from—rural depopulation. This fact has been patent to many for a long time. It is now forcing itself on the attention of the nation at large, and has even come to the notice of our Government and Parliament. We have a Senate Committee inquiring into the causes of rural depopulation, and a sum of ten million dollars is to be set apart to teach the farmer how to farm, in the hope of stopping the exodus.

THE EXODUS WILL NOT CEASE.

But it will not stop it, it will not touch the cause of the movement. Teaching is not the thing most needed by the Canadian farmer. Clear proof of this is found when we consider the period when this depopulating of the rural sections has been most marked. Prior to 1881 there was absolutely no such thing as agricultural instruction, yet the farm population in the older provinces increased by leaps and bounds. In the late 'eighties, the first beginnings in agricultural instruction as we now have it, were made. Since then they have developed wonderfully, and during the past ten years we have had a fairly comprehensive system of agricultural instruction. With our Agricultural College, Experiment Stations, Farmers' and Women's Institutes, District Representatives, short courses, Dairy Instructors, etc., we cover the ground very thoroughly, and it would be useless to deny that these agencies are doing a good work, and a work that farmers everywhere have shown themselves eager to take advantage of. The benefits have undoubtedly been great, but during this very period, when Ontario has done her utmost in agricultural instruction, her rural population has shrunk at an unprecedented rate, and it is estimated that during this time

the farms of this province have lost at least 100,000 people.

LABOR-SAVING MACHINERY NOT CAUSE.

Moreover, this depopulating of the farms is not the natural outcome of the introduction of labor-saving machinery. I remember some years ago drawing the attention of a public meeting in Toronto to the depopulation of the country. A city daily commenting the next day on what I had said, made this assertion: "It is useless to lament the decrease of farm population. The men who used to cut and bind the grain are in the factories making self-binders." Such an assertion showed a very superficial knowledge of farm conditions. Modern agriculture demands more men in spite of the introduction of labor-saving machinery. Dairymen and livestock husbandry, fruit-growing, the production of corn and roots require far more men, even with modern labor-saving machines, than were needed under the old system of grain-growing. It is not because the farms do not need the men, but because they cannot get them that less numbers are employed. The getting and keeping of sufficient help has become a *perfect night-mare* with the farmer, yet the solution of the problem is simple. The farmer can get the help if he will pay the wage. The farm boy, too, will stay on the farm if he can make as much there as elsewhere. It is because farming is not relatively as profitable as other farms of industry that farm population is shrinking. It is not meeting this statement to say that the farmers are now living more comfortably than ever before. Sir Horace Plunkett, whom I have quoted above, in his book on the rural problem in the United States says: "*The truth is that, while judged by the standard of living of European peasantries, the farmers of the United States are prosperous, in comparison with other citizens of that country they are not well-off.*" This is as true of Canada as it is of the United States. The farmers of Canada are not relatively as prosperous as other classes. Hence people leave the farm to engage in other industries.

The cause of this lack of prosperity is not far to seek. It is found neither in the ignorance, thriftlessness nor idleness of the farmer. When, in 1876 we introduced a protective tariff designed to enable the manufacturers to charge more for their wares than the world-price, some one had to pay that increased price. That some one was the general consumer of the country. But many classes of consumers were able in one way or another, to shift the burden onto someone else. The professional classes, for instance, were able, through their associations, to advance their fees so as to meet the higher cost of living. Artisans and mechanics were able to advance their wages, because a sufficient proportion of them to set the general standard of remuneration, were employed by the beneficiaries of the protective system, and because these were able, and wanted the men, they paid more for them. But on the great basic industries of the country, those engaged in transforming our great natural resources into wealth, and whose products form the basis of our exports, and are therefore incapable of realizing higher prices through Protection, on these industries, *the farm, the forest, the fisheries and the mine*, the burden of the system fell with accumulated force. Because these were capable of producing more than we could use of their products, they have had, in the main, to take for their products what they would realize in the open markets of the world, less the freight required to transport them there. *At the same time they have had to buy at an inflated and often a combine price, what manufactured goods they required, and to compete with those to whom they were thus under undue tribute, for what labor they required. Under these circumstances the wonder is not that farm population has decreased, but that farmers have been able to hold their own at all, and to improve their properties as they have done.*

That they have been able to do so is proof that they are a far more capable and energetic body of men than our

manufacturers who claim that they can scarcely hold their own, in spite of the protection they receive.

Such has been the course of the effects of the system of Protection on agriculture, and largely on fishing, for the fishing industry has suffered as well as that of farming. In the Dominion Government report, 1908-10, these statements are made:

"It is perfectly clear from the records that we are not taking full advantage of the wealth of fish in the teeming waters that wash our Eastern shores." Then, after showing that the number of men employed in our deep-sea fisheries had decreased from 54,035 in 1900, to 50,870 in 1909-10, the reports conclude as follows: "At the present moment more than any other since we, as a nation, have accepted the responsibility of creating a naval force of our own, it becomes doubly necessary for us to see that the number of our sea-faring population is not only maintained but increased. If the wealth of the national fisheries is not increasing in consonance with the growth of the nation itself, then a very important source of national strength is becoming sapped and weakened."

WHAT ABOUT OUR FORESTS?

The effect of Protection on our other great natural industry, that of the forests, has been slightly different to that on agriculture and fishing, but none the less disastrous to the nation. *Farming and fishing are not capitalistic industries. Lumbering is.* The farmer and the fisherman are, of course, capitalist in a sense, since the farmer must have capital invested in his farm, live stock and implements, and the fisherman in his boats and nets. But this capital is held in comparatively small masses, is generally the product of the savings of its possessors, who are also laborers, and is largely independent of the rates of profit on capital employed in other industries.

Lumbering is different. It requires the employment of large masses of capital, which must be drawn from investors in competition with the profits which are yielded by other industries. Hence lumbering has been as profitable on the whole as our protected manufacturing industries, or it could not have attracted the necessary capital. That it has been thus profitable is attested by the number of men who have grown wealthy

from it. The loss has been made up to them, however, in another way. The timber, belonged to the people, through their Provincial Governments. It was put up (when not given to some party favorite) and sold by auction to the highest bidder. It is obvious under these circumstances that the capitalists buying it would pay no more for it than would allow them to reap as great a profit as they could get were their capital employed in other industries. The country at large has shouldered the loss which protection of manufacturing industries imposed upon the lumbering industry, in a lower price received for the nation's timber, and in less stringent regulations as to the harvesting of that timber. The results of these conditions have been two. First, lumbering operations were allowed to be carried on in a very wasteful and destructive manner, since to impose more stringent regulations on the lumbermen would increase the cost of operation, and lessen to a corresponding degree the already small enough price which the public received for the timber. Second, the revenue received from timber sales, being comparatively small, public feeling was not aroused as it should be to the necessity of preserving and reproducing our timber resources, and so our forestry service was neglected.

Go into that great timber country between New and Old Ontario, a country capable of producing little but timber, but of producing an immense amount of good timber, and what do we find? The whole country has been burned over in the wake of lumbering operations, because the debris resulting from these operations has not been destroyed in a safe manner as it should have been, but has been left, to form a fire-trap. In this burning, much of the surface soil, vegetable mould, the accumulation of centuries has been destroyed, and the rock left bare, a permanent injury to forest reproduction. In spite of this burning, though, in the wake of the fire we find a sturdy growth of seedling pine. These, however, are doomed to destruction in most cases.

Causes of fire are numerous—the tourist, the hunter, the prospector, and last, but not least, the railways—and fire protection is inadequate. It is rare to find these seedling pines, which in time would be valuable timber attain a greater age than 20 years before a fire kills them. And so that great region, and other forest regions in the Dominion, which should be great permanent sources of wealth, conserving our river waters and supporting a numerous and hardy population, are being reduced to hideous deserts.

SAME FORCES AT WORK IN CANADA.

Instead of following a policy which would result in building up here in Canada a virile race which would counteract the deteriorating influences in the old land and supply a class of men of which the Empire is sorely in need, we have been following a policy which results in reproducing here the condition of urban growth and factory which is ruining the manhood of Great Britain. As the result, our natural resources of farm and forest are being irreparably wasted, and the race of hardy out-door men who are the nations surest hope, not only in defense, but in preserving the virility of the race in general, is being reduced in numbers and restricted in the opportunities for development.

PROTECTION MUST BE ABANDONED.

If Canada is to serve the Empire as she can and should, if she is to take the Old Land and place them where they should be, in our great out-door industries, if she is even to retain a reasonable number of her own people in these industries, she must abandon in total, the policy which has driven and is driving the population out of these industries into the factories and shops. *Protection must be abandoned.* The farmer, the fisherman, the lumberman, whose products are our chief basis of exports, and who, because of this, can receive no benefit from protection, must be allowed also to purchase what they need in a free market. The strange anomaly of Canadian made implements, bacon, flour, selling in foreign markets

at a lower price than they are sold at the door of the factory, must be removed. Conditions under which such manufacturing concerns as the Dominion Textile Company, whose head offices are in Montreal, are enabled to realize 50 per cent. profits on their capital invested, while paying their employees wretched wages—(See Government blue book No. 39, 1909), must be done away with.

It is quite possible that in the process some manufacturing concerns, over-capitalized and ill-managed, may be snuffed out. It may be necessary to devote some millions to the purpose of teaching our manufacturers how to manufacture as cheaply as those of other countries. If I had space I might adduce a few examples to show that there is some need of this. At least it would be a change after the glib impudence with which our capitalists, who know nothing about the conditions under which our agriculture is carried on, assume to instruct the farmer. It may be, as I have said, that some manufacturing concerns because of bad organization and bad management, may be wiped out. But even if they should be, would thereby any serious reason why we should not proceed with a change which is necessary to our national well-being? *Hundreds of thousands of farmers and others have been driven out of business during the past 35 years, sacrificed to a mistaken ideal. If we sacrifice a few of the hot-house products of an artificial system in the interests of enlightened nation-building surely there can be no great objection.* The protected manufacturers themselves, who have always been characterized by super-patriotism, will doubtless welcome the opportunity to thus sacrifice themselves on the altar of their country.

SACRIFICE OF INDUSTRIES NOT NECESSARY.

But it must not be hastily assumed that if we thus allow our rural industries a free opportunity for growth, we will necessarily sacrifice our city development, or any legitimate urban activ-

ity. There can be no doubt that the great cheapening of the cost of production which our natural industries would experience through being allowed to purchase their supplies and material in a free market, would result in a great expansion of these industries. More labor and capital would be employed in them. Their production and consumption would both be greatly increased. In this the merchants, the railways, the steamship lines, would share. Every manufacture which showed its ability to exist under natural conditions would also share in the benefits coming from such a great expansion of its market. The prosperity of a people is like a tree. Agriculture is its root, manufacture and commerce its branches and its life. If we increase the prosperity of our farming class, and of those other industries which are engaged in turning our natural resources into wealth, all will share in it.

The way to this desired end of allowing our natural industries a free opportunity to expand, is directly along the lines of the best interests of the Motherland as well as of Canada. Protectionists have long advanced the argument that it would be unfair to remove their protection and allow the manufactures of other countries to enter their markets unless the protective duties of these other countries were likewise removed. This has been urged again and again against any lowering of our tariff towards the United States. No such reason can be urged against lowering our tariff toward Great Britain. The manufacturers enter the British market absolutely free of duty. Can there be any unfairness in allowing British goods to enter our markets on similar terms? Let us extend the British Preference, not suddenly, with the danger of dislocating business in Canada by the sudden change, but gradually as the farmers in Canada, in their convention at Ottawa in 1910, asked.

Free trade with England, under these conditions, would produce your results, all beneficial to Canada, England and the imperial relation. First, it would afford relief to Canadian consum-

ers from the tyrannical exactions of trusts and combines which have given up under the tariff. This would not only help to solve the question of the high cost of living in Canada, but it would free our natural industries, agriculture, fishing and lumbering, from the artificial burdens they now carry, and by allowing them to expand would enable them to retain and increase the population now engaged in these outdoor occupations thus supplying the hardy yeoman, foresters and fishermen. Second, it would vastly stimulate trade between Canada and England, provide lower freight rates on Canadian products going to England, increase the popularity of our products in England and cement more firmly the bonds connecting the two nations. Third, the wider market thus thrown open to British goods, would greatly increase the prosperity of the motherland. It would have greater results in relieving the "overburdened British taxpayer" than if Canada were to assume half the upkeep of the British navy. Fourth, following in the wake of increased trade and more cordial feeling there would undoubtedly be a great increase in British immigration into Canada, thus supplying us with the best elements for nation-building.

A PROGRESSIVE FORESTRY POLICY.

Beyond this increased freedom of purchase we need a progressive forestry policy, to perpetrate and extend this great national asset, and Government aid in creating some system of co-operation among producers of natural products, which will free them from the rapacious exactions of middlemen and financiers. This should include not only co-operative means of buying and selling, but co-operative banking or credit societies, so that the savings of these classes might be advantageously used to supply their own financial needs. Money spent in these ways would have a greater effect, not only in increasing the material wealth of the nation, and maintaining the physical stamina of the race, but in increasing the defensive powers of Canada and the Empire, than

millions spent in Dreadnoughts. The Empire does not need money for defense, but men, and that is the best defensive policy in which will increase those hardy outdoor classes which experience has shown to be so valuable.

But all this, though true, may seem Utopian. This aspect of the question is never brought up in Parliament, though it must be known to our legislators. The chief business of Parliament seems to be to spend money—"Spend money, wisely if possible, but spend money." Our budget and our debt are larger than ever before. Little criticism of this vast expenditure is given by the Opposition. The protected interests encourage the expenditure. The object is obvious. So long as a vast expenditure demands a vast revenue, so long will there be a strong argument against reducing the Tariff. The Liberals have abandoned their one time

Free Trade principles, though at no time could stronger arguments be adduced against Protection than now.

The late Sir Richard Cartwright once said: "*The moment you introduce the protective system you create a class whose interests are essentially different from those of the people at large, and who become the ready contributors to corruption funds, sharing with their masters the plunder which they have been enabled to take from the people.*" Apparently the time has come when these interests have laid their deadly grapple on our whole party system. Having these facts in mind, may not the time have come for a reconstruction of our political life and the possible rise of a new party, a People's party, organized and financed by the People, standing for principles, not political expediency, and ready to serve the Nation rather than the Interests?



The Message of the Dew-Drop

Why art thou sad? I heard the dew-drop say.
 Why is thy spirit weary at the break of day?
 Seest thou not the sun? In glory doth he rise,
 To me he bringeth death, but life to all besides.
 Should I then lament, my fleeting hours repine?
 Ah no, my loss is gain if still through me he shine.

Well spoken little dew-drop, the answer now is plain.
 What others reap in blessing, we often sow in pain.
 Let me too be unselfish, in shelter I'll not stay,
 If my poor transient comfort keep others from the day.
 —W. J. Holliday.



Watson's threshing outfit near Fillmore, Sask. Threshing from the stook without a sheaf-loader requires fully this number of teams.

BANKING \$1,000 A YEAR IN WHEAT

Note.—The writer of this article visited many farms in the wheat belt of Canada last fall, in search of information as to the success which the ordinary newcomer to the prairie provinces was making in his change from diversified farming to that of wheat farming. Many farmers are making only a nice living on these wheat farms. Others are held down by unwise speculations in horses and by unwise investments in machinery on the credit system. Taking all in all, the fortunes of Charlie Dunlop, pictured in this story, will be a nice average between the big fortunes of the 2,000-acre farmer and the half-failures. The photos were taken by the author on different farms. Some of them show the effect of the first snow storm, which occurred on November 2nd.—Editor.

By Eluid Kester

"WELL I'll be blowed!" A beaming smile under a sombrero and clad in a pea-jacket, jumped from the seat of a wagon of wheat drawn by tandem teams, to greet me as I stepped from a C.P.R. station in Southern Saskatchewan.

There was no mistaking that greeting warmth of my friend. Only one fellow in our boyhood days at old No. 5 school in Pickering, had made use regularly of that ejaculation. It was my old friend Charlie Dunlop.

I had taken a run down this branch line to size the country conditions and the good accounts from this section decided me upon a visit. I had arrived at Regina upon a return trip from the Pacific Coast and was registered at "The King's," for a week.

My surprise was as pleasant as Charlie's. I had not seen him for ten years. We have gone to school together, had worked on neighboring home-farms, and had come home nights from the old paring bees, and socials with the same

girls. The same moonlight sonatas had been played for us in the beautiful Ontario summer evenings. But times had changed; shrewd business dealings in other lines had drawn us apart. And now the old associations surged around us both as we shook hands until the biceps protested.

"Get your business done and I'll call for you at the Corner Hotel yonder after I have dumped this wheat into the cooperative elevator. You have got to come out and see Helen and hang your hat behind my door for a week," said Charlie as he sprang back to this heaping 110 bushels of No. 1 hard, as if expecting instant obedience. This is characteristic of the West. Every fellow you meet is a bubbling volcano of welcome and enthusiasm. The joy of living seems to fill every blood corpuscle to overweight. It is called the "boost" spirit by many. It certainly is too genuine to be a counterfeit.

Its enthusiasm is irresistible. It catches even the staid and sober senti-

ments of old moneybags, and expands him in a way that would be regarded as miraculous to his old Eastern neighbors.

I was ready at the corner and when the prancing four-horse-team with their rattling tree-chains drew up, I accepted a place on the big spring seat in short order. We took a cross-country trail and drew up at a respectable story-and-a-half farmhouse on the open prairie that spoke of every comfort inside.

Charlie Dunlop and I had been raised in the same locality in Ontario. We attended the same old country school. We hated the same old teacher whose pedagogical methods were largely reinforced by elm gads and leather straps. We had hoed turnips together. Our father's farms had adjoined and it may have been the fact that Charlie had two very likable sisters that made my visits to the hill farm so frequent.

At any rate we knew farm life with all its ups and downs in Ontario in the 'eighties and 'nineties.

Charlie had married Helen Bray from the next concession and had gone into a rented farm two miles away in 1896. He had about \$500 in cash, a team of old horses, then worth about \$50 each, and a cow. Helen was a charming girl, bubbling over with merriment, and

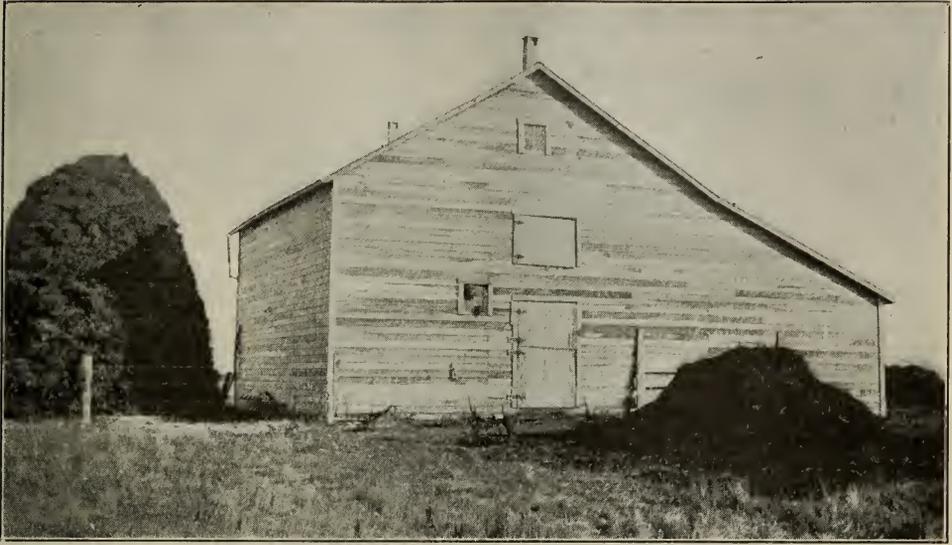
in all, a most sensible farmer's daughter. The match was a happy one. Their farm home was bright and attractive.

After the home had been blessed with two daughters, Grace and Dorothy, the end of the lease found them little better off except in the farm stock they carried. They had to live circumspectly. Stories of the West were repeatedly impressed upon them by the letters home from Saskatchewan by John, an older brother, who had made good there. Both Charlie and Helen hated to leave Ontario where their friends and relatives were all around them. But the objections to moving finally were overruled and Helen reluctantly agreed to try the West. Consequently a lease for another year was taken and they resolved to go West the following March. One, Hillson, in Pickering, had returned from the West, the owner of several farms, and Charlie had agreed to take a half section in Moosomin in 1906.

After the sale in February, Charlie found he had about \$2,000 in cash and notes, chiefly notes for six months. He retained a team of horses, one cow, a few implements and some household effects, sufficient to fill a car which was loaded



The three big colts in this picture were each valued at \$300.00. The farmer is unloading some slough hay which he brought in the night before.



This stable has room for 10 horses. The leanto at the back ties up six or eight cattle. The oat sheaves are stacked at the side for winter feeding.

at Claremont and billed to their destination.

I had left home about the same time as Charlie got married. We had met each other few times afterwards, and after his departure for the West all trace of him had been lost to me. I was not looking for him at this point. My surprise was therefore as great as his.

Helen recognized me at once. Her rosy cheeks, bright eyes and neat appearance were an illustrated story of good health and contentment.

Grace and Dorothy had grown out of my recognition while Charlie, Junior, was sturdily chasing a collie dog around the oat stacks at the stable.

"Well, what do you think about going back to Ontario now?" I asked.

"Not for me," replied Helen. "I hated to come but now I like this country too well. We have as many comforts here in the house as we did in Ontario. It is true we work hard during the threshing season but I drive out to town with my two ponies, attend the church functions and enjoy my social life. The winters do get cold but we do not seem to mind them any more than we did the drizzling wet and cold months of winter in Pickering. We know how to dress sensibly here."

"Yes," spoke Charlie, "and we have a branch of the Saskatchewan Grain Growers here which meets every two weeks. We have good programmes."

"Say, do you remember the times we had down at Audley in 1893 when Nelse Davy was teaching there? The Patrons of Industry had a lodge there which met in the schoolhouse and we had 100 members. I will never forget the contests of each side for that oyster supper. Well we had a big time here in Fillmore last winter when we chose up sides to get members. The losing side was to put up the oysters. Jack Stafford's side won, getting 65 members, while Ned Ramsey's side secured 35. At the supper, the women brought the "grub," and cooked the oysters. Mr. Hawkes representing the Grain Growers, addressed us and the girls' club rendered some music that would have done credit to your city houses."

It was evident that there was plenty of social joy in this farming community. There was no trace of the lethargy that is killing too many Eastern places, and I thought these two people's attitude explained much of the reason for the "boost spirit" noticed in every Westerner.

"If old Ontario, had this same spirit



Some times a movable granary is used. Four horses are used to draw it from one setting to the other.

of enthusiasm, I tell you Charlie we could knock the West into a cocked-hat in the matter of producing. We have the soil, the climate, the markets, and the railroads, what we want is enthusiasm," I added.

"Yes," he assented, "it would pay you people down there to give an agricultural man \$5,000 to go out into the sidelines to preach the doctrine of better rural life enthusiasm, to set the country people on fire with stories by their opportunities."

"Well, how have you done in your six years?" I asked.

"I have been here six years," said he, and have lost two crops in that time."

"I located first at Moosomin where I had 320 acres on shares. The expenditures in starting were rather heavy. I had to buy horses and machinery and support the family and a man until the harvest returns should come in. I had a little money from my sale and I had 100 acres of wheat that went 20 bushels to the acre; 100 acres of oats that yielded 6,500 bushels. Our cow kept us in milk and butter, while a few pigs were fattened on cheap feeds from town. I came through fairly well although I got 60 cents a bushel for wheat and 20 cents for oats, the share was two-thirds and I had to supply the seed."

"The second year was a flat failure. A hail storm struck me one Sunday just as the grain was ready to cut. In fact I had cut a half day on it on Saturday. It was a model stand but the hail storm cleaned me out slick as a bean. I got little from the farm that year and the owner got less. That is one advan-

tage of renting on shares. You do not have to pay if you do not receive."

"I then had the offer of this section from a friend two years ago and I moved here that winter. This is the fourth crop here. One year here was a total failure, while I had another strip hailed out last year. So you see out of six years I have had two total failures of the crop and one partial one.

"When we go into the house I will show you my books for the six years."

The drive was a pleasant one. On the sideroad we passed a row of wheat shocks standing from last year's bad crop when wet weather and frost had ruined so many prospects.

"Over yonder those two farms are occupied by American farmers from Missouri. They came in last year," said he, "and they are very decent fellows I hear, though, there are too many of them who work on Sunday."

"Yes," I assented, "a few may be doing so, I myself saw some threshing North of Gleichen last week on Sunday. But they will soon get over this among our Canadian people. You remember, Charlie, that I have heard your father tell how many pioneers of Ontario drew in barley on Sundays years ago!"

"The year 1911 was a bad one for me. I burned 90 acres of wheat in the stook.



A cheaply constructed pig pen by a shelter bluff. There were thirty pigs here that were being fed on ground barley and wheat, and skim milk.



Sometimes the wheat is stacked. This field went twenty-three bushels to the acre.

because of the wet I could not get it threshed. Threshers charged \$21.00 per hour and they had great difficulty in keeping their gangs of men together."

"The car shortage is always a present one with us. I have built a few granaries and have my flax and wheat, all but a car load in them."

"I notice you have a lot of flax this year."

"Yes, the past year's prices of \$2.00 and \$2.50 per bushel led a lot of farmers into growing it this year. I have 110 acres which will average 17 bushels. Now the price is down to \$1.13. This is difficult to thresh in catchy weather."

"I note," said I, "that there is considerable of it grown around Saskatoon. A Swede up there had 20,000 bushels this year. This Swede came out to this country only seven years ago and now he owns two automobiles and belongs to the leading clubs of that city."

The books for the six years were gone over carefully. The balancing up showed that the following had been the income and outgo during his six years:

CASH BOOK FOR SIX YEARS.

FIRST YEAR: RECEIPTS:

2,000 bus. wheat at 60c ..	\$1,200
4,000 bus. oats at 20c....	800
10 pigs at \$12	120
1 calf	30
10 ts. hay sold in town	100
	\$2,250

EXPENDITURES:

3 horses at \$150	\$450
Implements ..	860
Landlord's share	700
Seed Grain	200

Feed and board for men..	400
Hired help	240
Threshing	500
	\$3,500

SECOND YEAR RECEIPTS:

20 tons hay at \$12	\$240
500 bus. oats at 30c	150
15 hogs at \$15	225
Milk	60
	\$675

EXPENDITURES:

Landlord's share	\$200
Hired help	240
Taxes, Insurance, etc....	60
Threshing and Twine....	150
2 cows	150
Living, etc.	200
	\$1,000

THIRD YEAR: RECEIPTS:

5,000 bus. wheat at 80c..	\$4,000
2,000 bus. oats 25c	500
20 hogs at 14c.....	280
Milk and butter ..	50
	\$4,930

EXPENDITURES:

Moving	\$ 200
Implements	500
5 horses at \$250	1,250
Threshing, etc.	600
Hired help	300
Living, etc.	300
Landlord's share	1,600
	\$4,750

FOURTH YEAR: RECEIPTS:

4,000 bus. wheat at 90c..	\$3,600
2,000 bus. barley at 50c ..	1,000
1,500 bus. oats at 30c....	450
Milk and calf sold..	145
2 steers sold	100
	\$5,295

EXPENDITURES:

Hired help	\$ 300
Living, etc.	200
Insurance, Twine, etc. ..	200
Threshing	850
Landlord's share	1,700
	\$3,250

FIFTH YEAR: RECEIPTS:

Oats	\$ 200
Wheat ..	200
Cow	50
20 pigs at \$10	200

1 steer sold	40	
Milk and butter	150	
	————	\$840

EXPENDITURES:

Hired help	\$240	
Living, etc.	200	
Threshing twine, etc.	200	
Landlord's share	200	
Taxes, etc.	100	
	————	\$940

SIXTH YEAR: RECEIPTS:

2,500 bus. wheat at 80c	\$2,000	
2,300 bus. flax at \$1.13	2,339	
2,500 bus. oats at 30c	750	
20 pigs at \$15	300	
2 steers at \$60	120	
Milk, butter, etc.	200	
	————	\$5,709

EXPENDITURES:

1 horse	\$ 300	
Hired help	300	
Threshing, etc.	1,000	
Landlord's rent	1,700	
Taxes, etc.	100	
Trip to Ontario	500	
Twine, etc.	200	
	————	\$4,100

The total for the six years were as follows:

Year.	Receipts.	Expend.
1st year	\$2,250	\$3,550
2nd year	675	1,000
3rd year	4,880	4,750
4th year	5,295	3,250
5th year	840	940
6th year	5,709	4,100
	————	————
Total	\$19,649	\$17,590

A hasty inventory of the stock and implements on Charlie's farm was made. It totaled the following:

10 horses at \$220	\$2,200
5 colts at \$300	1,500
10 hogs at \$10	100
6 cows at \$80	480
Implements and rigs	2,000
Seeds and grain	500
House equipment	500
	————
	\$7,280

Altogether then this showed our farmer friend to be worth over \$8,500. Deduct from this \$2,000 he brought with him and it is easily seen that he has banked \$1,000 a year for both good and bad years during his stay in the wheat belt. This I learned about what a careful farmer on the prairies would make one year with another. It must be noted that this farmer was just an ordinary fellow not given to dabbling in real estate. Of course, there are a great many farmers who are not doing this well, owing chiefly to their recklessness in tying themselves up to implement men and to unwise speculation in horses. A great many farmers also do not pay cash as they go along as did Charlie Dunlop. He would rather borrow at the bank than buy on credit.

It will be noted that his first two years were most discouraging. In fact at the end of the first year he went \$1,250 behind. This ate up a big part of his reserve. The second year he was \$325 behind. But in the third year on his new place he struck about even. The good luck rewarded him in his fourth year, with over two thousand dollars of a surplus, while the sixth year did nearly as well. Meantime the reason that he did not suffer more, was owing to the fact that he was doing a little mixed farming with hogs and milk cows which consumed a great deal that would have otherwise have gone to waste.



THE BARTLETT PEAR GIRL

Note.—Here is a story from the Niagara fruit belt. Miss Wetherald's writings have often appeared in *Farmer's Magazine* and have been received with considerable appreciation. This story gets near to some of the problems on the farms of Ontario.—Editor.

By Ethelwyn Wetherald

THE girl who alighted from the train at a certain quiet railway station in Ontario was, even at first glance, different from the two or three specimens of rural femininity of the younger generation who waited on the platform for the expected arrival of friends, and yet was as obviously a farmer's daughter as they. The difference was one of bearing, expression and attire. Thankful Hayes carried herself as though she was a light piece of luggage that it was a pleasure rather than otherwise to be saddled with. Her dress was neither "swell" nor semi-shabby. Her blue serge skirt was newly braided about the edge, her coat of the same material had a little bunch of cinnamon pinks in the button-hole; her shoes and gloves were the freshest parts of her costume, while her hat was a soft frame for a face which expressed the sort of happiness that is not easily disturbed or dulled.

Her arms laden with parcels were suddenly swooped upon by two brown hands belonging to a young fellow near her own age.

"Hullo, Thanky!"

"Hullo, Brad! How's mother?"

"Some better to-day. Cheered up by the prospect of the early coming of the only darter." He swept the packages into the back of the buggy and faced his sister dubiously. "Say, Thanky, you don't look overwhelmed with grief over parting from your dear College. mates."

"Oh, it's no particular pleasure to part from one's friends," declared the girl steadily. Then the eagerness of her soul swept up to her face. "But

I'd rather be with mother than with any other friend in the world."

"Well, we're blooming glad to have you home anyway. I'm afraid," he added, with sympathy in the eyes so like her own, "that it'll be a big change for you after college."

The girl from McGill smiled at him. "I want my coming to be a bigger change to mother," she said, as they drove up to the door of a substantial farm house. Two minutes later her flying footsteps cleared the stairs, and the bunch of cinnamon pinks was pressed against a pallid, wistful face. Thankful rained kisses on her brow, cheeks and hands in impetuous school-girl fashion. Then she sprang up and rushed the blind on the solitary window up to the top.

"Now I can see you, you dear thing! But oh,"—as her glance for the first time took cognizance of the room—why, motherums, what are you doing in this little rabbit-burrow of a place? Why aren't you in the large three-windowed room across the hall?"

"This is plenty big enough for me, dear, said Mrs. Hayes. I'm quite comfortable, and you need space for your big trunks and all your belongings. We had it all fixed up for you. They moved me in here yesterday."

"Well, they'll move you right straight back again," declared the girl, hotly.

"Ah, no, dearie, don't say that. Let mother have her own way." She smiled appealingly and held out a transparent hand. Thankful's cheeks were red and her heart acted with rebellion. "I don't care," she began, and then re-

remembering that this was but one of a thousand acts of self-sacrifice on her mother's part she knelt by the bed again and took that dear frail figure in her arms without a word.

Afterwards she went across the hall to unpack her trunk. It was a large and airy apartment, but Thankful glanced about it with decided disfavor. The wall paper was faded and fagged out. It was mildewed near a window and broken at the door. The rag carpet, as the girl remarked to herself, was "aged and gray, Maggie." The rocking chair creaked dismally at the slightest movement and the lounge, which boasted three good legs and a block under the fourth corner, had a dull-colored shawl neatly folded to cover the hole in the upholstery. The bed was as comfortable as sagging springs and slimsy pillows could make it. The curtains were stringy, the mirror gave a greenish cast to Thankful's fresh complexion and a few picture postal cards did their best to cheer a bureau that mourned the loss of its varnish. Yet the room had been "fixed up" for her.

Thankful removed her dresses from the trunk and hung them on the row of nails in a corner of the room. Then she covered them from the dust with an extra sheet found at the foot of her bed, and made a wry face at the effect. All the time her thoughts were busy, and the subject must have been a pleasant one, judging from the half-smile that presently pre-empted her expressive face. Across the hall her mother was saying to herself, "Dear little heart, with her hot-house flowers and hot-house affection, she'll find home life a dreadful change"—which showed that a mother sometimes does not know her daughter as well as the daughter knows herself.

That night after the two younger brothers, Tom and Brad, had gone to bed, Thankful interviewed her father as he dozed over his paper. "Father," she said, "I want to ask you about the money for my education for the next year."

David Hayes stared at her. "The money for your education? Why, I



"Took that dear frail figure in her arms without a word."

thought your education was finished."

She leaned caressingly over the back of his chair and brushed her cheek over his bald spot. "Dearest dad, a girl's education is never finished."

"Is that so?" His tone was light but his mind was a maze of masculine perplexity. "What branches did you expect to take up now?"

She laughed but answered promptly, "Sociology, the art of making life beautiful, and the science of extracting happiness and profit from existence."

"Hum! And does all that require money?"

"Indeed it does." She paused to kiss the bald spot. "Now, daddy, I'm not begging. All I want is the privilege of using my own Bartlett money in the way I like best."

David Hayes was a just and reasonable parent. He had realized that if his children were to remain on the farm they must be given an interest in the profits of the place. Bradley had "gone in" for pigs, Thankful for Bartlett pears

and Tom was a chicken fancier. Each had a bank account and was encouraged to enlarge it. "Of course if it's a case of real necessity" he began—

Thankful stretched out her impetuous young arms in a gesture of entreaty. "Father, dear, I want my money to make mother happy. She's the greatest necessity in this house."

"That's so." But still he looked mystified. "She aint well enough to travel."

"No, not yet." She laughed at his bewildered expression. "Just trust me!"

"All right, daughter. Sometimes people never learn how to take care of money till they've spent it foolishly."

It certainly looked, during the next few weeks, that Thankful Hayes was spending money not only foolishly but selfishly. No longer demurring at the dedication of the large front bedroom to her own individual use and benefit, she did her utmost to enforce the contrast between it and every other room in the house. The dingy wall paper was replaced by a pattern of climbing rosebuds and tender young leaves; a gray rug richly bordered nearly covered the floor; there was an ample clothes press across one corner of the room, a full-length mirror framed in its door; the brass-trimmed bed, chintz-covered easy chairs, dainty window hangings and even the toilet set and dresser showed evidence of a refined taste and the eternal feminine love of delicate belongings. The two boys admired it hugely.

"It's a dream of a room," said Tom, as he stood at the door, while his sister arranged half a dozen fresh towels on the rack. Thankful looked about the room well content. Then she altered the position of a slender vase upholding a rose, which stood on a little writing desk near a window.

"Fine and dandy," confirmed Bradley. He pushed back the silk curtains of the dainty bookcase, expecting to find his sister's favorite novels. But a surprise awaited him.

"Now, Brad, do cover up those books and don't say a word," exclaimed Thankful, biting her lips with vexation.

The boy obeyed her with a bewildered

air. "I don't see anything wrong about a hymn-book and a Bible and a Baxter's Saints' Rest.

It was the evening of the same day that Mrs. Hayes was helped from her bed in the little dull-colored room across the hall and ushered into the furnished front apartment. In her fresh muslin wrapper, with the warmth of convalescence in her cheeks and the bright glow of appreciation in her eyes, she seemed a fitting part of the newness about her. Pausing for a moment in the doorway she glanced at the familiar scenes from the windows, to which a foreign touch was given by the unfamiliar setting. Then she took a deep breath of pleasure. "It is all lovely," she exclaimed, "but not a bit too much so for my girl," and she caressed the strong young arm on which she leaned. Then catching a glimpse of herself in the long mirror, she unconsciously straightened up and carried her head at its youthful angle. Going nearer to smooth a recalcitrant lock of hair, the lace on her sleeves caught at the fastening of the door, and a sudden movement exposed the contents of the wardrobe to full view.

"Thankful, dearest, where are your own gowns? Why are my belongings in here?"

"They are here because this is your room, mother darling. No, it's no use your protesting. You are the leading lady in the play of Our Home. I have merely made an effective stage setting for her."

When all other objections had been overruled the dazed little mother exclaimed, "But, dearest girl, you can't sleep in what you call the Burrow."

"Oh, no, I can't sleep in it, but it's a highly appropriate place for my precious maternal relative. Do let me tell you a secret. I'm going to have another window put in there, and use the rest of my Bartlett money in turning the burrow into a bird's nest."

"Bartlett pears turned out pretty well last fall," observed Tom.

"And our Bartlett pear girl is turning out pretty well this summer," added Bradley—a statement with which the rest of the family entirely agreed.

THE BIG CHANCE

Note.—We introduce here a new writer in Farmer's Magazine. During his course at the O. A. C., Guelph, he was one of the editors of the O. A. C. Review. He has since done newspaper work on the "Citizen" of Ottawa. The way he handles this subject will commend him to many readers.—Editor.

By Justus Miller

"Why isn't every farmer rich?"

This is the question each bread-buyer in Toronto asks. He sees the respectable, old-time loaf dwindle into a perfectly good bun, and groans inwardly. Perhaps he talks of balanced rations and alfalfa, to his cronies during leisure moments. He is sure he could farm a fortune from any soil.

He might do so too. If he had the ingenuity he probably would. Like every average man, the farmer lacks mostly in ingenuity. He awaits the big *chance*—he doesn't hustle out to find it. He is believed, usually, to be engaged in an occupation that hardly admits of rapid success. Yet a farmer, hitherto entirely unknown, an immigrant to Canada with little capital and no experience, achieved fame, that is at least continental. He did it because he had the ingenuity to look around him for something better and the perception to see it. So Seager Wheeler won the \$1,000 prize given in New York for the best bushel of wheat grown in America and incidentally established his reputation throughout the continent.

MONEY FOR THE PROGRESSIVE.

The circumstance that enables him to do all this was not his method of cultivation. It was his foresight in choosing Marquis wheat—a new variety that is superior to all others grown in Canada. And the genius who made this possible is Dr. Charles Saunders, Ph.D., of the Dominion Experimental Farms System, who is still working among his

plots at Ottawa to enable you, or your neighbor, to become the next Seager Wheeler.

HOW A GREAT SCHEME PROSPERED.

Before explaining his methods a word is necessary of the system itself. It was realized long ago that our agricultural resources were the greatest asset we had. It was also understood plainly enough that our wide variance of soil and climatic conditions called for new varieties of grains and improved breeds of animals to prosper in this environment. It had already been demonstrated in foreign lands that wonderful results might be obtained by skilful management. *All data lead to very definite conclusions, but to very little definite action.* Since this work must be conducted, very often at a loss, farmers didn't seem to crowd the ropes to be first in.

But in 1885 the Dominion Government came to the rescue. Five farms were set aside to be operated solely for experimental purposes. Since that time the system has flourished wonderfully, and at present there are nineteen such farms scattered all the way from Nova Scotia to British Columbia. It is a wonderful chain and stands the vanguard of a new agriculture.

The central farm is located at Ottawa and the head of each Department has his office there. Mr. J. H. Grisdale, is the director and under his able management very far-reaching schemes indeed have been planned.

The task of propagating grains suit-

able to our variable climate falls upon Dr. Saunders. He took charge of it in 1903, and the things he has accomplished are like fairy tales in the telling but mostly resemble hard labor in operation. As a result of them Canada is in a fair way to become the greatest grain producing country in the world. Thus have the farms vindicated themselves.

During the nine warmer months, Dr. Saunders may be found among his experiment plots. He watches with vigilant eye the progress of each, and seems to love his plants with their bandaged heads which look for all the world like Irishmen after a Donnybrook fair. But in the winter when the temperature is dry he becomes an expert baker. In a small room containing a wonderful little electric oven he works all day long making tiny loaves of bread as though for a child's tea-party.

BRINGING NEW LIFE.

Many experiments are under way all the time. On the central farm 35 acres are devoted to plant propagation. In springtime life is early astir in the plots. By April 20th all grains are sown if the weather be favorable. Then the growing crops become a source of constant interest, for each year new varieties of grain are born.

The work of cross-fertilization is a feature of utmost importance and must be done very carefully. It is accomplished by applying pollen from the anthers of the male flowers of one variety to the female flowers of another. To prevent bees from working at them they are tied up, presenting the aforesaid, Donnybrooks appearance. The operation is very fine and a nice touch is required by the surgeon.

Hundreds of plants are treated and only the eye of a genius can discover those characteristics desired and reject all failing to possess them. The plants are grown in plots two feet long and three feet wide. The seed from each one is hand-planted the following spring in an individual plot. The third year the result of this sowing is

planted with a hand-drill in fifty foot lengths of from one to twelve rows in width. By the fourth year it has attained the dignity of a 160 acre plot, and becomes something of consequence. After harvest it is ready for distribution to the branch farms.

The latter never conduct preliminary propagation experiments, but take the varieties when developed and grow them in large quantities. The seed is sent free to all farmers asking for it, in five pound lots and in many cases is sold in quantities sufficient to sow five to ten acres.

Annually, some 35,000 samples are given away. If care is exercised this will give a large quantity in three years. Indeed, many men report sufficient the second year for their own seeding with a surplus for sale.

FIXED CHARACTERS NEVER WEAKEN.

"Well Doctor," I asked, "Do you ever improve a variety when the characters become fixed.

"Never," he replied. "I am often asked that question. Men write to me for improved varieties; but I have always the one answer. When fixed, the characters remain so. I cannot change them except by cross breeding again.

"No; it is a frequent mistake. Selection may accomplish some things but not that. Sow a quantity of seed, inferior, but true to type, this year: next year you may harvest fine seed that will give as large returns as any. Selection has much to do with crop-returns truly but it neither gives nor takes away fixed characters."

THE FAR NORTH FROST LINE.

Grains are bred for many purposes. Heavier yielding varieties with stronger straw and with better milling and baking qualities are desired. But most of all early maturity is sought for. In this land of late spring and early fall frosts a rather diplomatic sort of wheat is required.

The weight of wheat which has been slightly frozen is reduced as much as five pounds a bushel and its grade is lowered to No. 5. The greatest prob-

lem which faced the North-West farmers was to secure a wheat which would beat the frost.

Dr. Williams, the former cerealist, produced Early Red Fife and Dr. Saunders later developed a selected and improved strain. These wheats made the North-West, but are being supplanted by the Marquis. Many farmers ask to see practical and definite results from the experimental farms. Truly they may do so. This wheat has been grown only since 1909, but already over 200,000 bushels are in the North West. It has a yield 50 per cent. higher than Red Fife; and Mr. Motherwell, minister of Saskatchewan, estimates that had it been grown during the last 10 years, that Province would have been \$15,000,000 richer. How is that for practical results?

The Marquis was obtained by crossing the Red Fife with Hard Red Calcutta. A far cry from India to Canada surely; but the new Marquis had hundreds of miles before it still. It was sent to the Branch farm at Indian Head in 1907,, and was later distributed from that point.

THE NEXT \$1,000 PRIZE WINNER.

"We have a new wheat, later than the Marquis," said Dr. Saunders, in his modest way. "We expect wonderful results from it. It has been named the Prelude and is three weeks earlier than ordinary wheat. It should open a new belt many miles north of the present wheat boundary. The baking quality is excellent and the yield is good. But it will not be ready for distribution yet. There are only a few bushels in existence now, and we will hold it on our farms another year or so."

Last year twelve new varieties of wheat were bred. Altogether some 250 varieties are under test, but the majority will be eventually discarded. The soil and climatic conditions of Canada call for some twenty-four distinct varieties. Up-to-date, about fourteen have been developed.

NO GRAINS ARE NEGLECTED.

Barley and oats have received much attention. A stronger straw and a hull-



Director J. H. Grisdale, head of the chain of the Dominion Experimental farms.

less type are required. Both of these qualities are being secured by cross-breeding. There is less scope for work with these crops, however, as the excellent varieties bred in Germany and Sweden adopt themselves readily to Canadian conditions.

A new pea—the Arthur—has been bred, that is very productive.

Experiments are conducted upon flax and beans but these are very recent.

THE FAIRY CASTLE.

In his attempt to win the gilt gingerbread man has often overlooked the plainer bread of life. He finds at last, it is the one diet of which he seldom tires. Whether he be an Austrian peasant or an American millionaire he requires it.

Yet only in recent years have scientists realized that so common an article of diet presented a wonderful field for research. In their attempts to probe into "things under the earth" and into "things high above the earth," they

overlooked the commonest product of the earth. So the scientific investigation of bread-making, and wheat growing for bread-making purposes, begins with Dr. Saunders.

"Here in this little room, I do all my baking, explained the doctor. "Some grain from each plot is stored separately and ground in a little mill. I bake all the bread myself in these small tins you see. My oven is heated with electricity and has given perfect satisfaction. I test the bread thoroughly and draw a profile of each loaf very carefully. My object is to produce wheats which give a large loaf of fine texture and snowy whiteness."

"The value of the flour depends largely upon the amount and quality of the gluten contained in the wheat. It forms the cement which makes it elastic and tenacious. It enables the starch grains to cling together so the yeast will act upon the dough to produce a light, porous bread."

Dr. Saunders is working to place in the hands of farmers, varieties, rich in gluten and of fine quality, which will bring the highest price from miller and baker.

Gluten is much improved by age as is illustrated in the cut of the three loaves baked from the same flour at different periods.

THE BIG CHANCE.

In all this work lies a wonderful opportunity for he who has the ingenuity to use it for himself. The government wishes to place on every farm in Canada better grains than are now grown. This is accomplished by sending free to every man all necessary information and the grains that give best results in his particular locality, if he will grow them.

Now who will be the next Seager Wheeler?



After Failure

It is what is left of a man after he has failed that counts. This residue is the measure of the real man, just as the pure gold which is left in the crucible after all the dross has been burned out in the hot blast is the real stuff.—Orison Swett Marden.

THE DODDS-SINDERS ABROAD

This is the second of the series of the three stories recording the experiences of the Dodd-Sinders family in its efforts to attain a social standing in a Canadian city following a sudden acquisition of wealth. In the February issue the Dodd-Sinders were pictured at home. In this issue they are abroad, where they have gone for "culture." The last of the series will be given in the April issue, showing "Their Return," to a more sensible life at home.—Editor.

By Ed. Cahn

THE Dodds-Sinders had, after many adventures, much seasickness and several fierce arguments, finally arrived in London; been conveyed through a fog the consistency of veal broth and now, at last, were installed in their apartments at the Cecil.

Dodds-Sinders had frantically begged to be allowed to hunt up a nice comfortable boarding-house where a body did not have to dress for every meal and in between.

Birdie wanted to go to the Savoy because she had read once in a book about the lovely supper parties people gave there.

Nora was for the Ritz because once, at the Imperial Opera, she had not been able to enjoy the performance because the girl behind her had so much that was fascinating to tell her companions about her stay in "deah ol' Lunnon," at the Ritz.

But Mrs. Dodds-Sinders declared that everybody who was anybody, both in books, magazines, plays and real life, always put up at the Cecil, and Cecil it must be.

Though the clerks in the office had been politeness itself, still, not one of the family but felt in his secret soul that they had been sized up for just what they were, newly rich, timid, and horribly afraid of blundering. There had been a wee little sneer in the booking clerk's eye, Nora thought, when he assured her imperative mother that they had been given the best suite in the house, and added, "Of course, you

know, our guests usually book in advance."

Now, Dodds-Sinders was wandering restlessly about, poking his nose into every nook and corner, examining the curious combined transmitter and receiver perched so jauntily upon the telephone hook, and pointing out in positive tones the great superiority of Canadian arrangements over the obsolete English ones.

Nora suggested tea.

"Why it's nine o'clock at night!"

"I know it, but it's never too late for tea in England, I'm sure of that. Let's begin ordering so they know we have money."

"Well, but have it coffee, little black ones; they always do have coffee sent up after dinner in England."

"Tell 'em to make mine two cups with lots of cream and sugar," said pa brightening.

"Caffay nory never has cream or sugar in it, Samuel!"

"Don't doubt it, but what I want is coffee."

"Pa! Café noir *is* coffee, in small cups. People drink it black after dinner."

"Let 'em, and you have it if you want it, but I want the other kind and I can pay for both."

"The big kind is not fashionable this time of night and you can't have it," snapped Mrs. Dodds-Sinders for her impossible husband had committed one horrible breach after another all the way over and her secret conviction that

what he failed to do she herself or her impulsive daughters attended to, helped not a whit.

While Birdie was giving the order and wrestling with her frank Canadian in an endeavor to turn it into the best Londonese, Nora stepped into the adjoining room and Mrs. Dodds-Sinders took a long preparatory breath. Then she let it go, for, after all, what use was there in scolding Samuel Dodds-Sinders?

Dimly she was realizing that snobs are born, not made, and that try as she would to make him one, and try as he might to be one, Samuel Dodds-Sinders would always remain the man forty-seven years of hard knocks and hard work in the mining camps of Canada and the Yukon had made him.

She could not forget how rarely he laughed now, how apologetic he was and how miserable he had looked from the moment they had torn him away from his beloved haunts at home and carried him off Londonward to acquire a polish. She could sympathize, for she felt miserable herself and forebore to scold. But since it would never do for discipline's sake to let him off unscathed, she turned her back squarely upon him and fell to gently massaging her cheeks, taking care to maintain a strictly rotary motion and push the sagging flesh upward.

Left to himself, Dodds-Sinders sank into a chair which was fitted with queer distended ears, and softly removed his shoes. Then he as softly elevated his feet to the marble mantel shelf and settled down upon the extreme back of his hair neck for a comfortable nap.

London servants are nothing if not dilatory, and by the time the coffee arrived Mrs. Dodds-Sinders was nodding and Dodds-Sinders was gently snoring.

The servant knocked. "Come in!" called Nora and Birdie from the other room, and come in he did to startle Mrs. Dodds-Sinders almost into a spasm and discover the Canadian millionaire in a position not at all becoming his millions.

There was a family quarrel after that and Ma's final shot at Pa was, "Now that walking poker will go downstairs and tell everyone how awful we are."

"Well Sally—"

"What?"

"Sarah, m'dear; you ought to be glad if he does. We got to do something to get known. Why that hotel clerk didn't know our name even! He's never heard of us."

"Don't you think so?"

"Know so. No, nobody'd know us from a custard pie. We are a long ways from home."

"Good!" cried Nora. "We will all keep our wits about us and learn all we can. Pa, you'd better buy a lot of mouldy old paintings and I'll send home some notes to the papers saying we are over here collecting for our gallery of art. It's the very latest thing. We will get a lot of new clothes and tomorrow me and Ma and Birdie will hunt up one of those poor ladyships who know everybody and are so poor that they have to make a living introducing strangers like us.

"After we get a few introductions—"

"Yes, and go to a house-party in the country."

"A shoot they call them."

"No they don't, they call 'em week ends, and——"

"No——"

"Girls! Don't quarrel. You are both right, so keep still. I can see that your father is going to be taken with one of his ideas very shortly."

"You may be old Sal, but you're not blind. I was just after rememberin' what that Count, what's his name now, was telling me on the boat about getting in right."

"Pa! You don't mean to say that you met a real Count and you never told us until he got away!"

"Oh Sam!"

"A Count!"

The voices were all fairly anguished. Dodds-Sinders settled back into his chair and enjoyed their woe for a full moment, then he carelessly announced that in exchange for complete absolu-

tion in the matter of the feet, as well as all other committed sins, he would tell them a piece of news.

It was the work of but an instant to wipe the soiled slate clean and then Pa told them that Count Victor de Vere, of London, Paris, St. Petersburg, the world in fact, was coming to lunch with them on the morrow and that he had asked if he might not bring along his bosom friend Baron Heim, of Berlin, Paris, St. Petersburg and the world.

"I told 'em," said Dodds-Sinders, "that I was shy on culture and all the trimmin's but long on the cash to pay for 'em."

"But how did you meet them Pa?"

"Well, some fellers had a little game of poker going and they asked me to set in. I sat, these two were already setting, and after the game we sort of got to talking."

"I didn't know until afterward that one was a Count and the other a Baron, but it didn't matter, they knew poker."

So, it came about that the Misses Dodds-Sinders, dressed in their best and accompanied by their beaming mother in her best, to say nothing of Pa in his best which was 'some swell' but in which he looked no different from what he always did, met Count de Vere and Baron Heim.

All went well until Pa lost himself in the jungle of the menu and ordered dessert for the first course. Ma crimsoned, Nora tittered hysterically, Birdie looked imploringly at the Count and that gentleman hastened to the rescue.

He did the ordering, so swiftly, and skillfully and thoroughly that they were all ready to fall upon their knees and call him blessed, especially Heim, for he was both hungry and thirsty. But, the size of the bill made Pa open his eyes, wide, and Pa was no piker either.

The Count enquired if this was not their first visit abroad and in the same breath suggested that the Dodds-Sinders allow them to be their guides, counselors and friends.

Their talk was full of references to

'my lord' this and 'my lady' that and long before the meal was over Nora and Birdie, to say nothing of their Mother, had absolutely determined not to let these fascinating foreign noblemen escape, particularly, as thanks to their perfect command of the English language, the Dodds-Sinders' were not called upon to essay any of their extremely doubtful French.

After the luncheon, at the suggestion of the Count, they all went for a spin in Hyde Park. Pa had become silent shortly after settling the bill for the luncheon and he remained as mum as an oyster except for an abrupt question now and then all through the ride which to Mrs. Dodds-Sinders and the girls was little short of Heaven itself.

A Count and a Baron! Hyde Park! London! Joy, Joy!

The Baron and the Count were continually doffing their hats and bowing to the occupants of other motors and carriages and it was quite evident that they knew everyone, even though judging from some of the puzzled and almost imperceptible nods, everyone was not quite able to place them.

The ladies themselves were inspected curiously. Enviously the girls thought, derisively, Dodds-Sinders would have sworn.

At last, after making an appointment for dinner at the Ritz the next evening with their new found friends the Dodds-Sinders ladies reluctantly allowed them to depart and once again in the privacy of their own suite Dodds-Sinders delivered himself thus; "Girls, I never go back on my word, once I've passed it, and I don't want you to. You promised to go with them fellers tomorrow night and so you got to go, but that's going to be the end of it."

"Why?"

"Samuel, are you crazy?"

"Maybe. But I don't like them. They speak English too well; they're too good at poker; they order too much when another feller is paying the bill; and they are laughing at us I bet a hundred dollars, this instant. They may be Counts and Barons all right,

but they look like grafters to me. We'd better look out for them."

"Silly!" said Nora impolitely, and Birdie tossed her head and left her paternal ancestor to her capable Mother.

Thereafter, Dodds-Sinders contented himself with scowling darkly at the mention of Counts and Barons and maintained a non-committal silence when in their company.

The titled ones were most attentive. They rushed the fluttering Dodds-Sinders ladies from hotel to hotel, from restaurant to theatre, and from theatre to opera. They drove and motored and inspected miles and miles of canvases, the happy Canadians cheerfully paying all the bills.

They introduced them to several gaily bedecked ladies and a few rather oily men, but, somehow or other, the friends of the Baron and the Count did not seem to be half as pleasant as themselves and the Dodds-Sinders' were content to let the acquaintanceships cease.

The Count devoted himself to Nora and the Baron was Birdie's special cavalier. Dreams filled their Mother's hours. With Nora Mrs. Countess Victor de Vere and Birdie Mrs. Baron Heim, what could she not do to the proud dames of Canadian society?

By all means let the distractions of general English society wait awhile, by all means encourage love's young dream.

Dodds-Sinders himself was the only stumbling block and when he at last perceived that his wife fully meant to give him Count Victor de Vere and Baron Heim for sons-in-law, and that the girls were determined to waive love in favor of titles, the hitherto meek and amenable worm fairly raved.

Mrs. Dodds-Sinders simply let him rave until he was tired and then demanded the reason for his dislike. He could not give a really good one and until he could, he knew that words were worse than useless, so he therefore hired a cab, bought a clay pipe and a package of strong tobacco, and had himself driven all over London whilst he did some thinking.

At last, he drove to the office of a well-known Canadian and after telling his story, frankly asked advice. It was freely given and he departed for the Cecil wearing a grin such as had not graced his features since he had left the land of the Maple Leaf.

The next time the titled suitors called, Dodds-Sinders was affability itself. He insisted upon monopolizing the conversation and talked about everything from Old Masters to stocks and bonds.

To the surprise of the ladies, their guests seemed really interested in Pa's chatter and prolonged their after dinner cigars to an unheard of length, whilst they cooled their impatient heels in the Ladies Lounge and fumed at the delay.

Left with the men, Pa explained in great detail how he meant to surprise the good lady and the girls, insisted upon secrecy and begged the help of the Baron and the Count.

"You know, me lads," said Pa, refilling their glasses, "An old miner like me don't know much about these deals. Now I feel that I can trust your judgment, and you wouldn't see me get in bad on a thing like this. Can I rely on you?"

Could he? Well rather! They assured him so emphatically that nothing but his interest engrossed their thoughts that after a little skirmishing Pa finally gave the whole enterprise into their hands. Then, after another glass he once more commanded silence and they rejoined the ladies.

The next day Pa summoned the Count on the telephone.

"Well, news travels fast," he said, "I met a feller this morning and he said he heard I was looking for something mighty fine, and he believed he had it. So, Count, I told him that he would have to talk to you because I was now in your hands. He's coming up to see you to-day. I hope you don't object? His name's Sentous. I took him for a Porchygee but it don't matter anyway, long's we get the goods. Oh say, Count, could you hurry it all up a bit? I'm so tickled over the sur-

prise for the girls that I can hardly wait."

At first the Count had frowned heavily but at the name Sentous he smiled, and when somewhat later that gentleman called upon him and he recognized in him an old friend, he felt considerably better.

A week after this conversation, upon the eve of Mrs. Dodds-Sinders' birthday, the Count and the Baron entered their parlor upon the heels of lackeys bearing two rather large rectangular packages, carefully done up in many wrappings.

The servants set their burdens down very carefully and withdrew.

Dodds-Sinders prayed the Count and his friend to be seated and then with a great air of mystery took up a commanding position upon the hearth-rug and began.

"Sarah, m'dear, an' Nory an' Birdie—phew! but it's hot! I'll just open the hall door here so's to have air."

"As I was saying, seeing as it's your birthday Sally an' Nory's next week, I says to myself it's time you was getting busy Sandy Sindere—Dodds-Sinders, I should say. Now says I to myself, says I, it's up to you to dig up something new for the good lady. Since she's knowing barons and counts and living in London, something extra ain't any too fancy for her. I know I'm nothing but an old retired miner and I know what's what when I see it in minerals and such, but hang me if I can tell a old master from a hydraulic hose. I'll get our friends the Count and the Baron to do my shopping for me. They done it and——"

"Oh Pa! Pictures!" cried Nora and Birdie falling upon the packages in high glee.

Dodds-Sinders held up a restraining hand. "Don't interrupt me. I only got to say that I done my best. I ain't old enough to get into the Canadian Senate yet, and won't be for forty years, but I got you something here unless I am fooled, what you won't stop thanking me for to your dying day."

"Open them up, gents."

The Baron and the Count smilingly proceeded to unfasten the parcels with the most painstaking care, volubly assuring Dodds-Sinders meanwhile of his wisdom in trusting them, the girls and their mother hovering near, all smiles.

Pa took out a check-book and fountain pen, clearing his throat loudly the while.

"Guess I may as well settle for these here now. Fifty thousand is the price for the two, ain't it?"

"Yes, and a marvelous, unheard of bargain at that price," said the Baron and the Count in concert.

Then they lifted two dingy brown canvasses from the wrappings and held them reverently aloft.

"Ladies! Behold! Both genuine Rembrandts!"

"Guaranteed?" asked Pa, making his best flourish on the check.

"Absolutely genuine!"

Pa handed the check to the Count and the pictures were placed in the outstretched hands of Mrs. Dodds-Sinders and Nora.

At that precise instant the door was flung wide open and four men from Scotland Yard came in. Pa seemed to be expecting them, for he greeted them cheerfully. "Just in time, me lads, just in time. These are them. Take 'em along!"

The Baron and the Count turned pale, swallowed hard and the Count turned and dashed for the inner room.

Birdie screamed and Mrs. Dodds-Sinders sank into a chair gasping, "What does this mean in heaven's name? Let go the Count this instant! Baron! Can't you explain?"

The Baron's face had turned pale with fright. The officers snapped handcuffs upon their captives and Dodds-Sinders, highly pleased, signed to the captain to explain.

"Madam, this 'Count' here is known as Slippery Dick; he is a noted confidence crook and no Count at all. The 'Baron' is known to The Yard as Mike the Dutchman. They simply bought those chromos from a dealer and

charged you a fortune for them. They are impostors. Thank you. Good-day."

The Count and the Baron were marched away and the Dodds-Sinders family were left in peace. After Pa had explained how he had hired the thief Sentous to help him catch the thieves, and how payment upon the check at that moment reposing in the pocket of the Count had already been stopped and had enjoyed his triumph to the full, Ma, utterly crushed, suddenly broke down and sobbed, "Oh, what a birthday party, Sam; I'm much

obliged for it, I suppose, but oh dear, I never want such another."

"I never did really *like* the Baron," said Birdie. "Pa, I am cured of titles."

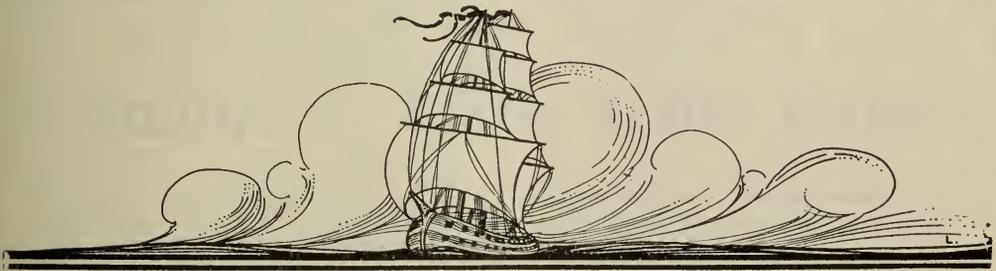
"So'm I," said Nora fervently.

"How about you, Sally?"

"I am too, Sam, I'm cured, but," added Mrs. Dodds-Sinders brightening, "it's the first time you ever were right in your life!"

And then Dodds-Sinders added to his triumphs the greatest of all, for he had the last word as he observed significantly, "No, Sally, it's only the first time I've ever been able to prove it."

The Third Story in the Dodds-Sinders Series will appear in the April Issue of Farmer's, in which "The Return" of the Family will be featured.



Don't Be a Habit Man

"DO you know what a habit man is?" asks the Business Philosopher. He is a man who does a thing to-day because he did the same thing yesterday. Repeating is easier than thinking—so Mr. Habit Man repeats.

His name is legion. We find him everywhere.

There he is now—that bookkeeper. He has been holding the same job for the last ten years. He has been putting the same figures in the same books all that time. His horizon ends at the top of the page. That is the reason the other fellow who is five years his junior and has been with the firm only two years is now secretary at twice the bookkeeper's pay. The younger man thought. He grew. He found better ways of doing things. He became worth

more to the firm and they paid him more.

Just a simple commercial transaction, that's all.

A Habit Man is a machine. A machine, you know, does not improve with age. It usually wears out. So does the Habit Man.

Repetition is rust. Doing the same thing in the same way day after day wears a rut that finally penetrates down to the very depths of stagnation.

Cudgel that brain of yours or it will surely lapse into a life time sleep.

Think! Dig! Make every day a day of improvement. No man is doomed save the Habit Man. And No chains of habit can bind tight enough to hold the man who would break them by red blooded thinking effort.

Don't be a Habit Man.



Cement silo and barn which carries a dairy of thirty cows.

WHAT SILO SHALL I BUILD ?

Note.—This article will be found of interest to all intending builders of silos. It must not be taken for granted that the arguments given in favor of any one silo are conclusive. It may be better for some farmers to erect a wooden silo. It may be better for others to erect a cement one. There may be, however, some things in the case of each that the farmer has overlooked, and in that way this article will be a big help to him.—Editor.

By George H. Dacy

A DURABLE and reliable silo is a necessary adjunct of every modern dairy or sheep farm. Even on a large horse farm the silo is of value, as ensilage plays no small part in the economy and efficiency of the well balanced horse ration. An increase of approximately forty per cent. is noteworthy in the feeding efficiency of the corn crop where this carbonaceous feeding stuff is consumed in the form of ensilage instead of being eaten as ear corn, corn fodder or stover or as corn stalk. The use of the silo minimizes the labor of harvesting and feeding the corn crop while it supplies the farm animals with a highly relished, succulent roughage

during a season when pasturage is not available.

Ensilage has come to be of such value in the dairy herd ration that many milk farmers feed it the year around. Ensilage fed in conjunction with alfalfa or a combination silage composed of two or three parts of corn to one part of either soy beans or cowpeas, furnishes a practically balanced ration which, in itself, is sufficient food for the high producing dairy cows. When one considers that silage makes for cheap and rapid gains among the fattening steers and sheep, as well as engendering a maximum milk flow in the dairy herd, it is small wonder that farmers, the

country over, are building so many silos.

MANY KINDS OF SILOS.

Naturally the first question that comes to the countryman who has determined to build a silo on his farm is, "What kind of a silo shall I build?" At the present time silos are being built of wood, stone, brick, tile, iron, and concrete, and the silage will keep as well in one of the structures as the other, if proper care is exercised in the building and filling. On account of the scarcity and correspondingly high price of good lumber, the wooden silo is being supplanted by one of a more durable nature. The stave silo, which is so popular throughout the country, is liked because it can be quickly erected, it is adapted to any size of structure, it has a smooth interior wall that facilitates the rapid settling of the ensilage, and it can be purchased directly from the manufacturer, all ready to set up.

However, a stave silo that is left empty during the three summer months, is liable to shrink and collapse. This means that the staves will pull apart and sometimes twist out of shape. This type of silo requires close attention as it is neither vermin nor ratproof, and it is not immune against decay. The relative cheapness and possibility of moving the stave silo are points in its favor. Stave silos are particularly favored by farmers that own from ten to twenty cows. Such silos must be placed on a good foundation to which they are securely anchored, in addition to being tied by means of a cable extending from the roof of the silo to a post set in the ground, some distance from the structure.

Ordinarily a good silo fourteen feet inside diameter by twenty-six feet high, with a nine foot foundation, will cost about \$300. The Gurler silo, another wooden variety, which is made of two by four studding, and sheeted up on the inside exterior costs about \$200, for a structure sixteen feet in diameter and thirty-six feet high.

Quite commonly, the latter silo is built inside the barn, when it is necessary to sheet up its exterior. In such cases the cost of the silo amounts to \$150. The special objection to this type of storage building is that the curvature of the boards on the outside constantly keeps the ends of the boards in tension working against the nails, and for this reason it is never advisable to build one of these silos of a smaller diameter than fourteen feet.

THE STONE SILO.

At one time stone silos were quite popular. Where stone is plentiful and long hauls are not necessary, silos of this type are efficient and inexpensive. They are usually long-lived, and are condemned only on the ground that air may penetrate the mortar of the wall. Stones are so porous in nature, that unless they are thoroughly wet when placed in the wall, they will absorb moisture from the mortar, so that it is of little avail as a protection against the atmosphere. Every fourth year stone silos must be "pointed up," while they must be strongly reinforced to begin with, in order to prevent wall failures.

Brick and tile silos are costly, as structures that cost only \$300 when built of other material, will cost \$400. where brick or tile are used. They must be well reinforced to prevent wall ruptures, and must be frequently "pointed up" to hold air leakage in check. As they are wholly airtight, iron silos preserve the ensilage in excellent condition, but their cost is prohibitive, while the silage acids act injuriously on the iron.

For all-round efficiency the solid wall concrete or monolithic silo is to be highly recommended. Such silos are simple of construction, cheap, durable, and permanent. They cost about the same as a good wooden silo, and are only half as expensive as brick or tile structures. Although the concrete silo is criticised on the grounds that it promotes the freezing of the silage, the truth of the matter is that ensilage freezes no more readily in a well con-

structed concrete silo than it does in any other variety. A concrete silo cannot burn down; it never leaks; it is ready to fill without repairing; it will not blow over, and it has no hoops that may fall off. Such a silo should be air-tight; the inner surface of the wall should be smooth; the walls should be rigid enough to prevent cracking and to withstand strong winds, while the walls should be non-conductors of heat and cold.

THE CONCRETE SILO.

The concrete silo when built as a monolith is practically a unit. Its walls and roof are connected by a network of steel reinforcement. The walls usually are six inches thick and are reinforced in proportion to their size and capacity, number nine telephone wire being excellent for this purpose. Where used for vertical reinforcement the wire should be placed in short lengths. Forms of wood or steel are used in the construction of the concrete silo. Some of the agricultural colleges maintain forms that they rent at nominal charges to the local farmers who desire to build monolithic silos. In other cases the silo builder has to build forms which will cost about \$75, where constructed of wood, or he may be able to rent steel forms that cost from \$100 to \$400 per set when they are built.

The size of the silo depends on the number of animals in the herd and their individual size and capacity. The silo should be of such height and diameter that one and one half inches, and preferably two inches, of ensilage will be fed each day. This keeps the top of the silage from drying out and molding. Generally speaking, the silo should be twice as high as its diameter. The silo should be about five feet higher than the amount of silage that is to be put in it, so as to allow for settling. In filling the silo to the top, as much silage should be put in the first day as the structure will hold, and then it should be allowed to settle for three or four days before refilling. It does not pay to build a silo for more than ten cows. The best plan is to build the

silo and then to purchase more cows. A silo larger than twenty feet in diameter it not to be recommended, as it is wasteful of feed and labor in feeding the animals.

KEEPING AIR OUT AT DOORS.

Where trouble is met with, either with the concrete or wooden silos by air leaking through around the doors, the best plan is to plaster the door jams with a mixture of putty made from red clay and water, at the time of filling the silo. A piece of heavy roofing paper should then be cut somewhat larger than the door opening and put over the doors, letting the silage pack closely against the paper. Such a practice will insure an air-tight door. Although in some sections of the country the silos are built without roofs, the preferable plan is always to roof the silo. The concrete silo should, of course, be equipped with a permanent concrete or steel roof.

BUILDING ON GOOD GROUND.

A firm, sandy loam is the best soil on which to build the foundation for the silo, as it drains easily and will always retain its stability. In a clay soil the foundation footings should always be started below the frost line unless thorough drainage is provided. Black muck soil furnishes a poor base for the silo, and it is necessary to guard against settling where the silo has to be built on such a soil. The bottom of the soil should be below the frost line and at least five feet deep. One prominent silo expert phrases the directions for laying out the silo as follows:

"Having selected a suitable location for the silo, lay out a circle by means of a sweep with a hole in one end, the other end being fastened to a nail on a stake. At a distance of half the diameter of the silo from the stake a pointed stick should be run through the hole in the sweep, and keeping the sweep level by use of a carpenter's level, a circle should be drawn on the ground.

"The excavation should be made six feet deep and wide enough for a twelve-inch wall. The floor of the silo should be about four feet below the ground line. The bank of earth should be cut away enough so that footing trenches two feet wide may be made.

No forms are necessary below the ground level, as the earth wall acts as the boundary for the concrete. The inside form should be placed and those above the grade line, and then the concrete may be mixed and poured into the form. Concrete foundations for wooden silos should extend from eighteen inches to two feet above the surface of the ground, and should be twelve inches thick. Solid-wall silo foundations should be one foot thick, and should end at the ground line where the six-inch wall should begin."

MIXING THE CONCRETE.

For silo construction the concrete is mixed according to the batch mixing system. This work may be done by machine where desirable. The concrete should be prepared on a water-tight platform, and some method should be used of readily measuring out the desired proportion of sand, gravel and cement. The best plan is to use a wheelbarrow of known capacity or to count the shovelfuls of each ingredient. None but clean sand and gravel should be used. Spread the cement over the sand and gravel on the platform and mix thoroughly, and then the water to the desired consistency, continually mixing the concrete with shovels. As concrete hardens rapidly it should not stand more than thirty minutes after the cement is first wetted before it is placed. It is essential not to separate the materials when the concrete is poured into the forms. Pouring from a considerable height should be avoided, as such a practice tends to settle the heavier parts to the bottom, while the light materials remain at the top. If the concrete is very wet it will handle easily and can be poured six or eight feet without injury.

After each twelve inches of concrete is placed in the forms it should be puddled or tamped with a flat spade, shovel or sharpened board. After the surface has been sufficiently tamped the upper surface should be roughened to receive the next layer. The second layer should be poured before the previous one is thoroughly set, and a little dry cement should be sprinkled between the layers where a good connection is desired. After one foot of concrete has been poured all around the silo

forms, the continuous reinforcing bands should be placed about one inch from the outside of the wall. Then pour on another layer of this concrete and repeat this reinforcement until the forms are full. The usual method is to place the forms early in the morning and to fill them before the noon hour, so that the regular farm work may be carried out during the afternoon where the farmer is building his own silo. In this way it takes about two weeks to erect the silo with three men doing the work.

A very durable concrete silo of the solid wall type which I recently inspected was constructed at a total expense of \$293. This silo was fourteen feet inside diameter and thirty-five feet high, exclusive of the roof. Its capacity is ninety-five tons. Fifty barrels of cement, twenty-eight cubic yards of crushed stone, and sixteen cubic yards of sand were used at a cost of \$99.60. The reinforcement and galvanized iron for the roof door cost \$25; the side doors cost \$4.60; the labor bill amounted to \$159.; the rent for the staging was \$5. The best material was used in building the wooden forms so that the average farmer could cut down this expense by using poorer grades of lumber. Furthermore, the crushed stone had to be bought at \$1.25 per cubic yard, whereas the general farmer will doubtless have plenty of stone and gravel right on his home farm. It was not necessary to plaster the outside wall of this silo as was done, so that the farmer could further decrease the cost by not surfacing the outside wall with the creamy wash of cement and water applied with a whitewash brush.

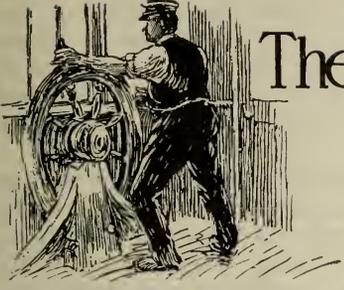
Where possible the silo should be located on the south side of the barn, or it should be sheltered by other buildings to prevent the freezing of the silage. The round barn with the silo in the centre usually remedies any difficulties that may arise from frozen silage. Where the circular barn does not exceed seventy feet in diameter, and where it provides space for but one row of stalls around the circle,

such a building is convenient, efficient, and from thirty to fifty per cent. cheaper than a rectangular barn to accommodate a similar number of dairy cows. During freezing weather the doors, ventilators and windows of all silos should be closed except at feeding time. The silo should be connected with the barn by means of a good chute which will facilitate feeding operations and will

aid in preventing freezing of the ensilage. The interior of the stave silo should be painted once every two years with hot coal tar or coal tar creosote. Coal tar, asphaltum, and creosote should never be used on the walls of a concrete silo, but a wash of cement and water mixed to a creamy consistency may be applied with a whitewash brush as the occasion for so doing arises.



This stave silo was first erected on a farm near Toronto. It was then taken down and put up on this farm. Now in use for over 20 years and sound yet.



The Pea Soup's Tug of War

by

Edward J. Moore

There is a novelty about this story which most readers will like. It depicts a tug-of-war, but one quite out of the ordinary. The affair is pulled off on water rather than on land. Lake Ontario is the scene of action—and there is action in plenty, in addition to character and humor.

“PEE-ZOOP—pee-zoop—pee-zoop.”

That's exactly how it sounded down in the engine-room of the Old *Oshawa*, when she was plugging up into a heavy wind. The big single cylinder seemed to force the greasy piston out on its four-foot stroke rather reluctantly. When it got to the dead-centre the wheels outside seemed to hesitate for an instant, and then go on again with a rush, with the “zoop” of the return stroke.

“I wondered why they called her ‘The Pea-Soup’ on the *Toronto*,” I said to old Engineer McPhee, as he sat back on a grating over the cylinder, smoking one of my cigars, “but I see now.”

“She's grunted like that for well on twelve years,” he said, pushing his cap back on his gray hair and twisting around for a look at the water glass, “ever since the day we pulled the *Levis* off a ledge on the ‘Long Shoo’ rapids.”

“Naw, I haven't time to tell you about it,” he said, and to get away from my persistence, grabbed an oiler and started down the iron ladder toward the condenser. “But,” as a parting shot, “ask Redfield. He knows all about it.”

I did get hold of Captain Redfield in the wheel-house that evening and asked him for the story. At first he seemed offended, but after a minute grinned good-naturedly.

“Not from me, young fellow. It hurts me too much yet. Andy McPhee sent you up here. He likes to jolly me over it about three times a year.”

Next day, however, when we were pegging away up Lake Ontario, with the old engine smacking over her “pee-zoop—pee-zoop,” I got the story from Andy.

“She wasna sich a bad old craft in her time,” he started off, in rather a round-about way, “but they nailed forty feet on to her aft, and stuck a noo deck on up above, an' now they load her down with canned goods and iron pipe till she grumbles with the strain, and then want me to make the trip, up the canal an' all, in the same time I used to.”

The *Oshawa* ran from Montreal up the St. Lawrence, through the canals, and via Lake Ontario to Hamilton, stopping at the larger towns for freight and with a day at each for loading. She was scheduled to make the round trip in a week.

“I helped put this old pop gun intil her,” McPhee went on, pointing down to the big cylinder below us, “an' mighty good work it's done. A set o' them little triple-expansion outfits with a screw behind, like they're puttin' in now-a-days, would 'ave jiggled the bottom off her years ago.”

“But,” with a reminiscent chuckle, “I was telling you of the tug-of-war we

had with the *Levis*, and the 'Long Shoo' rapids.

"One day, back in the summer of '96, I think it was, we were pluggin' up the Cornwall Canal at a good clip, goin' up fairly light, it bein' near the first of the season, and gettin' near the head when we heered a most ungodly tootin'. It was comin' closer, too, mighty fast.

"I left my mate with the engine an' rushed up on deck an' in a minute saw what was in trouble.

"Comin' down the rapids, blitherin' about, one minute sideways, the next end on, the next half on her beam ends, was the *Levis*, our company's crack new rapids boat, and up on deck, some o' them lyin' down, some o' them pray-in, was the scarest bunch of human nature you ever got your eyes on.

"We guessed ther was somethin' wrong with her steerin' gear, and we guessed right, only not big enough.

"Tom Redfield was a wheelsman on her then, that's where the joke comes on him, and that day he'd been talkin' to a pretty girl up on the bridge and goin' round a curve a quarter of a mile above he got her in the inside current too late and she bumped her rudder and ten feet of her keel on a ledge swingin' round the corner. Tom said afterwards somebody'd cut down a big tree he always'd steered by, and it surprised him so he forgot where he was. I've always blamed it on the girl.

"But anyway, the *Levis* came plungin' down, scrapin' over the shoals, rearin' up like a fiery horse and goin' over sideways in heaves like a buggy in a rut. Lucky she was light draft and had a chunky nest of boilers set well down in her. If she hadn't been built for it, so to speak, though not exactly for that, she'd 'ave stuck and turned over in a minute.

"Up there, in the canal, above the river and only fifty yards away, we could watch her pretty plain. Goin' round the next bend she slewed over near shore, and we heard her scrape hard. She canted over, rolled free,

made a sort of sideways dash in a cross current for the middle of the river where the water showed white, scraped again, then stuck, swung half around, rolled over as the current caught her broadsides and then swung back.

"She seemed to have caught on sort of a pivot and hung there, swingin' back an' forth. All the time her whistle was tootin' most gorgeous. Bob McDonald was hangin' on to the whistle rope, I guess, wonderin' what was comin' next.

The story stopped while McPhee made a tour of the bearings of the big machine, dropped the jogger of a force-feed oiler into action and looked up at the steam guage.

"This old outfit eats coal most voracious," he resumed, "and the stuff they give us now ain't scarcely worth firin' with. I used to get all the steam I wanted but now I have to keep jogging the boys in the stok'old all day. In the old days I could push her up thro' Farron's—Oh, yes, I was tellin' you about the *Levis*.

"Well, we watched her hangin' on that ledge, twistin' round, rollin' over an' back, wonderin' how long she'd stick, for about five minutes. Every once and a while she looked as if she'd slide off, when the current caught her and tipped her up forrud. All of us who knew the 'Long Shoo' knew what that meant, for just 'round the next bend the river took a dive into one of the wildest parts. One to a thousand she'd a turned over the first roll, down there.

"I wasn't thinking then of bein' able to do anything but all of a sudden Captain Redfield, father of Tom, who had the *Oshawa* for twenty years till he got too old to see straight, called me up on the bridge.

"'How's your engine runnin' to-day, Andy,' he says, sort of scowlin' like. 'D'ye think we can run back an' tie up to the *Levis* long enough to take the people off her?'

"Holy Peter, I says, do you want to

get us into that mess, too. Well, you can land me at the head of the canal.

"Don't tell anybody else," he says, 'or they'll all leave, but we're goin' to do it. We'll swing round when we get well up into the river.

"I knew what was bothering the old man. Tom was on board the *Levis*. An' I have guessed too, that the captain had a share in the boat. He got a bigger share afterwards.

"I got down below here again an' made her sift up to the first lock in high order. We went through that too, scarcely waitin' for the head gate to open.

"While we were workin' up into the river the old captain came down to me in the engine room. 'I'm goin' to take her down myself, Andy,' he says, 'an' I believe we can get her through. We'll drop down to that cove in the bend above where she's stuck, swing around there and go down stern first. I'll try to get a line aboard 'em as we go past, and you'll have to hold her up in the current if I don't.'

"Good heavens, captain," I says, "what do you take me for, a steam winch? Such a thing's never been done in the river.

"Which ain't sayin' it won't be," he says, with a sort of chuckle,—he always did that when he was excited—and he climbed off up on deck.

"Well, the scheme worked all right, at least the first part of it. I didn't expect the *Levis* would hang there till we got down to her, but when we come round the upper bend there she was still swingin' round, lookin' sort as if she was built for a new-fangled merry-go-round. We dropped into the cove, and though I felt her jar when she scraped once, we got round alright and headed up the river. Up the shore line I could make her move a little, but out in the current—as I thought at first—it'd carry us down like a dingy.

"Howsumever, the old man kept manoeuvrin' back and forrord, up an' back for fully five minutes, till he got in just the swirl he wanted and then

signalled me down to slow, with the wheels still runnin' ahead.

"We went back, easy at first, then faster, and then Bill my mate, who was standin' over at the gangway, yelled that we were fair to bump the *Levis* stern on.

"That was ruther a ticklish minute for me, standin' at the valve gear here, not knowin' what was to happen, but I had a most amazin' faith in the old man, an' it was justified too, for we got caught in a cross current just above the ledge and swept across and down the channel not more'n thirty feet away from the *Levis*. I got a most amazin' signal for 'full head,' an' I tell you I give her steam in a hurry, an' we seemed to sort of hang there. Some way the boys got a line aboard the *Levis*. they hauled over a hawser an' first thing we knew there we were tied up to her, without even a bump, we just holdin' our own in the current, gradually pullin' in around behind the ledge.

"We hung there for a minute or two and then I got the signal to ease her down a little, an' then, a minute later, to go up on deck.

"I was glad to get out for a minute, too, to see where we was, so I left Bill with the engine and made a bee-line for the wheelhouse.

"Going along the deck I had a chance to take in the situation. After droppin' below the ledge that held the *Levis* a cross current had swung us in till we were in a sort of boiling pool behind her and about two feet lower down. We were only, perhaps, a hundred and fifty feet away an' a hawser ran from our bow bitts up to her amidships. This was hangin' easy. Our wheels just kept her against the current.

"When I climbed up into the wheelhouse there was the old captain, sittin' cool as a cucumber, with a sort of grin on his face. 'What do you think of it Andy,'" he says.

"What bothered me was how he was goin' to get the people off the *Levis* an' I told him so. 'You could do it with a breeches buoy outfit,' I says, 'but before you'd get one rigged up the *Levis*

'd be tumblin' over the ledge on top of us.' I thought of tryin' to send 'em down in a boat, but the cross current over the ledge was so stiff they'd likely miss us or be turned over.

"I could see the men below bringin' up a couple of hawsers which belonged aft, an' followin' my look the old man says, 'Andy, we're goin' to pull the *Levis* off the ledge an' up into the cove. I wanted you to see what was ahead o' you.'

"Yes, I says, an' we'll blow the head off our cylinder doin' it an' you'll be floatin' down past Lachine on your back in a couple of days.

"'Quit your joshin', Andy,' he says. 'If we can get up through that sluice way of a channel again we'll be alright. I've been studyin' things while we've been warpin' in here. The *Levis* is hangin' there on a sort of pivot up near her bow. When she swings round she strikes again on a straight raise near her stern which keeps her from comin' over, but when the current gets her again she swings back free. I think, with a good jerk at her stern we can pull her off.

"But how are you goin' to get the jerk, I says, when your own boat can't keep her head in that current.

"'Andy,' he shoots back, 'I know you and I know this boat an' her engine most as well as you. She's got to do it an' she will if you want her to.'

"And his confidence sort of made me feel we could.

"'I'm havin' a couple of hawsers spliced,' he went on, 'so's to give us lots of room, and they're passin' a couple more down from the *Levis* to have in case o' need.'

"I got down below then," the old engineer continued, as he saw the interest intense in my eyes, "an' got a couple of fresh boys down in the stok'old, for I had an idea of about how much steam I was goin' to use. Then I come back here and Bill and I got everything tightene'd up for a stiff pull.

"After about five minutes warpin' back and forth down there behind the ledge with the wheels runnin' easy, I

got the order to stand by, an' the old captain shouts down the tube, 'Give her all you've got when I tell you, Andy, she'll need it to get up over the ledge.'

Three toots from the big whistle above broke in on the story.

"Wonder what we're passing now," the old engineer queried. Then, as three hoarser ones answered, "The *Caspian*, eh, she's mighty late to-day," and in a minute more we could see the white bow and then the blue trimmings on the paddle boxes, as they came in line with the window opposite the engine-room door.

"See her old walkin' beam joggin' up an' down?" Andy remarked. Her cylinder stands straight up like a pump in a well, and tries to push a hole in her bottom every time she makes a stroke. If we'd had that riggin' in the *Oshawa* we'd never 'ave got over the ledge that day.

"So you managed it?" I questioned in my turn, to bring him back to the story.

"Well, I wouldn't be here if we didn't," came the reply with a sort of a snort, and then, with his eyes shining in reminiscence, he went on.

"I recollect hearin' the safety valve pop off with a roar while I was waitin'. The boys below had been feedin' her well. Then I got the bell for half-ahead an' half a minute later for full, an' then the fight commenced. Cap' Redfield told me after he thought he could make the channel on a slant but once out in the whirl of it he saw it'd carry our bow around, so he had to swing in square on. For a little minute I felt her bein' carried back but I give her another notch of steam until I could sort of feel we were holdin' our own.

"'Give her some more, Andy,' the old man shouts, sort of chucklin', down the tube, an' though I hated to, I gave her another notch and in a minute this old ramrod," pointing to the piston below, "began to run up an' down like a churn handle, an' the wheels outside started to kick up a fuss rather unnatural.

"Seemed sort of cruel to do it," the old engineer kept on, with the love of the staunch and true in machinery construction making itself felt in his story and in his eyes. "Things began to creek up some and I sort of felt a grinding in the main shaft bearing on the sta'bord side. But would you believe it, the old cap'n kept us goin' like that for fully twenty minutes before he signalled to ease off a little.

"But you got up," I queried anxiously.

"Oh yes, that took us up through the worst of it, through that sort of flume," he said, "but don't forget that we were yet in the middle of one of the worst parts of the 'Long Shoo,' with our engine runnin' over her capacity to keep us even where we were and with a bunch of people on a stranded boat behind lookin' to us for their lives. I tell you, yon was some anxious minutes, and they weren't short ones neither.

"What bothered me was whether the steam'd hold out. It fell twenty pounds when we was comin' up through the flume, with the boys doing their best down below, then. But Bill fixed that later.

"Then around here things were lookin' mighty queer. The main shaft bearing began to groan some and I had to get the purser—he had nothin' to do, never has—to get out a length of hose from the fire pump forrud and play kind of easy on that and one or two other suspicious lookin' spots. You know, of course,"—a query as to my technical capacity—"if one o' them bearings had ever stuck up from overheatin' where we'd ave been?

"While we were hangin' there in the river, fightin' to hold our own and now an' then twistin' a little from side to side in the swirls of current, I could hear some hawsers being tumbled around up above and suspicioned they was transferring the line from the *Levis* over our stern. In a minute or two more the old man calls down again: 'All ready, Andy. Now for the tug of war.'

"And then," continued the old en-

gineer, "the real fun began. I'd been watchin' the steam gauge rather close and it most made me fall over when it began to go up again in jumps. After a minute or two Bill came back smilin'—I hadn't missed him in the hurry of things—and told me he'd dumped a couple of barrels of extra oil down in the stok'old and broached 'em to over the coal. That saved me from any worryin' on that score.

"But that wasn't all. When I went to give her more steam to take up the slack in the cable and try to get a pull at the *Levis*, I found she wouldn't 'cut off' right. A sort of knockin' on one of the rods told the story, and I had to send Bill down to monkey with that loose bolt with the whole machine in motion. It was like trustin' yourself in the inside of a sausage machine, but, someway or other he got down, got a spanner on the bolt for a bit of a second each time the rod came around and got it set again.

"By this time the old man was howlin' again for more steam. He never could see any limit to any engine, the old captain, and it made me mad. I says to myself, 'I'll give you enough for once or poke a hole down through intil the river.'

"And they do say," the old man went on, pride in the achievement making itself evident, "that the old *Oshawa* started off then like a lumber tug, and the people on the *Levis* thought we'd pull her off if we had to lift up the bottom of the river. Of course I don't vouch for that myself.

"But anyway," as if to justify the boasting, "I did feel a jerk when we tightened up the slack of that cable and felt the old boat quiver when she settled down to the work.

"It was then," with a smile, "that the name came to the old craft, for she christened herself.

After a few minutes steady pulling she seemed to settle down on herself and to do the work with less fuss. Bill kept the oil going well over the machine and I stood here, giving her a little more or less steam when the current

seemed to catch her hard or easier. She was workin' so that you could feel it all over her.

"Then, sort of gradual, faint at first, but growing louder, I heard that whistlin' begin to come from the cylinder—'pee,' with the upward stroke, 'zoop,' when it went back—'pee-zoop, pee-zoop.' I thought at first the packing was blowing out and got mighty uneasy, but it got no worse, an', do you know, the old machine's got off the same song whenever she's been in a strain, ever since.

"But what about the *Levis*," I threw in, to get back on the story. "Did you get her off?"

"We got her off," the old man continued, with annoying deliberateness, "after about three hours of pulling. Started to yank at her about noon and freed her about three. The old man tried her every way—bow, stern and even amidships till everybody was fair tuckered out an' sick with the strain, an' then when we least expected it the current took an unusool twist, lifted her bow up an inch or two higher than ever before and getting a strain on at the right minute we twisted her round and started up the river with her, stern first.

"After that it was fair easy. Though a few blades were cracked, her wheels would still run and when we once got her in line Bob McDonald started her engines and ran her reversed, helping this old machine out.

"It was a funny sight that," he went on, slowly, as though mentally seeing the picture over again. "After a little I got up on deck for a minute to see how we were doing. There was the old *Oshawa*, belchin' a pillar of smoke like a volcano, wheels fairly tearin' around, stickin' her nose into the swirls like a fast liner and tremblin' from stem to stern with the strain of it all. And comin' along behind us on the end of the hawser, like a whipped schoolboy, was the spic and span-lookin' *Levis*, with her movin' wheels givin' her the appearance of holdin' back. But you should a heard the people on her cheer."

"How did it end," I interjected. "Where did you take her to?"

"Oh," with a resigned sniff, as if nothing remained to tell, "We pulled the *Levis* into the cove, where we'd turned the *Oshawa* round four hours before, and let her strand there twelve feet from shore. They threw out a double gang plank and let the passengers off without wettin' their feet. The company sent a gang up after a day or two, built a coffer dam around her and in a month had her out on the regular route, good as ever.

"And the *Oshawa*," I suggested.

"Oh, we ran her down through the rapids to Cornwall and laid up there over night while we got in a new load o' coal and I got the old machine cooled off an' straightened up. Started off up the canal again next morning and got into Hamilton a day late. The company kicked, too, because we didn't make our schedule."

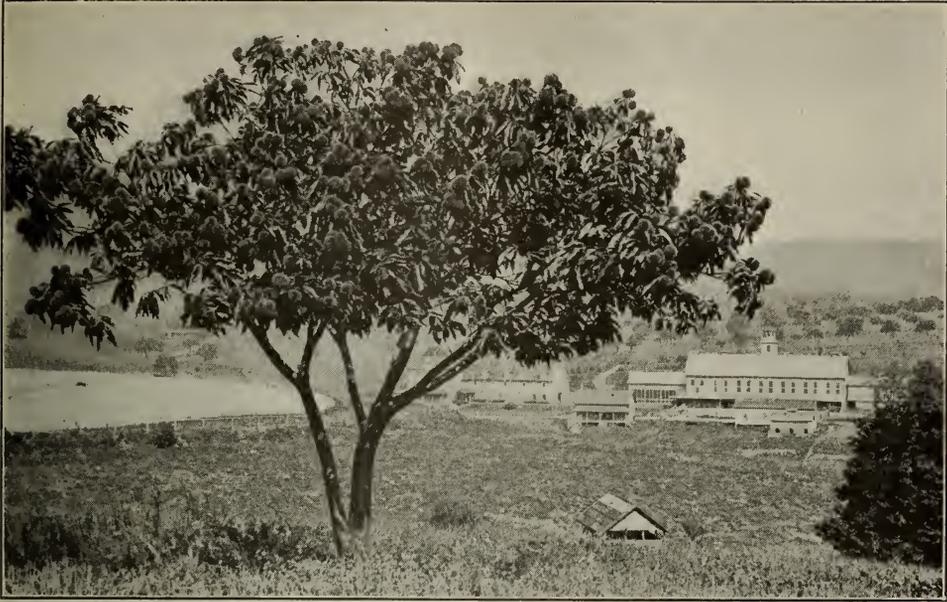
"Surely not," I began.

"Well, just at first," with a smile. "A little while after I got this." He took a worn case from his vest pocket under his slicker, snapped it open and exposed a good-sized gold watch inside.

"A few miles further up," he said again, "you'll see a little broken-down pier, with a patch of woods beside it an' some houses behind. That's Colborne and one o' the houses I bought with my share of the salvage of the *Levis*. My old wife usually comes down an' waves to me when we go up. Comin' down we're too far off shore. I'm there myself after the boats stop in the fall."

And fifteen minutes later, after I'd gone to the forward gangway to see better, I was able to pick out the bunch of trees and the little pier in front, and then, as the big whistle up above screeched out a friendly salute, with the aid of my glasses, I saw a little figure in black waving a white apron in the wind.

And from behind me came, faint and monotonous, though now with more meaning, the "pee-zoop, pee-zoop, pee-zoop," of the *Oshawa's* old engine.



The Paragon Scion on a nursery stock. This tree yielded six bushel of nuts at six years of age.

CHESTNUTS \$5 A BUSHEL

Note.—It will be news to many Canadians to learn that the sweet chestnut grows in Canada. The writer of this article has picked up his information from personal visits to New York and the Niagara district. Farmer's Magazine last year told of the destructive ravages of a certain fungus disease in the chestnut trees in the United States which threatened their extinction. It will be good news to many to learn that the Paragon chestnut is immune to these attacks.—Editor.

By G. H. Corsan

LAST year I came across three bulletins issued by the State of Pennsylvania on the chestnut tree. The first was compiled by Prof. Davis, of Bucknell University and is number 123 and dealt with the growing of the Paragon chestnut on Col. Coleman K. Sober's 800 acre farm at Lewisburg, Pa. The other two were bulletins number 1 and 2 on the chestnut blight disease and its treatment. As the State of Pennsylvania had the honor of holding the Northern Nut Growers' Convention last December, I thought that I could not do better than attend and study this matter out to my

own satisfaction. Now bulletin number 123 is considered the best bulletin that was ever placed before the public by any state department and as it was published in advance of the discovery of the blight I therefore looked for much information in regard to the future welfare of our chestnut trees from a food producing standpoint. The convention met at Lancaster, Pa., December 17 and 18. The federal authorities at Washington had two big guns and two lesser guns on hand. Mr. Rush brought us out to his English walnut farm and showed us English walnuts that had not a twig killed by last Win-

ter's 22 degree below zero weather. A Mr. Jones had us visit his farm and see the wonderful work he was accomplishing with grafting paper shelled pecans of the best varieties.

But what interested me the most was that Col. Sober asserted that he had successfully fought the chestnut blight. He told us his method which was simple and I thought that, while I had no reason to doubt that he was as successful as he said he was, and that he had not nearly as much trouble keeping it off his square mile of chestnut orchard and groves, yet I must see. So over I went to Lewisburg, Pa., to see the wonderful Paragon chestnut that grows as large as the Italian and is as sweet as the American.

As most of the readers of this paper know the State of Pennsylvania has spent \$370,000 the past year in fighting the chestnut blight.

This disease which has destroyed in a few years over a billion dollars worth of chestnut trees in the Eastern States has baffled all efforts to even check it,



Col. C. K. Sober, of Lewisburg, Pa., in his nursery, showing the young chestnut trees grafted on Paragon stock.



A roadside tree eight years' old that yields very large nuts.

much less annihilate it. Tussock, gypsy, codling and brown-tailed moths combined could not begin to equal the damage that the chestnut blight has worked on this one tree.

Now Bulletin No. 123 was issued in 1903 and does not mention the blight. In 1902 the blight was present in the wild chestnut groves surrounding Col. Sober's place but was not understood. In three years it wiped out every tree in the Bronx.

Col. Sober has nine neighbors who have wild chestnut bush that intersects and dovetails his farm at different points.

It just so happened that when I visited his place the State inspectors had just finished marking all the trees on his place that were to be destroyed because the blight had set in on them.

At one corner where his groves ran close up to a neighbor who had a chestnut bush that was very badly infected he had seven trees condemned. At another point where a road separated him from a badly infected bush there was



A square mile of chestnuts in the nursery. Note the burrs on the young three-year-old trees from the seed. The nuts sell by the carload to the Pacific Coast, at \$5.00 a bushel.

one tree condemned. Now Mr. Sober has hundreds of thousands of trees, for he has a hundred acres in grafted nursery stock. When we think that one tree to the 100 acres he must lose, and that not one of those trees but that he can afford to lose as they are too close to others to bear properly. But what is more wonderful, not a particle of blight was discovered on the Paragon section of the trees. The native chestnut stock only showed disease.

Of late years, Mr. Sober uses only Paragon stock for grafting Paragon scions on. At three years of age from the seed this tree bears nuts. At sixteen years of age these trees bear 8 bushels of chestnuts. Last winter a temperature of 32 degrees below zero fell on the trees yet not a twig was killed.

To the farmers of Southern Ontario I say grow the Paragon Chestnut. To the children of Ontario I say eat chestnuts and save your teeth. The Italian who never saw a tooth-brush nor a rotten tooth owes the fact to chestnut eat-

ing where chestnuts cost nothing but the trouble of picking them up.

Mr. Sober sells his chestnuts by the carload for \$5.00 a bushel without trouble.

Last fall the chestnut growers received \$8.00 a bushel for the small native nuts. Had they been Paragons they could have done better still.

Sir Isaac Newton, the great discoverer, it was who said that all truth is simple, and thus Mr. Sober found it to be, for his plan of fighting the blight is cleanliness. The chestnut is far too valuable a tree to be grown slipshod and uncared for in the future and perhaps as a timber tree its days are ended as the Paragon is a much smaller tree than our native wild tree.

Let the farmers of Southern Ontario watch this valuable tree for signs of the blight. And I think that it would be a good idea if the Agricultural Department of this province would print and distribute the three bulletins I have mentioned.



A Talman Sweet apple tree about ready for the third spraying.

UPSETTING THE OYSTER-SHELL'S APPLE CART

Note.—Many of our old orchards in Canada are being rendered under productive by reason of the fruit enemies which are allowed to have right-of-way over them. The same is true in the old orchards in the United States. Many of these could be made as productive as the young orchards along side of them if they were given the right kind of treatment. An old tree has a great deal of vitality, and clings to life with the persistence of the human being. The farmer who takes advantage of this will add dollars to his income. Other articles will appear in *Farmer's Magazine*, dealing with the fruit pests and how to control them. In the meantime it is well to study the spray calendar issued by the agriculture department of your province.—Editor.

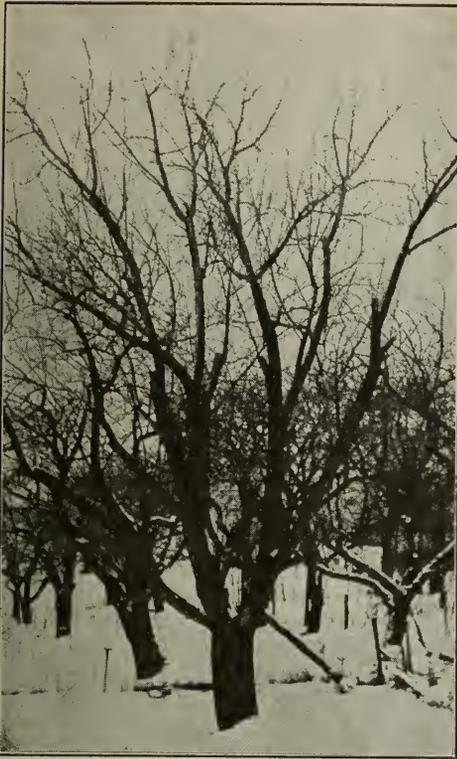
By F. C. MacKenzie

A HEALTHY tree is much like a healthy person. It can fight off and successfully resist the attacks of disease germs just so long as the energy in the tree is not impaired by other influences. It is well known that the ordinary human being receives into his system a great many of the germs of the common diseases that afflict mankind. But owing to the general good health, the vital process soon drives out from the system these bacilli before they have time to establish themselves.

Similar resistant powers are possessed by the healthy fruit tree when the germs of fungus diseases seek to

fasten themselves on the bark or in the cambium. The live forces in the healthy tree are too powerful to allow the infection. Consequently many orchardists have little trouble in fighting diseases upon the fruit trees where cultivation, air, drainage, and fertilization have contributed to a vigorous life in all the trees.

On the other hand every traveller through the country is familiar with comparatively young orchards that are in a most lamentable state owing to the presence of all forms of fungi and to the attacks of the many parasites with which fruit growers have to contend.



A tree badly attacked by oyster-shell bark-louse. It is almost too far gone to save.

The shaggy rough bark, the dead limbs, the blackened blotches all over the tree and the generally bedraggled appearance, might well disgust the fruit tree lover, as such conditions in the animal world, always do disgust the live stock man. There is no excuse for this condition. There is only one reason to be given for it, and that is extraordinary negligence on the part of the owner.

Where this takes place in the midst of a fruit growing section it really becomes criminal negligence, in that the infected orchard is a constant menace to the neighboring fruit farms.

Coming back to our analogy to the animal world we find that where the animal's vital forces are weakened through bad feeding, improper shelter, or through exposure to repeated attacks of disease germs, these other troubles soon establish a foothold and the efficiency of the animal is largely lost. The apple tree that is neglected

grows too many branches. Insect life flourishes on its leaves during the summer, where there is no spraying done. Roots cannot perform their best functions in the sod-bound uncultivated soil. These all contribute to lessen its vitality so that insects and germs establish an easy foothold on that tree.

Perhaps one of the greatest pests in sapping the vitality of orchards is the Oyster-Shell Bark Louse known in its Latin name as *Mytilaspis ulmi*. It is not generally regarded as destructive, and is as much to be dreaded as the San Jose scale. It is for this reason that it has obtained a foothold on many of the trees in Ontario, and is doing more damage than it is generally credited with. When a young or old tree becomes covered with thousands of these little insects, fastened to the bark, and there sucking out from the tree, its life juice, it can easily be seen that much of that tree's energy in the production of fruit is lost to the fruit-grower. A tree cannot grow apples and the bark-louse, and do full justice to the apple crop. It apparently seems possible to do full justice to the insect.

Fortunately this insect is single-brooded, and therefore does not increase very rapidly. The San Jose scale is continuously brooded, and that is perhaps the leading reason why it is so destructive. Had the Oyster-Shell the same habits of propagation it would have, long ago, wiped out the orchards of Ontario.

A neighbor of mine had a fine young orchard about thirty years old on a gravelly hill-side sloping to the west. Of late years the orchard has not been doing so well in the number of barrels of returns, and the owner was at a loss to understand why his trees were not doing better. He kept them fairly well pruned and fertilized, but as he had never sprayed and had never been very badly troubled with the codling moth he did not deem spraying operations necessary. Upon visiting his farm some time ago, and getting into discussion on the merits of the different varieties of apples, my friend mentioned the decline in his orchard returns, and upon his invitation we strolled down

among the trees. Several Northern Spy, Seek-No-Further and Belleflower apple trees were particularly affected. Upon inspection we found that these trees had a rough appearance and unmistakably showed signs of lessened vitality. The trees were just in their prime, and they should have been giving a return from four to ten barrels of apples. I, at once suspected the presence of scale and a very cursory examination revealed the Oyster-Shell. Upon rubbing off the outer bark it was found that the trees were entirely covered with these little scales. The owner was quite surprised to find that so minute an insect could produce such a difference in the tree. There was hardly a portion of the trunk and main limbs that was not covered with the parasites. It was only a case of a short time when these trees would be dead. Around many of the limbs, at the point where the limbs branched off they completely encrusted the bark, and black blotches, where the pruning had been done,



A Northern Spy branch almost encrusted with oyster-shell. Note the black fungus about the centre and the rough dead appearance of the bark.

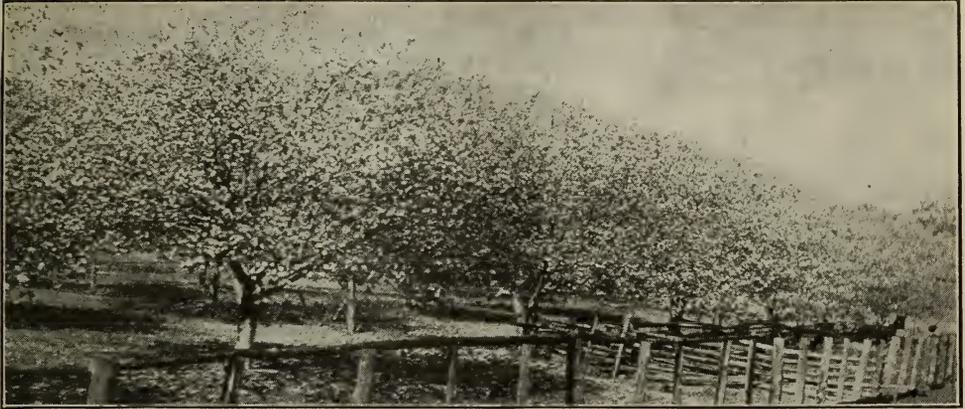
showed the fungus diseases were already taking advantage of the weakened condition of the tree.

Now this man realized at once that something had to be done, and he readily accepted my advice to begin spraying at once. He applied the first spray during the winter, using a strong solution of Bordeaux. The next spring before the buds burst, he sprayed with the same solution. As the buds were bursting he used a weaker solution and added some Paris Green. Still another spraying was done after the blossoms fell.

Having been told that the young Oyster Shell hatch about the first week in June and begin to run about the bark looking for fresh places to fasten themselves upon the tree, he made a strong kerosene emulsion and went all over the trunks and main limbs of the trees with a white-wash brush. He was determined to save the trees if possible. Needless to say his apple crop that year was much improved and the trees showed striking evidence of fresh vitality.

The next year having heard of the use of Commercial Lime Sulphur he bought a barrel of the mixture and used it instead of the Bordeaux. The dormant spray was made quite strong. The second year showed that there were few scales alive while the trees were shedding all the old bark and showing a vigorous, healthy looking under bark that betokened new energy. The orchard had come back to its old-time vigor. The Oyster-Shell plague had been beaten, and it only required the ordinary spraying every year to insure this healthy young orchard being kept in a high state of productiveness.

The life history of this insect is fully understood. The scale is of a brown color, and when young this natural color prevents its ready detection upon the bark. If the scale is raised up and examined any time in the fall or winter numbers of very small white particles will be observed. Using your glass on this you will see that these are tiny eggs. They remain here till early in the summer. About the end of May or the beginning of June, these eggs hatch



A fine young orchard at Orono where spraying changed a low yield into one of over 200 barrels last year.

and the bark-lice issue forth to scatter themselves over the tree. Having secured a suitable place these minute insects fix themselves upon the tender growing bark. They have little beak-like structures attached to their mouths with which they pierce the bark and are able to suck the sap from the twig. Once fastened to the limb they remain attached and do not move about. They continue feeding upon the sap of the tree until about the first of September, when they have reached full size. At this time wax-like threads issue from their body, and these form into the scale, which is easily seen. Under these the female deposits her eggs, and when her work is completed she shrivels up to a mere speck and her existence ends.

Now the farmer having understood the habits of this insect is soon able to upset his fine calculations for the increase of his species and for the destruction of the farmer's apple crop. He may be possessed with a turtle like house of his own, but this avails little when spray mixtures get after him. Many farmers find that his apple cart is upset quite easily by a white-wash with a strong solution of lime in the early spring. This causes the scales to gently curl up and fall off under the action of the sun. And when the scale is gone the protection also is gone to the eggs and insects underneath. The best thing about the oyster-shell is, that it is easily controlled.

BECAUSE

Because I know what you hold pure,
 Because I know the prayer you make—
 I needs must hold my life, full sure,
 'Twere well worth while, for your dear sake.

And lo, in striving for the best,
 I love it, too, and grow so strong
 To meet the battle, face the test,
 I greet my days with smile and song!
 —Amy E. Campbell.

RAISING 200 INCUBATOR CHICKENS

Note.—The incubator on the chicken farm is now a necessity. Failure to raise the chickens has been always due to the lack of information on the part of the farmer as to how to treat the young fowl under these artificial conditions. Mrs. Kepper is a practical farmer's wife whose experience in raising chickens is here told.—Editor.

By Alberta M. Kepper

HATCHING chicks by artificial means is a simple process, if one has the patience to follow directions carefully.

Eggs intended for hatching in incubators are not always as well selected and guarded as is the single clutch placed under the hen, yet like results are expected.

During early spring the eggs become quickly chilled and must therefore be gathered several times daily; even then the really cold ones should be discarded for setting purposes.

Ten days is the limit of time for holding eggs for incubation. Though they hatch when much older, every additional day takes from the vitality of the chick. Better results come from holding them in a well ventilated, dry cellar where temperature remains at 40 degrees F. or a little above. Several times the eggs must be tamed. This is easily done if they are put upon trays.

The time of cooling the eggs during incubation cannot be fixed as surrounding conditions have much to do with the length of time required. A good rule is to test their temperature by laying the cheek upon them—they should feel cool, not cold. The housewife's hand is so inured to heat and cold that it is not reliable.

When the hatch is almost completed there may often be found a number of eggs still showing the life heat. These may be brought out in fair proportions by raising the heat in the machine, and covering the eggs with a woolen cloth wrung from warm water. Re-

move cloth in fifteen minutes and continue the heat in machine at 103 degrees F. These later chicks will give better results if given to a hen or at least not brooded with the stronger ones.

Now the real struggle begins; for it is the per cent. of hatch that is brought to maturity that brings our gain or loss.

The incubator and brooder in use upon the majority of farms are more in the nature of a labor saver than with the sole view of increasing the output, and from this standpoint the following method of brooding has been a marked success for many years.

The machine, holding 264 eggs is set twice each season, beginning the last of February or first week in March, depending upon the season, and the second setting follows as soon as possible. This gets the harder part of the work with the poultry out of the way before the garden and fruit exacts the housewife's attention.

DISINFECTING THE BROODER.

Two days, at least, before the chicks are hatched, the brooder and house are sprayed with a good disinfectant. When this is dried, they are again sprayed with undiluted, but low grade kerosene oil. This is death to mites. A small brass spraying apparatus that is fitted with hose and nozzle and can be operated easily by a woman, is employed, reaching every seam and chink with the liquids. The fumes are driven off

in a few hours, if the lamp is lighted.

The bottom of brooder is covered by an inch layer of very light chaff. Heavy scratching material causes the chicks to sprain their legs when attempting to scratch. There is also a sprinkling of clean, sharp sand on the brooder floor.

THE CHICK'S FIRST WEEK.

The first week in the life of the brooder chick is the critical time, and they must have steady, intelligent care.

At the end of 48 hours after the first chick is out of the shell, a very little prepared chickfeed is scattered over the litter in bottom of brooder, using not more than two tablespoonfuls for a hundred chicks. They will work this chaff all over in an effort to satisfy their hunger. While they are busy with this, build a little pen in front of the brooder, not over 3 feet square. Cover the floor of this with chaff and bury in it a quarter cupful of feed for each hundred chicks. Place also a dish of sand and the water fountain. This fountain is made by piercing a tin bucket several times about $\frac{3}{4}$ in. from the top, and after filling it with tempered water, inverting it in a pie tin, kept for the purpose. Open the door of the brooder and allow chicks to come out. If weather is cold, stay by them and after they have drunk and possibly taken up a part of the feed they will bunch together. They must now be returned to the brooder and the door closed. Ventilators, however, must always admit fresh air. At the end of two hours this must be repeated.

After the first day, an attempt should be made to drive them into the brooder, and if the weather is moderate, the door may be left open and a watch kept; soon the little ones will be seen going in and out, busy as bees, then the attention does not need to be quite so close.

Long ago the oft advised ration of stale bread and hard-boiled eggs was discarded because against nature, and the ordinary commercial chick food with a like amount of steel cut oats mixed with it was substituted for the first ten days. Afterward the extra oat-

meal is omitted and the plain chick food is the solid grain ration until they are able to pick up wheat and cracked corn which is usually in about three weeks.

A FEEDING MIXTURE.

A good mixture contains equal parts of finely broken corn, wheat, oats, whole millet and a light percentage of flax-seed. This mixing may be done at home at a considerable saving where one has access to the several grains. If bought ready mixed, put it under a glass if necessary. It does not pay to buy grit and charcoal at grain prices.

Clean, sharp sand can usually be bought by yard or ton and dumped out where there is plenty of room.

WHITE CLOVER LEAVES.

Five pounds of feed should last a hundred chicks the first week, reckoning from the time the first one is hatched. Green food, in the shape of raw, sound but unsalable potatoes and white clover leaves if procurable, is furnished after the third day. A quart of tender leaves is soon gathered from the lawn and almost as quickly disappears. Chickens are very fond of it and must have something to relieve the concentrated diet of grain while in confinement. The potatoes should be cut in two as such small chicks cannot pick through the tough skins.

As soon as they are accustomed to going out and in the brooder without help, the boards forming the pen may be taken away and they are then given the liberty of the room—the floor is tight so as not to waste feed—and covered with chaff.

CARE AT NIGHT.

Very little care after the first week is required throughout the day, but they must be given attention during the evening. When chicks go out and in the brooder at will, the heat must be kept up during the cool days of spring so that when cold the chicks can get warm without crowding together. Especially must there be a brisk heat when they go to roost. This is the critical

time and it pays to spend a little while each evening in getting them quieted, stirring them apart gently, then lowering the flame and closing the door of brooder, but always raising the lid so the impure air can escape. If very cold, windy weather prevails, throw a carpet or other heavy cloth over the brooder but do not fail to ventilate.

It is better to not give them access to the water fountain until they have spent sometime scratching for food. This cools them and takes away the desire to over-drink and trample one another.

A brood of chicks once reached the water fountain when they were warm and it was full of very cold water. The result was sudden chilling and a rush for the brooder. Over inside they crowded and colds developed and there was a serious derangement of the bowels that carried off the entire brood.

After the first week the feed increased but buried deeper so that exercise must be greater to obtain it, and there are now additions to the fare, as table scraps, a little ground meat or any food that is not sour or sloppy.

A LARGE RUN WIRE ENCLOSED.

In front of the brooder house is a wire enclosed pen about 14 feet square. This pen is on the south side of the house where the sunshine reaches freely before the apple tree, that partly shades it, is in leaf. When chicks have

learned to find the way to heat, they are permitted the freedom of this run during pleasant weather, but the doors of brooder and brooder house are open when they are out so they can return at any time.

Gradually their liberties are increased until at the end of the third week they roam the orchard.

In times of sudden downpours they scamper to cover as readily as the hen brooded ones. They, also, come home to roost, but wait until the evening is cool then rush and huddle together. It is well to be on hand every evening until they no longer require a brooder.

When this method is followed it is not unusual to bring an entire brood of from 150 to 200 chicks up to the line when artificial heat is required without more than a loss of 5 per cent. At the same time it is possible to use the same fixtures and start with as robust stock and lose practically the entire brood. If the home is visited by sickness or anything occurs to prevent this care there is sure and great death rate—bowel trouble, gapes and all the other ills befall the neglected chick. The brooder rated for 300 chicks will comfortably care for from 150 to 200, providing they are always fed and watered upon the outside. When this is done the chaff need not be changed oftener than twice each week and our ten weeks' Plymouth Rock is ready for the pan.

Never Make The Same Mistake Twice

The wise man puts a lighthouse upon every rock that has shipwrecked him in the past, a red light upon every shoal that has previously stranded him.
—Orison Swett Marden.



One Ontario farm woman found great joy in caring for her Asters, Phlox and Sweet Peas.

GARDENING AND SPRING FLOWERS

With some ideas in Tree Planting, Hot Beds,
and Popular Perennials for the farms of Canada

By Grasmere

AROUND the evening hearth many persons are searching the seed catalogues for knowledge of spring garden plantings. The time for preparation and planning ends with the month of March, for when the April violets blossom it is almost too late to work out a complete garden.

There is a peculiar joy of anticipation in a garden, whether that garden lies out upon the prairie homestead, or snug and secluded in the warmer provinces. Everybody loves a growing thing. The planting time holds in its thrall the old and young. The love of producing

plants, and of watching nature send up its shoots, its blades and its ears, belongs to no class or age. The child in the school garden will watch patiently for the tiny bud to appear. The adult will haunt for days the garden where crocus and daffodil lift their delicate yet courageous flower-faces from the cold ground.

I believe it was Disraeli who said in one of his books:

"How fair is a garden amid the toils and passions of existence."

But the farmer whose work lies at all times among the fields and woods, and



A Presbyterian minister has a beauty spot near his country home at Orono.

with the animals, often fails to see the beauty of a garden or enjoy the ecstasy of delight that many find therein. He sees so much of nature, early and late that he overlooks too often the beauty of this continuing Paradise. Yet he, too, needs the garden, a small garden close by the house where ordinary farm labors are forgotten, where coarse machines and commercial rotations have no place. The small garden, where time is to be had for it, is a constant relief and a welcome change even to the hard worked farmer.

IN THE CORN FIELD.

The vegetables for use on the farm table can often be grown to better advantage out with the hoed crops on the farm. Beets, cabbage, turnips, sweet corn, carrots, parsnips, tomatoes, and string beans fit in quite well with the field rows. They get the usual cultivation and care with the rest of the field. The only objection is, that they may be so far from the house that they are not used as often as they would be if near at hand.

Where the housework is not left to one pair of hands, it is often a pleasure to the woman on the farm to have a small enclosed spot where she can look among her flowers and vegetables and get relief from the cares of the meal-getting, sweeping and other daily routine.

PLANT A SHADE TREE.

Every springtime should be a time of planting trees. It is a standing wonder

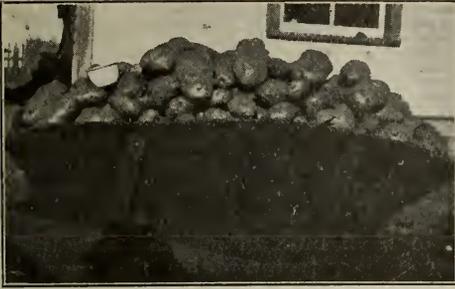
to me that so many farmers in all parts of the country neglect this annual opportunity. He who plants a tree is doing a big service to humanity. He is improving his place and his own neighborhood. He rejoices the eyes of all travellers. He adds to the joy of the landscape and through its branches preaches daily lessons in beauty and usefulness. The climate grows pleasanter and the winds less severe, where trees grow. Every planting aids this. One farm buyer recently said that he would consider a farm enhanced fully 25 per cent. in value where good trees were planted in order upon it.

Speaking of tree planting Mrs. Kepper, in writing from her farm home in Iowa, says: "Money should not be the determining factor in rural adornment. The landscape is pleasing if there are simple lines of harmony thought out.

"We sit and dream of the great things in the by-and-bye. We will plant when means are plentiful; when we can do something befitting our ideals. And all the while seasons come and go, the years slip away, and we find ourselves on life's western slope, nearing the sunset; and still the cottage bleaches in the summer's glare and is bared to the sting of winter. Weatherbeaten, grim. It stands a blot upon the prairies. All the while the trees that cover the hillsides and the shrubbery in the ravines plead to be given a chance. These natives are inured alike to whim of winds and caprice of climate.

"While we dream of laurel and rhododendron, mayhap there stands in the back pasture a hawthorn fair in its springtime dress or regal with autumn fruitage and it wins from us scarce a passing glance. Take it home. Love it. Give it a place upon the lawn and it will plead the cause of unappreciated beauty with appealing force.

"A clump of locusts sprouts from a single root are let stand in a prominent position on a well-kept lawn, just as nature fashioned them. Neither limb nor thorn has felt the shears. When strangers pause and inquire the name of the fern-like group, there is always a



A contribution from the vegetable garden in Edmonton, Alta.

disappointed 'oh,' then, after a pause, 'well, its's lovely anyway.'

"We attach too much importance to the high sounding of Latin name. Many a man would plant the common elms and maples obtainable on his farm if they bore a foreign name.

"These are but two of a long list of exceptionally good decorative plants, taken from the nearby woods. I wish I might bring to every farm woman that knows not what is to be found in byways, the scent of the moss and violets; and a vision of the beauty in leaf and limb, and berry. There are endless selections to be obtained that would light up the dull days of winter or add a touch of color at any season.

"In your enthusiasm have a care to not overcrowd the plantings. One does not wish to live in a thicket. There should be broad stretches of unbroken green. It is the seeming haphazard placing that evolves a beautiful whole that satisfies.

WE LOSE THE WANDERLUST.

"To-day the house may consist of but one room or two. Never mind. Keep to the good work, and yield not a jot from the purpose of making artistic surroundings, and when the modern home is a reality it will as a picture fitted into an exquisite frame carved out of what lies near.

"The trees were God's first temples; and to-day they are almost divine in this influence.

"In summer we seek their refreshing shade; in winter they turn back the bitter winds. And always they rear their heads to higher, nobler spheres

than ours, drawing us near to the heart of things; binding us with cords that never chafe, and we lose the wanderlust; become stable parts of the community."

PERENNIALS SHOULD BE POPULAR.

Extremely satisfactory is the perennial border running along the back yard fence. It routs the tin can; the leaky bucket; the half-worn broom. Who could have these lying about to trip her when she is showing the flowers to her friends?

This class of flowers is so hardy, and given to longevity, that once set they, with little care become a permanent feature, and annually reward that care with gorgeous bloom. The gold, the white and the blue of the iris make May a dream. The sky, intensified, reflects in the larkspur.

Peonies blow themselves up and flaunt their brilliant heads as though daring every other flower to combat. A rich red one is from my grandmother's collection. For half a century it stood beside the front foot-path. She brought it "West" when she came pioneering in the long ago. By the side of this, and trying to outstrip it in every way, stands a white one the parting gift of a friend. The pink one, too, is doubly dear because found in the mail with the message, "Mother's favorite. So lovely. Want you to know and enjoy it." On down the border (there are more than twenty clumps) the ones with these appealing associations are set upon a pedestal in the affections. Those obtained from the



A Prolific Vegetable Garden near Leduc, Alta.

florist, though often rare and rich in color and form, do not get half so near the heart. These must wait for the added value until they are handed on from friend to friend.

In this border the lilies and phloxes gladden the harvest days—the hollyhocks persist in spite of neglect, and there is continuous and pleasing display and never a week of monotony from the hour the first wee blue German iris is coaxed forth in the April sunshine until the hardy chrysanthemums, still in flower, are covered with snow.

Some cultivation and weeding is necessary the first year; less will be required afterward; but a little timely attention is always beneficial, as a light mulch in the fall and a top dressing of fertilizer. There must, also, be frequent division of roots if one would see the plants increase, for with perennials truly a joy shared is a joy doubled.

MAKING A HOT BED.

Preparation for spring means purchasing the seeds and laying out the

garden plans. Moreover it means the getting ready of a hotbed and the putting in of such seeds as are needed for early planting.

From the first to the latter part of March is quite early enough to make a hotbed. Provide a quantity of fresh horse manure from the stables, and add to this, if it can be had, one-third to one-half in bulk of leaves. Mix them thoroughly, tramp down the mass in successive layers, and form into a large pile, so that fermentation will proceed, even in severely cold weather. In two or three days fermentation will be apparent by the escape of steam from the heap.

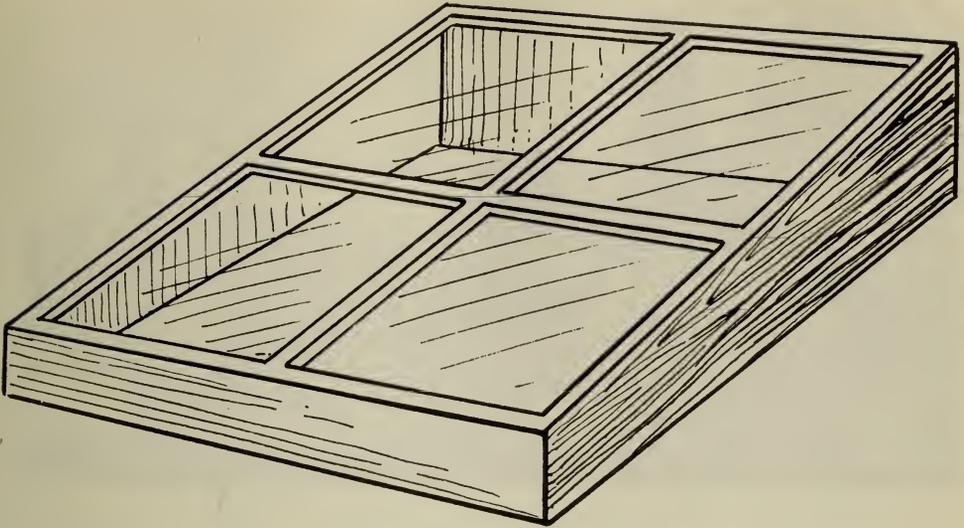
Now turn again and allow the heap to remain two or three days longer, or until the second fermentation commences. Make an excavation or pit 2½ feet deep, and of a size suited to the number of plants required.

It would be better built up of brick, but if brick is not convenient, lumber will do.

Hotbeds should have 12 inches of a



On Jacob Strasburger's farm, Rosenthal, Alta. In spite of such an abundant fertility in the soil the city of Edmonton imports a carload of vegetables a week during the summer. There are sixty varieties in this collection.



A hot bed is easily constructed.

slope in front, which will give the proper slope to catch the sunlight. Cross pieces should be placed for the sashes to slide on, to facilitate opening and shutting the frames. When everything is ready, the manure is placed in the pit and trodden down firmly in layers to the required depth, 2 to 2½ ft. Then put on the sashes and keep the pit closed until the heat rises.

At first it will probably be 100 deg. or more, which is too hot to sow the seeds in; but in two or three days it will subside to 90 deg. or a little less, when the soil may be put on to the depth of 6 to 8 inches. The heat may be readily ascertained by plunging a thermometer into the manure.

The soil should be of well rotted sod (or common garden soil will do) mixed with about a third of fine old manure. On the top put about three inches of river sand, then you will not have to contend with weeds; and in this the seeds may be planted in drills 2 to 3 inches apart.

As soon as the plants are large enough either thin them out or transplant them to another frame.

Air may be given by raising the sashes at the back. Lukewarm water should be used whenever necessary.

Tomatoes and peppers should be in

a separate frame from cabbages, cauliflower and lettuce, as the former require more heat.

Then again a nice bed of flowers is very restful to the tired nerves, and a good place for a nice bright bed would be opposite your kitchen window, it rests the woman's nerves to look out on the flowers as she does her work.

CHOOSING A SITE FOR THE GARDEN.

Sunshine is the main thing to consider in selecting a garden site. With a house facing south it is not possible to avoid a considerable shadow from the house itself. A garden surrounded by a high wall also will have the disadvantage the wall shadows on the south boundaries. Gales from the west and south-west are very often destructive to trees and plants by reason of their force alone, and on the other hand the cold winds from the north, north-east, and east do damage by their low temperature and dryness, "cutting" and destroying your growth. The ideal sill for a country lot, therefore, is one open to the south, and preferably sloping slightly in that direction, partly sheltered by higher ground or trees to the west and south-west and wholly sheltered to the north and north-east, or on those sides which send the roughest winds.



A homestead a hundred miles west of Edmonton, where Spring flowers grow in profusion.

Another point is the dryness of the soil which is intimately connected with its temperature. The warmth of a site—other things being equal, is influenced by the nature of the soil. The coldness of a damp site is due to the absorption of heat resulting from evaporation.

The following table, compiled by an expert, shows the relative heat absorbing capacities of various soils assuming 100 as the standard:

Sand with some lime	100
Pure sand	95.6
Light clay	76.9
Heavy clay	71.1
Brick earth	68.4
Chalk	61.8
Humus	49.0

FERTILIZERS.

The question of manures and fertilizers is another most important one. The best manure for general purposes is that of horses and cattle mixed. It should be dark in color, dry, and so thoroughly rotted as to crumble into small fragments. Brands of fertilizers are legion. If you are going to use any quantity by all means mix it yourself. Public demand is now beginning to force dealers to carry the raw materials or chemicals from which they are made. Nitrate of soda, muriate and sulphate of potash, acid phosphate and ground bone being the principal ingredients. Those come finely pulverized and may readily be mixed with a shovel and then screened to make the compound as desired.



ARE GIRLS WORTH EDUCATING ?

Note.—The Alberta Government is moving in the matter of supplying schools for the education of both boys and girls in farm methods. It is true that there are many people who look upon the education of a girl as waste energy and money. It must be remembered that "colleges don't make fools, they only develop them." Mrs. Muldrew, of Red Deer, Alta., has already made her acquaintance with our readers in former issues.—Editor.

By J. Muldrew

QUITE recently, in discussing the value of training in Home Economics for girls, a very fair-minded man, and one that greatly favored this kind of education, said to me: "I find a good deal of opposition to the teaching of Household Science. Both men and women tell me that once a girl has had training at one of these schools she is never contented to go back home and work again, and that she is helpless if she has not every faculty at her finger ends, and that the schools, instead of making a girl a better worker, simply make her discontented with home conditions."

Now there may be a good deal of truth in these statements, and the discontent may be a divine discontent. Our young men are sent by the hundreds to College to learn Agriculture, and when these boys return from College, one of them may be heard to say to his father: "Father, we are a long way behind the times, and this old farm is not much more than paying expenses. Now if you want me to do this work so as to get the very best results and to make this farm worth working, you will have to allow me to get the proper machinery, to do the work in the way that I have seen it demonstrated."

If this father happens to be a progressive man, and if he has any faith in the boy and in the educational institutions where he has received his training, he will not hesitate to give the boy a chance to see what he can do with the education that he has received. If, on the other hand, he is a pig-headed man,

or one who has become fossilized and can see no good in modern methods, or if he is a vain man, and it hurts his vanity to think that his child can teach him anything, he will very likely say that the College is a nuisance and that his boy is no good for anything since he went there. You will hear him grumble somewhat to this tune:

"My boy is not content to do farming in the way I was taught to do it. He is not the man with the hoe, he wants the cultivator, says there is no sense in his keeping the farm, but will make the farm keep him, and lots more to this effect. The College that teaches such twaddle is more of a nuisance than anything else."

While all will agree that all boys and all girls that go to College do not come back paragons of wisdom, I think we are also agreed that the College may not be altogether to blame. I am reminded of a remark from "The Letters of a Self-made Merchant to his Son," "College doesn't make fools, it only develops them." Neither does it make wise men it only develops them.

FATHER, A PROGRESSIVE MAN.

If a young girl goes to a College to learn the most approved methods, and the wisest and the most up-to-date systematic housekeeping, and on her return to her home says: "Mother, we are fifty years behind the times in our housekeeping, and father gets credit for being the most progressive man in the

county." I hold that there is something radically wrong with that household, and that a sensible girl with good training and a fair chance can do a lot to mend.

I believe, too, that we should give the girls the same chance that the boys get. Girls are quite as valuable an asset to this country as boys are, and if we are to make the right amount of progress, it is only by seeing that the girls get all the chance they can to develop into as progressive home-makers as the boys get to be progressive in Agriculture or any other kind of business they may undertake.

Sometimes when I go around the country, and see a splendid barn, up-to-date in every respect, and hear the men talk of the value of fresh air for the animals to breathe, and a good water supply, I am led to wonder a bit as I look at the low ill-ventilated place where he eats and sleeps and spends Sundays, whether he does not spend more thought on the living conditions of the cattle, pigs and horses than he does upon his good wife and his children. I wonder if he often discusses the question of fresh air for the children, if he knows how many cubic feet of fresh air they ought to have, and whether they have it or not.

WIFE BECOMING AN OLD WOMAN.

I wonder, too, if in looking into the face of his wife, he does not realize that the fresh girl that ten years ago was the

pride of his heart, is fast becoming an old woman, and is losing the elasticity from her step, and the cheer from her voice, that she is seldom anything but tired, and that he has not taken her or sent her away from home for a rest for years.

The centre of the farm life is the home, and the centre of the home is the woman that is trying to make the place homelike, and if out of these places we are to expect men of brain and brawn, men with strong moral force, the place to begin is with the education of the women who are to have the direction of them during their childhood's days.

We are all familiar with the reply to the question as to when the education of a boy should begin. "Begin with his grandmother." As people of some vision we are looking out towards the future of Canada. We are alive to the value of education, and have provided good public schools, but there are some things that the schools as they now are cannot compass, and to everyone who can at all afford it, I would beg that they do not forget to be generous with the special training that to-day can be secured for every girl. At least we ask that the girls get the same consideration that is given to the boys, and that if it seems only plain common sense to educate a boy in terms of his daily life, it is equally demanded that the same be dealt out to the girls.



MACHINERY ON THE FARM

Note.—There are many interesting stories of the invention and introduction of farm machines that ought to be told. The men who have studiously labored to perfect a machine to save labor on the farm have had many discouraging ups and downs. However, greater things than what have been anticipated have often resulted. The mechanism of a self-binder, a corn-planter, a fanning-mill and a sheaf-loader is interesting to me of a mechanical turn of mind. This is the first of a series of stories on the working out of machinery ideas.—Editor.

By Harris K. Adams

AGRICULTURE owes its efficiency today to man's intelligence in the use of animals and in the manufacture of machinery, as much as to the rotation of crops and the transportation of its products. Not one feature can be ranked higher than the other. Each is a part of the successful business of farming. "Of what use is a good crop, if the farmer is unable to sell it because of poor transportation facilities?" wails the new-comer on his homestead, fifty miles from the railroad.

"What good comes from your seven-cent beef if I have not the good breeding cows nor can get the animals to eat roughage?" says the mixed farmer during this shortage of cattle times.

One man in the pioneer days of old Canada with his wooden-beam plough and his oxen, his sickle and his flail could not at his best have a very big pile of wheat at the end of the season.

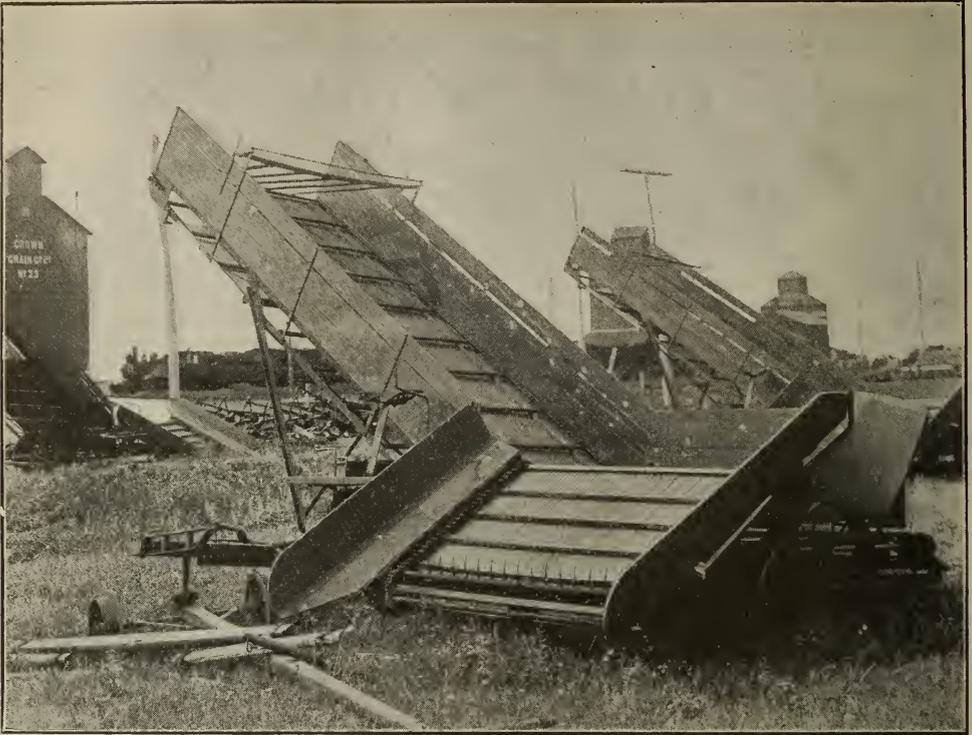
The big farmer of the thousand acres on the prairies to-day feels a handicap despite his steam plough, his double-disc seed drills, his tandem self-binders, his Stewart sheaf-loader and his 47-inch self-feeding threshing machine. Machinery has been invented and manufactured at a marvellous rate during the past twenty years and yet it has not kept pace with the demands of the western farmer. The short season of harvest and the scarcity of labor, make a big demand on all the forces that can be brought to play upon that harvest.

The rise of machinery in the productive world has been extremely interest-

ing to the economist. Labor looked upon the introduction of the printing press as a bad thing. The cotton machinery of the English Midlands was smashed for the same reason. The man who first bought a self-rake reaper was looked upon as a disturber of the peace and as a robber of the day laborer. In recent years the substitution of electricity on the street cars was looked upon by many farmers as a challenge to their business of live stock raising. So also was the gasoline tractor in the West. Yet these big machines have come and are doing the labor of thousands of men and horses. Strange as it may seem the farmers cannot supply horses, nor the country the men for the legitimate needs of agriculture to-day. Three hundred dollars is an ordinary price for a horse, while hired men are asking prices to-day more akin to the salaries of professional men in the days gone by.

All this tells us that the introduction of machinery has been of great economic importance to the farmer.

The way the writers on political economy tell us of the beginning of wealth is most interesting. There were ten fishers in the waters of a certain stream. Each man had to catch three fishes a day in order to feed himself and pay for his clothing and shelter. One man more ingenious than the rest, starved himself a day in order to make a rough contrivance whereby he could catch six fishes a day. He was now able to lay up three fishes to the good with which



The sheave-loader, five hundred of which were used on western farms this past year.

to support himself while he worked out some other schemes, thus he soon developed ways and means to increase his catch many times by the use of this contrivance or machine. Thus was the beginning of Wealth originated in the brain of some man and worked out in machinery. In other words machinery has made it possible to increase production. And increased production is necessary owing to the many people who cannot or will not produce for themselves, in order to keep this old world from starving to death. Else population would soon overtake production.

Every farmer is interested in live stock. The Clydesdale man eagerly scans all news about the latest importations from Scotland. The cattle man, whether in favor of beef or of milk, becomes enthusiastic when talking of his favorite breed. The agricultural papers know this and spend columns of matter describing the stables and

herds, and outlining the best strain of breeding.

The same intensity of interest is felt by other farmers for machinery. They will read with interest of the latest improvement of the working of a new machine. Yet too often our journals give little space to the news side of machinery. Is it not as interesting and as much of a news nature as the story of a Holstein or a Percheron?

I well remember the joy that came to me as a farmer's boy when my father purchased his first old Champion self-rake reaper on a farm in Ontario. This machine was looked upon as a wonder and as a triumph for the inventor and manufacturer. I, as a boy could cut a ten-acre field of wheat and have it laid in sheaves in less time and in better shape than two or three of the best cradlers could do. But to-day the use of the same machine is as much forgotten as is the cradle and sickle. The machine that could cut and bind the

sheaves at the same time has taken its place.

With the development of the wheat farms of the West, the farmers have found that a great deal of labor was required to get the sheaves to the threshing machines and various inventions have been tried to overcome this difficulty.

The threshing machine that could travel from place to place and pick up the stooks has been tried in some places, but it has met its difficulties. That it might be possible to have a machine to do the loading on a plan similar to that of the hay loaders has been the dream of inventors for some time.

A few years ago several farm boys gathered during the long evenings of winter around the old stove in a grocery store at Molesworth, Ont., All these boys were readers and thinkers, always interested in the latest inventions and machinery. Many are the stories they told of the little ingenious outfits they had rigged up on their father's farms to save labor. With the developments of the self-binder, their inventive ideas were stimulated, and any old binder was eagerly bought up for experimental purposes.

About this time a couple of the boys got the Western fever and took up land near Neepawa, Man., where all the troubles and trials of a big wheat farm became very real indeed. On their winter visits home to Molesworth these lads discussed with the other boys the possibilities of inventing a sheaf-loader that would do away with the use of so many teams and men at threshing time. The Stewart boys were especially active in this regard. They decided that the machine must be of the side delivery type, that it must pick up its sheaves from the left-hand side of the driver and empty them into the wagon to his right. Their main trouble seemed to be in developing this pick-up device—one that would stand the strain and at the same time do the work. After many trials at home and on the Western farms the idea of a revolving drum, built to take all the strain itself so as to product the elevator chains and slats was looked upon as the only solution.

The next question to overcome was the shelling of the grain. This was found to be easily regulated by the speed of the drum. They had to calculate, therefore, to a nicety, the relative speed of the drum with that of the machine. If the pick-up revolved too slowly it it would upset the stook and roll the sheaves. If it revolved too fast, the sheaves were suddenly lifted and would fall heads down thus shelling the grain. Just how nicely the boys worked this plan out was witnessed by the writer last fall on a big grain farm near Regina. The pick-up drum seemed to work to perfection and the sheaves when taken up were handled in first-class shape by the carriers and tumbled into the wagon with little, if any, shelling of wheat.

The next thing was to place their machine on the market, and to finance the operations until the farmers and threshers seeing its advantage would call for it on every side. When a man uses a sheaf-loader and dispenses with half of his threshing gang, he is placing a great dependence upon a machine which if it stopped or refused to work would mean a big monetary loss. This pioneer sheaf-loader had been so carefully planned and experimented upon, before being placed on the market, that it became the wonder of modern machine manufacturers. Out of the fifty machines that were turned out in 1911 by a firm which had taken up the idea, only three were returned for defects, although all were sold under a guarantee that they would be satisfactory or no payment would be demanded.

J. W. Sangster was at this time a farm journal editor in Toronto, and being one of the Molesworth boys, and foreseeing a future for the machine, had a strong enough faith in it to throw up his journalistic positions and enter the new firm. As chief agent for Saskatchewan, he made sales of over 75 per cent of the output and became a short time ago secretary of the Winnipeg office.

Another man, who foresaw the value of the invention, was D. A. MacDonald,

for many years a member of a Palmerton carriage company. He with Mr. Simmers are now in Minneapolis to extend the manufacture to the United States.

An interesting feature of the first trials of the new implement, was the fact that John Hope, formerly manager for the Bow Park Farm at Brantford, who was the first man to cut a swath of grain with what proved so popular a binder, the Brantford binder No. 7 was also one of the first men to put the sheaf loader on his big 300-acre farm near Winnipeg. He soon became an enthusiastic admirer of the idea.

The working of the loader is simple. One man or boy sits on the machine and drives the four horses so that the drum will strike the stooks. The teamsters with their rack enclosed wagons follow to the right and catch the sheaves as they are elevated. When the sack is full and no other team is

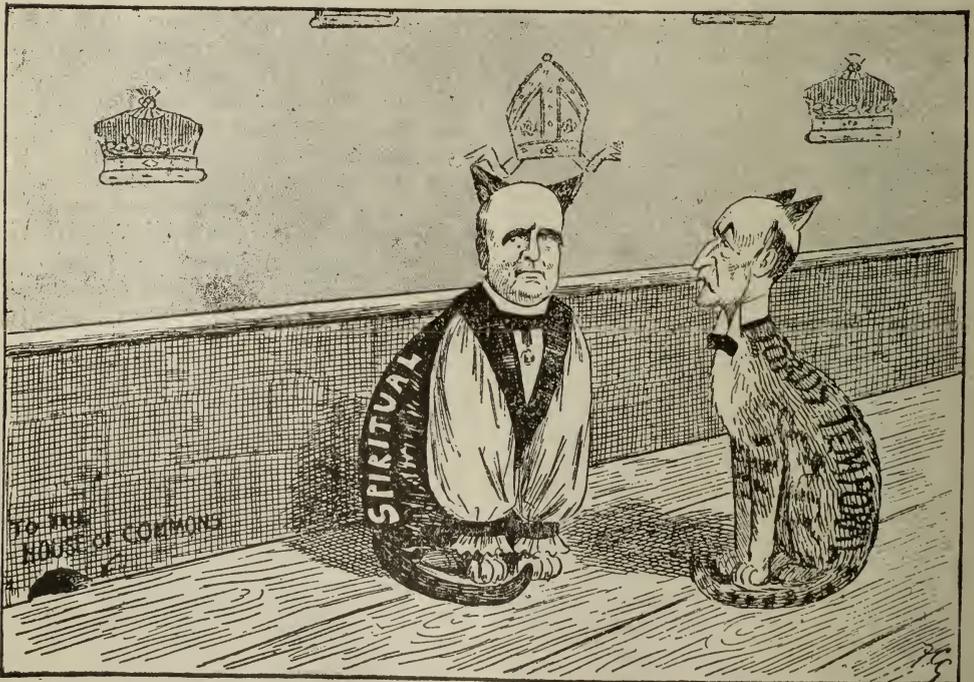
ready, the loader stops to await the coming of an empty.

The big drum is filled with tooth-like spikes on the elevators, which catch the sheaves and tumble them on to the slats which carry them up to another elevator running at right angles, which conveys the sheaves to the wagon.

Where the stooks are set in a straight line, the driver has less trouble in moving his machine and the one machine could elevate enough wheat to keep two if not three threshing machines going at full speed.

It does away with four wagons, and three men from every gang. The meaning of this saving is best understood by the farmer in the West, who has to stand the annual threshing siege. It is little wonder then that the sales are going on faster than the manufacture, for when a farmer sees anything that will make him money, he is not slow to accept the idea.

YOUR FIRST BITE



Lord Lansdowne: The Welsh Church Bill will be through that hole presently, Your Grace; it will be your first bite!

—Westminster Review.

A FARM REVIEW OF REVIEWS

This Department seeks to acquaint the reader with some of the best things that appear in our contemporary farm journals. Each subject will be found to contain much to interest the average farmer.

The Billion Dollar Hen

Some Lessons from the United States' National Egg Laying Contest

The sum of \$750,000,000 was the value put upon the United States hen by Secretary Wilson over a year ago. Since then the poultry products of the United States have advanced in value. They are now looked upon by the majority of people as one of the big features of agricultural revenue. Mr. Coult in the Technical World Magazine for February finds that the returns from the farm show only two other outputs as surpassing that of Her Ladyship the common hen. Cotton and corn only have this distinction.

The first National Egg Laying Championship Contest ever held in America has recently been completed at the State Agricultural Experiment Station at Mountain Grove, Missouri. The fight began November 1, 1911, and the last egg was laid October 31, 1912. There were 640 entries, divided into 128 pens of five hens or pullets each and no less than 30 breeds of chickens were represented.

The contest was held under the direction of the Missouri State Poultry Board, with T. E. Queensberry as the expert in charge.

There was a total of 87,843 eggs laid during the contest, or an average of 134 eggs for each hen.

The national championship was won, for instance, by a pen of Rose Comb Rhode Island Reds, owned by D. E. Hall, California, Missouri. During the year these five hens laid a total of 1,042 eggs, an average of over 20 eggs each. Second prize went to a pen of White Wyandottes, entered by P. J. Jansen, Little Rock, Arkansas, with a record of 1,015 eggs, and third place to a pen of Single Comb, White Leghorns, owned

by Walter Hogan, Petaluma, California, with 991 eggs.

But by way of showing that no exclusive virtue resides in these winning breeds it may be pointed out that of the six pens of Rhode Island Reds in the contest, one pen laid only 541 eggs during the year, little more than half the record of the winners; that of the six pens of White Wyandottes, the lowest produced only 463 eggs; while, out of eighteen pens of White Leghorns, the lowest dropped to 573.

And—most instructive of all—the individual championship of the whole contest was carried off by Lady Showyou, a White Plymouth Rock hen, which laid 281 eggs during the year, while, of the other hens of the same breed in her pen, one laid 218 eggs and the other three only 314 eggs between them. Thus the individual championship went to a hen from a pen which won no place at all in the big race. She was sold to a Chicago breeder for \$800 cash. Her eggs averaged a little more than two ounces apiece, a total weight slightly more than 36 pounds of eggs, or six times her own weight for the year. She did not become broody during the contest but took a month's rest during January, when the weather was very cold. She broke all known records for consecutive laying by producing 82 eggs in 82 consecutive days ending June 24th, missed one day and continued laying an egg a day for the rest of the month.

Dry mash and grit were always available in self-fed hoppers and a grain mixture was fed morning and night. The following proportions were used:

Grain Mixture—200 pounds cracked corn, 200 pounds wheat, 100 pounds oats.

During this year the grain feed will be two parts of corn and one part of wheat for the winter months, and one part corn with two parts wheat for the summer months, eliminating the oats from the grain feed for the reason that the hull caused some trouble. In order to overcome this loss of oats in the grain mixture, the amount of oats in the dry mash has been increased to three hundred pounds and the use of sprouted oats will be continued. This year the beef scraps have been increased to 250 pounds in the dry mash and the powdered charcoal has been increased to 35 pounds. Last year's dry mash was composed as follows:

100 pounds wheat bran, 200 pounds middlings or short, 200 pounds corn meal, 200 pounds rolled or ground oats, 150 pounds dry beef scraps, 75 pounds alfalfa meal, 50 pounds gluten meal, 25 pounds O. P. oil meal, 8 pounds fine table salt, 25

pounds powdered charcoal. The cost of this feed was about one and one-third cents per pound for the grain mixture and about two cents per pound for the dry mash.

One-half pint of the grain mixture was fed each morning in the litter to five hens. A little larger quantity was fed in the litter at night. The dry mash was available at all times. At 1 o'clock each day a handful of the dry mash which had been moistened with buttermilk or skim milk, was fed in a trough to each pen. This was just enough to add variety and the hens gathered around the trough as soon as they saw the feeder coming, for they were very fond of it. During the season when green vegetation was not available in their yards a handful of sprouted oats was also fed at this time.

The hens had fresh water available at all times. A small quantity of permanganate of potash was placed in the drinking water to prevent colds and disease. A small quantity of Epsom salts was fed in the moistened mash once or twice every month.

Alfalfa in Ontario

There is an Ontario grown variety that beats all others

Alfalfa is being recognized more and more as a most valuable farm crop for Ontario, says Prof. C. A. Zavitz, of O.A.C., Guelph. Its perennial character of growth, its power of making use of the free nitrogen of the atmosphere and of the fertilizing elements of the subsoil, and its capacity of producing large yields of exceptionally nutritious feed for farm stock combine to place this crop as one of the most important which can be grown. It possesses a combination of characteristics which is not found in any other farm crop. Alfalfa starts its growth early in the spring, which continues throughout the summer, and even late into the autumn. Under favorable conditions it produces two or three crops per annum and thrives for several years without the necessity of re-seeding. The feed is relished by practically all kinds of farm stock. It can be fed in the green or in the dry condition, can be converted into silage, and in a few instances can be pastured at certain times. In at least some localities over Ontario the second crop in the season is allowed to ripen for seed production to good advantage. Alfalfa is particularly suitable for use in a long rotation and leaves the soil in an excellent condi-

tion for the growing of other farm crops. In order, however, to make alfalfa growing successful it is important to sow the right kind of seed on suitable soil, and to employ the best methods of culture.

A few years ago alfalfa was grown in Ontario by a comparatively small number of farmers. In recent years, however, the growing of alfalfa has become popular, owing to the marked success obtained with this crop in various parts of the province. Many farmers are now sowing alfalfa in such a way that poor results are almost sure to follow, while others are using much better methods and are almost sure of obtaining results of a most satisfactory character. From experience obtained from conducting experiments with alfalfa at the Ontario Agricultural College within the past twenty years; from the results of the co-operative experiments with this crop; and from the observations of the alfalfa grown in a practical way by the farmers of Ontario, we believe that suggestions can here be given which might prove of much service. The selection of this subject for discussion at this time at the convention of the Dairymen's Association seems very appropriate, and it is to be hoped that there

may be a good discussion by the members present.

Soil Conditions.

It is practically useless to sow alfalfa on land which has a cold, wet subsoil. It is absolutely necessary for the roots of alfalfa to have an opportunity to penetrate the subsoil to a depth of a few feet before the water level is reached, or the plants cannot live many years. Alfalfa usually does particularly well on sloping land or on hillsides, providing the land is not of a springy character. Alfalfa sometimes does well on the lower part of the land, where the subsoil is not wet and the water does not remain on the surface of the soil in the spring of the year. Land which is naturally well underdrained is very suitable for alfalfa growing, but other lands will sometimes give fairly good results with alfalfa if they are artificially underdrained.

If lime is lacking, it is exceedingly important that it be applied and incorporated with the soil. As there is a considerable amount of lime in much of the soil in Southern Ontario, the advantages from the application of lime are not nearly as marked as they are in some of the States of the American Union, where it is practically impossible to grow alfalfa successfully without lime applications.

While it is important to have fertile soil which is well underdrained, it is also very important to sow alfalfa on land which is comparatively clean. Land which has

grown a crop of potatoes, corn or roots, and which has been thoroughly cultivated, should furnish a good seed bed. When it is desirable to sow alfalfa after a grain crop or after a sod the land should be worked thoroughly in order to kill the weeds and the grasses, and the alfalfa seed can usually be sown in the month of July.

Good Seed of a Hardy Variety.

Good, plump seed, free from impurities, and of strong germinating power should be used. Unless care is taken in ordering alfalfa seed, there is danger of securing weed seeds, which cause much labor in purifying the alfalfa crop in future years. Every person ordering alfalfa seed should become thoroughly familiar with the Seed Control Act, copies of which are obtainable from the Seed Branch of the Department of Agriculture, Ottawa.

Not only is it important to use seed which will score high in purity and in germination, but it is also of very great importance to use seed of a hardy variety if it is the desire to crop alfalfa for several years in succession without re-seeding. Recent experiments, which have been conducted at the Ontario Agricultural College, show us that there is a very great difference in the hardness of different kinds of alfalfa. We have under experiment alfalfa grown from seed obtained from different parts of Ontario, the United States, South America, Europe and Asia.

ALFALFA OR LUCERNE, O.A.C., 1912.

Country.	Strain	Tons of Hay per Acre		
		1910	1911	1912
Peru U. S.	Peruvian	2.6	.0	.0
	Grimm, Minnesota	3.6	2.7	4.6
U. S. Common	Texas	2.1	.5	.7
	Utah	2.6	.6	.6
	Colorado	2.1	.4	.6
	Nebraska	2.5	.6	1.1
	Montana	2.4	1.0	1.6
U. S. Special	Variegated, Kansas	2.2	1.2	1.5
	Wheeler, S. Dakota	3.1	2.5	4.1
Canada	Variegated, Ontario	3.4	2.0	4.1
	Common Violet, Ontario	3.2	.8	2.5
	Variegated, Ontario	3.6	2.2	4.9

It will be seen from the tabulated results here presented that there is a great difference between the Peruvian and the Grimm varieties of alfalfa. Here we have a comparison in the results of a tender, southern alfalfa, and of a northern, hardy variety. Practically all of the plants of the Peruvian alfalfa were killed in the spring of 1911, and under similar conditions the Grimm alfalfa came through with almost a perfect stand.

A great deal of the alfalfa seed which has recently been imported into Ontario belongs to the Common variety, and comes from Utah, Colorado and Nebraska. It will be seen that the plants of the Common variety from these Western States are very tender, and were almost completely winter killed during the past two years. The Common alfalfa obtained from Montana is said to be the hardiest strain of the Common alfalfa in the United States, and yet the results are comparatively low in Ontario. Even this strain of Common alfalfa has been badly winter killed at the College.

The two special lots of seed obtained from Kansas and from South Dakota have been noted for their hardiness in the United States, although they are still grown only to a very limited extent. The sample received under the name of Variegated alfalfa from Kansas has not proven to be variegated, and has given comparatively low results.

The three lots of alfalfa from Ontario seed show some very interesting results, the two variegated lots coming in the same class for hardiness as the Grimm alfalfa of Minnesota, and the Wheeler alfalfa of South Dakota. Two of the most important points in connection with this experiment appear to be the superiority in hardiness of the Ontario variegated alfalfa over the Common Violet alfalfa of the United States, and the superiority of the Ontario variegated alfalfa over the Common Violet alfalfa of Ontario. As the results of experiments conducted at the Ontario Agricultural College at Guelph, it seems very evident that the four hardiest alfalfas for sowing in Ontario are Grimm alfalfa of Minnesota, the Ontario Variegated alfalfa, the Baltic alfalfa of South Dakota, and the True Sand Lucerne.

Inoculation of Seed or of Soil.

Many of the soils of Ontario which have not grown alfalfa previously do not contain the alfalfa bacteria in the soil. It is wise to introduce this bacteria either with the seed which has been inoculated, or with the soil obtained from a field on which al-

falfa has been grown successfully, and in which there has been an abundant development of the nodules on the roots of the alfalfa. If the proper bacteria are not present the alfalfa must secure its nitrogen from the soil. With the proper development of the nodules on the roots of alfalfa the plants have the power to make use of the free nitrogen of the atmosphere as well as of the nitrogen which is already in the soil. As the seed can be so easily and so cheaply treated it is usually wise to treat the seed unless it is known there is an abundance of the proper bacteria in the soil. For further information regarding the inoculation of alfalfa seed, inquiries should be made to Professor S. F. Edwards, Bacteriological Department, Agricultural College, Guelph.

Time and Method of Sowing.

Under average conditions in Ontario the alfalfa seed should be sown at the rate of about twenty pounds of seed per acre, and the seeding may take place at any time of three different times of the year, as follows:—

1. Alfalfa seed may frequently be sown on winter wheat in the early spring either on the old snow or on fresh snow of one or two inches, and no harrowing or cultivation is necessary. When this method is followed the soil should be free of grass and weeds and the wheat should not be very thick on the land.

2. On suitable seed bed, and as soon as the land is sufficiently dry in the spring, alfalfa seed may be sown from the grass seed box placed in front of the grain drill. About one bushel of barley or spring wheat per acre sown from the tubes of the drill makes a very good nurse crop. After the seed is sown the land should be harrowed lightly. This method usually gives very good results, providing the land is in a good state of cultivation and is in a clean condition.

3. Alfalfa may usually be sown alone to good advantage in the month of July on a summer fallow, providing there is sufficient moisture for good germination. This is a good system to follow providing the land produced a crop of grain or was a sod in the year previous to the sowing of the alfalfa seed.

It is nearly always wise to leave the alfalfa undisturbed the first autumn. If there are weeds, however, which are likely to go to seed, or if the crop is so heavy that there is danger of smothering in the winter a mowing machine can be run over the field so as to cut the tops of the plants, which could lie as a mulch on the field.

The Inequality of Freight Rates

The Fruit Growers of Ontario have a Traffic Expert to Look After Their Interests

BY the refusal of the Northern Navigation Company to carry fruit shipments on their boats from Sarnia to the Soo, except one day a week western Ontario producers practically lost one of their very best markets the past season, said S. E. McIntosh, before the Short Course for Fruit Growers' at Guelph, in January. We sacrificed that market to American producers, who were able to ship apples from Lyons, N.Y., into the Canadian Soo, at a rate of about 18c. less per barrel than Ontario growers; and also land apples there from Illinois and Ohio for 22c. per cwt. Reference was made to these facts at the Fruit Growers' Convention in Toronto, and I am very glad to inform you the railways have taken some notice of this.

The markets of Port Arthur and Fort William are also gradually slipping away from us for similar reasons, as outlined in regard to the Soo. Mr. Cannoss of the Fitzsimmons Fruit Company, Fort William, informed me that because of the lower freight rates on American roads, they were able to bring June tomatoes from Texas, and southern fruits and sell them at prices so low that they were marketed in preference to the Ontario product.

These facts alone are sufficient to show the serious state of affairs even east of Winnipeg. West thereof, our Ontario fruit shipments, burdened with an excessive freight rate, are brought into competition with British Columbia, Oregon, Washington and Nova Scotia products. Yet we find the British Columbia fruit shippers were but recently given a reduction of apple freight rates to this market by the C.P.R. amounting to \$24 a car from Okanagan to Calgary, and a further reduction from 45c. to 40c. on apples, and from 53c. to 48c. on fresh fruits, to the coast.

Looks Like Robbery.

The British Columbia grower can ship from Vancouver to Calgary for 75c. per cwt., or to Winnipeg for 85c., covering that portion of haul between Calgary and Winnipeg for 8c. per cwt. The Ontario grower ships to Winnipeg for 53c. or to Calgary for \$1.04. For the haul between Winnipeg and Calgary the Ontario shipper pays 51c., while the British Columbia shipper is charged 8c. Such discrimination, almost looks like robbery.

Nova Scotia apples, hauled 700 miles far-

ther than Ontario apples, can be put on the Edmonton market for one cent per cwt. less freight than Ontario apples.

It is high time that a thorough investigation was begun of the huge and complicated problem of railway rates on Ontario fruit shipments, especially west of Winnipeg, with a view to determining a just and equitable basis upon which a traffic tariff should be framed. Such would be an immense undertaking, requiring men of special ability. High railway officials tell us that rate schedules are a deep and intricate mystery, not to be understood or rashly meddled with by anybody save themselves. I agree with them the tariffs are all they say, and I submit herewith a few of the great mysteries in rate-making to western points, comparing rates charged British Columbia shippers to certain Manitoba, Saskatchewan and Alberta points with rates charged Ontario shippers over the same haul.

From Kamloops to Calgary the rate on apples is 62c.; Okanagan to Calgary 60c.; and from both points to Winnipeg 75c.; the haul of 837 miles between Calgary and Winnipeg is made for 13c. and 15c. respectively. For the same haul the Ontario shipper pays 51c.

From Salmon Arm, B.C., to Medicine Hat, the rate is 67c., and to Winnipeg 75c. The C.P.R. make a difference of 8c. per cwt. for the haul of 657 miles between Medicine Hat and Winnipeg to the British Columbia shipper, and for the same haul charge the Ontario shipper on the same commodity 48c., a difference of 40c. This surely is a mystery.

From Ashcroft, B.C., to Regina, the rate is 85c. and to Winnipeg the same rate of 85c. For the 365 miles between the latter points, where no charge is made on the Ontario competition, the same railway company assess you 34c. per cwt.

From Ashcroft, B.C., to Lethbridge, the rate is 74c., and to Winnipeg 85c. It is 765 miles from Lethbridge to Winnipeg, for that haul the British Columbia shipper pays 11c. per cwt. For the same haul, however, we are asked to pay 51c.

The same condition exists to points all through the West. Is it any wonder, therefore, that the Ontario fruit growers are deeply concerned lest they lose this market, which is consuming 75 per cent. of the crop.

From Spence's Bridge, B.C., to Medicine

Hat, a rate is given of 70c., and to Winnipeg 85c., 657 miles for 6c. per cwt., and they levy upon you 48c. per cwt.

Okanagan to Medicine Hat, 71 per cwt., with only 4c. more to Winnipeg, while for the same 657 miles you pay just twelve times the rate.

I could go and quote you many such instances of discrimination. Vancouver to different points, Brandon for instance, for 85c., and the same rate to Winnipeg, while you pay 53c. to Winnipeg and 72c. to Brandon, a difference of 19c.

Why Ontario Apples are Absent.

Equally glaring express rates could be given, but time will not permit dealing with them very fully on this occasion. One outstanding fact is that while the Dominion Express Company has running rights over practically two-thirds of the railway mileage in Canada, some of our most extensive fruit districts are served only by the Canadian Express Company, and these shippers are compelled to pay rates greatly in excess of those from competitive points, such for instance, as the following:

Sarnia to Winnipeg, express rate.. \$2.90
Forest to Winnipeg, express rate .. 4.20

The latter is 23 miles less haul. The shipper must pay that rate of \$1.30 in excess of the former, or pay a local rate back to Sarnia, hand the shipment over to the other express company, and thus entail certain delays.

Such conditions in respect to both freight and express rates are bound to prevent greater development of the fruit industry in Ontario, and the extension of our markets in the West.

Rates, however, are not the only grievance. That railway, express and steamboat companies are unnecessarily slow in fulfilling their part of the marketing of fruits can be clearly shown by facts and figures. It seems they are charging for the time it takes them to deliver the goods, rather than the length of the journey.

Delay in transit is one of the serious problems. One shipment of apples from Glencoe to Chicago took 250 days. Few shipments reach Winnipeg in six days, and indeed some have made less than three miles per hour. Fruit is delicate and perishable at best, but it is inexcusable and maddening to have shipments go forward at an average rate of three miles per hour. A schedule of ten miles per hour is asked for by the Ontario Fruit Growers, but it is very doubtful if any improvement can be looked for in this matter until by a submission of facts relative to the moving of the whole season's crop, we can prove to

the Railway Board the necessity of an investigation for the purpose of devising a remedy for a defective system. The producer or the shipper, under existing conditions is unable to form any very certain idea of the condition of the market when his shipment reaches it, for it is too much of a speculation as to how long it will be on the road.

Getting cars in a reasonable time after ordering them is another problem, and one that is costing fruit shippers many dollars each year. One shipper I have in mind who only handled nine cars this season, estimates a loss of over \$300 owing to market changes while waiting for refrigerator cars. Red Adams report. No company obtaining its right reality, the people, should be allowed to humbug the people and cause those who make their operation possible and pay their profits, great equipment to cope with the demand. Goods cannot be shipped unless cars are provided, and of our principal railroads—one that has doubled its revenue in ten years, had thirteen more refrigerator cars four years ago than it has to-day. Is that keeping up the demand?

Probably the most contemptible grievance of all is the pilfering of the fruit shipments, the loss from those petty thefts being estimated in some cases at 10 per cent. Some one is to blame for this, and the railway companies are adding the last straw, in allowing employees to go unpunished, who rob a shipper's consignment after charging high rates and allowing the trains to dawdle along at the speed of a man walking.

Stop-off or an inward freight minimum for loading in transit is a request recently heard by the Railway Commission, but upon which no ruling has yet been given. It was pointed out to the Board that in granting the fruit shippers the same privilege as now exists for canned goods, live stock, grain and poles, namely, a stop-over for \$3 to complete a carload, many carloads would be shipped that under the present conditions never reach a market. To substantiate this statement I have here reports from 17 shippers who claim they could ship 191 cars under such a privilege that the majority of which otherwise would never be marketed.

The Board of Railway Commissioners have said the granting of this request would be good business on the part of the railways, but they—the Board—have no power to order the extension of a privilege, unless discrimination is shown. That the Ontario Fruit Grower is discriminated against, cannot be disputed.

The Master of the Sheepfold

One of Joe Wing's Stories on his Favorite Theme

IN The Breeders' Gazette Mr. Jos. E. Wing tells a very interesting story that will be readable at this time on the farm.

The "old man" had had a hard day. He had caused a hard day for those under him. At the office his keen mind and domineering will had ruled over all, from office boy to his first assistant. He was not a patient man, especially, he had no patience with inefficiency. Now he was going home in the winter's twilight. His suburban train flashed through lighted villages or stopped at brilliant stations where people disembarked laden with packages. As he proceeded the village grew farther and farther apart with wider spaces of darkness between them. At his station the train glided away in the darkness and an auto drew up the platform.

"That you, Ben; how are things?"

"All right, sir, only that shepherd got drunk again and the missus fired him."

"What's that, the shepherd gone?"

"Yes, sir, he was very drunk, sir, and tried to build a fire in a hay rack down at the sheep barn."

"That's a pretty mess, just now. Are'n't the ewes lambing, Ben?"

"They are, sir. There were two pairs of twins born since he left. One of them was born out in the pasture and got cold. I have it up at the garage. Bill, the cowman, say that the ewes will not own the other twins and none of us knows what to do."

"Well, why did you not try to sober up the shepherd?"

"We did, sir, but he got to drinking the whiskey that the missus bought for the lambs."

"But lambs don't drink whiskey"

"That's what I have always understood, sir. This shepherd told the missus that new-born lambs when they got chilled needed whiskey, so she got him a quart."

The big automobile glided up to the lighted country house. There the curtains were were up letting warmth and light stream out into the winter's night. The great door opened and the butler, smiling and helpful, welcomed the master and removed his great coat, and he hastened up to his wife's room.

"Well now, Mary, how goes it?"

"Oh, John, I was so wishing you would

come. We are in such trouble. The shepherd has gone and the cowman's wife is ill and there are six new-born lambs down at the fold and there may be more by this time. It never rains but it pours. One lamb got chilled and we are warming it at the garage and one ewe will not let either of her babies have any milk. Jane and I have been down twice, but we do not know what to do."

The master looked much annoyed.

"Mary, I have had a hard day. I thought I came home to rest, but it seems not. Let the sheep go if they want to. I'll not do anything for them."

"Oh, but John, the little lambs are so dear and helpless, and you know so well how to care for them. Let me tell you a secret, dear. It was when I was a little child and saw you as a big boy caring for your father's sheep and the little lambs down on the old farm that I first learned to love you."

His grim face relaxed into one of his own smiles. When he smiled his square strong face was quite transformed. Gently he kissed the woman and said: "Yes, I did know about sheep in those days. I wish that I knew anything else as well. But I would never have put any sheep on Woodmere if I had supposed that such a thing as a real shepherd would be impossible to find. Well," with quiet exasperation, "let's get out and see how things look at the sheep fold."

"Before dinner, John?"

"Before anything. Minutes are precious with these lambs. I'll put on this old automobile coat. Where is the electric lantern? Come on, Mary, come out with me. I'm hanged if I go a step without you."

They went out and paused first at the garage.

"Ben, where is that lamb you were warming up?"

"It is here, sir, by the radiator."

"That is no way to warm a chilled lamb, on that cold floor. This one must have been born in the snow. Bring some hot water, a big bucket full of it. That is the sort, as hot as you can bear your hand in it. There. Now souse the lamb in, hold it by the head so, and soak it well. All under but the nose. See that lamb begin to come to life? Keep it in the water for five minutes, then

wipe it dry and bring it down to the sheep fold."

They passed on down across the big lawn to the sheep fold. There was a chorus inside, anxious calling of ewes uncertain about their offspring, feeble cries of newborn lambs. They passed inside and turned on electric switch, flooding the place with light. Groups of ewes stood contentedly munching hay at the racks or chewing their cuds as they lay about on the straw. Others hastened about seeking to find their lambs, poor staggering morsels quite unaware of how to use the world into which they had come.

"What a swad of them there are! And what bully strong ones, too!"

"Why, John, I thought they were so weak."

"Well, dear, they need milk, but they are all right, and look at the markings! See those legs, see those backs, see those little horns begin to sprout. It will be queer if we don't beat old Winthrop at the show next fall."

"But what will we do, John?"

"Mate 'em up, mate 'em up. Get the ewes with their lambs first thing. Where are those little panels I had made on purpose for this emergency?" He searched the adjoining feed room, reappearing with a pair of hinged panels that opened to make a little pen four feet square. "Now I'll hook this to the wall and put a ewe in it, but first let me decide which are her lambs."

With a crook he soon caught a ewe and led her to the pen, while under his direction Mary brought the lambs. Quickly he threw the ewe to the ground and turned her in a sitting position, meanwhile examining her udder.

"The lambs have not sucked yet. Let me have one of them."

Deftly he took the lamb by the neck and lay it down beside the mother, its nose against her distended udder. He inserted a trained finger into the lamb's mouth, and it sucked, from instinct. Then he slipped in the teat. The lamb drew a little milk, the taste came as a pleasant awakening to it and presently it was sucking like a steam pump. Soon thereafter he had the other lamb in like position and thus he let them lie until they had nursed well.

Gently he turned the ewe to her feet, and put the lambs beside her. Eagerly yet with keen suspicion, she sniffed them each. Then she accepted them. The odor was of her own sort. She called to them in low mumbling tones of endearment such as ewes have for their newborn offspring.

"That's a good job. They're safe to go through, and beat Winthrop's if they get their feed. Now for another ewe."

He arranged a second pen alongside the first one. The sides of the pens were of matched boards, the lambs could not creep out nor could the ewes see outside. The second ewe likewise readily owned her lambs. The third ewe then went to her pen. Her one lamb was sucking vigorously before they put her in, no need to inquire as to its parentage. Where then did the odd lamb at the garage belong? Careful search among the ewes revealed the evident mother. She was a young ewe that had not lambed before. She had already forgotten her lamb, or thought it surely dead in the snow. As she was penned the chauffeur came with the lamb.

"He is as fine as a fiddle, sir, and bawling like a calf."

"That's good. Bring it here; let's hope its mother will own it."

Placing it in the pen they watched. The strong young ewe calmly sniffed it, then with her head vigorously butted it. If ever it had the right scent for her it had lost it through the bathing, she would have none of it.

"Here, you young fool, none of that," he growled.

"Oh, John, what will we do?"

"Fill it up first," and with his old sheep shearing twist he set the ewe on her haunches, whereat she protested vigorously, kicking and struggling a little as is the way with young ewes. Led to the maternal fount the once chilled but now steaming lamb sucked vigorously.

"There, that lamb will go it all right, if only its fool mother will own it."

The ewe stamped her foot and was angry. The lamb ventured timidly to approach her side. She butted at it hard, but John prevented her and rescued the lamb. "Bring a little rope, Ben; we will have to tie her up."

The ewe was tied rather short at one side of her little pen. "Now she can't hurt the lamb. Go to it, little one!"

But the ewe could prevent its sucking for all that. She squirmed and twisted and stamped her feet.

"Well, here is an all night's job for someone. We will simply have to hold that ewe every time the lamb sucks, and do it for two or three days I guess. Let's go to dinner."

At dinner the "old man" was genial, even gay.

"Aren't those the finest ever? Did you notice that they are like their sire in

the back? Give me a ram with a good back. I don't mind if he is a bit high if he has the back and the chest. Why, they are built like little Percherons. Coming in showers, too. Well, the earlier the better, that was always my experience. All those of to-night are safe but the single one."

"They are very dear," said the gentle-faced wife. "But I wish they had a shepherd for to-night. Hear that wind howl!"

"Well, they've got a shepherd for to-night, and a good one. They've got a ten-thousand-dollar shepherd for one night, anyway. I'm going to take care of them myself."

"Why, John, it will break up your rest."

"No, I'll have Central call me every two hours, and I'll not undress, but lie in the library. Do you suppose I'm going to risk anything happening to such lambs? I don't need to go to the office to-morrow, either, unless I wish."

At ten, at midnight, at two, at four, and at six one might have seen the grim-faced man going across the moonlit lawn to the sheep fold. Each time he came to a scene of deep interest—calm and tranquil

ewes yet to lamb, lying in their clean straw, or munching the remnants of hay in the rack; the twins in each pen, little warm white soft bodies, sleepy at times, yet waking at his gentle lifting and obediently nursing just to prove to him that they could do it and that their mothers were willing.

The unreconciled ewe was yet distrustful of her offspring, but even she grew more willing to let it suck. At four in the morning was born another lamb, a fine strong one, needing nothing but to go to pen with its mother. At seven came the cowman with a neighboring farm boy who could take the shepherd's place.

"I am afraid you have had a hard night, dear," said the wife at breakfast time.

"Pshaw, you waste sympathy. I enjoyed it. You ought to see the little disowned lamb going for his dinner. I have told the new boy to see that it has it every hour. I rather think he will make the best one of the lot. And did you know there was another one born this morning? For \$10 I would never go back to the office but would stay and be my own shepherd."

"What has come over the 'old man'?" inquired the clerks in the office that day, "he is like some big jolly farmer."

My Life Text

A College Girl Graduate Becomes a Farmer's Wife and Likes It

BEING a college graduated farmer's wife it is of the crucial moment in my life wherein the two became reconciled that I write. Some there are who will blame me, calling me narrow that I held such non-sensical views; others they will sympathise with the viewpoint from which I saw my life at the time, writes a College girl in *The Ladies' Home Journal*. It is to the latter, and especially to any who might perchance be standing at the crossroads where a like decision awaits them, that I tell my little story.

My girlhood was spent in a carefree way in one of the happiest homes in a college town. Could you find a more alluring picture? There is ever a healthy freedom under like conditions not to be found in other places.

Of a naturally romantic nature my idea of friendships with young men was based on the same principles of our happy college days, and while I had known many bright young classmates for whom I entertain a

wholesome regard I kept myself free from anything of a serious nature, feeling that somewhere, sometime, "my own would come to me." When he came, as he did a year later while I was teaching, he seemed everything to me that the college "boys" had not seemed: he was more mature, a rising lawyer, an ex-Consul, a man among men.

We became engaged, and then followed a year of separation in which I was at home preparing for our coming marriage.

In the spring word came from him that his father was lying at the point of death, and that he was leaving immediately for the old farm home, there to meet with his brothers and sisters who were also hastening homeward. A letter that the father had passed away came next, and then this one:

Dearest Marian: We laid Father away yesterday in peace Mount Auburn. He was a good man, loved and honored by all who knew him. He is at rest. We shall miss

the kindly old face, but I think he is happier to be where Mother is.

There is no one left now to call the old place home. It is like an empty nest, or liked a loved body from which the soul has gone.

We sat about the gate last night, the brothers and sisters, saddened both from Father's death and from the impending loss of the old home. We talked a little of the feasibility of keeping it, but there seemed to be no one to see that it was kept up. The girls, of course, have their own homes, Ed has his railroad business, John his Denver church, and Frank his dental practice.

After the others had gone to bed I sat far into the night with a half-formed plan in my mind. I arose this morning early, walked to a high point in the timber back of the house, where, in my boyhood days, I had threshed out my youthful problems; and there, watching the sun rise, I came to a definite conclusion: I am going to buy the old place from the other heirs. I shall have to borrow a little capital, for I haven't quite enough to cover the amount, and I want every foot of the land. I am going to give up the law, and I am coming here to live as God must have intended men to live. I am going to plow and sow and reap and live in the open. I have felt the call to the land for several years, but it was easier to keep on in my practice than to make the break. I thought it all out this morning, with the song of the birds about me and the spring smell of the rich loam in my nostrils. The office, with its grind and the petty grief of our clients, seemed very far away; the artificial life of S—, with its constant social strivings, seemed suddenly an unworthy thing; and with bared head I thanked God for the wisdom to see my life as it should be.

Then followed a sweet, intimate portion of the letter, concerning our coming marriage, of the happy life we would have together; there would "again be little children in the old home —" But I was in no mood for any of this. I was stunned. That he should make this move without first consulting me seemed incredible. Who was I—Marian Barclay, Professor Barclay's daughter, educated, talented, a social favorite in my home town—who was I, to marry a farmer? Oh, I proved to myself that I was an egotistical little prig, there is no denying that! I was mystified. That a man of his education and standing in the community should deliberately turn his back on an honorable profession, with its social advantages, and choose to be a farm-

er seemed unbelievable. I was disgusted. "To plow and sow and reap." Yes, and wear overalls, and be dirty and sweaty! Ugh! How could he? And to think that my home-town friends didn't know him; and now, instead of appearing as the distinguished young lawyer from S—, he would come to our wedding in the autumn a sun-tanned farmer. And I to be a farm drudge all my life!

Well, at least it wasn't too late. I didn't have to be a farmer's wife. But I loved him. That was the hardest point to meet. I couldn't give him up. Plainly the thing to do was to dissuade him from this foolish venture, this fad that seemed to be his for the moment and which he would in time thank me for persuading him to relinquish.

I wrote him to that effect. Letters at any time are more or less unsatisfactory, and this one must have seemed a combination of all that was petulant, angry and sarcastic. His reply contained much that was kind and considerate; a steadfast opinion that he was doing the best thing, and an underlying note of disappointment in me that I couldn't fail to detect. One sentence stands out clearly in my mind: "I want to ask you one question, little girl. Do you love me, or did you love the idea of being a lawyer's wife and moving in the S— social set?"

It was a miserable way for things to go on.

I went one afternoon with two of my club-girl friends to a concert in the college auditorium, a famed orchestra having been secured. It was such an occasion as I most enjoyed—the music, the pretty gowns, the soft chatter between numbers. Before it was over I had determined to stay in the environment I loved. There would be my parents and my pretty home, the college life, the concerts and lectures, the little nephews I adored.

Upon returning home I went to my room and wrote the letter, a letter so bitter that it would forever sever the bond between us. I have happily forgotten much that I said, but I know I quoted:

Let it pass in silence,

We'll forget.

There are, doubtless, things to live for

Even yet:

And Life holds far nobler uses

Than regret.

With my heart full of sadness, rebellion and anger I walked along the shady old streets to the postoffice. I dropped in the letter—and a sudden panic seized me.

"George," I said to the neighbor boy at the postoffice window, "could you hand me

back that letter? I have forgotten something—important.” I had. I had forgotten that love is the greatest thing in the world.

“Sure,” he said with a friendly smile.

I walked to the hill beyond the cemetery. I don't know how long I stayed, and I cannot follow the intricacies of the debate that went on in my mind and heart. But I fought it out—the foolish pride that bound me to the conventions of what I chose to call “my station in life”—and renewed the love for a good strong man whom I trusted implicitly. I came down from my hill a wiser, maturer woman, and I did not go home by way of the postoffice.

That night I told Father and Mother of the change in our plans. Father, strange to say, seemed wonderfully well pleased. There seems ever a call to Nature in the hearts of men. Mother was more dubious. She had a “sister who had worn herself out on a farm”; it wasn't just what she had “planned” for me—and such is the perversity of human nature, I found myself defending before her what I had previously despised.

We were married in the autumn—my farmer and I. Oh, yes! He was tanned from the summer's work, but so was “Charlie” Morgan, who had been “lazying” away the summer down East on his uncle's yacht.

Next to my family I have learned to love the old place, and two children play in the big, grassy yard. We have prospered. We have refitted and refurnished the fine old brick house. We have books and pictures and music. A touring car stands in the

garage. We have our friends with us often. My husband's influence is felt far and wide, in country and in town alike. Better than these we have our health, we are happy, contented, tranquil.

I wouldn't make the picture more ideal than truthful. There has been plenty of hard work. I have ironed and baked and sewed, and I think I have canned tons of fruit. But I have been happy; and when work and health and happiness go hand in hand what more in life is there to be desired?

If I have worked hard so has Esther Cole, one of the girls with whom I attended the concert that long-ago afternoon. Witness her last letter:

“Tuesday we were entertained at luncheon at the Savoy by Mrs. Emory-Dodge; then from there we went to Mrs. Hambright's for bridge, to the Middleton's for dinner and a theater party afterward. was nearly dead. I'm coming out to “The Oaks” one of these days, Marian, if it's convenient, and try to catch up.

Ah, me! The things that used to seem worth while!

And an extract from Clara Burnham's last:

I just gave my little annual entertainment, a rose luncheon—and, Marian, it cost us \$65, half of Fred's salary. It just makes me sick, the awful high cost of living. But what is one to do?

Ah, well! “A crucial moment in any life, viewed through a ten-year perspective, becomes softened and mellowed.”

Fox Frenzy

Breeding for Black Foxes Brings in Millions in P.E.I.

IN one of its first issues, Farmer's Magazine had the story of the Black Fox farms of P. E. I. Since then, the development of fur-farming in the Island has gone on so extensively that everybody is talking about it. Dr. W. F. Chapman, of New Jersey, spends his summers down there and tells about the industry in the New York Independent. He says:

The story of this industry is unique and exceedingly interesting. Twenty-odd years ago a farmer on the island, hunting one day for cows in the woods, discovered a fox-den in a hollow log, and from it carried home a

pair of black-fox pups. Like the Boer children in South Africa playing with the white pebble that was found to be a great diamond, the farmer had little idea of the value of his find. He bartered the pups for a cow with a neighbor who conceived the idea of breeding from them, but after several years of unsuccessful effort he sold them for \$80 to a man who lived on a small island off the coast of the main island. The new owner, with a more retired place to keep the little animals, and perhaps with better understanding of their nature, at any rate with better luck, succeeded

after a couple of years in securing a litter and the game was on.

When it was found that a silver-fox pelt would bring many hundreds of dollars, and even thousands, in the London fur market, it was not easy for any man to keep the business to himself. And yet, until about three years ago, the industry was confined to a small district in the hands of not more than a half-dozen men. These men had conspired to keep the business as secret as possible and to hold it in their own hands. They learned by costly experience the nature and habits of the animals, how to confine them and care for them, and went on quietly increasing their stock, importing a few from other countries to vary the breed and annually selling a considerable number of pelts at prices as high as \$2500 apiece.

The business could not be kept secret long. The friends and acquaintances of these foxy men began to notice that they were spending more money than ordinary farmers were used to handle, and the secret was out. The business burst its bounds. The foxes, so to speak, broke loose. A great demand arose for the live stock for breeding purposes. Applications came from near and far. Every farmer or combination of farmers that could raise enough money to buy a pair have made a start in the business. Many, unable to purchase pure silvers, have started with crosses, hoping to breed out the red and ultimately develop pure stock. Business men have been attracted by the industry and companies have been formed with large capital to extend the industry on a larger scale. The business has spread over the island and has crossed to the mainland, and now there are scores of these fox farms worth millions of dollars, when but three years ago there was a scant half-dozen. A very frenzy has seized the country. Men are fox crazy. "Fox" is the topic of conversation everywhere. You hear it and overhear it on the trains and boats, at the country store and at the casual meeting of neighbors. Everybody is speaking and thinking and even dreaming of black foxes.

The value of the silver-fox depends, of course, ultimately upon the value of its fur. The dark silver, commonly called the black fox, has been hitherto exceedingly rare, and its fur has gone principally to adorn the royalty of Europe. For that reason and also because of its exquisite beauty, it has been for a good while the costliest of all furs. A few years ago a black-fox pelt from Prince Edward Island was sold at auction in London for £580 or nearly \$2900. That is said to be the highest price ever

paid for the pelt of a single animal. The light silver, or pointed fox, is more numerous and somewhat less valuable, while "crosses" or patch foxes" vary in value according to their approximation to the pure silver, grading down to the common red which is by far the most numerous and least valuable, being worth about \$5 per pelt.

When the fox-farming industry first broke its narrow bounds on "The Island," the live foxes were sold for nearly the value of their pelts, but the price has been mounting steadily upwards during the past two years. Recently, one of the pioneers in the business sold his ranch of 20 pairs to a company, with certain guarantees, for \$625,000, and within a few weeks a gentleman from Russia visited "The Island" and purchased five pairs for \$100,000. These are to be shipped to Russia and the industry established in that country.

Thus it will be seen what a sensation this new industry has produced in that quiet country. Think of it! A man may have lived for fifty years on his ancestral farm, with all its accumulated stock and machinery and buildings. He may have a herd of cows, a flock of sheep, teams of horses and other stock of an ordinary farm. With these and all the other products of his farm, he has been able, by frugality and incessant labor, to make a living for himself and family. But now, if he is one of the fortunates, he can take you back to some good-for-nothing thicket of bushes and show you a little animal, not much larger than a skunk, and that smells like one, only not so emphatically, worth more in the market than all the farm with all its stock and produce and buildings and machinery.

Continue to think of it! Here is a man with an estate that looks to the passerby like an ordinary farm. There is no great mill or plant with smoke stacks befouling the sky, no great crews of men coming and going, no grunting, shunting locomotives hauling back and forth the raw material and the finished product. There is but an ordinary farmer who knows nothing about metallurgy or mineralogy, nothing about the management of the world's big business, with no more education than he could get in a common country school during the winter months of a few youthful years, and yet, with an amount of work less laborious than tending a flock of sheep, pocketing shekels like a steel magnate or a hundred goldminers. He can raise foxes more easily than he can raise sheep, and how much better is a silver-fox than a sheep! It costs about as much to raise a fox as it does to

raise a bull-pup. The latter may be snatched from the watery grave of your neighbor's superfluous young canines for the price of carrying it home, while a pure silver-fox is worth twice his weight in gold.

During the mating and breeding season, from December to May, the pens are guarded with the most absolute strictness. No one but the keeper is allowed to approach them. The slightest intrusion upon their privacy by man or beast is apt to result in the effort of the parents to hide their young. The mother, if excited by any means, will bury her young in the ground, or carry them about in her mouth until they are smothered or worried to death. The male is usually withdrawn from the pen before the little ones arrive. Many have been lost through the ignorance or disregard of the peculiar nervousness of the female. During this delicate period such care must be taken that it is perilous for the keeper so much as to change his coat when visiting the pen.



A suggestion for a coat-of-arms for P.E.I.
—From the Montreal Star.

Potato Spraying and Seed Treatment

Insects and Diseases Eat a Big Hole Out of the Annual Profits

THE growing of potatoes is one of the problems with which nearly every farmer is confronted and with which many are specialists in all parts of Canada. The celebrated Delawares of New Brunswick have advertised that province far and wide. Farmers in various parts of Ontario have made much money in raising early potatoes as well as the late ones. New Ontario has shown that her soil can produce the biggest kind of potatoes. However, if one wants to see size and abundance one has to visit the potato crop of Northern Alberta. It is marvellous the size to which the potatoes grow and the number of them that are in a hill. Even the back yards of the city of Edmonton produce so abundantly that every householder carries a big potato story around with him.

The Irish potato was introduced into the civilized world a little more than three hundred years ago, writes D. E. Lewis in the *Fruit Grower and Farmer*, of St. Joseph's.

During its period of domestic cultivation it has become indispensable. No other vegetable is so widely grown or so generally used. Adapted to a great variety of soils and climates, it has a prominent place

Fig. 4.

among the crops of almost every nation. In the United States it has reached a high state of development, and is probably cultivated by a greater number of growers than any other crop. It has a place in the home and market garden, on the general farm and is grown extensively and almost exclusively in many favored sections.

By reason of its great commercial value, special attention has been given to its perfection. Through the selection of seed and modern methods of cultivation, the size of the tuber, as well as its productiveness, has been greatly increased. Repeated efforts have been made to produce varieties resistant to adverse conditions, and, in part, at least, they have been successful. No varieties have been found, however, which are entirely resistant to fungous and insect pests, and since many of those best suited to commercial growing are especially susceptible to this kind of injury, spraying, seed treatment and crop rotation have become a necessity.

Why Spraying is Necessary.

During the early spring, usually about the time the potato plant is coming through the ground, a yellow and black-striped bug

makes its appearance. This insect is the adult stage of the Colorado potato beetle, an insect which caused greater consternation among potato growers soon after the Civil War than the San Jose scale has recently caused among fruit growers. It was soon found, however, that careful spraying with poison, together with the aid of its natural enemies, would hold the insect in check.

The adult stage of the beetle may cause much or little trouble, according to the number of insects, but the next stage, the larval, is the one most dreaded. The adult has laid its mass of orange-colored eggs on the under side of the leaf, and as these hatch and the larvae or slugs, emerge severe injury commences. Happily, the ravenous appetite of these causes their sure destruction if a poison is on the potato foliage. There are from two to four broods of the Colorado potato beetle, and all stages may be found at almost any time during the summer months. If spraying afforded protection from this insect alone, it would be a paying investment. It happens, however, that the sprays applied in the control of this beetle lessen the injury also from such other insects as the stalk-borer, the flea-beetle, and, in a measure, at least, the blister-beetle.

Potato Blights.

It is rather unfortunate that during a season when wet, cloudy weather prevents great injury from insects, the other group of potato enemies, the fungous diseases, find the conditions favorable for their greatest development. This is especially true of the late blight of the potato, but is true also, in a less degree, of early blight. Both diseases may be controlled by spraying, and frequently failure to thus protect the plants means a loss of half or more of the crop. The early blight is first noticed about the time the tubers are setting on the vines. Small, grayish-brown spots appear on the leaves, and as they slowly increase in size they are marked by concentric rings. Soon they become hard and brittle, and many fall out, giving the plants a ragged appearance. The injury may simply check the growth of the plants and cause a light setting of tubers, or it may kill them outright, entirely destroying the crop.

The general appearance of the late blight varies somewhat, but its ultimate effect is to cause a sudden wilting and death of the potato plant. The spots appear first upon the leaves as blackish-brown areas which soon become soft and foul-smelling. The

fungus works in the stem and tuber also, producing dark rings of discoloration and frequent rotting of the potatoes. Fortunately, both of these diseases may be controlled by careful spraying, and since spraying is necessary to control insects, the fungus may be combated at the same time, and the cost of separate applications saved.

Spray Materials to Use.

Bordeaux mixture, to which arsenate of lead has been added, is the most effective spray material to use against all potato insects and fungous diseases. Paris green or arsenate of soda is frequently used as a poison in place of arsenate of lead, but since they wash off the foliage easily, they become especially undesirable during rainy weather.

A correct and thoroughly efficient spray for potatoes may be made as follows: Dissolve five pounds of copper sulphate in twenty-five gallons of water; slake five pounds of stone lime slowly, and after the slaking has entirely ceased, add enough water to bring the volume up to twenty-five gallons and mix thoroughly. Next dip a bucket of each of these solutions and pour them together through several thicknesses of burlap or through a strainer into the spraying tank. Proceed in this way until the two solutions have been mixed, and then add four pounds of arsenate of lead paste or two pounds of dry arsenate of lead, which has been previously mixed into a creamy mass with water. Stir the mixture thoroughly, and it is ready to apply.

Many growers pour one of the solutions into the other, or perhaps, place the lime and copper sulphate into the spraying tank and add water, thinking in this way to lessen work. The labor is shortened by such a method, but so is the effectiveness of the spray mixture. The chemical compounds occurring in such a mixture are not the same as those formed by combining equal quantities of the dilute solutions, and are not so sure to check the plant diseases. When large quantities of bordeaux are to be used, tanks should be placed upon a platform high enough to allow the dilute solutions to run into the spraying tank by gravity.

Potato Spraying Machinery.

The kind of machinery best adapted to potato spraying depends largely on the acreage to be protected. Small knapsack sprayers are efficient for garden work, but power sprayers, or at least large hand pumps must be used in the field.

HELD UP

This little story, "Held Up," is from the pen of one of the most popular of American short-story writers—a writer whose work appears frequently in the leading publications. The entire action centres around a wedding present—a substantial check—but the honor and happiness of two families are involved, to say nothing of the contracting parties of the marriage. The unusual way in which the crisis is met provides ample scope for a tale both clever and romantic.

By Thomas L. Masson

KOYTE, engaged to the richest girl in the town, was supremely happy.

Not necessarily because she was rich, but because he loved her. They were to be married to-morrow.

For several weeks before a man is actually married—especially when he is marrying a very popular girl—he is more or less of a nonentity. But upon this eve of the ceremony there had come a lull. Everything had been arranged; everybody was waiting; and she had telephoned him to come up and see her and to have, as she expressed it, "a quiet half-hour all to themselves."

She came into the room almost breathlessly a moment after Koyte himself had entered in obedience to her summons.

"Isn't it grand, Jack?" she said. "Just look at what Papa has given us for a wedding present!"

She showed him a check on a leading bank for fifty thousand dollars made out to her order.

Jack Koyte was himself by no means a poor man, his father having long held a very comfortable berth in one of the largest trust companies; but he staggered a little at the sight of the check.

"That's splendid, Margy!" he exclaimed. "The governor has always been good to you, hasn't he? But then, we really didn't need it. You know," he added proudly, "I can always support you, although possibly I may not have as much——"

She put the check over his lips.

"Don't say another word, Jack," she said. "It's all right. We'll take this money and put it away for a rainy day. You had better take it yourself. Here."

She ran over to the desk and wrote her name on the back and handed it to him.

"You take it," she said, "and put it in the bank. I don't know anything about those things; and you had better have charge of it for the present."

Jack Koyte hesitated. He felt diffident about accepting the responsibility. She saw his embarrassment and anticipated it.

"Don't worry," she said. "I will ask you for it again; but I'm so excited about this whole affair that I don't want to think about that just now. I've had an awful time with the bridesmaids. You know the colors didn't match, and at the last moment——"

Koyte stopped her with a kiss. For him there was more important business than the details of a wedding ceremony, which he regarded from his man's point of view as being entirely superfluous, any way. Besides, his time was short.

An hour later he walked up the steps of his own home. Everything was quiet inside. He went upstairs to his room for a moment, and then came down again. He heard voices in the library. He recognized them. He entered.

His father and his mother were sit-

ting together somewhat closer than usual, and talking in low voices. Jack, absorbed in his own happiness, didn't notice anything unusual. He didn't see that his father's head was slightly bent.

"Well, what do you think?" he exclaimed. "Maybe Margy's governor hasn't done the handsome thing! By Jove, I can't get over it! Of course I knew he would give Margy a nice present; but just look at this!"

He threw the check down on the table.

His father turned his head quickly and his eye fastened on the check. Then he looked at Jack, who for the first time suddenly realized that something had happened.

"What's up?"

Jack's mother spoke.

"Something terrible," she said quietly. "You had better tell him, Arthur," she said, as she turned to her husband.

Jack looked at them wonderingly. He had never seen such a look upon his father's face.

"I am ruined," said the old man.

"Ruined?"

"Yes. And that isn't the worst of it either. I've disgraced you all."

"What do you mean?"

"Well, I got involved in a deal the other day. It was a put-up job. I can see it now that it is over. At any rate, I used some of the bank's funds, and I couldn't make good. To-morrow morning they are bound to discover it, and it will be all over."

"Is it true?" asked Jack, looking at his mother.

"Yes. Your father tried to keep it from me when he came home; but _____"

"I couldn't," said the old man.

He went on, slowly telling the details of the transaction. Jack listened mechanically. He was so paralyzed with the news that he hadn't recovered his faculties. But when his father had finished, he said:

"Does any one know about this?"

"Not a living soul except you and your mother."

"But don't some of the directors sus-

pect it? Isn't Margy's father on the board?"

"Yes; but it would be impossible for anybody to know about it, as the loss isn't even suspected. But to-morrow afternoon the papers will contain everything. I can see the head-lines now."

So could Jack.

There was a silence.

The old gentleman nervously moved his hands back and forth and twitched his chair. His eyes wandered. Suddenly they went down on the check that Jack had placed upon the table. It was upside down. He saw an endorsement. He straightened up a little and looked at his son.

"Did she endorse that check to you?" he asked.

"Yes."

"What's the amount?"

"Fifty thousand."

There was another silence.

The great ormolu clock over the mantel ticked solemnly.

At last Jack spoke.

"How much would pull you out of this hole, Dad?" he asked.

"Fifty thousand."

The old man turned and looked at him steadily for half a minute. Only for an instant did his gaze relax, when it rested rather furtively upon the face of his wife. Then he said:

"I don't suppose you could get married, Jack, after this thing comes out. You see, we can't keep it longer than to-morrow morning, when the exchange opens. Had you thought of that?"

"Yes."

Jack looked at his mother.

She got up.

Jack had seen the same look upon her face when, during his boyhood, she had had occasion to punish him; or when she had discharged some servant.

"Well, it's a good thing I was here!" she said sharply. "I declare, if you men are not all alike. You haven't got any more courage than a couple of scarecrows. Why, I actually believe that you would have done it!"

Her husband looked at her, his hand trembling slightly as it lay on the arm

of the chair. His aristocratic old face began to show reproach.

"Now, Mary," he protested feebly, "you know perfectly well that I had no such thought."

"Nonsense! You don't suppose I have lived with you all these years without knowing you. You always did have a weak spot in you, any way. Now, you would have taken that check and used the money and saved yourself. But you, Jack——"

She held up her finger at her son.

"I had expected better things of you. You would have let your father use that money and help him out so you could get married to-morrow."

Jack's blood began to mount to his face. He had a strain of his mother's temper.

"Mother," he exclaimed, "you have no right to say a thing like that! Of course, I shouldn't have done anything of the sort! Absurd! Preposterous!"

His mother went to him and put her arms about him.

"Do you suppose, my boy," she said, "that I don't know what you are? Haven't I been fighting that particular thing in you all your life? Oh my! but I'm glad I caught your father when he came home to-night and got it out of him! If you two had met without me—well——"

"But what do you expect me to do?" said Jack defiantly.

She took up the check, folded it carefully, and handed it back to him.

"You go right back to Margy, return this check to her, and tell her the truth. Then if she wants to marry you——"

Their eyes met.

Jack took the check and sidled out

of the door. He went down the steps to the corner, got a taxicab, and in fifteen minutes was ringing the door-bell at Margy's house. It was nearly midnight, and he had to wait. But at last she came—an animated interrogation point.

"What is the matter?" she said.

"I came to bring you back this check. My father is mixed up in a financial transaction, and the whole thing will be disclosed to-morrow. We shall unquestionably be disgraced, and I've come to explain the whole thing to you so that you won't have to marry me. I simply *had* to do it to-night."

In reply, Margy went up to him and put her arms about his neck.

"You silly old thing!" she said. "Don't you suppose we knew all about that? Father found it out. That's the reason he gave me the check and told me to turn it over to you. You see, he's one of the directors, and he realizes that it wasn't your father's fault; but of course he had to save him at this critical moment."

Jack straightened himself up. The same look of reproach came over his face that his father had displayed a short time before toward his mother. His voice rang stern.

"You don't think there are any circumstances under which I would accept that check, do you?" he said. "I would die first! How can you think such a thing?"

Margy laughed.

"Well, of course I knew you wouldn't," she replied, "because I have such faith in you; but, to save my life, Jack, I couldn't tell you the truth! I was just dying to see how you would really act under such circumstances."



CANADIAN POLITICAL AFFAIRS

The Navy Problem in its Broadest Aspect—The probability of general European war augments with every hour of hostilities between the Turkish and Balkan Nations. Possession of strategically important Constantinople by any power more vigorous, and more inclined than the Porte to develop naval strength, might be of huge menace to Great Britain. Was the possibility that she may occupy the adjacent waters stated to Mr. Borden as one great factor in the "emergency?" That Canada, by dependency on Great Britain, is in grave danger of being soon involved in war, seems plain on the very face of the European situation. Surely the Ottawa statesmen should cease the petty business of playing for position at the next general elections, and hasten to agree on defence plans in such circumstances.—
E. W. Thomson.

By Edward William Thomson

MANY incidents have incited the present Contributor to an explanation which the Editor of "Farmer's Magazine" might not make without some risk of seeming to advertise "No connection with the House over the Way." One of those incidents consisted in the Hon. Rodolphe Lemieux, formerly of Sir Wilfrid's cabinet, rallying the writer with—"I have read your Navy article

Farmer I was surprised to find the Magazine more favorable to the Borden plan than W. F. is himself!" Mr. Lemieux was newly surprised when told that Mr. W. F. MacLean, M.P. for South York, has no sort of business or other connection with this Magazine, which is the exclusive property of another of that name—Colonel J. B. MacLean. This avowal does not indicate any lack in proper estimation of the energetic, experienced, radical chief proprietor of the Toronto "World." Of course he cannot wish to be credited with responsibilities which do not pertain to him. Yet it might be as awkward for him as for the Editor of this periodical to correct publicly an error which I have found prevalent in many places between Victoria and Halifax. Some may be reminded of the good old

story about Sir Allan Macnab, well known throughout the Canadas of from forty to seventy years ago. He resided at Hamilton. When the Chief of his clan visited that town he called on Sir Allan, who chanced to be out. On getting home he found a card inscribed "*The Macnab.*" Hastening to reciprocate the civility he found the Chief absent, therefore, left for him a card inscribed "*The Other Macnab.*" The other MacLean — Mr. W.F.—has surpassed even his wonted activity this session of parliament. Partizans watch him with new and fearful interest. Opposing Leaders can never feel sure as to what course he and his bright "World" may take in regard to novel affairs. The orbit of that independent Comet continues incalculable by political regulars. These might behave in a more edifying way if they could count no more on safety from the impact of any other luminary of the daily Press.

Some wise men hold that the most important February event was the London Privy Council's decision that a certain confiscatory Act of the Alberta Assembly is *ultra vires* of any Canadian Province. The importance consists in relieving Canadian credit from grave

danger. If aught closely resembling repudiation of contracts and seizure of private trust-funds were declared *intra vires* of the provinces, they, and the Dominion which includes them, could not but be regarded as dangerous customers in money markets. Let us briefly review the Alberta case. In the general provincial election of March, 1909, the Rutherford Ministry sought public approval of a railway policy which included most prominently the building of a road from Edmonton to Fort Macmurray, 350 miles, by the Alberta and Great Waterways R.R. Company, whose bonds for \$20,000 per mile, and \$400,000 for terminals, were to be guaranteed by the province. Because I was then in Alberta I know that the Charter, Scheme, Company, and Guaranteeing Act were fully placed before the electors. They approved the Rutherford Ministry by electing thirty-nine of its supporters to an Assembly of forty-one representatives all told. Thus the people most emphatically backed the A. & G. W.W.R.R. project. Lawyers make small account of this fact, which to me seems highly important. So it appeared to W. R. Clarke, an American banker, who had organized and was President of that Company, as he is still. As soon as he had been convinced that the voters liked his scheme, and would stand by their Government's guarantee of the same, Clarke hastened to England. There he soon induced the Morgan's London House to agree to buy his Company's provincially-guaranteed bonds at par. These are for fifty years, bearing five per cent. interest payable half-yearly. Obligation to pay can nowise come on the Province unless the Company default, in which case the Province would automatically become owner of the Company's road, funds, total possessions. Alberta endorsed, as it were, the Company's note, on condition that the proceeds should be placed with trustees, whose duty would be to pay out the money to the Company by instalments, each instalment coming due when ten miles of railway should have been completed and certified to by

an engineer of the Alberta Government, payment to be then authorized by the provincial treasurer. The company alone could get the money, but could get none of it without building equivalently. When the company's bond had been duly and formally guaranteed by Alberta's Government the Morgans paid \$7,400,000. This was deposited in Canadian banks having Edmonton branches; \$400,000 in the Dominion, \$1,000,000 in the Union, \$6,000,000 in the Royal Bank. These Banks took the money as trustees, agreeing to pay 3½ per cent. interest, being bound to pay to the company only as specified above. President Clarke hastened preliminaries to construction. He alleges his company's outlay to have been more than one million dollars, largely for clearing the line, buying timber, ties, and sundry supplies. In March, 1910, he was stopped by the Rutherford Ministry, whose existence was threatened by revolt of a "liberal" faction consisting of about half of all the representatives elected one year earlier to support that Ministry and the A. & G. W. W. R. R. scheme! The revolt is alleged to have been contrived by a rival railway concern hungry to get control of the banked \$7,400,000. Be that as it may, the Rutherford Ministry resigned. Chief Justice Arthur Sifton then came down from the Alberta Bench "to save the party."

Mr. Sifton had been out of politics for years. He was by residence a South Albertan. His region did not favor the A. & G. W. W. scheme. He himself seemed unaware of the pressure of Immigration northward, and of the probable early need for a railway from Edmonton to Macmurray. He regarded the project as premature. So did the Laurier Ministry, who refused to grant it the usual Federal subsidy of from \$3,400 to \$6,800 per mile. This may in some degree account for the amazing course which Premier Sifton pursued. He induced the Assembly to pass legislation which purported annulment of the provincial guarantee as applied to the company bonds, and purported also to convert the \$7,400,000 of com-

pany money, held by the trustee bank, to the general funds of the Province! An eminent Toronto K.C., speaking on a political platform, described this as worse than any confiscatory proceeding by Castro of Venezuela. Mr. Sifton described it as "foreclosure." Yet the R.R. company had neither defaulted nor received any formal notice of an intent to "foreclose." Mr. Sifton refused even to hear Mr. John Moss, K.C. in protest on behalf of the company.

On strength of the Confiscatory Act the Provincial Treasurer drew cheques on the trustee banks for the whole of the money. As the banks stood in a fiduciary relation alike to company, bondholders, and Alberta, they refused to honor the cheques. Then the Sifton Government proceeded, on the ricketty basis of their own Confiscatory Act, to sue the banks. The Union and Dominion Banks paid their \$1,400,000 into court, pending final judgment. The Royal judiciously retained its \$6,000,000, and contested the legality of the grab at it. An Alberta judge ruled favorably to the Sifton contention. The Alberta Court of Appeal sustained that judge. The Privy Council decision reverses that of the Alberta courts. This judgment declares *ultra vires* of a Province such attempt as Mr. Sifton made to convert to general provincial uses money deposited with trustees for a specified purpose. Other points against the Confiscatory Act were left undecided. One excellent result is assurance to the World's money-markets that Canadian provinces have no such "sovereign" powers for repudiation and confiscation as the Alberta lawyers alleged.

Now for the political and practical effects. To some observers it appears that Alberta has not only been mulcted in all the costs of lengthy and expensive litigation, but saddled with obligation to pay 5 per cent. for fifty years on \$7,400,000, of which the provincial treasury can get no sort of use. Were that view correct the electors of Alberta would probably turn the Liberals out at the next general elections, now not more than a year distant, though the Sifton Ministry, since Mr. C. W. Cross

joined it, has been exceedingly progressive. But the specified view is incorrect. An effect of the London decision is to put the A. & G. W. W. R. R. Company where it stood before being assailed. Its charter is in full force. So is the provincial guarantee of its bonds. So is the obligation of the trustee-banks to pay out money for every ten miles of completed road. The project was a sound one from the start. Its completion will develop great and valuable tracts not of arable prairie only, but certainly of asphalt beds and probably of petroleum—to say nothing of the predicted allurement of tourists and sportsmen by the great game and fish region en route to and neighboring Fort McMurray. In short, the enterprise will pay the company. Hence the company will be able to pay interest and principal of the bonds. Hence the provincial guarantee will never cost Alberta a cent.

I am glad to find the accomplished Editor of *The Financial Post* in substantial agreement with my view of the A. & S. W. R. R. L. enterprise. In a communication he says:—

"Undoubtedly the rock which obstructed the consummation of the Rutherford-Cross railway policy in Alberta was the issuing of the bonds of the railway company guaranteed by the government on a five per cent. basis and the marketing of these at par. This was done at a time when the Province itself could dispose of four per cent. at par. Very naturally the holders of Alberta securities became perturbed. This heterodox financing aroused a storm out of which grew the most searching enquiry to which any railway proposal was ever submitted. All the weaknesses of the deal and none of its virtues were brought to light. The whole bent of the enquiry was towards discovering some graft—some infidelity to the province. None was proved. No transaction can be drawn or entered into that is not capable of being ill-constructed or susceptible to having read into it motives other than intended. It was the fate of the Alberta-Waterways agreement to be misread. In reality it was as good as any agreement of its kind

ever entered into. Virtually it was the same as practically every other agreement between the western provinces and railroad companies with the solitary exception that it provided for a guarantee of five's instead of four's. This was the point of the inquiry that shouldered in the Rutherford-Cross government, the weaknesses common to agreements under which railroads are built by bonds of companies with provincial guarantees behind them."

Premier Sifton's way out of the troubles he has created seems plain. He can repent, then hasten to enable Mr. Clarke's Company to build the railway. The trustee-banks are bound to liberate the cash for that and no other purpose. If Premier Sifton be too obstinate to bring forth fruits meet for repentance his party can easily depose him. The Premiership would then naturally go to Mr. C. W. Cross, Attorney-General of Alberta. He helped to promote the A. & G. W. W. R. R. when he was in the Rutherford Ministry. He has now been proved right as business man and lawyer from the start.

One point of the bungled affair should be noted. Alberta suffers from the negligence of two Ottawa Cabinets as well as from the arbitrariness of her Premier. The Confiscatory Act might have been disallowed by Sir Wilfrid Laurier's Ministry in 1910, and by Mr. Borden's last year. The federal veto power on provincial legislation was established for the avowed purpose of enabling Ottawa to stop precisely such Acts as Mr. Sifton tried to establish. Sir John Macdonald was true to the design of Confederation in using the veto. He was not afraid to work to the idea that the power representative of the Canada should control provincial legislatures as fully as the Fathers of Confederation and the London Parliament intended. Sir Wilfrid Laurier worked on the so-called "liberal" theory that the federal veto should be employed only when a province clearly encroached on Dominion field, or legislated in such wise as to provoke trouble with some foreign nation. On the latter ground it would appear that the Sifton

legislation should have been vetoed at Ottawa. It attacked citizens of the United States, on whose behalf Washington must have intervened had not the London Privy Council saved them. For the Borden Ministry's refusal, in January of 1912, to disallow the Edmonton Act no reason was or can be given consistently with Sir John A. Macdonald's view of duty and constitutionality in such matters. It appears true that Sir Wilfrid refused disallowance because his party friends wished him to abstain, and that Mr. Borden refused lest he might be charged with intervening against his party's opponents. Alberta has to pay a long score partly incurred by the negligence of two Ottawa Cabinets.

THE NAVY ENCORE.

Voluminous misrepresentation of Mr. Borden's "Navy" programme has come almost as much from his friends as from his opponents. Many of the former seem as desirous as all the latter to proclaim his scheme "jingoish," one of "tribute" or permanent contribution to London armaments, one designing no ship-building in Canada nor defence of the Dominion's coast cities, coal mines, settlements. He has wisely maintained almost perfect silence, let his introductory speech be interpreted all ways by all disputants, waited in patient hope to get one chapter passed before producing a second. The contending speechmakers and writers remind one of critics wrangling as to how a novel or play will end after they have read or witnessed only the first part or act. Such wrangling, superfluous as it usually is, would be silly if the publisher or manager had explained the plot publicly. Why not take Mr. Borden's introductory speech as one of good faith? The House might pass the \$35,000,000 vote as one authorizing the Ottawa Ministry to expend the sum in building three battleships for loan to London until called to Canada by Ottawa. Then the Premier could reasonably be asked to produce his promised plan for establishing Canadian shipyards for the building of small cruis-

ers, etc., and also a sufficient scheme for defending our coasts by torpedoes, floating or submerged mines, etc. Would not that be the proper Opposition course if the Opposition were sincerely bent on securing that Canadian defence which prudence requires, and not primarily bent on obstruction with intent to force a general election soon?

That they and the people at large may properly demand an early general election seems to me true, because the House is not truly representative of the electorate according to the census of June, 1911. The House cannot be replaced by a truly representative one before passage of an overdue Redistribution of Representation Act. Mr. Borden might well hasten to propose a Redistribution Act, whose passage would set him free to appeal to the electorate on his Navy programme. This certainly would not be less popular if he disclosed the remaining or purely Canadian-defence chapters thereof. He would be newly esteemed for candor did he take that course. Moreover, his Navy scheme, which still seems to me sound, could be then no longer misrepresented by either friends or opponents. He now runs risk of being suspected, as Sir Wilfrid often was, of evasion, shiftiness, designing what he dares not specify. He seems seeking to hold on arbitrarily to office in order to effect ends presently kept dark. Moreover, his quite-Canadian Navy scheme tends to become unpopular by lack of complete specification. If the electors become persuaded that his delay of a Redistribution Bill comes of fear to arrange voting lists on which he might be promptly challenged or forced to appeal to them, they may newly incline to turn him out when they get the chance. Thus his good Navy scheme, which is essentially of more value than any party's tenure of power, might be or might seem to be rejected by the country as an incident of his defeat. There are good reasons for calling a plebiscite on any Navy plan.

One curious delusion has been manifested throughout the Navy debate by speakers on both sides. All seem ob-

essed by a belief that Canada could not be defended against German invasion, or Japanese invasion, if the Old Country's fleet had no existence, or were destroyed in the North Sea. Certainly a Canada without any more armament than the Dominion now possesses could not be defended. But this Dominion, if duly prepared with armaments, is singularly capable of defense against any or all possible enemies, bar the United States, our brother English-speaking country and firm friend. Captain Reid, of the Royal Engineers, (the Army's scientific corps), wrote on this matter last February to the Montreal Gazette:—"So far as the Eastern Maritime Provinces are concerned, excepting the case of the important shipping town of Halifax, there is no need for the presence of a fleet of battleships. Mine fields in the narrows of Belle Isle and at Rimouski, thickly strewn in the passage between Cape Ray and Cape Breton, and in the Bay of Fundy, will afford ample protection from a hostile fleet. In addition, there is, during the winter months, the fell guardianship of 'General February.' The great cities of Canada are therefore perfectly immune from attack by sea." He went on, "No fleet in the world can venture far from its coal basis . . . Neither the British, nor the French, nor the German, nor the United States fleet will ever venture singly across the Atlantic to their opposite shores bent on a hostile errand. A coal-less battleship is as helpless as a shoaled whale. Moreover, where on a hostile continent is a badly hulled dreadnought to be docked and repaired? Must she risk the Atlantic passage again homeward deep in the water."

Take down the map of Canada. Look at both coasts. Consider what Captain Reid specified. You will see that no matter how great the German fleet attempting invasion of our Eastern coast its ships could be easily kept out of the Gulf of St. Lawrence and the Bay of Fundy by merely sowing the entrances with mines. The German fleet could not risk its bottoms when three thousand miles from a base of coal and re-

pairs. It could not effect a blockade. It would have to turn round soon after arrival off our east shore, where nothing except Halifax and the east coast of Nova Scotia would be attackable. That city and coast could be perfectly protected by forts, guns, mines, etc., at no great cost. A high authority in the Canadian Marine Department told me lately that the St. Lawrence route could be amply protected against any hostile fleet by merely taking away the lights and buoys! To British Columbia shores Capt. Reid's method of defence can be swiftly and inexpensively applied against any attacking fleet, such as that of Japan, which would be thousands of miles from its coal and repairs bases. Look again at the map. Observe that Dixon Entrance, (opposite the G.T.P. terminus of Prince Rupert), Skidegate Channel, Hecate Strait, Queen Charlotte Sound, Juan de Fuca Strait, Straits of Georgia, are all sufficiently narrow to be closed to any hostile overseas fleet by mines, etc. Certainly it would be well to have battleships, cruisers, destroyers, torpedo boats and ship-building plant on our coasts. But these are perfectly defensible at a cost well within the paying powers of Canada, whose land forces should all be organized with design to back up coast defences, instead of as now on the foolish presumption of danger from the United States.

It is monstrous and contemptible to suppose or allege that some eight million Canadians, if duly prepared, could not beat off both Germany and Japan at once. It is ridiculously alleged that, were Great Britain's fleet shattered in the North Sea, we could escape invasion and annexation by the victor only by begging Washington to save us and annex our country to the Republic. That is bosh. It postulates that we are to go on without any more preparation for self defence than we have now. That is not Mr. Borden's idea, nor Sir Wilfrid Laurier's idea. They intend defensive local armaments. The sooner we get them established the better. If such were amply provided, Canada

could stand off the European and Asiatic worlds. We have been so long accustomed to rely on the Old Country for defence that few of us seriously consider the truth that we can defend Canada far more effectively from Europeans or Asiatics than Great Britain can. Canadians who say that we must depend on either Motherland or Brotherland for safety on both Ocean shores might well be invited to "go hang a calfskin on those recreant limbs."

Mr. Borden, in that part of his scheme which has been formally disclosed, seems to ask Canadians to defend not themselves, but Great Britain. If that were all his scheme surely it would appear surpassingly foolish. For the British power may be smashed, no matter how great its superiority in ships and guns, by flying and submerged dirigibles, or by some such long chapter of disaster as ruined the great Armada of Spain. This is the danger against which Canadians have to guard. By way of helping to avert it the Premier proposes to add three big ships to the King's fleet overseas. Is not that wise? But no such addition to that fleet can insure victory for it. Defeat is conceivable, nay, very possible. It is against that contingency that the Laurier scheme might provide, if it did not include a dilatory proposal that we stay defenceless until we can build ships, etc., in Canada. Last month it was here hoped that the two party Chiefs would put their heads together and combine their schemes. Several important Liberal M.P.'s have since urged this. It seems improbable they would do so except by Sir Wilfrid's privity and consent. At time of this writing the Premier has not, apparently, held out hand to accept the proffered olive branch. There is still some hope that he may cease to be obdurate.. Perhaps the Opposition may soften his heart by letting the \$35,000,000 vote pass soon. If ever there was a case in which the Royal Governor-General might well privately endeavor to bring politicians to agreement, this is one.

FARM INFORMATION IN BULLETINS AND BOOKS

By the Editor

Canada and Sea Power

WAR talk and Navy debates have occupied a prominent place in parliamentary, journalistic and even fireside discussion during the past few months. Norman Angel's book the "Great Illusion" has been the most discussed book of the century and has already been translated into 18 languages. Other authors have appeared from time to time dealing with the same subject. In "Canada and Sea Power," published by McClelland & Goodchild of Toronto, Mr. Christopher West, takes up the question of war as it bears upon Canada. The author is apparently well acquainted with rural Canada during the past half century. He has also been a close student of old world history, so that his conclusions carry conviction. He makes out a good case for his belief in the folly and futility of warfare, from a commercial standpoint, apart from the moral aspect of the case. Every reader of Farmer's Magazine who wants all the references and arguments against excessive Navy and war expenditures, and against Canada dipping into the business of armaments will do well to get a copy of this work. It sells at \$1.

Grape Anthracnose

Anthracnose of the grape or birds' eye rot is a disease of much importance to grape growers. Experiments conducted at Lawton, Mich., will be of interest to all grape growers, as it is possible to control this fungus disease. The matter is contained in a bulletin issued by the United States Department of Agriculture of Plant Industry and can be had by writing that department at Washington, D.C.

Ice Cold Storage

The Ontario Government has just issued a bulletin number 207, which goes into the storage of ice on farms. It is edited by R. R. Graham, of the O.A.C., and by picture

and description shows that all that is necessary to know in the structure of an ice-house and of the benefits to be had on the farm from a good supply of ice. It can be had by writing to the Ontario Department of Agriculture, Toronto. It should be in every farmer's hands.

Lime Sulphur Hurts Potatoes

Potato growers who are also fruit growers would like to use lime-sulphur sprays for both fruit diseases and potato blight; but researches made by the Station at Geneva, New York State, prove it unsafe to spray potatoes with lime-sulphur solution. In 1911 and again in 1912, the use of the newer fungicide results in dwarfing of the potato plants, while bordeaux mixture apparently increased the vigor of the plants and was an efficient protector against blight. The details of this work may be learned by sending a post card to the Station for Bulletin No. 352.

The Experimental Farms Report

The report of the Experimental Farms for the year ending March 31st, 1912, is out. Of all the many publications issued from time to time by the Department of Agriculture at Ottawa this annual report is by far the most comprehensive, as it deals with practically every phase of Canadian agricultural activity, ranging from the cultivation of fruits and ornamental plants to the growing and preserving of corn for stock food; from the hatching and rearing of fowls to the rearing and feeding of cattle, sheep and swine; from the management of bees to the protection of crops from insects and disease, and so on throughout the whole range of farming.

The first 230 pages are devoted to the reports of officials, whose headquarters are at the Central Farm at Ottawa, the remaining 216 pages dealing with experimental and investigations being carried on

at the ten branch farms and stations, distributed over the different provinces.

This is the first annual report issued by the new director, Mr. Griddale, who in the section designated "The Report of the Director," gives out much interesting information concerning the peculiarities of weather and vegetation at such outlying districts as Fort Vermilion in the Peace River District, Athabaska Landing, Alta., Salmon Arm and Kamloops, B.C., and other places.

The Mine and Rescue Work

The Commission of Conservation for Canada have just issued a bulletin on this subject. It will be interesting news to many to know that work is going on in all the mining regions to train men in this work. There is much wonder that something of this nature has not been done earlier, since records of the losses of lives in mining accidents is about the highest in Canada of any place in the world.

Farm Manure

The University at Wisconsin in Bulletin No. 221 takes up the question of how to get the most profit from farm manure. The whole question is thoroughly gone into and experiments made to show just what loss results from leaching by rains, fermentation, etc. The whole treatise is one of the most valuable things we have seen on the subject, and no market gardener or intensive farmer can afford not to have this pamphlet on his desk. It can be had by writing to the Agricultural Experiment Station at Madison, Wis.

Insect Injurious of Truck Crops

The Bureau of Entomology of the United States have just issued a bulletin on this subject, which will be found of immense value to all people who are growing garden truck. It goes into the history of insects and shows the methods of control. It may be had by writing the department of Washington, D.C.

Sandhill Forestation

This question has become prominent in Ontario in recent months, and the Department of Forestry are to be congratulated on the way they have succeeded in popularizing the work. It will be interesting to many to know what Nebraska and Kansas are doing. Bulletin 121 of the Forest Ser-

vice of the Department of Agriculture at Washington tells the story in a most interesting way.

The School

We have on our desk a late issue of this new magazine, which is edited by the members of the Faculty of Education University of Toronto, with Dr. O. J. Stevenson, M.A., as Editor-in-Chief. An article by F. C. Hart, B.Sa., of Galt, on the Rural School Fair, Agricultural Education in Alberta, by J. McCaig, of Edmonton, and one on The Little Red School House by Mr. F. H. Sphinney, of Montreal, all point that this magazine is going to be a real bright and helpful publication for the school teacher.

Variation in Milk

It is a well known fact that the composition in milk varies constantly and often quite widely from day to day. An interesting bulletin on this subject is issued by the Animal Industry of United States Department of Washington, which gives the results of many experiments and comparisons of morning and evening milk from individual cows.

New Alfalfa Varieties

Mr. George W. Oliver, Plant Breeder of the United States Bureau of Plant Industry in Bulletin No. 258, shows the results of his investigation with varieties of alfalfa. Although there is nothing very new about the bulletin it is valuable in the way it shows how improvement is being made in hardy plants. It has many photographs also.

Children's Garden Work

More information can be received along this line by reading Bulletin No. 252, issued by the Experimental Station Department of Agriculture, Washington. Every person interested in the work would do well to write for this bulletin.

Breeding Asparagus Against Rust

Bulletin No. 263 of the Bureau of Plant Industry of the United States Department of Agriculture, edited by J. B. Martin, contains the history of the work that has gone on in this department since 1909. The bulletin is well illustrated and contains a lot of valuable information to market gardeners.

Spring Millinery Ideas



Toque showing elongated line.



Two attractive models which are along accepted lines.



Lingerie gown of embroidered crepe, showing how the new drapery effects are managed. Girdle and sash are of velvet, which may be either black or colored.

OUR PATTERN DEPARTMENT

Note.—An immense number of orders for Farmer's Magazine patterns arrive at the office daily. Strange as it may seem there are many who forget to sign their names, many who forget the money, many who neglect to state the size of the patterns required and many who send their orders to our Branch offices instead of to the Central office at Toronto. Ladies ordering patterns of Farmer's Magazine so as to avoid error and delay will please observe the following conditions:

First, address your letter to the Farmer's Magazine, 143 University Avenue, Toronto, Ontario.

Second, write on one side of the paper only, state clearly what you want.

Third, enclose the money.

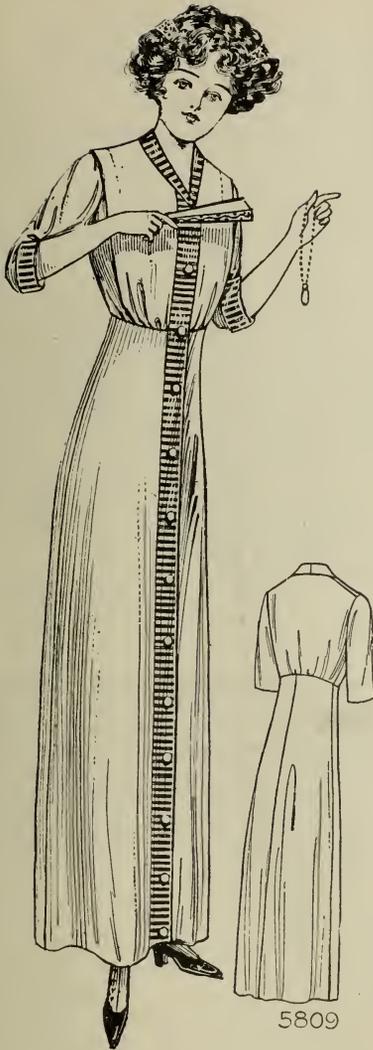
Fourth, sign name and address plainly.

Comply with these conditions carefully and it will be our fault if you do not get your patterns within a few days after the arrival of your letter.



4091—LADIES' ONE-PIECE CORSET COVER.—This one-piece corset cover is especially desirable for founcing, and is suitable for stout ladies. Its construction is quite simple, as there is no seam at the back and the garment closes at the front through a box-plait. The pattern, 4091, is cut in sizes 32 to 48 inches bust measure. Medium size requires $1\frac{3}{4}$ yards of 17-inch founcing, $1\frac{3}{8}$ yards of edging, $1\frac{1}{4}$ yards of beading, and 3 yards of ribbon. Price of pattern, 10 cents.

5879—GIRLS' DRESS.—This dress is made in one piece. It is made with short sleeves and a small turn-down collar. Serge, cheviot or wash materials can be used to make this dress. The pattern, 5879, is cut in sizes 6, 8, 10 and 12 years. Medium size requires $2\frac{1}{8}$ yards of 36-inch material, with $\frac{3}{8}$ yard of 18-inch all over. Price of pattern, 10 cents.



NO. 5809—LADIES' DRESS.—This attractive frock is one of the simplest models to carry out. It is made in the kimono fashion, with the closing at the front. The skirt is cut in four gores. Contrasting material is used as trimming. Linen or serge can be used to make this dress. The pattern, No. 5809, is cut in sizes 32 to 44-inch bust measure. Medium size requires $5\frac{1}{4}$ yards of 36-inch material, with 1 yard of 27-inch contrasting goods. Price of pattern, 10c.

No. 5903—LADIES' DRESS.—This is a dainty model for development in serge, mohair or linen. The dress closes at the front and is quite simple to develop. It has a three-piece skirt with excellent lines that make the frock very distinguished looking. Plaiting is used to trim the dress, allowing the closing lines from the neck to the hem and edging the turned-back cuffs. The pattern, No. 5903, is cut in sizes 32 to 42-inch bust measure. Medium size requires $4\frac{3}{4}$ yards of 36-inch material, with $2\frac{3}{4}$ yards of plaiting. Price of pattern, 10c.



No. 5995—LADIES' SHIRT-WAIST.—This is a splendid type of a tailored shirt-waist, and is just the thing for general wear with the coat suit. It is made with or without the box plait, and can be made with either the long or short sleeves and either a standing or rolling collar can be used. The pattern, No. 5995, is cut in sizes 32 to 42-inch bust measure. Medium size will require $3\frac{1}{2}$ yards of 27-inch material. Price of pattern, 10c.

No. 5888—LADIES' THREE-GORED SKIRT.—This garment is cut in three gores and closes at the left side. It is one of the most attractive models of the season, and is easy to develop. Serge or cheviot can be used to make this skirt. The pattern, No. 5888, is cut in sizes 22 to 30-inch waist measure. Medium size requires $3\frac{3}{8}$ yards of 36-inch material. Price of pattern, 10c.



WHAT OUR READERS THINK

Some Sketches from Recent Letters to the Editor

Likes Drury's Articles

"We find the magazine very interesting and instructive. I was much pleased with the article written by E. C. Drury on "Canada and the Empire." His article voiced the opinions of thousands of men in Saskatchewan to-day.

"I wish the magazine every success."

Yours very truly,
Robt. R. Johnson.

Ronleau, Sask.

Assist the Grange

"I see that you state with last issue of Farmer's Magazine that the Grange would welcome contributions to assist the organizer in his work throughout Ontario. Now I fully agree with you in this. I believe in an organization among the farmers that is not fed and controlled by the Government, one where the farmers themselves are as free to express their real needs as are the manufacturers in their self-supporting organization, the Manufacturers' Association. Cannot more farmers contribute? Are there no retired rich farmers who think enough of the independence of farm life to assist in so worthy a movement? I believe we have the right man as organizer in J. J. Morrison."

Yours truly,
M. D. A.

Ontario County.

Wants Cheaper Money

"I would like to congratulate you on the stand you are taking for cheaper money for the farmers when land could be had right and left at almost your own prices, and at long terms, it was no wonder that

farmers concentrated their minds on wheat growing. Those days are gone. The country is getting filled with half-section men, who were imbued with the idea that Canada was chiefly for wheat growing. In many cases this has been disappointing. Nothing but mixed or real farming can save the situation. If the Government would see their way to advancing money at a cheap rate and on long terms, we could buy another team of horses, a cow or two, breed pigs, raise fowls, and engage in general farming, thus cultivating the land properly, attending to fencing and making a home on the place. As it is, too many are taking out of the soil all they can as easily as possible, hoping to sell soon and move in to new lands to repeat the process. Stick to your point and you will certainly confer a benefit on the farmers of the country."

Yours truly,
J. A. Harrison.
Fort Qu'Appelle, Sask.

Objects to Statement

"I have enjoyed your articles, but in the December number there is an article written by F. C. Nunnick, B.S.A. on page 36 that says farmers make their money too easily. Why is a farmer not allowed to make his money as he likes? If this gentleman would have a try, he would soon see that there was no easy way about it. Why do you never publish what these B.S.A.'s earn? I take it you did not note what this man said. Give the farmer a square deal. We are trodden down enough as it is."

Yours respectfully,
W. L. S.
Looma Vista, Alberta.



Jolly Youngsters on an Ontario Farm.

MARCH ON THE FARM

By Grasmere

REPAIR THE IMPLEMENTS—In a score or more of days, every farmer in Canada will be using some or all of his seed implements. This usually will come in with a rush and the man does most effective work who is ready to pull out the team and hitch to the implements without any delay. Everyone knows the perplexing annoyance caused by finding out at the last moment that the work of the day will have to be changed because the implements that he expected to use need repairing. The harrows want their teeth sharpened. It may be that the cultivator points need sharpening. A broken whiffletree or tongue needs replacing. Many bolts need to be tightened. A little paint on the wood and iron work of the machines often means much in the life of the machine. Where the implements lie out of doors all winter, a good plan will be to thoroughly oil these machines now. This will prevent further

rusting. It often pays the farmer to have a small forge and anvil in his workshop. Many minor repairs can thus be made without a trip to the neighboring town. Implement waste keeps many farmers poor.

CARE OF THE HARNESS—A separate room adjoining the stable should be provided for all harness. It is customary on many good farms to take the harness into the farm office or into the kitchen, and after taking it apart and thoroughly washing with castile soap and warm water, to apply a good harness oil. All broken straps should be replaced and sound snaps and buckles fitted ready for the spring rush. Pay a little attention to the collars. A good snug fitting clean collar means much to the horse. Sore shoulders are generally an evidence of careless management on the part of the teamster.



A curiously shaped tree in Western Ontario.

SELECT BIG SEED GRAIN—Why not try one field of a better strain of grain on your farm this year? You will be surprised at the difference there is in varieties and vitality. Many farmers in Alberta and Saskatchewan did this last year with Marquis wheat, and they now have enough to practically seed their whole section. The same holds true in flax and in oats and barley. Professor Zavitz of the O.A.C., Guelph, lays great stress on the selection of big seed, more vigorous strains, and to the proper time of sowing. I do not care how poor your farm may be if the man will cultivate that field honestly, select first-class seed and sow it at the proper time, he will receive enough more yield over the usual careless way of seeding to pay him interest on his investment.

GRASS SEEDS—The same thing regarding selection holds true about grass seeds. Some farmers find that it pays them to seed down their whole farm each year to clover. This all depends on the rotation practiced. In other cases it would not pay at all. Some men follow a two-year rota-

tion of beans and wheat, seeding down the wheat to clover, which is ploughed under just before planting the beans the following spring. The growers of potatoes in Wentworth County, Ont., also find that it pays them to use a great deal of clover. In another page Professor Zavitz's report on alfalfa seeding will be found of interest. The best alfalfa is the South Western Ontario grown seed. Many a man has had a failure of alfalfa because he sowed a tender variety. Do not condemn alfalfa because you fail. Director Grisdale, of Ottawa, advises heavy seeding of mixed grasses for Eastern Ontario and places similar in climate. He would sow as high as twenty-five lbs. of seed, using timothy, alsike, alfalfa, white clover and sometimes other grasses. The reasons he gives are, that the thicker the seeding the more likelihood there is for a good stand and the better the quality of the hay. Being thick it enables cutting to be done a week or so earlier than usual. Red clover is also one of the best crops for Central Alberta, as is alfalfa. Timothy and Brome grasses are grown on many parts of the prairies with success, and when saved right make splendid feed.

CARING FOR THE EARLY LAMBS—A great many farmers flocks will drop their lambs this month. It is well to have the sheep pens so situated that they can have abundance of sunlight for a young lamb will be much better in the sun. Also provide a small run for them where they can eat some chopped oats and bran and will not be robbed by the sheep. Select a warm day for using a little sheep dip on the old sheep, as the ticks will eat up a lot of flesh from the lambs. Ear-mark the pure-breds so that no mistake will be made later on. Keep only the best specimens for breeding purposes.

THE POULTRY—Care should be taken this month to have the poultry houses cleaned. Use plenty of white-wash and coal oil. All nests should be so constructed that they are easy to get at and free from dirt. The mating pens should be arranged this month.

THE GARDEN—Top dress the garden with manure. Gather all decayed wood and rubbish for burning. Have your plan of planting made out and your seeds purchased. Study the catalogues of reliable seedsmen.

ORCHARD WORK—This is the month of the dormant spray. Go over the trees thoroughly on the look-out for Oyster-Shell and San Jose scale. Use either Bordeaux

mixture of lime sulphur on all trees. Be careful not to have it too strong for the cherry trees, as the buds cannot stand this solution of lime sulphur. Scrape the rough bark from the old trees if you have time, but if you have not a few sprayings will do much. Farmers will find this month one of their best months for pruning. To get fruit you will have to prune severely. Where large limbs are cut off paint them with white-lead or tar.

NAME YOUR FARM—Have you yet named that farm of yours. If you have much love for your place it is worthy of a name. If you don't like it, for business reasons name it. It will sell better. No man who hates farming should be on the farm, but nine times out of ten a man who hates farming and has not prepared himself for anything else will be no good in any other employment.

The Holstein Breeders' Association reported in the last annual meeting that about thirty registrations of farm names had been made by their secretary during the past year.

DAIRYING.—Dairying is the one business on the farm that will turn many of the rough fields to profitable account. The cities are clamoring for good milk, butter and cheese. The Pacific Coast and even Toronto in the East are importing New Zealand butter. To the farmer who wants to do things there is no better opportunity than at the present time, Start cow testing this spring. Write the Government for particulars. It costs you nothing. It weeds out your poor cows.

Keep the stables clean, have the milk house tidy, clean, and free from pollution from the yards. If you are a patron of a cheese factory encourage the maker to better efforts. Lend your influence towards the building of a better factory. Accept all criticism in the spirit of progress. The town of Brockville, says Senator Derbyshire, paid out three million dollars last year to the farmers for milk. That means better farm life and prosperous communities. There is a report that comes from Norway that there is a milking machine that milks direct into the pails without the use of tubes. When this is successful here, and electric power is on every concession, the big drudgery of dairying is over.

RAISE PURE-BREDS—Out of the three million cattle in Canada about 50,000 are pure-bred. Why not start a herd of pure-breds yourself this spring? Buy a couple of animals of the breeds you prefer and



The Championship Ayrshire cow at the Ottawa Live Stock show.

gradually work up. Nothing interests a farmer more than good live stock. Nothing holds the boy better than hogs, sheep, cattle or horses. Select the breeds you like best. Of course, one's likes often change and one has to be guided often by the nature of one's farm.

THE BOY ON THE FARM.—Have you a son or a boy on your place who is farming with you or are you yourself only a boy on the farm? Read the article in this issue on this subject. It is one of the brightest things that has yet appeared in Farmer's Magazine. There is no better life for the boy than in the open fields. He loves out-of-door life and finds intense amusement in everything he does. Study to keep up this enthusiasm in the everyday duties. Don't let your boy or yourself become a drudge.

HOUSECLEANING.—To the woman on the farm the question of housecleaning is near at hand. Do not be in a hurry to do the work. There is too much cold weather and risk to run to yourself and to your family. Have you considered the vacuum cleaner or the little gasoline engine to aid you in your wash days? Have you a dumb-waiter in your house? Have you planned out the installation of a water system in the home? There are many conveniences that should be in every farmhouse and there would be if a little planning and energy crept into your heads during the long days of windy March. Remember that many people are saying that farmers treat their hogs and cattle better than they do their wives. It is, as the boy says, "now up to" the farmer to dignify the profession and his home. A bunch of agricultural editors



A single stock of kale grown in Edmonton.

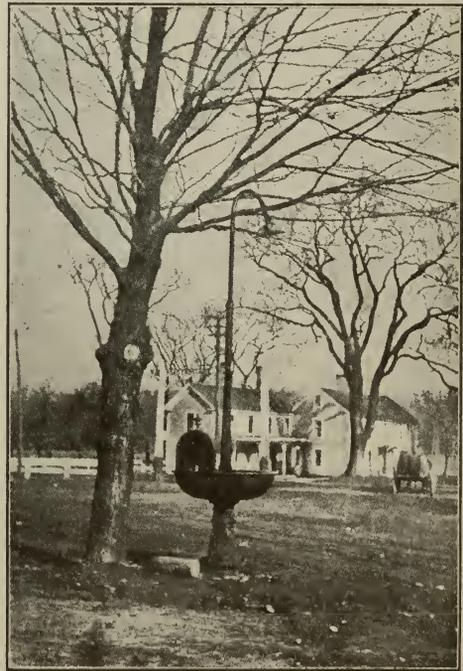
were recently discussing the reason for the boys leaving the farm and for the low tone of many communities. One editor said that the school system was wrong as it continually holds up the profession as ideal.

Another held that the main reason for the situation was that the mothers had not high enough ideals and tolerated too much carelessness in the home. Still another blamed it on the women, who wanted to get into the city where house conditions were better and where their husbands were on salary. Now what is the trouble? Is it the women or is it the men, or is it the conditions?

THE BEEF CATTLE.—All cattle for beef should be ready for sale now. The man who has his cattle ready seldom misses a good market. The practice of feeding to the middle of June and leaving all the finishing period to the last is a poor policy. Prices for hogs and cattle are likely to be fairly good. The United States is short, says the Breeders' Gazette, on all live stock over last year's. Consumption is increas-

ing so fast in Canada that prices for all live stock will likely continue at a high level. Where are you going to get your stockers this spring? Mexican troubles are spoiling much of the United States' source of supply. Alberta is going in to mixed farming. There is no better place in Canada for this work. The registrations for hogs showed a most marked increase from that province. Hon. Duncan Marshall is pushing the milking shorthorn and this cow is being called for from many quarters. It is a noteworthy feature of the last annual Shorthorn meeting in Toronto that breeders are realizing the need for action and are going to have a record of performance.

PLAN FOR SOILING CROPS. — The cheapest way to raise hogs and cattle on the big farms is to have soiling crops. Plant several good big crops of corn, rape, clover, or other crops. Too many farmers are trying to do too much with the help they have. It would pay the farmer to cultivate less and carry more live stock. It may be that a good machine should be purchased this year where one man can accomplish more in a day's work. Director Grisdale at the Dairymen's convention said that the man



A drinking fountain erected by one of the Granges in Massachusetts. This farmer's organization, on the other side, is doing good work.



Mr. Lang's farm house on Sea Island, B.C. An option on his 100 acre farm for \$1,500 an acre was recently taken by a Dock Improvement Company.

who cultivated corn with a single row cultivator, or a cultivator that did only the parts of two rows was losing time. A corn cultivator should do two rows completely. These cultivators are made in Canada. Send for the catalogues of the leading implement dealers so as to know just what you can get to supply your need.

IMPORTING OF TREES AND PLANTS.

The regulations governing the importation of vegetation of various kinds into Canada and the Dominion and Provincial laws under which they have been passed have been collected in a convenient form and published as a bulletin with explanatory notes by the Dominion Entomologist, Dr. C. Gordon Hewitt. This bulletin, entitled, "Legislation in Canada to prevent

the introduction and spread of insects, pests and diseases destructive to vegetation with regulations regarding the importation of vegetation into Canada," is published as Bulletin No. 11, second series, of the Experimental Farm Branch of the Dominion Department of Agriculture. It also forms Entomological Bulletin No. 6 of the Division of Entomology. It may be obtained free on application to the Publication Branch, Department of Agriculture, Ottawa. The laws and regulations of the Dominion Government and of the governments of those provinces possessing such legislation, namely, British Columbia, Nova Scotia, Ontario and Prince Edward Island are given. A full explanation is given of the regulations which must be observed by persons importing nursery stock, which comprises trees, shrubs, plants, vines, etc., into Canada and into the provinces mentioned.



Making Friends.

MARCH

Herald of Spring am I!
Blowing a wind trumpet I come!
My blast is strong and keen,
As o'er the meadows sheen
I rush a roaring lion!

Ally of Boreas and Blue!
Howling a storm diapason!
Yet whispers of peace from below,
Hepatica's triumph o'er snow,
Bear we outwards a lamb!

—E. J. M. Hitchcock.

The Farmer is Known by the Company He Keeps

In this age of science and progress, the man who lags behind in the knowledge of the best the world can give, is as much a 'hum-drum' as was the illiterate settler of a hundred years ago.

You read about the appalling ignorance of some backwoods specimen of humanity, and you inwardly pity a person in such an environment.

Just as much to be pitied is the farmer who does not have his tables laden with the best literature that the times affords. He owes it not only to himself but to his wife and to his growing family.

A magazine that places agricultural operations on its proper place in the world's industries; that teaches the young persons, who raise grain, fatten animals, produce celery or prune trees, to respect and dig-



Good silo and barns at Unadilla farm.

nify their calling, is no uncertain voice to listen to beside the good old farm fire-side.

Such is Farmer's Magazine, in its aims and endeavors. Its well printed pages, its bright and pleasing illustrations, its charming short stories, as well as its snappy editorials, are of great interest to farmers in Nova Scotia as in British Columbia and over the whole expanse of country that lies between. Be sure your home has it upon the library table.

You will be judged by your fellows by what you read and know. Show this copy to your neighbor and he, too, will appreciate your interest when he sees the magazine.

FARMER'S MAGAZINE

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TORONTO

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\$2 per Year



Driving in an apple orchard at Newcastle.

HINTS FOR FARM BUYERS



WE all buy manufactured goods, and wisdom demands that we read the catalogs issued by the manufacturers. Reputable firms live up to what they claim in their catalogs. This department gives a review of the recent catalogs issued by the firms who are manufacturing up-to-date goods for the farm.



The introduction of the silo has in a very large degree revolutionized feeding methods as applied to almost all classes of live stock. It has meant the extension of summer conditions into the winter months. A glance through "Modern Silage Methods," a volume recently published by the Silver Manufacturing Company, of Salem, Ohio, will demonstrate to the non-believer that the introduction of the silo is based on sound economic principles. In this book will be found many facts and figures which show the relative feeding value of ensilage as compared with the corn crop fed in any other way. It will further show that corn is not the only crop from which excellent ensilage may be made.

A summary of the principal experiments that have been conducted at the various stations in feeding all classes of live stock is given in the volume referred to and in addition an illustrated description of the various types of silos that are being placed on the farms of the corn belt. The compilation is given showing the amount of material required to construct the various types of silos, thereby making the book well worthy the perusal of those who are contemplating the adoption of this method of feeding live stock. This volume will be of special helpfulness to those who are now feeding ensilage, because the compounding of rations is taken up in great detail and such combination of feeds as are recommended may be used with safety, because they are based on the results of scientifically conducted experiments.

The Massey-Harris Co., Toronto, are sending out their handsome 1913 catalogue, which illustrates the Massey-Harris line of farm machinery. This line includes almost everything which the farmer needs. A card sent to the Massey-Harris Co., Toronto, will bring a copy to you.

A copy of the 1913 catalogue of the Cyphers Incubator Co., Buffalo, N.Y., entitled, Profitable Poultry and Egg Production, has been received. It is a 245-page book, highly illustrated, and deals fully with incubators, brooders, poultry food and poultry supplies. This book, which is free for the asking, should be in the hands of every farmer. It contains a fund of information on the subject of poultry raising, which will mean many dollars for the farmer.

Owners of orchards have for some years needed no argument to convince them of the profit and importance of spraying fruit trees, and in this time spraying has become practically universal among orchardists. General farmers, truck growers and gardeners, however, have not as yet reached this stage, although the vogue of spraying among them is rapidly increasing. In fact, it is just as important and just as profitable to spray the potato field, the garden and many other kinds of crops, for that matter, as it is to spray apples. Instances are many where from \$15 to \$30 net increase in

the profits per acre have resulted from spraying tomatoes. Potatoes seem to respond even more liberally. Not only is the yield larger, but the individual members of the crop are bigger and of finer quality. It is all important, however, that the spraying be done with the proper materials. This applies not only to the solutions, but to the machinery by which they are applied. In fact, this latter is equally as important as the former. For a good spray poorly applied is worth little, even less than a poor spray properly applied. One of the largest and most complete lines of spraying machinery now on the market is that manufactured by the Bateman-Wilkinson Company, Limited, of Toronto. This is the well known "IRON AGE" line, and is deservedly popular. It includes every variety of spraying apparatus, from the small hand and knapsack sprayer to the big traction power unit for large orchards. Bucket, barrel, hand and power appliances are found, and all possess the high quality of the "IRON AGE" line. Men who do spraying should write for the illustrated booklet on spraying machinery, issued by the Bateman-Wilkinson Company, 480 Symington Ave., Toronto. It is well worth reading, and will be sent free on request.

Chicago Flexible Shaft Company, 95 LaSalle Ave., Chicago, have forwarded copies of their catalogues in connection with their horse clipping and sheep shearing machines. The former shows very conclusively the advantages of horse clipping, the arguments given in its favor are those of leading veterinary surgeons. These catalogues fully describe the different clipping machines. It will be to the advantage of every farmer to have one of these catalogues in his home. They are free.

"Artificial Rearing of Foultry" is the title of a booklet being sent out by Gunn, Langlois & Company, Limited, Montreal, showing the profitable revenue derived from poultry raising. It contains complete instructions as to the best method of handling poultry from the time they come from the incubators till they are ready for the market.

A most attractive catalogue has been received from R. C. Jamieson & Co., Ltd., Montreal, describing the use of paints, and showing a full line of paints and stains manufactured by this company. The calendar is high-class in every particular, and will add to the attractiveness of the farm home.

Lamontagne, Limited, Notre Dame St. West, Montreal, Canada's leading manufacturers of harness and leather goods, have their 1913 catalogue ready for mailing. It gives a complete list, with prices, of their different lines of harness. A card sent to the manufacturer will bring this catalogue to you. They are prepared to fill all mail orders promptly and satisfactorily.



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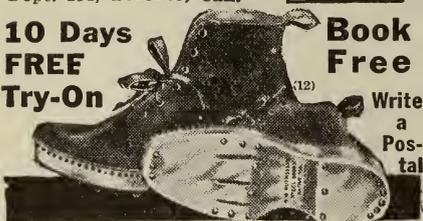
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They give it their skill, their knowledge and their taste and when it reaches the

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67A

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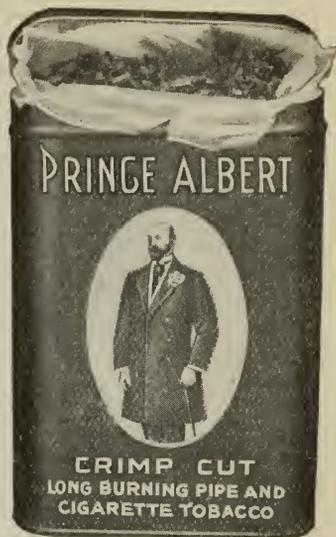
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Let that put a dent in *you*—the man who loves his pipe and suffers from *fire-brand* tobaccos; *and you*, who gave up a pipe because it would not fit your taste.

Get this, men, as it's handed out, fair and square: P. A. is the one tobacco that's got everything any man who knows the delight of a pipe ever dreamed of. It can't bite, because the bite's removed by a patented process. That's why millions of men fondly call P. A. the "joy smoke." *No other tobacco can be like Prince Albert!*



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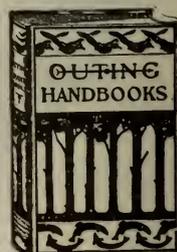
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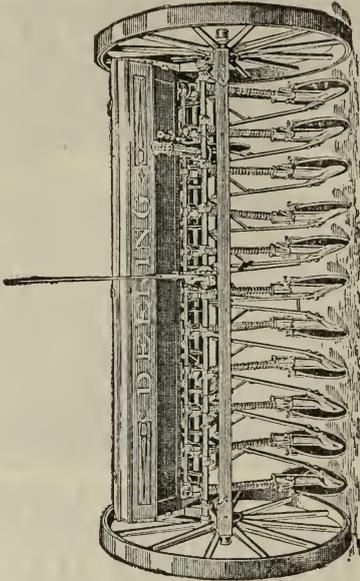
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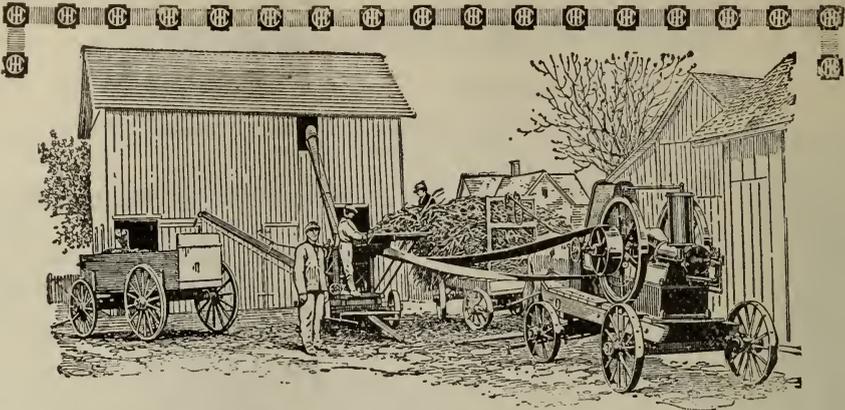
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An I H C engine will do all that, and more. Having paid for itself, it will continue to earn its way by working steadily year after year until you will say, "My I H C engine is the best bargain I ever made."

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The I H C local agent will show you the good points of the I H C engine. Get catalogue from him, or, write the nearest branch house.



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I am using 75 of your stanchions and find them satisfactory in every respect. In fact, I believe them the best on the market.

E. G. HOUSE.

Wallace B. Crumb,

Dear Sir,—

In 1909, I built at Auray Farms, Sparta, N.J., a new cow stable for 41 head of Holstein-Friesians, and equipped it with steel stanchions. Last summer, I built another cow stable and put in your stanchions. They proved so much more satisfactory that I have discarded the steel stanchions and have replaced them with your make.

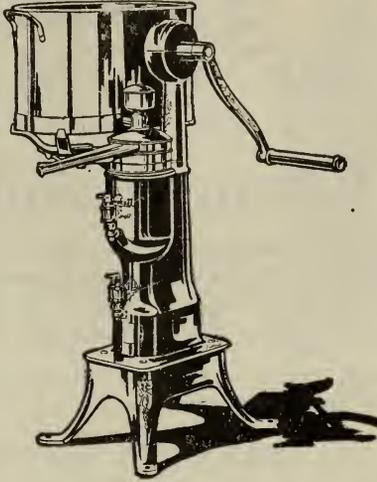
Yours very truly,
FRANK M. AVERY.



**Pay the Price of the Best
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ECONOMY in buying a cream separator does not begin nor end with the price. You may easily pay too little and just as easily pay too much.

Learn the difference between gears that work without back lash and those that have it or develop it soon. Learn the importance of a self-adjusting bowl spindle bearing, and learn to know one when you see it. Discover the difference between brass and phosphor bronze as a material for bearings. Buy a separator with an oiling system that cannot fail you even for a few minutes of a run. When you find the separator that comes up to your specifications—one that with proper care will do good work for a long time—buy it. You will find it marked



Learn the difference between gears that work without back lash and those that have it or develop it soon. Learn the importance of a self-adjusting bowl spindle bearing, and learn to know one when you see it. Discover the difference between brass and phosphor bronze as a material for bearings. Buy a separator with an oiling system that cannot fail you even for a few minutes of a run. When you find the separator that comes up to your specifications—one that with proper care will do good work for a long time—buy it. You will find it marked

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I H C cream separators turn easily and they are easy to run because the working parts are accurately made and the bearings are sufficiently lubricated. The shafts and spindle are the strongest used in any separator. The shaft and spindle bearings are supported by the frame, but have no contact with it. The contact is between the steel spindles and phosphor bronze bushings. The gears are spirally cut so that there is no lost motion between them. They are entirely protected from grit and milk, and at the same time are easily accessible for cleaning.

See the I H C local agent and ask him to give you a demonstration of the efficiency of the machine as a skimmer and to go over with you and explain carefully all of its good, mechanical points. You can get catalogues and full information from him, or, write the nearest branch house.



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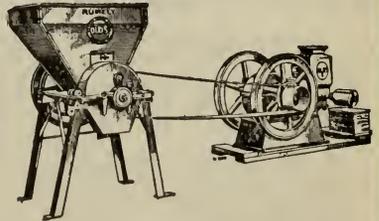


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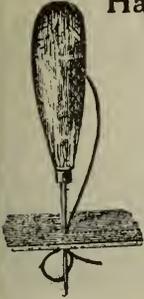
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Complete outfit, \$1.50, sent prepaid anywhere in Ontario or Manitoba.

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We will give this beautiful clock free of all charge to any lady who will sell forty sets of our beautiful embossed Easter and other post cards at 10 cents a set (six beautiful cards in each set).

The clock is a perfect timekeeper, in beautiful and artistic gold plate frame, just like picture. It is nine inches tall, and will grace the parlor of any home.

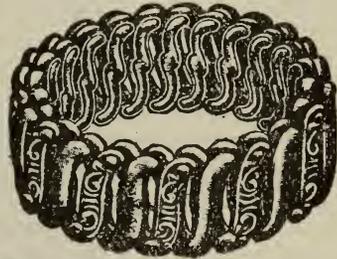
Your friends all want cards, and you can easily earn a clock in a few hours.

Send us your name, and we will send you the cards. When they are sold send us the money, and we send you the clock, carefully packed, and all prepaid. Address

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We will give this beautiful prize free of all charge to any girl or young lady who will sell 40 sets of our handsome Easter and other postcards at 10 cents a set (six beautiful cards in each set.)

The Extension Bracelet is of rolled gold plate, and fits any arm.

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Special Magic Lantern (with 12 slides), Rubber Type Printing Outfit, Toy Steam Engine, with whistle, fly wheel, and everything complete for running, Gold Signet Ring, Electric Flashlight or Guaranteed Watch free to any boy. Send your name and we will send you 30 sets of beautiful Season Greeting, Birthday, Scenic and Floral Post Cards to sell at ten cents a set (six cards in each set). When sold, send us the money and we will send you whichever prize you choose. For selling 40 sets we will give you a Moving Picture Machine or a Simplex Typewriter. Address

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British Columbia is the treasure house of Canada. It is the most fortunate of countries, in the ideal climatic conditions sought by the agriculturist, dairyman and fruit-grower. Investors would do well to turn their attention to B.C. as a prospect for sure returns.

I represent the North Coast Land Co., the largest Land Company operated in British Columbia—paid-up capital \$1,500,000—with old country directors.

We own the pick of the land in the Fort George, Nachaco and Buckley Valley Districts.

Our Farm Lands are low—prices ranging from \$20 to \$35 per acre. Our 10 acre Fruit Tracts, having fine transportation facilities are cheap at \$750.00—\$150 cash, balance \$10.00 every month—no interest—no taxes—clear title.

WE GUARANTEE MONEY BACK TO ANY WHO FOR ANY REASON FIND PURCHASE UNSUITABLE.

W. M. INGRAM, 203 Enderton Bldg., Winnipeg, Man.

Late Superintendent Dominion Government School Lands

Safe and Sure Investments

1913 NEW IDEA.

The INTENSIVE vs. The EXTENSIVE.

Can the grain farm of ½ a section and expensive outfit yield as much profit as the small farm of 50 acres of garden, poultry, etc.?

I have a few choice 50 acre plots well cultivated and within 10 miles of the City, and on very easy terms. This is a good proposition, either for profitable occupation or as investment.

INFORMATION AND ADVICE FREELY GIVEN. WRITE FOR PARTICULARS.

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160 acres improved, one mile from town, \$1600.00

320 acres improved, 1½ miles from town, \$22.00 per acre.

480 acres, 4 miles from town, with 8 horses, 10 cows, all implements and household furniture, all for \$32.00 per acre.

Small cash payment. Balance, easy terms in all of above.

A. F. BROWN & CO.

REGINA, - - SASKATCHEWAN

Another Fruit Farm

BARGAIN

WE have to offer this month another exceptional Niagara Fruit Farm bargain which should not be overlooked. It is situated close to Niagara Falls, and has the best boat and railway shipping facilities to be found anywhere. Fruit consists of 40 ac. peaches, 6 ac. plums and prunes in their prime, 10 ac. cherries, 4 ac. asparagus, and some pears. All bearing, fertilized, and in A1 condition. 16 ac. pasturage and clover, and 12 ac. choicest early garden land. About 5 ac. buildings, gravel pits, etc. Has large roughcast house and 2 frame houses, barn 30 x 40, shed attached, packing house, implement house, smoke and tool house, and spray mfg. plant. Total acreage is 100, and it is all rich sand and well drained. Six springs of the purest water on property. Has railway siding on farm, and its location is the best to be found. This has always been managed on an up-to-date basis, and has been paying a dividend of over 25% annually, clear of all expenses.

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Reaping Rewards from Resolutions

By FRANKLIN O. KING.

Do you Remember That Old Story about Robert Bruce and the Spider? Robert was Hiding in a Cave. His Enemies Had Him "In the Hole," Temporarily, So to Speak, As it Were. While Reflecting on the Rocky Road to Royalty, Robert, the Bruce, Espied a Spider Spinning His Web Over the Entrance to the Cavern. Nine Times Did the Spider Swing Across the Opening in a Vain Attempt to Effect a Landing, but the Tenth Time he Touched the Home Plate, and Robert, admiring the Persistence of the Insect, Cried Out Loud—"Bravo," Two or Three Times. One Right After the Other. Shortly After That Bruce Got Busy and Captured a King-Jom.

All of This Preamble is intended to Point a Moral, which is—"If At First You Don't Succeed, Slap on More Steam, and Sand the Track." In This Connection I want to Inquire about Your New Year's Resolutions, and to Ask If You Have Kept the Faith, and If Not—Why Not? I believe the Pathway to Prosperity is Paved with Good Resolutions. Therefore let Us Resolve, and Keep Resolving until Victory is Perched on our Banners. Remember, You Have Fought Many a Victorious Waterloo that the World Knows Nothing About. The Man who Gets Up every Time He Falls Down Will Some Day Cease to be a "Fall Guy." Good Resolutions Will Be Rewarded, with Rich Realizations, and It shall Follow as the Night the Day.

How Much Better Off are You than Last Year, or the Year Before That? Perhaps Your Wages are a Little Higher, but Have not Your Expenses More than Kept Pace with That Increase? Aren't You Paying a Little More for Your Clothes and Your Meals, and don't You Smoke More Expensive Cigars and more of Them than Formerly? If It isn't Cigars, It may be Something Else—Some More Expensive Habit.

A Man Begins To Go Down Hill at Forty, and the time may come when a Younger Man—perhaps a Cheaper Man—will fill your job. The Man Who-Looks-Ahead will prepare himself for that time by getting a Home. My advice to You, therefore, is to Get a Home while you are able to do so—and Begin Now. I would further advise you to Get a Home in the Gulf Coast Country of Texas.

Since Investigating Conditions in the Rain

Belt of Gulf Coast Texas, I have no Fear of Old Age or Poverty, because I know I can Take up a Few Acres down there and be Absolutely Independent. I am Firmly Convinced that with Average Intelligence and Average Industry, any Man who is now Working His Head off in the North to make a Bare Living, where they Snatch One Crop between Snowstorms and Blizzards, can soon Lay Up a Nice Bank Account in the WINTER GARDEN OF AMERICA. Come to the Land of Least Resistance, where You can Grow Three Big Money-Making Crops a Year on the Same Land and Without a Dollar's Worth of Expense for Irrigation or Fertilization.

I believe you could save Twenty-Five Cents a Day if You Tried. I know you would Try if you Realized that our Growers of Figs, Strawberries and Early Vegetables clear a net profit of \$300 to \$500 an Acre. Men have Realized more than \$1,000 an acre growing Oranges in our Country. Remember that our Early Vegetables get to Northern Markets in Mid-Winter and Early Spring, when they command Top Prices.

One German Truck Grower on adjoining lands last spring realized nearly \$500 from three-fourths of an acre of Strawberries. You could do as well if you only Tried, and on a Ten-Acre Trate FIND FINANCIAL FREEDOM.

The Biggest Price paid for a car of watermelons on the Houston Market last year was \$140. The car was shipped by the Danbury Fruit and Truck Growers' Association.

We are situated within convenient shipping distance of Three Good Railroads and in addition to this have the inestimable Advantages of Water Transportation through the Splendid Harbors of Galveston and Velasco, so that

our Freight Rates are Cut Practically in Half. The Climate is Extremely Healthful and Superior to that of California or Florida—Winter or Summer—owing to the Constant Gulf Breeze.

Our Contract Embodies Life and Accident Insurance, and should You Die or become totally disabled, Your family, or anyone else You name, will get the Farm without the Payment of Another Penny. If you should be Dissatisfied, we will Absolutely Refund your Money, as per the Terms of our Guarantee.

Write for our Free Book, which contains nearly 100 Photographs of Growing Crops, etc. Fill Out the Blank Space below with your Name and Address, plainly written, and mail it to the Texas-Gulf Realty Company, 1454 Peoples' Gas Bldg., Chicago, Ill. Read it Carefully, then use your own Good Judgment.

Please send me your book, "Independence With Ten Acres."



Two Texas Gulf Coast Products.

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1. The full advice of eight experienced and reputable men, all of whom are the smallest shareholder.
2. An opportunity to interest yourself, not only in one real estate deal.
3. A share in certain profits as yet unrealized, some of these are: (owing, but which are valued by the Valuation Committee of the division cost \$145,000.00, a portion already sold for \$200,000.00, and a profit equal to 30 per cent. per annum on its paid up capital, as the large investor.

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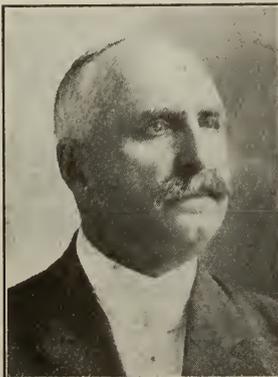
Incorporated under the "Joint Stock Companies Act" of Manitoba

Authorized Capital, \$1,000,000.00

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Co-operation the Means to a Desired End

CO-OPERATION, which in this instance means the placing of your money with the money of the Directors and other Shareholders, will enable you to place your funds in some of the very best property offered, and by this means participate in some of the large profits now going to individual investors, who alone control thousands, and to other large corporations doing business on the same co-operative plan as our own.

Whether your means be limited or otherwise, you may participate in large profits created by the expansion of Winnipeg and the West. Last year on a capitalization of \$250,000.00—partly paid up—the Company made \$17,297.04, net profit, and is still the owner of property which cost \$205,914.32.

We feel that with a capitalization of \$1,000,000.00 properties more central can be purchased. These

will, of course, cost more money, but profits will be more assured, and the percentage of profits greater.

The shares are being offered at \$110.00 each, par value being \$100.00, and can be paid for in cash or on the following terms: \$30.00 cash per share, and \$20.00 every six months until fully paid for.



Albert H. Oakes.

Investors, Limited, Offer

are large shareholders. Their interests are identical with those of
ut a dozen at the same time.

properties bought for \$205,914.32, upon which \$121,591.33 is still
ipeg Real Estate Exchange at \$274,790.00; (b) "Park Manor" Sub-
he unsold portion estimated to be worth \$96,000.00.

30. A company which during its first and organization year made a
aid a cash dividend of 15 per cent. A company for the small as well

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Name
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YOUNG MAN

Before deciding to leave Ontario consider well the opportunities which she offers on every hand. Consider the various types of soils capable of producing all the products between No. 1 hard spring wheat and the tender fruits such as peaches, apricots, and also early vegetables and melons. Consider the equable climate possessed by the more southerly portions, while that of the northerly parts is to be preferred before many others in Canada. Consider carefully the transportation facilities offered for the marketing of these various products both by rail and by water; remember that Ontario is centrally situated in North America, practically surrounded by the greatest inland waterways of the world. Remember that suburban lines are being projected into various districts and every day surveys are being made for other new ones. Also remember that competition between various transportation companies is keener here than in some other places. The greatest home market in Canada is in Ontario; the great manufacturing centres are either in the Province or just on the border. New Ontario offers one of the best growing home markets on the continent. Ontario offers the greatest inducements to the upbuilding of large centres—cheap power.

She is a complete and self-sustaining Province. The southerly parts can supply the

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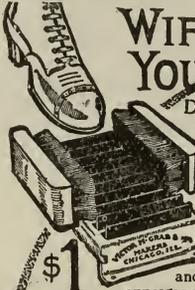
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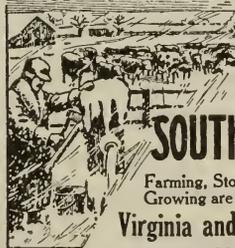
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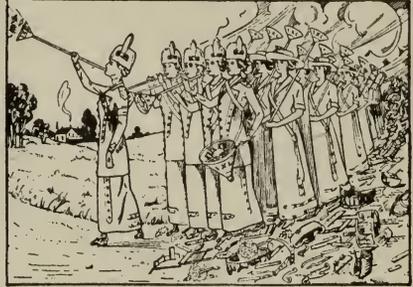
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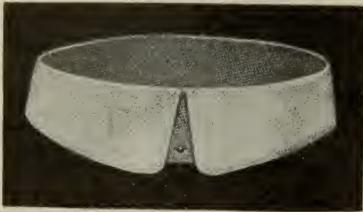
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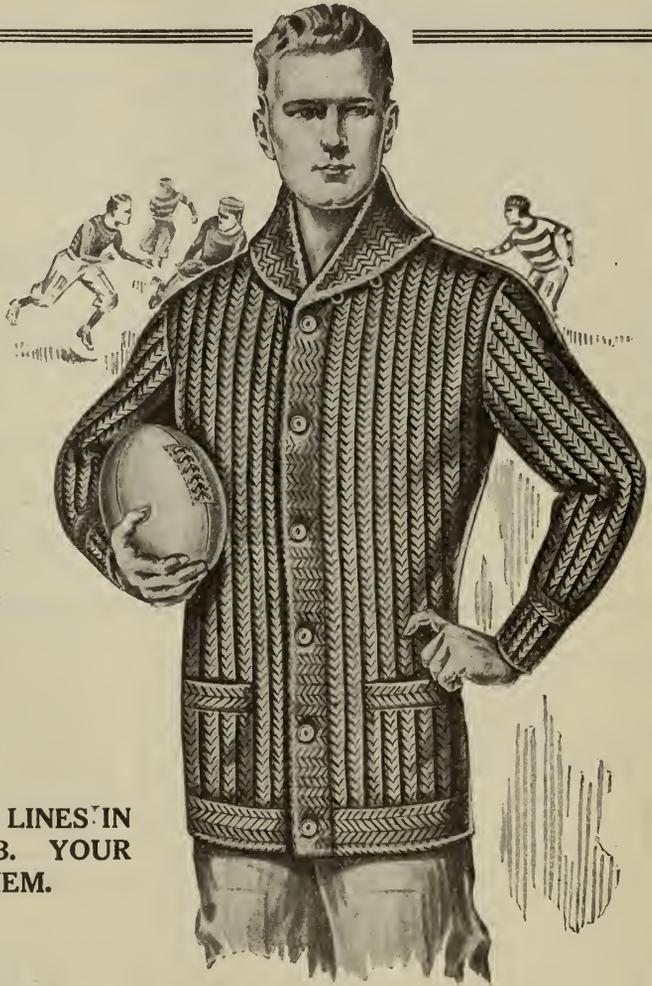
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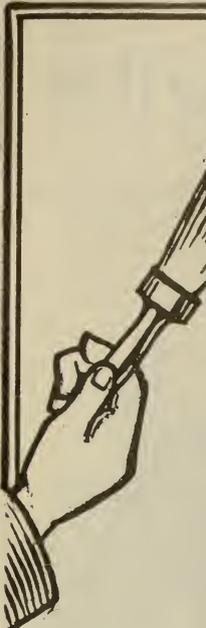
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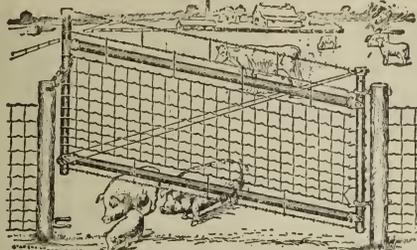
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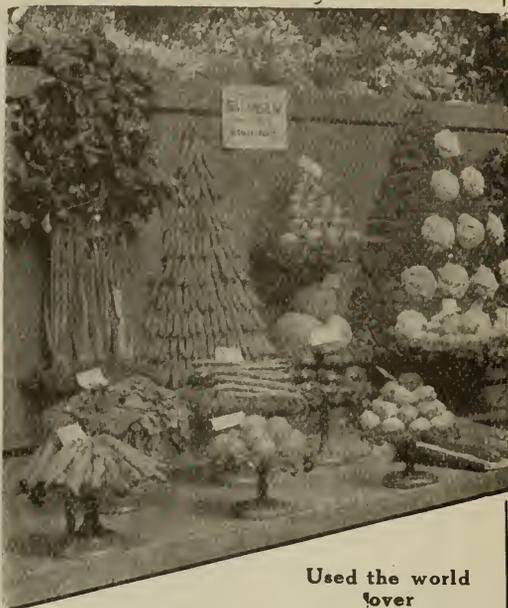
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From time immemorial natural cures have been going on in every country, not less in our own than in others, through the efficacy of natural remedies. It is the result which sometimes seems miraculous to one who has suffered long without relief. For example, Dr. Thomas' Eclectic Oil is above all things a natural remedy, composed of penetrating and soothing ingredients that have caused cures seemingly impossible through ordinary means.

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25 per cent. to 50 per cent. off on FRUIT TREES.

Part of our nursery land at Fointe Claire has been sold and must be cleared next spring. This accounts for the special prices we are offering on this high quality stock. It consists of:—

30,000 Fruit Trees,
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Write quick for complete list and prices, letting us know what you are especially interested in.

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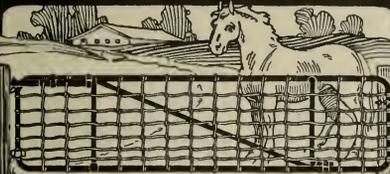
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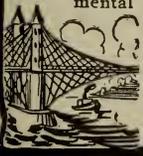
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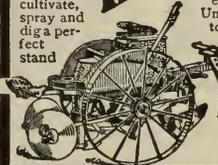
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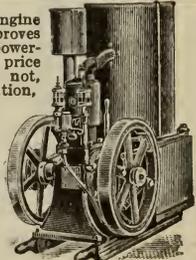
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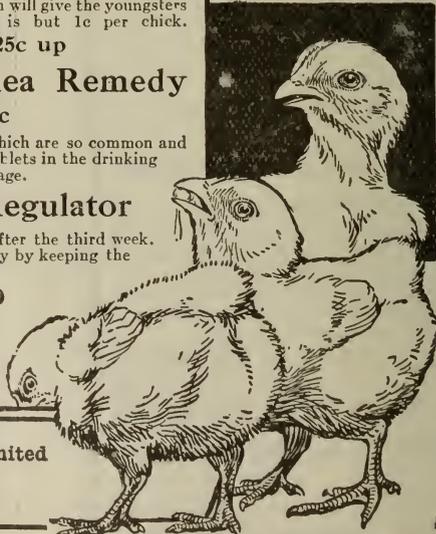
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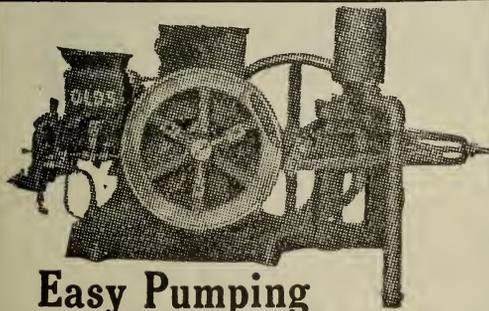
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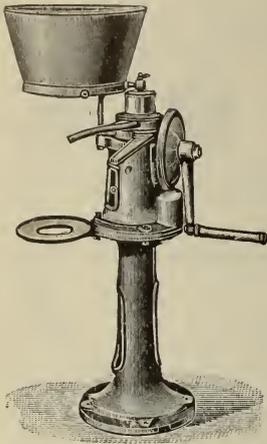
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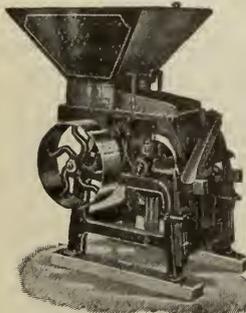
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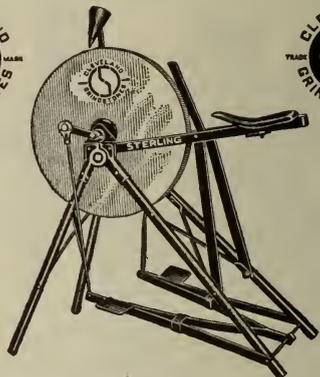


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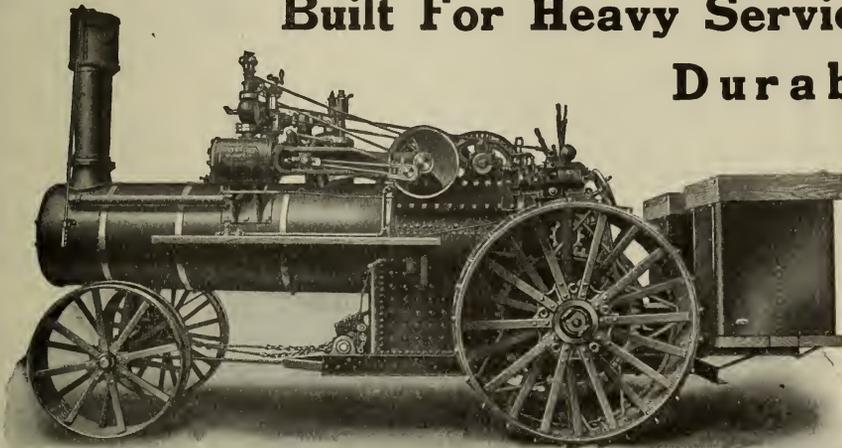
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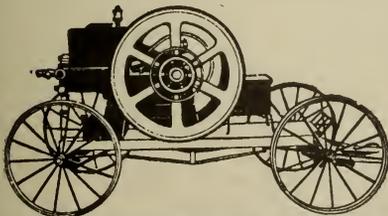
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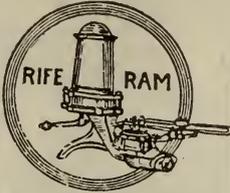
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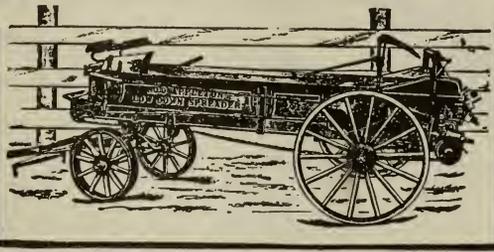
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50 Gallon Horizontal.

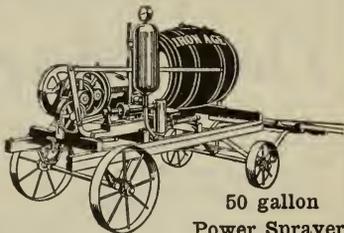
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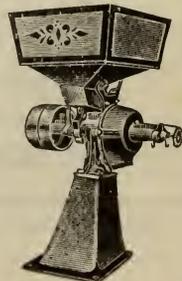
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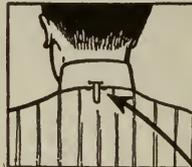
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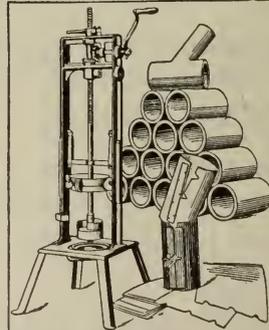
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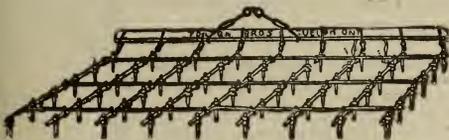
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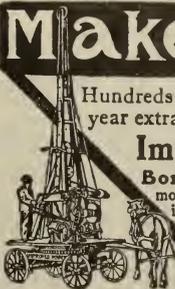
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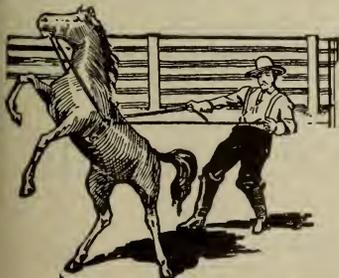
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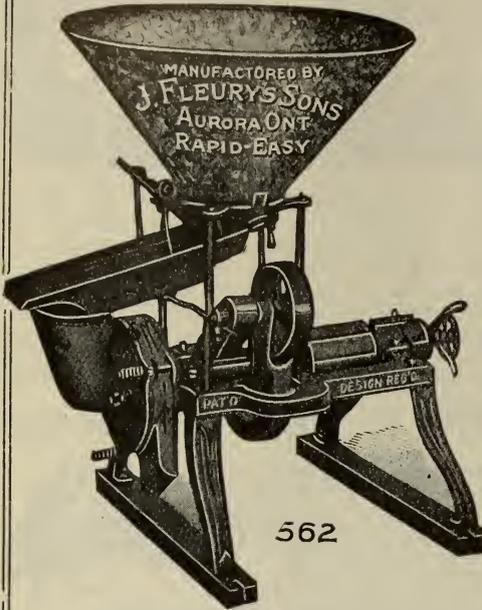
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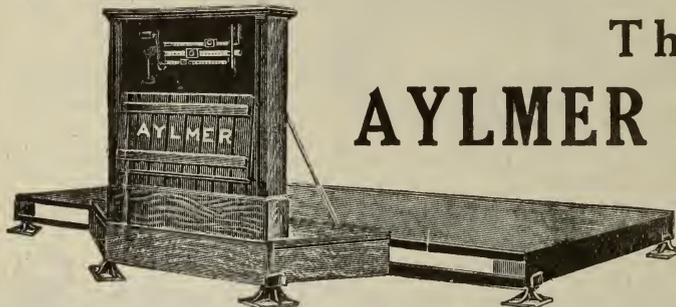
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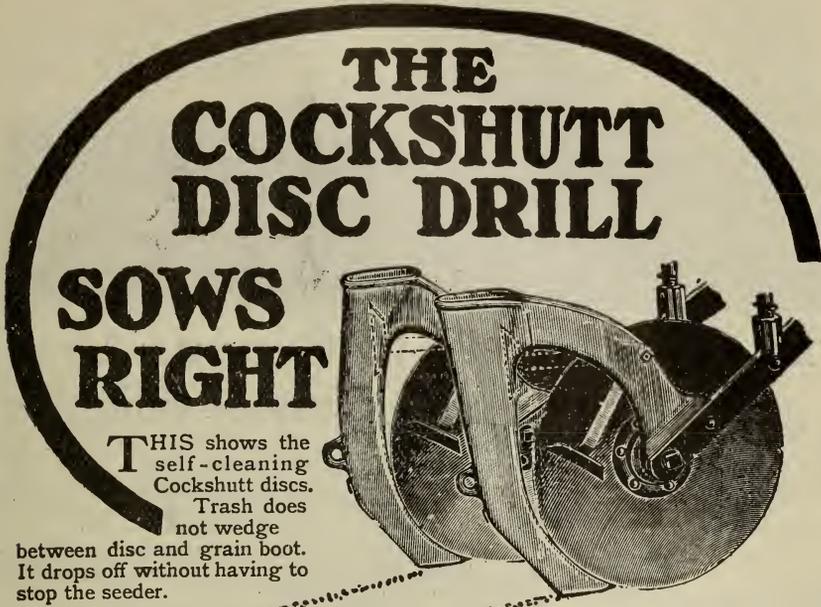
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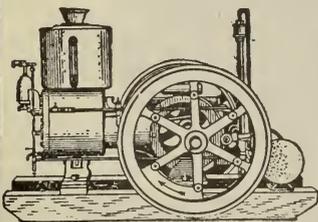
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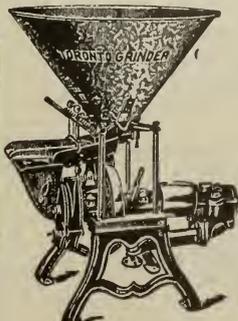
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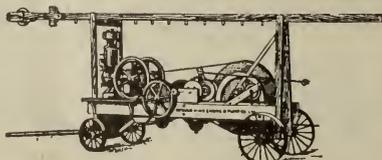
Ontario Wind Engine & Pump Co., Ltd.
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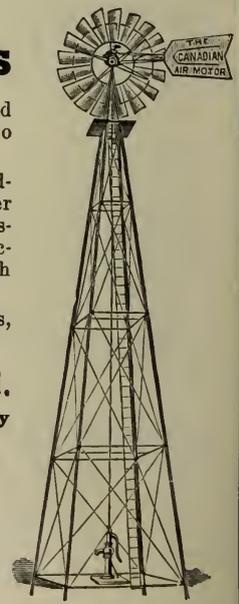
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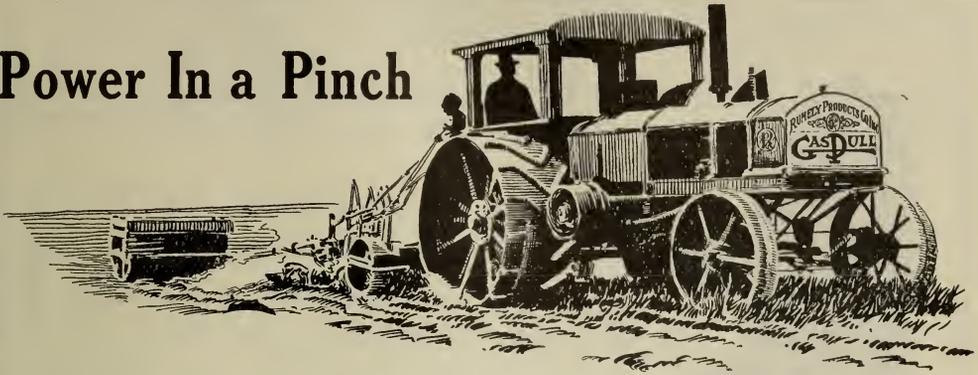


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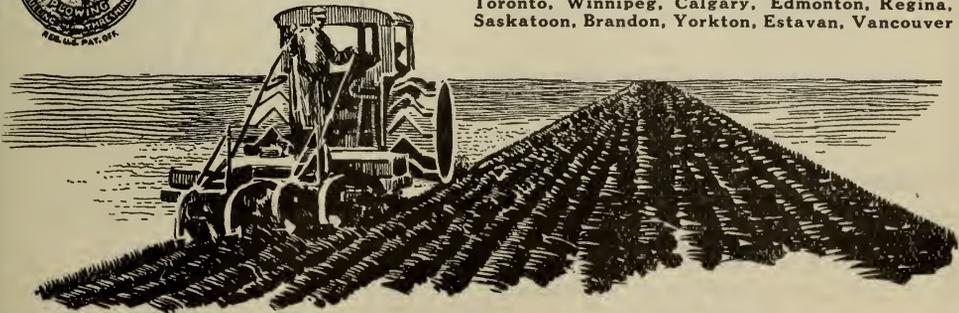
"We have threshed as high as 3,131 bushels of wheat in one day. I will put this rig up against anything in the country for \$1,000."

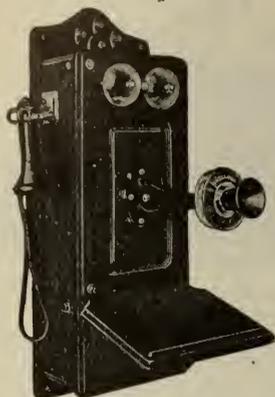
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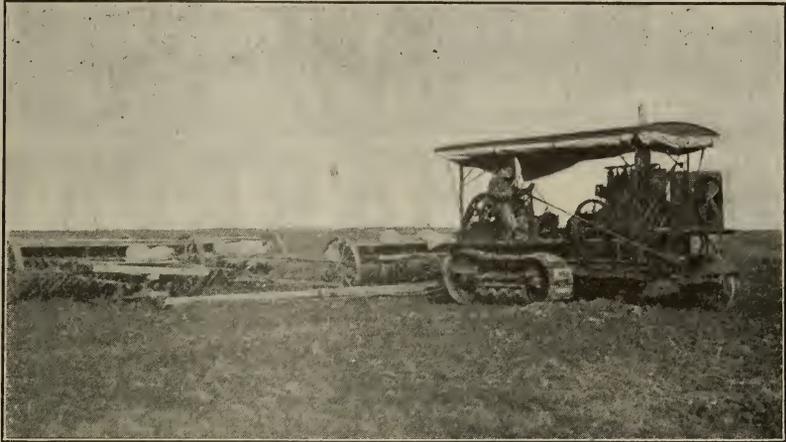
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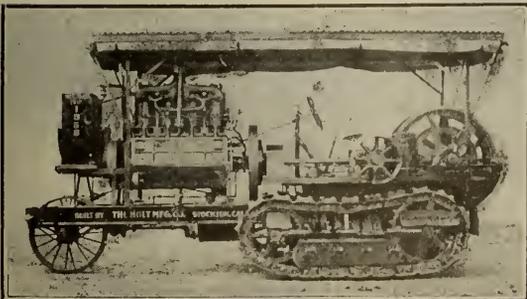
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Many inexperienced builders have rushed pell-mell into the field with untried, untested small size tractors. Even with our many years of tractor building experience, we are not satisfied to do this. First, we gave long, careful thought to the power problems of the small farm. We studied the requirements from every angle. Then we designed and built this 25 B.H.P. tractor especially to meet these conditions. Next we gave the tractor a thorough searching shop and field test. No guess work at any stage.

KEROSENE for fuel at all loads, and is oil cooled. It has two working speeds—1.8 and 2.6 miles per hour. It is built almost entirely of steel, thus insuring greatest strength with **LIGHT WEIGHT**. The drive wheels are equipped with our wonderful wave form lugs, making the tractor well fitted for work on soft soil.

A Self-Lift Plow, Too

The Hart-Parr-Sattley Self-Lift Plow (see illustration) is built especially for use with the Hart-Parr Twenty-five. No other self-lift plow is designed under so many fine features, none work so efficiently behind a tractor. The two equipments are big winners and money makers. In combination, they form a strictly **ONE-MAN OUTFIT**. You can operate both the tractor and plows right from the engine platform.

field test. Step by step, we modified and strengthened it.

Costs Little—Pays Out Big

And now, that we, ourselves, are convinced that this new Twenty-five is right, we offer it to the farmer as the only small tractor that really is efficient, reliable and economical in every respect. It's a profitable investment on farms of 160 to 320 acres. And the price is within reach of the small farmer's pocket book.

Great Strength—Light Weight

The same general features of construction which have made our 30, 40 and 60 B.H.P. outfits so successful, are all embodied in this new Hart-Parr model. It will easily take the place of 10 sturdy horses and do the work better, quicker and cheaper. It uses **CHEAPEST**

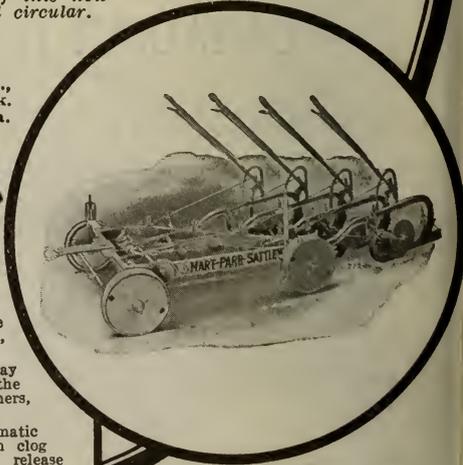
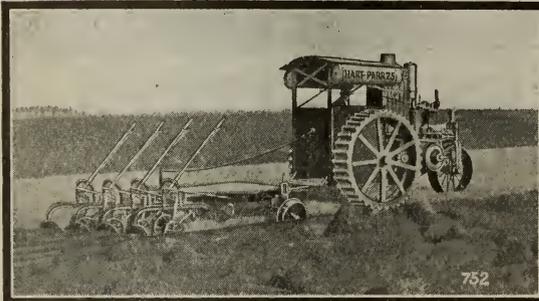
Let us tell you more about the important features of this new tractor and self-lift plow. Write to-day for special circular.

HART-PARR COMPANY

42 Main St., Portage la Prairie, Man. 1626 8th Ave.,
Regina, Sask. 67 West 23rd St., Saskatoon, Sask.
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*Here Are Just a Few of the Many
Superior Features Built Into the
Hart-Parr-Sattley Self-Lift Plow*

- 1.—GREAT STRENGTH AND SIMPLICITY.** No cumbersome construction. No excessive weight.
- 2.—LARGE CLEARANCE.** No chance for clogging in trashy soil.
- 3.—THREE WHEEL TRUCK.** Affords excellent support over entire frame. Frame cannot sag and throw rear plows out of adjustment. Furrows are all turned to same depth.
- 4.—FURROW WHEEL.** No need to steer the plow. The engine may swing a foot or more to either side, but the furrow wheel keeps the plows in the furrows. Enables plow to work close into fence corners, or make field turns and still maintain uniform furrows.
- 5.—HAND-LIFT AS WELL AS SELF-LIFT.** The hand and automatic lift features are independent of one another. Should any bottom clog or meet an obstruction, the hand lift enables you to clean or release any individual bottom without lifting the entire plow.



Plow Platform Removed Showing Mechanism

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The Improved House Furnace



A "Sovereign" hot water boiler is the modern, improved method of house heating. It is not style or extravagance that has prompted the many thousands of home builders and house owners to install the "Sovereign."

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Consult us about your heating. It is an important matter, and we give it the serious consideration it deserves.

TAYLOR-FORBES COMPANY LIMITED

Makers of "Sovereign" Hot Water Boilers and Radiators

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OFFICE

GUELPH, CANADA

WORKS AND
FOUNDRIES

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Your fingers, you see, need never touch the soap. The top forms a holder, permitting a firm grip on the stick until the last bit is used

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And such lather! Lather that leaves your face like velvet! Lather so softening and refreshing that you look forward with pleasure to your morning shave.

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Four forms of the same good quality :

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Nicked Box

Williams' Holder Top Shaving Stick

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Nicked Box

Williams' Shaving Cream (in Tubes)

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consisting of a liberal trial sample of Williams' Holder Top Shaving Stick, Shaving Powder, Shaving Cream, Jersey Cream Toilet Soap, Violet Talc Powder and Dental Cream. Postpaid for 24 cents in stamps.

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After Shaving use Williams' Talc Powder

FARMER'S



A P R I L

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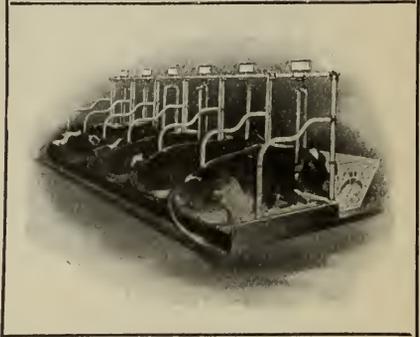
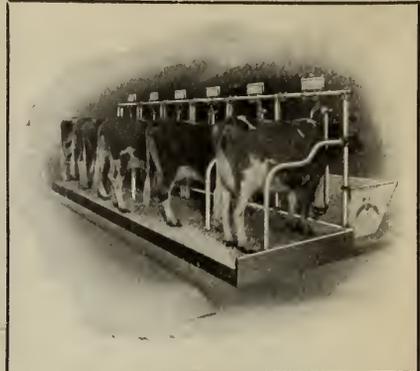
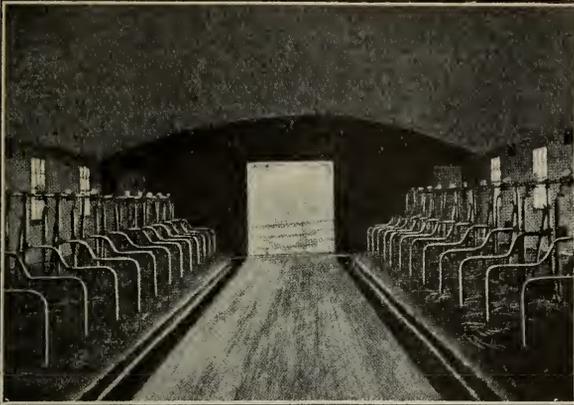
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A Modern Dairy Barn, well designed, well arranged, and fitted up with BT Sanitary Barn Equipment, will save money and make big profits for you. The Steel Stalls and Stanchions will make your stable bright, clear, and easy to keep clean. Your stable will look well—nothing will add more to the appearance than the BT Steel Stall Equipment. It will be durable, fireproof, and will last a lifetime without repairs. In addition, your cows will be cleaner, healthier, more comfortable, and the increase which results in the quality and quantity of their milk production will go a long way towards paying for the whole equipment, in the first year alone. Mail coupon to-day for our Stall Book, telling all the facts about the

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If so, when?

Number of stock

Name

P.O. Prov.

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If you wish us to make you a plan for building or remodeling, please enclose rough pencil sketch of the floor plan of your barn, indicating dimensions and number of stock to be housed.

Free Barn Plan Service

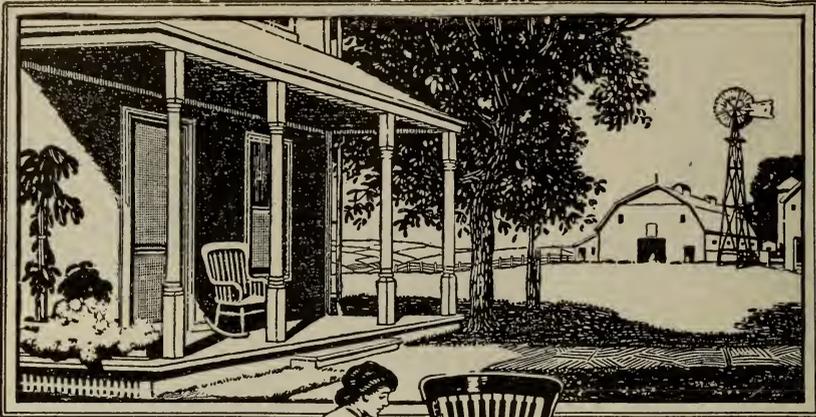
Mail us a rough pencil sketch of the floor plan of your barn, and we will make you an up-to-date plan for building or remodeling. We have had many years of experience in building and equipping barns, and believe we can give many helpful suggestions for a good layout. If you have any difficulties in regard to Lighting, Ventilation, Arrangement tell us about them. Indicate dimensions of barn and number of stock to be housed. WRITE TO-DAY. Address

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FARMER'S MAGAZINE

Vol. 5

Toronto April 1913

No. 6

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KEEP OUT

“KEEP OUT!” used to hang as a sign on every factory door. The old idea of secrecy in business made it seem a crime to show outsiders processes, materials, and methods of manufacture.

Now the white light of publicity is being let in by those who depend on public favor for business profits and business growth. The “Keep out” sign is disappearing from factory doors and the “welcome” sign is taking its place.

Candor and honesty form the backbone of modern Advertising. Men tell the truth, and it pays. Modern selling relies more and more on the confidence and good will of the buyer.

To-day, eyes are too sharp and intelligences too keen to make deceit possible. Absolute frankness in Advertising is the straight road to confidence. The public demands the light; it abominates and fears darkness.

To-day, many canning factories, packing houses, bakeshops, and public kitchens welcome visitors, concealing nothing.

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FREE A BOOK THAT EVERY COW OWNER NEEDS

In this 72-page book has been gathered together a fund of valuable information covering very fully those questions which are of vital interest to every owner of cows.

Some of the subjects interestingly discussed in this book by the best known authorities in America are as follows:

- Dairy Cows' Diseases and The Proper Treatment;**
- Proper Dairy Feeding and Balanced Rations;**
- Most Suitable Dairy Crops; Alfalfa;**
- Dairying for Profit; Silos and Silage;**
- Soil Fertility; Farm Buttermaking, etc.**

Illustrations of representative cows of each of the well-known dairy breeds are shown and the special claims for each breed are set forth by the various cattle association secretaries.

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LIMITED
Montreal, Que.



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Montreal, Que.

Please mail me, postage free, a copy of your Dairy Handbook.

I keep _____ cows. I sell cream, make butter, sell milk (*Cross out whichever you don't do.*) The make of my Separator is _____, used _____ years.

Name _____

Town _____ Province _____

Farmer's
Magazine

KEEP OUT—continued

To-day, many public service companies use the publications to tell the truth about themselves. To-day, many big industrial enterprises are open without hindrance to the inspection of an interested public.

To-morrow, many more companies, depending for their success and prosperity on public confidence, will lift the curtains that veil their board and work-rooms—they, too, will come to printing candid advertisements.

The public may overlook, but does not forgive, a lie or an abuse of its confidence. The public regards with suspicion those who attempt to serve it in secrecy and silence. The public is repelled by juggled facts or befogging words. The public rewards with its favor and money those who tell it the truth. It walks and shops where the light shines and where the paths are straight.

Advice regarding your advertising problems is available through any recognized Canadian advertising agency or the Secretary of the Canadian Press Association, Room 503 Lumsden Bldg., Toronto. Enquiry involves no obligation on your part—so write, if interested.

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Farming to-day is amongst the highest professions and needs men of brains as well as brawn. Ambitious young men and women can find ample scope for the development of their talent at the farm home. A successful farmer must be a business man and should know how to keep accounts. The Kennedy School can help you to make farming more profitable or if you desire to enter a business career we can give you the required training to help you to be successful.

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London, Eng. Chicago New York Paris, France

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FROM SCENES LIKE THESE OLD BRITAIN'S GREATNESS FLOWS.

Upper scene: A Cumberland farm, England. Lower scene: A flock in old Scotia.

FARMER'S MAGAZINE

Vol. 5

TORONTO APRIL, 1913

No. 6

THE LITTLE OLD GRAVEYARD

A graveyard is usually bedecked with monuments and in that respect the title of this article is appropriate. As foreshadowed in the previous issue, this writer has approached his subject in a most interesting way. It will likely be the case that many farmers will be tempted to neglect their apple orchards during the coming season, owing to the fact that the marketing of their fruit last year was not as profitable as it should have been. Now this will be a poor policy. Apples are always going to be in demand when properly put up. There is no sign of an over-production. The fruit associations are getting together to better the marketing conditions. It is especially urgent upon the orchardists of Eastern Canada that they do everything to insure a high-class apple. This story tells what has been done on the north shore of Lake Ontario.—Editor.

By Justus Miller

A mental graveyard is a man who buries good ideas within himself. He usually has a hard luck story to tell you too. He traces his failures to every cause but their source—himself. He is the original all-in victim of fate. And worst of all, he is living just now in every community in Canada.

In a certain rural district of this country a rich farmer and a splendid home may be found. Next door a man lives who has been "right up against it" all his life and he is a hard-working, good-living fellow, too. On the other side of the line a splendid orchard is giving a thousand dollar net gain annually. But on his side the trees are neglected and profitless.

He simply never understands his neighbor. He doesn't look around him to discover why the other man succeeds. He buries all the successful ideas that come to him, in the little old graveyard.

One day a man named R. S. Duncan,

stepped off the train at Port Hope. He was sent down as a district representative to the united counties of Durham and Northumberland, to look around—so he looked. What attracted him most were the graveyards — not the granite and marble kind, but the mental graveyards. He saw the wonderful opportunities for successful orcharding were realized by comparatively few people. Poor men neglected their apple trees and argued there was no money in them. Whereupon Duncan took off his coat and argued also.

"Ain't no money in apples," advised one. "Markets are on the blink," said another. "Oyster shell bark louse'll clean out the orchards and if they don't something else will," argued a third. "Don't seem to be much money in farming at all, these days," said the last.

"Now see here, boys," said the newcomer, "I don't want you to believe anything I can't prove. I'll take the most

neglected orchard I can find right on your own land and make a profit on it, and a big profit too. And if it isn't in any worse shape than the majority of them I'll make it in one year."

This offer stopped the argument. An orchard was taken at Colborne for a period of three years, which had been hopelessly neglected. Many of the farmers in the neighborhood became interested at once and gave the scheme every encouragement they could. But some winked at each other when Duncan was around, and smiled out loud when he had gone. Now all this happened two years ago and in each year of the trial, the prophet has proven himself.

THE OUTLOOK IN 1911.

In 1910 the old orchard had about gone on strike. It was 2 1-2 acres in area, the soil was a sandy loam and there were 117 trees in the block. In this year only 30% of the fruit was No. 1 and the total crop of 73 barrels was sold for \$100. No wonder that farmers argued there was no money in apples.

Now the reasons why such conditions prevailed were not hard to discover. The orchard had been entirely neglected. It had not been plowed for years and

had never been sprayed. It had not been pruned and was full of bark lice and blister mites. Bud-moths, codling moths, caterpillars, case-bearers and canker worms had made it their hunting ground. Apple scab, ink-spot and fungus diseases generally had delighted in it. In short, it was subject to the attack of all the hidden pests of the orchard world that are holding the apple-growers up. It was exactly such an orchard as you have upon your farm to-day, if you have never cared for it.

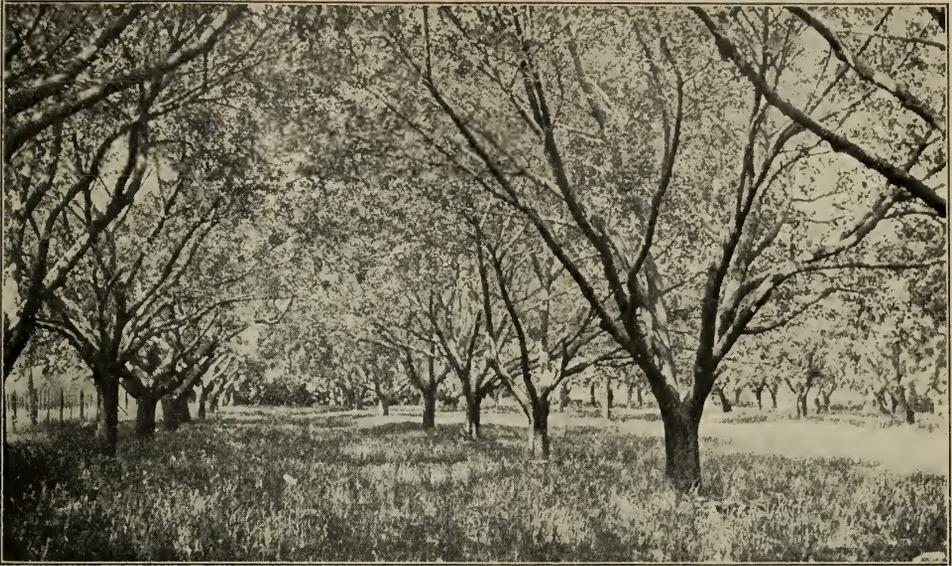
THE OLDEST MOTHER.

Now this proposition was not so hard as it looked to some to be. Mother Nature is the oldest and wisest mother of all. She isn't close fisted, this old lady; she always comes half way, but she never gives anything for nothing. Many individuals in our scheme of things practise that little game, right from the Wall Street plunger to the indifferent farmer. But they all get stung in the end—a fair interest must be paid every time.

So Duncan got to work. He simply developed the principle of assisting nature. First of all, he cut out all dead wood and pruned the trees. Air and



A good cover crop of clover in Noble's demonstration orchard.



Nicholl's orchard in prime condition. July 5th. A cover crop of clover and oats.

sunshine are as essential to their growth as they are to ours. The sunshine is needed to color the fruit, and the air to feed the trees. All limbs that obviously were useless were cut away. The long leaders were dehorned. Wider, lower trees are demanded so the cost of spraying and picking will be less. So Duncan made them wider and lower. The fruit-bearing wood was left as often as possible for Duncan wasn't seeking fish-poles with fringes on the ends, just then.

All cuts of 1 1-2 inches in diameter were disinfected and painted with white lead and raw linseed oil. This prevented fungus and disease germs from entering and shed all the water which otherwise would have soaked into the wood.

Next came the operation of scraping away the loose shelly bark. The codling worms had used it for a lodging place during many a winter before, but when the first rain came to soften the bark somewhat, the district representative had each tree treated thoroughly. Many objected to this process, but the results proved the wisdom of it. It was sure hard on the worms—but it helped the apples.

After all the dead wood had been gathered and destroyed, the necessary

fertilizer was applied. This question in itself caused much controversy. But it is a simple proposition when you stop to consider it. It is simply putting back into the land what you have taken out in crops: simply a question of paying the Old Mother her interest. Nitrogen, phosphate and potash are taken away, and they must be returned in some other form. *Nitrogen and humus always exist together*, Mr. Shutt, of the central experimental farm, tells us. We can give both to the soil by growing legumes as cover crops. But the others have to come from other sources. On these 2 1-2 acres 25 tons of barnyard manure, 1,000 pounds of acid phosphate and 500 pounds of muriate of potash were applied.

Early in the spring the land was plowed. The soil needs air and light just as much as a human being does. You wouldn't expect a person to be a very vigorous with a blanket wrapped closely around his head. And the old trees didn't want the blanket smothering their roots either. They had stood for this kind of treatment until they had just about shut up shop. They were all sick trees when Dr. Duncan came along.

"The fresh air treatment for them,"

said the Doctor. So the soil blanket was broken up with a plough and was torn with a cultivator. All through the spring and summer the air and light treatment continued, at intervals, until at the end of June the orchard was finally seeded with a cover crop.

MAKING A BLANKET.

Now while it is true a person doesn't want a blanket around him all the time, it is also true it is very comfortable to have one in the winter. An orchard is just the same. It wants the air and light in the summer, but it wants a blanket around its roots to keep the cold out in the winter. Nature sent the snow for this purpose. But sometimes she picks her geese in other districts so we have to make a plant growth to cover her carelessness.

Then there are other reasons. By making a fine mulch through cultivation, the moisture is conserved and the roots have all they require. When a crop is grown in the orchard the mois-



An unsatisfactory method of bracing trees. Note the logging chain around the trunk.

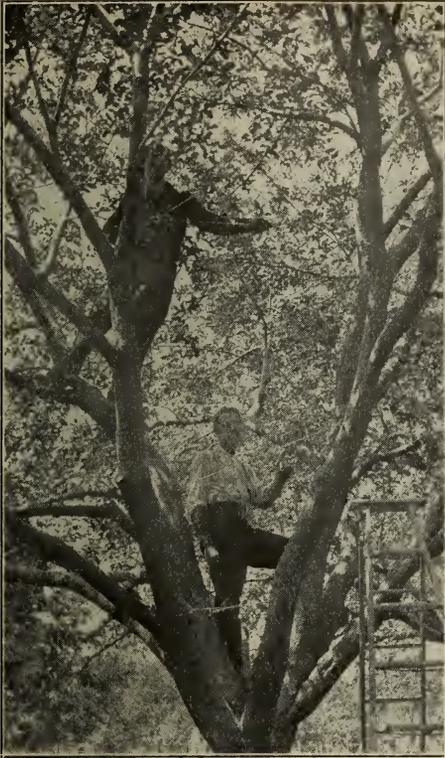


One of the younger trees before pruning.

ture is taken up by it and evaporation by the sun is more rapid also. Water is harder to cool than air, and if much were in the soil in the fall it would cool gradually, keeping a high soil temperature. This would cause a late leafy growth on the trees and when the frosts came the sap in the twigs would freeze, causing winter injury. All this points to a cover-crop.

Mr. Duncan tried two different kinds. On one half he sowed 40 pounds of hairy vetch and on the other 17/8 bushels of cow peas. Both gave excellent results and both supplied nitrogen and humus to the soil.

But before this was planted other work had to be performed. Some of the trees were large and spreading. Big limbs on opposite sides of the trees threatened to part company. Bolting with rods or wrapping with chains had been proved ineffective before. So these were strengthened with wires.



Bracing spy trees to prevent splitting, using screw eyes, No. 13 galvanized wire and two-and-half inch harness rings.

Screws were put into the limbs and No. 9 wire was stretched from one to the other, thus affording a very satisfactory brace.

THE KNOCK-OUT BLOW.

The numerous insect and fungus diseases were laying for the trees that spring, as usual. They had grown accustomed to attacking it unhindered, but were rudely shocked upon that occasion. For the first time they were treated with lime-sulphur and arsenate of lead.

Just before the leaf-buds burst, Mr. Duncan had prepared their banquet. Every tree was sprayed thoroughly with commercial lime sulphur, 1 to 10, to destroy oyster shell bark louse and blister mite. This was followed by the same wash, strength 1 to 35, with 2 pounds of arsenate of lead mixed with every 40 gallons. This controlled apple scab, caterpillars, case bearers, canker worms

and bud moths. Immediately after the blossoms fell a third complete spraying was given for the purpose principally of rounding up the codling worms.

WHEN DUNCAN SMILED.

Now the old orchard was rather surprised at all this. It was a new experience for it. But Mother Nature was ready to "come across" with her share without any quibbling. So the trees spread out their leaves and the little green apples grew into large red ones, and the old-time enemies couldn't destroy them, for there were no enemies left.

Altogether from the 2½ acres, 331 barrels were harvested. Of these 98 per cent. were free from fungus or insect injury and 87.6 per cent. were No. 1's. These were sold—as all apples should be sold—through a co-operative association for \$1,055.00. The cost of barrels and of picking, packing and selling was \$314.45 or 95c a barrel. The expenses



The same tree as on the opposite page after pruning has been done.



A few of those present at an orchard meeting held during the operations. Dominion Fruit Inspector Carey, will be noticed in the wagon.

as explained heretofore amounted to \$202.60. So that old orchard that in 1910, had produced but \$100 worth of apples, in 1911 gave a net profit of \$537.95, or exactly \$215.18 an acre.

In 1912—last year—owing to a combination of unfavorable conditions, this net profit an acre was lowered to \$108.63.

And so Duncan won out, just as he is winning out in other orchards in the

counties of Durham and Northumberland. He won *because* he *wasn't* one of the aforementioned "mental graveyards," because he understudied successful men. And yet after all it wasn't a case of winning. It was just an example of the Old Mother paying the just reward she always pays to the man of brains and energy, who will give her the interest she demands upon her principal.

WHAT THINK I!

Have you sinned, what think I?
Should I ever pass you by?
Loving once and loving free,
I love to eternity.

Did you wound me, what think I?
Shall I always bitter sigh?
Anything, each sad mistake,
I can pass for your dear sake.

Will you kill me, what think I?
I'll be happy where I lie,
If I meet your lips once more,
In a kiss like those of yore.

—Aileen Beaufort.

PROF. ZAVITZ AND HIS WORK

By W. A. Craick

A FEW years ago when the customary programme of subjects for lectures before farmer's institutes was being compiled, Professor Zavitz of the Ontario Agricultural College asked to have included in his list an open discussion on questions on field agriculture, to be put by his audience. It was an innovation, but it caught on. At meeting after meeting, the set addresses were passed over in favor of the novelty and the farmers got the Professor going on all sorts of practical subjects in relation to crop production.

At first chairmen used to be nervous about it. *"Don't you think we had better have something definite to start with?"* said they. *"The members won't like to ask questions at first. It will be all right when the ice is broken, but to begin with it would be safer to announce a subject."*

To this the Professor used to shake his head, maintaining that he trusted his audience and did not believe they would let him stand long without putting a question to him. His belief was justified, and there was never an instance when the proceedings halted for lack of queries. This direct questioning became extremely popular among the farmers, who gained by this means a great deal of information and advice which would not otherwise have come out.

This illustration makes as good an introduction to the personality of the Professor of Farm Husbandry at Guelph as it is possible to obtain. It is characteristic of the man. His knowledge is practical, not academic. He sheds the character of the lecturer when he gets among his good friends the farmers, and adopts that of the conversational and friendly adviser. In the summer they follow him out to his experimental plots like a flock of sheep, listen eagerly to his explanations with all the open-mouthed attention of a kindergarten class, and even forget that it is raining, so entertaining is his subject. In winter he banters them from the platform and drops all formality in discussing local problems with them.

This little bright-eyed man with the pointed beard, whose smile is so contagious, has been doing things at Guelph for a good many years. He has pretty much grown up with the place. Now that he can look out from his office window and see the foundations laid for the fine new building which will in future house his department, he likes to recall College geography as it was when he first chummed with President Creelman, back in the early eighties. The main building, one or two sheds and a house or so, made up the total equipment then, and everything else has gone up under his eyes in the interval.

THE ZAVITZ FAMILY ARE FARMERS.

The Zavitz family are farmers by heredity. Father succeeded son as agriculturist through as many generations as the family tree has been

traced. Originating in Southern Germany, the Zavitzs settled in Pennsylvania, and then moved to Welland County, three generations ago. The Professor's grandfather was born there and his father also. He himself came into the world in the summer of 1863 at Locust Grove Farm, Coldstream, Middlesex County. Under the circumstances it was quite natural that as a youth he should enroll at the College of Agriculture and make the study and promotion of agriculture his life-work. He went to Guelph after obtaining his second class teacher's certificate at the Strathroy Collegiate Institute, where by the way, the Hon. W. J. Hanna was one of his contemporaries.

After obtaining his B.S.A. degree in the first class which received that distinction, young Zavitz stayed right on at the College, in the capacity of assistant in the department of field husbandry. He was placed in charge of the experimental work in 1893, when Professor Shaw resigned and his department was subdivided, and soon afterwards was made Professor of Field Husbandry.

There are two directions in which the Professor has been eminently successful. One has been in the results secured from his investigations, and the other in the popularizing of his experimental work. The public know of him as a man who is attempting to do for the field crops what Luther Burbank is aiming to do for fruit—that is secure better and better varieties of grain and roots, suited to Ontario conditions, and with a higher degree of productivity. But whereas Burbank is working with fruits and flowers, which can be increased through vegetative reproduction, ignoring the seed, Professor Zavitz and his assistants are dealing with grains which cannot be increased in this way, but must be multiplied by the seed and worked out in such a way that the seed will produce plants true to type and practically identical with the plant from which it is obtained.

The uncertainty of this work is obvious and results are long in being realized. Professor Zavitz once asked Luther Burbank what he thought of the possibilities of securing an ideal plant by cross-breeding. Burbank replied, "*It is just as possible as it is for the sun to shine, but you have a big problem ahead of you.*" The main difficulty in the way of the experimenter is the action of the laws of heredity. The ideal oat plant, for example, can only be propagated from seed, but seeds secured by cross-breeding produce innumerable combinations of the characters of the parent plants and it is exceedingly difficult to get a combination of all the good qualities of the parents, which will always come true in the future generations. There are at Guelph to-day many thousand hybrid plants of grains, of which several possess promising features, and, while none of these have been sent out yet, there will doubtless be favorable results in the near future.

Apart from this Professor Zavitz has shown himself a skilful selector and it is from this work that the greatest benefit of the College experiments has up to the present been derived. Here practical advantages are apparent. The College has already sent out new varieties of grains and root crops that are having their influence on production. As an example, twenty years ago practically all the barley grown in Ontario was the common 6-rowed variety. To-day about 94 per cent. of the production of barley is of the Mandscheuri and O.A.C. No. 21 varieties.

Accustomed to search the face of the earth for new varieties of seed with which to experiment, in the spring of 1889 Professor Zavitz secured

a pound of Mandscheuri barley from Russia through an English seed firm, and sowed it on a small plot in the experimental department with sixty other varieties. The results obtained were so satisfactory, both in that and succeeding years, and the grain was so much superior to the common six-rowed variety that some twenty years ago small quantities of it were distributed to farmers through the province for experimental purposes. From these small lots there are now upwards of one-half million acres of this barley grown annually in Ontario. But the Mandscheuri barley is now being displaced rapidly by a still better variety—the O.A.C. No. 21.

In the spring of 1903, selected grains of the Mandscheuri barley were planted by Professor Zavitz at the College. Thirty-three promising plants obtained from these, were selected, harvested and threshed separately. In 1904, these lots were sown separately in rows and the best rows of plants obtained were chosen. From then on only the best strains were grown in the tests and finally the number was narrowed down to three, of which the best came to be known as O. A. C. No. 21.

The introduction of the original Mandscheuri barley and the new O. A. C. No. 21 variety has had a marked influence on the yield of barley per acre in Ontario. The average annual yield per acre for the last fifteen years, as estimated by Professor Zavitz, is over one-fifth greater than for the preceding fifteen years. This furnishes but a single example of the benefits which the province derives from the prosecution of the experimental work under the direction of the Professor and there can be little doubt that a large proportion of the increased value of the farm crops of Ontario during recent years is attributable to this cause.

Yet after all it has been through his work as director of co-operative experiments throughout Ontario that Professor Zavitz has achieved his greatest distinction. When he took charge of the department he arranged within the first year for twelve experimenters outside the College and these were ex-students of the Ontario Agricultural College. Recognizing the splendid possibilities of the work, not only for the farmer, but as an assistance in his own investigations, he set his mind to devise means of increasing the number of farmers who would carry out experiments. The first year he wrote personally to a number of College graduates and got them interested. The next year he supplemented this by having students at the College write to their fathers and neighbors at home. Beginning in this way the propaganda has spread until last year over 5,000 farmers were enrolled and conducted one or more of the experiments provided.

Co-operative experimental work has been extremely popular and its results have been most gratifying. The farmers can see with their own eyes the outcome of experiments, which would not otherwise be brought to their attention. It is purely a voluntary movement. A programme containing about forty subjects is prepared and sent out in the spring and those interested can apply for the materials required for the experiments which they desire to try. All arrangements are made by correspondence.

One of the most popular lines of work has been the introduction of a few of the very best varieties of farm crops. As already noted, it was by this means that O. A. C. No. 21 barley was scattered through the province. More recently the O. A. C. No. 72 oats were similarly introduced. In 1911 seed of high quality of each of three varieties of oats, including

the O. A. C. No. 72, were sent out to three hundred farmers for experimental purposes, each receiving one pound of each variety. The O. A. C. No. 72 variety which had been originated at the College from a single plant and which had made high records in experiments there, took the lead throughout Ontario in yield per acre and showed itself to possess long stiff straw comparatively free from rust, and grain of good quality.

Last year the farmers grew the O. A. C. No. 72 oats from the crop of the year before's planting with satisfactory results. At the present time there is a big demand for this oat, but the farmers are sowing practically all of the seed again this year and some will have large fields of it. To show its value, one farmer recently sold 100 lbs. of it for \$25.00 and from present indications, it is expected that this new variety will occupy the same position of supremacy among oats that the O. A. C. No. 21 barley occupies among barleys.

These are two typical examples of the co-operative work, which Professor Zavitz has been instrumental in starting among the farmers. It has been sufficiently successful to bring him to the attention of the agricultural authorities in the United States. A few years ago the Federal Government invited him to undertake similar work at Washington, but he declined because he felt that to forsake his experiments at Guelph and start all over again would be to undo his lifework. At the same time he has not hesitated to assist various state departments to establish co-operative schemes similar to that in Ontario.

Much travel, a great deal of talking and an endless stream of correspondence are all incidental to the Professor's duties. During the winter months he jumps around from convention to convention, exhibition to exhibition and meeting to meeting, and everywhere is made heartily welcome. In summer he has his hands full with visitors to the College and the summer courses. He has become so familiar with the farms of the province that he can actually read the history of the fields as he rolls past in the train. And then his correspondence would appal even a hardened business man. True he has four excellent assistants and three stenographers to help him out, but none the less the burden of attending to the requests for information and advice which pour in on him from day to day, especially in the spring, is a heavy one.

It is no new thing to hear criticisms levelled at the Ontario Agricultural College, but unfortunately the critics are judging the institution by the single circumstance that many of its graduates become themselves instructors and do not go back to the farm to put into practice what they have learned. To them it would appear that the College is not performing its functions to the full when it fails to send back its students to the soil. But the utility of the place is not to be judged by so narrow a standard. One need but describe the work that Professor Zavitz is doing to show that, viewed broadly, an immense amount of good is being accomplished. Lectures alone take but a small percentage of his time. The larger share of his attention is bestowed on that practical extension work which has as its object the education of the farmer on his own farm and the introduction of more profitable varieties of grains and root crops. The increased value of these crops in recent years is sufficient to support many colleges the size of that of Guelph and abundantly justifies its existence and maintenance.

APPLES THAT SELL

The following article is the result of a personal investigation on the part of the writer, combined with the opinions of practical apple growers in every province of Canada. It will be found of exceeding interest as it deals with varieties and relative bearing ages.—Editor.

By F. M. Chapman

WITH the coming spring there revive in the hearts of all the farmers who tramp out into the orchard among the reviving trees, the same old questions of varieties, bearing ages, fruit grafting and the best marketing plans for the fruit.

Apples are grown in all the Provinces of Canada, although in Manitoba, Saskatchewan and Alberta, the industry is not, nor never will be, carried on with the same success as it is in other Provinces.

The questions that are being asked in all fruit sections are much the same. Is planting being overdone? What is the use of taking care of apples if we cannot find a market for them? Now these two questions have been answered at different times and in different ways. In the first place, it is safe to say that the production of good fruit will never be large enough to make orcharding unprofitable to the good fruitman. For fruitmen, to make a success of the business, must love their work. No farming operations, so far as are yet known, partake of the nature of gold-mining or an inheritance windfall. Dollars do not habitually fall into idle hands. It is assuredly a fact that human energy and resourcefulness have earned gold dollars for hundreds of men in Canada and will continue to do so, so long as the incoming hordes of people continue to demand high-class apples for the table.

The fruit-grower, to be successful, must plant varieties that are commercial successes. He must use diligence in cultivation, and care for the trees in the most economical manner. Pruning, spraying and cultivation are essential to

success. This has been amply demonstrated time and again by the Demonstration Orchards that are being used in various parts of the country. The St. John River Valley in New Brunswick is being awakened into fruitfulness by these and private demonstrations.

VALUE OF A BRAND.

Another great thing to consider and this is the question which is agitating the minds of the growers in all parts of the country is the marketing of the fruit. Mr. P. C. Dempsey, of Trenton, Ont., told the fruitgrowers the other day at Orono, Ontario, that he had no difficulty in selling his private brand because he stood behind the reputation of every apple he put in. Here is the great trouble with our market end. We are not particular enough about the quality we put up.

It has been said that no man is capable of packing his own apples, and to a great extent this is true. It takes some moral courage to throw out an apparently good apple which has only one flaw, but the successful fruit seller must do this. His number one apples should be absolutely perfect. The Fruit Market Act allows 10 per cent. imperfection in a No. 1 pack. The good grower's policy allows no imperfection. He must rise above this and guarantee that 128 apples in the box of that number will be perfect apples. This is the high standard that must animate all packers.

Moreover the co-operative associations and all selling associations must get together and help to distribute the apples. The people of Canada are not eating half the apples they want or otherwise

the Hood River apples would not be selling in Toronto and Winnipeg in March at 5c each.

The Okanagan Applegrowers are bestirring themselves in this matter as are also the Ontario Associations. The last meeting at Guelph wherein co-operation was discussed, showed that something ought to be done at once and the men who were chosen as a committee to move in this matter, are expected to bring about results in the near future.

It is true the Dominion of Canada has no law which permits the easy formation of co-operative associations. It is quite easy to make joint-stock companies and the failure of one that had its headquarters in Toronto recently, carries with it one of the greatest scandals that has happened in the apple situation for some time. It is said that some \$300,000 have been lost to men who have gone into this business. There ought to be an inquiry by the Government into the failure of this packing company.

WHAT VARIETIES ARE BEST.

As to the best varieties to plant, the various sections of Canada have different ideas. Those varieties which have made the most money for the growers in the past have been named in letters to us in many instances. These will make interesting reading. Strange as it may read, the Ben Davis has been one of our best paying apples. In a big year, though, this apple is a drug.

T. R. Trotter of Antigonish, N. S., says that the Northern Spy has given him the best yield of apples. In planting a new orchard he would put in Northern Spies, Ontario and Scott's Winter.

John A. Barr, of Hatzig, B. C., who lives along the lower main line of the Fraser River, says,—“apple-growing has not yet been established here. The dampness of the climate favors fungus diseases.”

J. Blinco, Creston, B. C., finds the Wagner to be his best-bearing variety. Top-grafting on six-year-old trees made great growth and came in to bearing in three years. Considerable planting of the Delicious has taken place in this section.

R. W. Grierson, President Oshawa Fruitgrowers, Ontario County, Ontario, writes: “I have an orchard of apple trees, some of which are 65 years of age. The young orchard came into profitable bearing at 12 years of age with the exception of Spies which were not profitable until 15 years of age.”

BALDWINS FOR THE NORTHERN SHORE.

“The Baldwin has paid the best of any apple I grow,” said he. “There are few culls and the apples are uniformly No. 1, and are picked before the danger of frost, when the average price is good. They average me about three barrels per tree. My experience with grafted apple trees is that the Spy will yield as quickly from the nursery stock as from grafted stock.”

“In planting a new orchard I would put out Tolman Sweet, for grafting to the Baldwin, and Spy, Stark, Blenheim, Gravenstein, Snow, and Duchess.”

Dan Johnson, of Lambton County, on Lake Huron, says that they have their apple trees bearing profitable crops in 6 to 7 years. The Baldwin and the Spy are the leaders in this district. The Golden Russett also has many admirers there. Trees of this variety often yield 20 barrels with 80 per cent. No. 1's. In planting a new orchard he would set out the following:

50% Northern Spies, grafted on Talman stock.

30% Baldwins.

20% Rhode Island Greenings.

These would be planted with fillers, using Duchess, Wealthy, Wagner, and Hubbardston.

W. H. Westney, of Pickering, on the North Shore of Lake Ontario, finds that they got paying crops of apples at 8 years of age from Ontario's. His best bearers have been Baldwins and Greenings. These average 2 1-2 barrels per tree, at the average price, for 4 years of \$2.08 for Baldwins and \$1.98 for Greenings. Thus an acre of Baldwins would return him over \$200 a year.

OVER \$50 FROM A TREE.

F. R. E. DeHart, of Kelowna, B. C., says that Jonathan and McIntosh come into bearing at 4 years of age, giving an

average of 3 boxes to the tree. Newtowns, Grimes Golden, Delicious, and the Cox's Orange bear at 5 years of age.

"I have taken," says he, "as high as 42 boxes from a 10-year-old tree and got \$1.25 a box for them. I would say that an orchard of 20 acres should at 10 years' old average 15 boxes to the tree of No. 1 apples.

"If I were planting out a commercial orchard on Bench land here I would plant the Jonathan, McIntosh Red, Spitzenburg, and Grimes Golden. If on bottom land, I would plant Northern Spy, Yellow Newtown, Grimes Golden, and Delicious."

Raymond Hicks, manager of the Kootenay Fruitgrowers Union, Nelson, B. C., finds that the best paying varieties come into bearing there at 4 years of age.

LIKES THE WAGNER.

"The variety which pays the best is without doubt, the Wagner," says Mr. Hicks, "so that I would most certainly make that the leader in any orchard here. I would follow it by the Northern Spy and Ontario."

R. C. Abbott, of Fraser Valley Fruit Co., Mission City, B. C., reports that the Duchess will give paying crops at 5 years of age and this with the Yellow Transparent, are best used as fillers to be cut out at 10 years of age. Grimes Golden gives a fair crop at 6 years, but bears full at 10 years.

"My trees at 10 years average 10 boxes to the tree and return me \$1.75 to \$2.00 a box. The Greening and the Ontario are excellent apples with us and begin to bear at 6 years. I have some McIntosh Red, but cannot say how this variety will pan out here. We have no really good orchards here as it is only lately that apples have been planted."

SPRAYING INSURES 90% NO. 1'S.

L. P. Pangman, Salmon Arm, B. C., has found the best paying varieties of apples to be the Duchess, Wealthy, Jonathan, Spy, and Wagner. These bear often at 3 years but come into general bearing into the sixth year. Trees of 7 and 8 years of age have yielded him 10 boxes to the tree while 10-year-old

trees have gone as high as 30 boxes. In planting a new orchard he lays particular stress on the McIntosh Red. With three sprayings of the fruit he can get fully 90% No. 1 fruit from his orchard.

A fruitgrower near him with 4 acres of apples, received only 400 boxes the first year he bought his land, that being 6 years ago, although the trees were 8 to 10 years' old. He cultivated and sprayed and his returns since have been:

- 2nd. year, 700 boxes.
- 3rd year, 1,200 boxes.
- 4th year, 1,700 boxes.
- 5th year, 1,700 boxes.
- 5th year, 2,100 boxes.
- 6th year, 2,800 boxes.

This man practiced thinning of the fruit. His increase was highly satisfactory.

Prof. Theodore Ross of Prince Edward Island, gives the following table and information of apples in planting in this "garden of the Gulf":

Varieties in order of merit.	Begin to bear after being planted.	Yield 10 years after planting. barrels.	Price per barrel.
Wealthy	2nd year	2	\$2.00
Gravenstein	4th year	2	3.00
Alexander	5th year	½	2.00
Wolfe River	5th year	½	2.00
Spy	8th to 12th	0 to ¼	3.50
Ribston Pippin	4th to 5th	1	3.00
Ben Davis	2nd to 3rd	1	1.75
Gano	3rd to 4th	1	2.00
Duchess	2nd to 3rd	2	1.50

The varieties bringing the most money to growers at the present time in this Province are: 1st, Wealthy; 2nd., Alexander; 3rd., Duchess; 4th, Ben Davis; 5th, Ribston Pippin. Several correspondents put Ben Davis next to Wealthy.

I set out an orchard of 900 trees last year and the year before. My order was as follows, as far as I can remember: 300 Wealthy, 200 Ben Davis, 100 Alexander, 100 McIntosh Red, 100 Stark, and 100 Duchess. This orchard is now owned by G. D. Dike.

Charles Bryan, of Durham, N. S., in planting a new orchard, recommends Blenheim, Kings, and Fallswater. He has to top-graft for his Gravensteins. Bishop Pippins droop too much to suit him.

Mr. Elmer Lick, of Oshawa, says that spraying makes a difference in the Spy

of, at least, double value. On other varieties, it is not quite so much. There is no use of trying to raise clean apples of high quality without spraying. What our people want, is a high-class apple and they seem to be willing to pay the price for it. The intelligent use of spray material insures this good quality. Last year the growers would have profited by a late spraying in August. The season must always determine to a great extent the applications to be made.

In Manitoba, there are several hardy varieties of hybrid apples that are proving to be possible. On the prairie, the growth of any kind of fruit is welcome and it is quite possible that these hardy apples may yet find considerable favor.

The Peace River country in Central and Northern Alberta, bids fair to be a mixed farming section. Apple trees have been planted there and high hopes are entertained of being able to produce many apples there in the future. The fact that Yellow Transparent apples have ripened at the U. S. experiment station at Sitka, Alaska, is indeed encouraging.

The best advice about future plant-

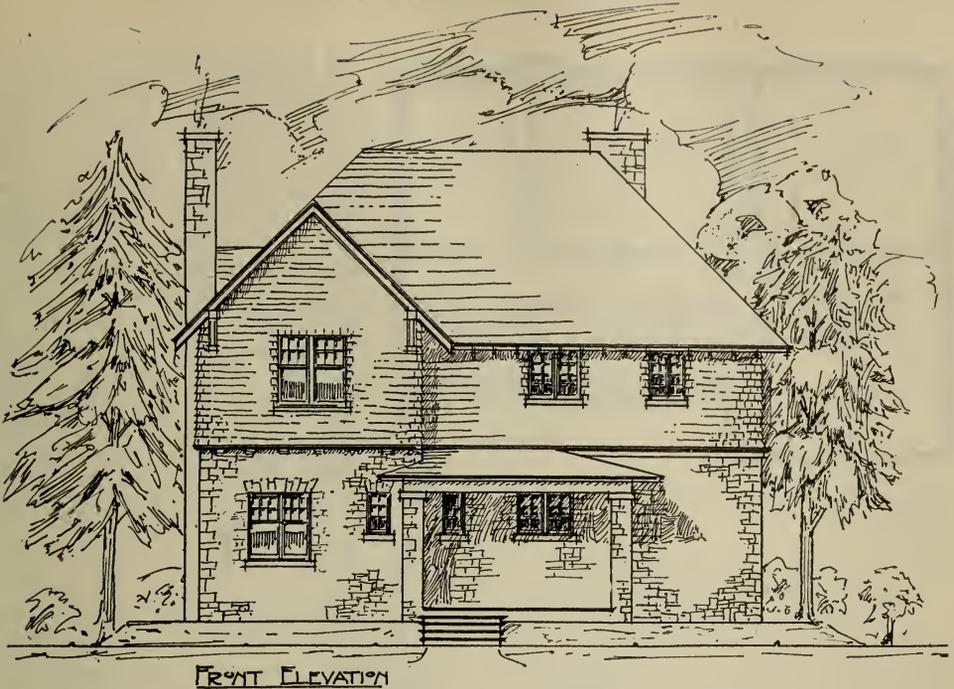
ings, is for the farmer to consider the successful varieties in his own neighborhood on similar soils and with similar physical conditions. Generally speaking, the market likes a red apple, medium in size and of table quality. But cooking qualities are being sought for also by the city households. The prairies are also beginning to demand Talmans Sweets for baking purposes and it is to be hoped that this apple will come into the prominence it deserves.

Eat a Delicious on the West Coast, a Spitzenberg or a Yellow Newtown in the B. C. valleys, a Gravenstein in Nova Scotia, a Fameuse in Quebec, a McIntosh or a Spy in Ontario, and the appetite will never call for the imported kind. The great question with us, is the packing of these good apples in the style that will attract and create repeat orders.

Too many shipments are like the Snows I saw in Saskatoon last October, green, unsightly, small apologies for the grand little red apple. Any farmer would be ashamed of such a product. It is quite needless to say that he did not use his name on this barrel.

Enlarging the Home Market

CANADA'S home market is growing, as the immigration returns continue to surpass all previous records. During the nine months, April 1st to December 31st, 1912, 334,083 immigrants arrived at ocean ports and 113,798 from the United States. These figures show an increase of 53 per cent., as compared with the number of arrivals of the corresponding months of 1911, which were 185,151 at ocean ports and 107,356 from the United States, making a total for the nine months' period last year of 292,516 persons. During the month of December, 12,025 immigrants arrived, 7,262 from ocean ports and 5,763 from the United States, as against 10,724 for December, 1911. A great number of these immigrants have brought substantial sums of money, which will be spent for farm implements, clothing and furniture. They must buy the necessities, comforts and luxuries of life, according to their means.



The front elevation of this farm house.

THAT NEW FARM HOUSE

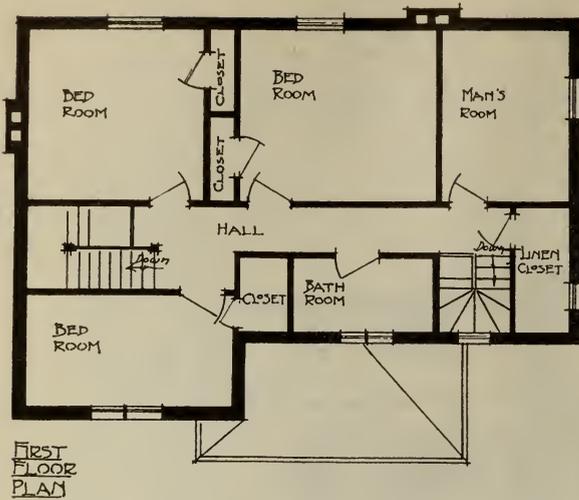
Readers of Farmer's Magazine will enjoy a series of articles that will appear in Farmer's Magazine dealing with farm architecture. The writer of this is a rising young architect, who has worked out many ideas for the betterment of the modern farm home. Blue prints of this plan can be secured through the magazine at quite reasonable rates if they are desired. Too many farm houses to-day are constructed without any reference to an architect or to the plans of houses in other districts. It ought to be borne in mind by every man who contemplates building, that it is quite possible for somebody else to have an idea that would be of big service to him.

By R. A. Abraham

WITH the development that is taking place in scientific agriculture, comes the demand from the farm itself, for a more convenient, compact and beautiful farm house. Too long the attention of the farmer has been riveted to the building of his hog pens and stables at the total expense of household conveniences. The wonder is that so many of the women and young folks have remained passive so long.

House building in the city has made such wonderful strides during the past

ten years, that it is quite common for the poorest of workmen to have a neat-looking house in which will be found electric light fixtures, gas connections, laundry tubs, hot and cold water and a den. But on the farm, in too many cases, the old houses, that were built by a former generation and which, in many cases, were models in their day, have been left without any of the finishing touches by their present day inhabitants, whose scientific knowledge has been of no avail. Even in the building



The first floor plan of the house showing a bath-room and two stairways. The rear left-hand bedroom can easily be made into a sitting-room with a grate.

of new houses, there is a woful lack of knowledge of economical architecture and the farmer seeking no outside information, builds his own uneducated, crude plan into a structure which brings backaches, tired feet, and unwholesome conditions, to the persons who spend the most of their time within its walls.

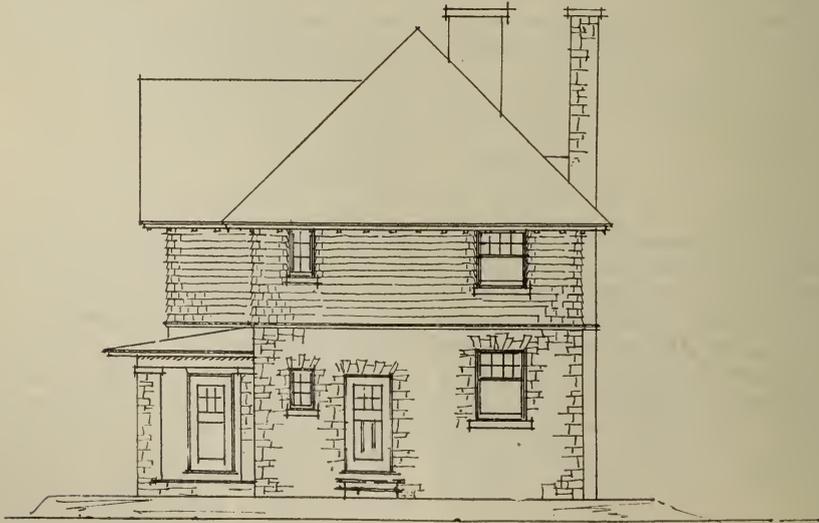
As *Farmers' Magazine* has repeatedly said, the planning for the country home should be most carefully prepared, seek-

ing to incorporate in all the latest ideas of labor-saving, and healthful devices. To the man who is building a new house, every avenue should be searched for information as to the most up-to-date ideas in house-planning. The farm-house today does not need to be large, as recent developments on the farm lead to the erection of smaller houses for married helpers. The handling of the dairy products, is so vastly different from that of olden times, that less space is needed and the country home is coming to be what it ought to be, a real privacy for the farmer and his family.

I have here tried to show what can be done towards making the farm home more convenient, comfortable, attractive and inexpensive.

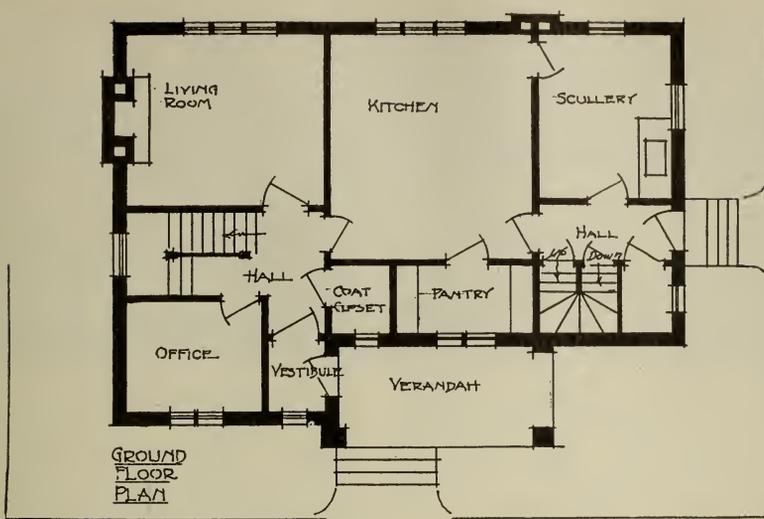
The farmer to-day is a reading farmer and he ought to have a library wherein he has an office desk with the farm data always on file at his elbow. This room ought to be convenient to the front entrance.

The old-time parlor ought to be a thing of the past. It was a room, too often, where one felt that he had to be



SIDE ELEVATION

Side elevation of the same house.



The ground floor plan of the house showing a large kitchen which might be used for a dining room, and an office that could be used either for that purpose or for a den.

dressed up to enter it, and which was only opened about once a week. I have, therefore, omitted the parlor from the plan, and substituted a living-room with a fire-place in it. This living-room should be furnished with comfortable chairs, covered in good serviceable colors that are designed to add to the comfort of whoever may be in the room. This room should be the cheeriest in the house. The window decorations should be simple, yet harmonious. The old-style heavy curtains have a ponderous effect and collect too much dust.

I have added a good-sized dining-room which can be used as a living-room also, if so desired, or a kitchen. In case that it being used as a dining-room, the scullery is ample size for a working kitchen in which the sinks are situated and from which entry is had into the rear hall, which leads outside and to the back-stairs. A closet at this rear entrance will be found most convenient for dirty boots and coats. A large pantry is situate off the dining-room.

The cellar can be divided up into different rooms, one for the furnace, one for the fruit cellar, and one for coal and wood, or a department may be put in for a wash-room in summer. The up-stairs, which is reached by a front and

back stairs, is most conveniently situated, taking up as little room as possible. There are four bed-rooms with their closets and also a separate linen closet. At the head of the back stairs is a man's room, or it may be used for a maid's room, if necessary. If only three bedrooms are required one of these rooms can be used for an up-stairs sitting-room and a fire-place can be put in. This is often a pleasing feature for the country house.

A BATHROOM IN EVERY HOME.

One of the most important features is the bath-room. It is too often the case that the farm houses of our land, do not know the luxury of a bath-tub and depend upon a basin, or a pail to do service. Of course, it is necessary to have a water service for this, but it does not take any more to install a water service in these modern days, by the aid of a gasoline engine, or by an electric pump, where electricity is available, than it does to buy a horse and rig. At any rate it should be considered before other luxuries, such as the purchase of a carriage, or of a piano. By attaching the pipes to the kitchen range there will always be hot water convenient. It will then be quite easy for the tired and soiled farmer to enter by the back stairs

to the bath-room and there, reviving himself, improve his appearance and add to the comfort and dignity of the farm home. It is just such things as these that will hold the farm boys and girls to the good country life and to the joys of a living that has no counterpart in the world.

THE HARMONY OF THE OUTSIDE.

The exterior of the house has been treated in a very simple manner. Stone is used for the lower storey, although brick or any other building material can be substituted. The second storey is shingled and when the work is properly done this combination gives a most pleasing appearance. The verandah is of the simplest construction with two stone piers carrying the beams for the roof.

The gable on the front elevation has a slight projection beyond the stone work at the first floor level. This has been treated with some brackets which give an artistic touch to the place.

The rafters project about two feet and the rain water pipes are fastened to these without any fascia board, which allows the rafter ends to show.

The shingling of the walls and upper storey are to be lapped at the corners and at the window openings. The roof can be treated at the option of the person building and it will depend upon his own local circumstance as to the cheapness of the shingles.

The estimated cost of this house is \$3,000. Much of this cost does not come out of the farmer's pocket, because he does his own teaming, his own excavating, and much of his building work.



TWO PICTURES

NIGHT and the city street,
 And the glitter and stain of gold;
 The lure of lies and laughter that dies
 On lips that are bought and sold.
 There are shadowy ways where the wanderer pays
 His tribute to fear or death;
 But it's man to man, it's life in a span,
 It's desire and despair in a breath!

Dawn and a country road,
 With its dew-drenched, fringing weeds;
 A wind blown by from fields of the sky,
 The mist on the river's reeds:
 Then the wan, white light, like a ghost of the night.
 Yields the flame of day its toll;
 But his vision free with heaven to see,
 Man may walk there alone with his soul!



A group of milking shorthorns in the rich pastures of England. It is cows like these that Alberta is calling for.

CATTLE IN ALBERTA

By August Wolf

WHILE factors of the Hudson's Bay Company, then overlords of the domain, are credited with bringing the first cattle into what is now the province of Alberta as early as 1837, when, according to records just come to light, calves were worth 10 shillings at Fort Edmonton, the pioneer ranchers were the McDougalls, Peter Gunn, member of the provincial parliament for the constituency of Lac Ste. Anne; J. A. Kanause, Messrs. Lynch & Emerson, "Ned" Maunsell and Robert Patterson, members of the provincial parliament for MacLeod.

The McDougalls, the head of which family Rev. George McDougall, who established the first mission in Edmonton in 1840, brought in the first bunch of cattle from the south in 1871, soon after which Peter Gunn drove a small herd into the Peace River country to ascertain if the lands, north of Edmonton, were adapted to ranching purposes. H. A. Kanause, a pioneer trader, who built a fort near the present Elbow Park, Calgary, in 1871, brought a bunch of range stock there several years afterward. The cattle were bought from his brother, then as now a resident of Townsend, Mont. The herd consisted of one bull

and 21 cows. They were admitted duty free by the Canadian government.

These facts have been established by L. W. Kelly in the course of investigations for a history of live stock in Alberta, which is being prepared under the direction of the provincial association.

Joseph McFarlane of the old Pioneer ranch near MacLeod, brought in the fourth bunch. McFarlane, who was then in partnership with O. Olsen, was the first dairyman south of the Saskatchewan River, and he coined money with butter at 75 cents a pound. Then, in 1876, two years after the first squad of Royal North-West Mounted Police reached Fort MacLeod, "Tim" (Dominic) Lynch and George Emerson, the latter now ranching north of Brooks, brought in a comparatively large bunch of heifers, which they sold to settlers, and to mounted policemen who intended settling. It was from this bunch that "Ned" Maunsell, the biggest individual rancher now in the south country, secured his first herd.

The cattle growers had their trouble with the "rustlers" in the early days. The Indians, who were placed on reserves by the treaty of 1877 and deprived

ed of buffalo as a result of the wholesale destruction by the white men, looked upon the ranchers' cattle as gifts from the Great Spirit. The redmen helped themselves right and left. Mr. Maunsell, who began the year of 1879 with 133 head, had only 59 in the fall, while other ranchers suffered equally or worse at the hands of the Indian thieves.

The big ranchers came into existence in the early '80s. The pioneer outfit, owned by the Cochrans, was under the management of James Walker, who located a ranch near the present city of Calgary. The stock, which was driven in late, worn by the trail and unlocated as the range, experienced a rough winter. The district was deep in snow and the losses were heavy.

The MacLeod district was open and the range free from snow. The cattle there thrived and ranchers made money. When spring came the Cochrans outfit, bought several thousand more cattle in Montana and moved to the range near the Koetenai lakes. The venture was a costly one, as the seasons switched that year. The Calgary district was open, as was the MacLeod range, while the lake district was deep in snow.

Around the edges of the little lakes the starving cattle ploughed, eagerly devouring every vestige of feed, but the shores of the lake were soon trimmed smooth, and all around the deep snow refused to give up to the blundering beeves the food that lay beneath. Again the Cochrane cattle were in dangerous state, and the owners faced enormous losses.

Frank Strong, a rancher from near MacLeod, formerly in the employ of the I. G. Baker Company, volunteered to get the stock out on the open range on the present Peigan reserve on pay-

ment of \$1,000. This offer accepted, he took a number of cowboys, the first brought into the province from the northwestern States, rounded up 500 cayuses, and jammed them through the drifts toward the lakes. The trip occupied two days, but it opened a good trail, and when he turned the band of horses loose to go back to the open country, the starving stock of the Cochrane ranch following on an eager trot, and in a few hours the animals were filling up on the open country on the Peigan reserve.

Fifty years ago, when the great herds of buffalo roamed the range lands, there was little chance for cattle to survive, the bison holding the range by right of might, and lording over it with arrogance and unreasoning petulance. The range was theirs and they wanted it. But as time went by, as hunters slew them in thousands, the buffalo faded, and the range cattle came. There were hundreds of thousands of buffalo in Alberta in 1870. Four years later the I. G. Baker Company shipped from its post at Fort Benton, Montana, a total of 250,000 prime buffalo hides, to secure which number the hunters had slain and left to the wolves thousands of young stock and aged animals.

Hon. Duncan Marshall, minister of agriculture, who is doing much through his department to encourage dairying and beef-raising, reports there are in Alberta to-day probably more registered cattle than in any of the western provinces. However, the industry is yet in its infancy, as is evidenced by the fact that the hundreds of thousands of pounds of butter and cheese and many thousands of gallons of milk and cream are shipped into the province every year. The production is nowhere near equal to the demand and it is not likely that it will be in years to come.



Sig. 1



A grader outfit in York County, Ont.

DO GOOD ROADS PAY ?

Good roads are a decided luxury to most farmers in the spring, and fall. Even the summer's drive is often a nightmare owing to the barbarous conditions existing. Anything to get better roads, except the signing away of one's birthright, ought to appeal to all. Many farmers object to paying for road improvement because the auto soon finds out a good piece of road and in one season spoils it. If some system of taxation for the fair upkeep can be devised, the farmers will largely give up this attitude. However we have full sympathy with the farmers in their views, and we know that with the increase in the rural traffic and of motor vehicles, the demand from the farm for Good Roads will grow. We have had enough, at least, of the pick-and-shovel-hit-and-miss methods of statute labor. The Dutch in Holland built permanent brick roads 100 years ago that are in good repair yet. Later articles will deal with the financial end of good roads.—Editor.

By Walter James Brown

IF THE question were asked, Do railways pay? scarcely one person in a thousand would answer in the negative. We all know that railways pay good dividends to the shareholders, and, if the rates are reasonable, they pay the people they serve also. The railway development on the continent of North America has been really marvellous in recent years and has made possible the wide dispersion of population and the

development of industries that without railways would never have been achieved. This fact has served to divert public attention very largely from the necessity of improving the rural highway. Unfortunately, by over-looking the importance of the rural highway and by placing too much emphasis on railway development agriculture and the social life of rural communities have been severely handicapped. A study of his-

tory reveals the important fact that in a highly developed society the rural highway is more and more essential to rural progress as railroads increase and is, in fact, even more important to the community than is the railroad itself.

It is worthy of note that from the dawn of history the nations which have occupied from time to time positions of supremacy, that is, those that have really ruled in each period of the world's development have been foremost as road builders. Suffice it to say that Egypt, Babylon, Carthage, Rome and France have in turn held supremacy as

parish surveyors, and for the working of the roads by labor tax. During the period of 1700 to 1770, 530 turnpike or toll-road acts were passed by Parliament and in 1840 there were, in England Wales, 104,772 miles of turnpike road. In 1857 Ireland freed itself from all toll gates, and the turnpike trusts were abolished in England and Scotland by Act of Parliament in 1878. Since that time the plan of extreme localization has been gradually superseded by the more rational and practical plan of combining parishes into highway districts and requiring the



Such roads as this are bad enough in the country. This was taken on Chestnut Street, Dunnville, Ont., in April, 1911. The Street has since been paved.

world powers, and as road builders. Great Britain inherited from Rome about 2,500 miles of improved highways. But the principle of local autonomy which has been prominently displayed in the origin and development of Anglo-Saxon institutions has vitally affected the administration of the public roads in Great Britain. From the time of the formation of parishes, the people of each parish were expected to keep the roads in their respective boundaries in good condition. It naturally followed that the roads were for the most part impassable. Toll roads were instituted in 1346. In 1555 an Act was passed providing for the election of

county to bear a portion of the burden of maintaining the main roads. Since 1882 the general government has assumed a portion of the expense and the local government board now has the general superintendence of the various road systems for the benefit of the nation at large. It may be noted in passing that the MacAdam road is the favorite in France while the Telford and Tresaguet methods are in general use in Great Britain and in America.

ONTARIO'S ROAD SYSTEMS.

In this country we have had various modifications of the European systems of road development and maintenance.

The different provinces have differed greatly among themselves as to the details of the systems adopted. We have had toll roads maintained by statute labor. The Province of Quebec developed perhaps more largely than any other province the toll-road system. The tendency in recent years has been toward the centralization of control and toward aid from the provincial government in securing road improvement. In the Province of Ontario, for example, the provincial government at present stands one-third the cost of certain country roads when constructed according to the plans and under the supervision of the Commissioner of Highways. An effort is now being made to secure an amendment to the statute to allow separate municipalities to undertake road improvement under government supervision without enforcing the county system. The present law requires a county as a whole to build and maintain the through roads, but it has been difficult for many counties to comply with the regulations as not all the municipalities within the county have been willing to bear their portion of the expense. What is needed is a flexible system of road improvement adaptable to the needs of one or more municipalities so that all through roads or main highways may be permanently con-

structed and maintained under the supervision of the Commissioner of Highways.

ALL B.C. ROADS ARE PROVINCIAL.

In the Province of British Columbia all the roads are located, built and maintained by the provincial government, and paid for from the public treasury. Road building has been carried on systematically and scientifically, with extremely satisfactory results. It is safe to say that in that province, notwithstanding the adverse local conditions, the public highways are, on the whole, the best in any province in Canada.

The Dominion Government contemplates making large appropriations for the improvement of public highways throughout the country. No one questions the advisability of this measure, but there is a difference of opinion as to the best methods to adopt in securing the results desired. It would seem that the law should be general in character and made applicable to the Dominion as a whole, while each province should have a free hand in solving the question of the administration of the law in keeping with its particular local needs.

In order to discuss intelligently the economics of road improvement under



"The Scotch Line," Lanark County, Ont. An example of a good road,



The Kingston road in York County, Ont., after it had been resurfaced with broken stone.

the conditions that prevail in Canada we need more information than is available at the present time. It might be advisable to establish a national good roads bureau for the specific purpose of collecting and disseminating information relative to the necessity for and cost of highway improvement. Too little attention is given to this subject by our educational institutions, while the public press has not the available data which may be used effectively in creating public opinion in favor of a movement so essential to the well being of the country. The first cost is too often considered prohibitive, because little consideration is given to the resultant and ultimate gain. If we knew the total weight of our farm crops and the amount in tons hauled from farms to mills, and from mills back to farms, and from the farms to the shipping points we should be able to estimate the saving in cost that would be accomplished by improving the rural highways.

COST PER MILE OF HAUL.

It is only by going to foreign countries that we can get some of the data required to illustrate this point. Investigations conducted by the United States Office of Public Roads and by

various states have established the fact that the average cost of hauling per ton per mile in the United States is about 25 cents. The possible saving on transportation over country roads is indicated by the following data on the cost of hauling: On broken stone roads, dry and in good order, 8 cents per ton per mile; on broken stone roads in ordinary condition, 11.9 cents; on earth roads, containing ruts and mud, 39 cents; on sandy roads when wet, 32.6 cents; on sandy roads when dry, 64 cents.

These figures are well supported by consular reports prepared in 1895-6 on cost of hauling in foreign countries that are considered to have first class systems of improved roads. These figures for European countries are from a minimum of 7 cents to a maximum of 13 cents. If the United States could reduce the cost of hauling from 25 cents to 12 cents they would save on their twelve leading crops about \$51,000,000. This would be money saved to the farmer and would be an increase of his profits to that extent.

It has been found that the average distance farm crops in the United States are hauled is nine miles. This means that the roads cost the farmer \$2.25 a ton for each ton marketed. If

the cost were 12 cents a mile it would mean \$1.08 per ton, or a saving of \$1.17 per ton. In the United States this saving each year would aggregate \$250,000,000. It is estimated that if only 25 per cent. of the rural highways were improved the cost of hauling farm products to market would be reduced to 15 cents per ton per mile. Such a saving would pay for the total cost of construction and maintenance of permanent highways in ten years.

OCEAN RATES ARE CHEAP.

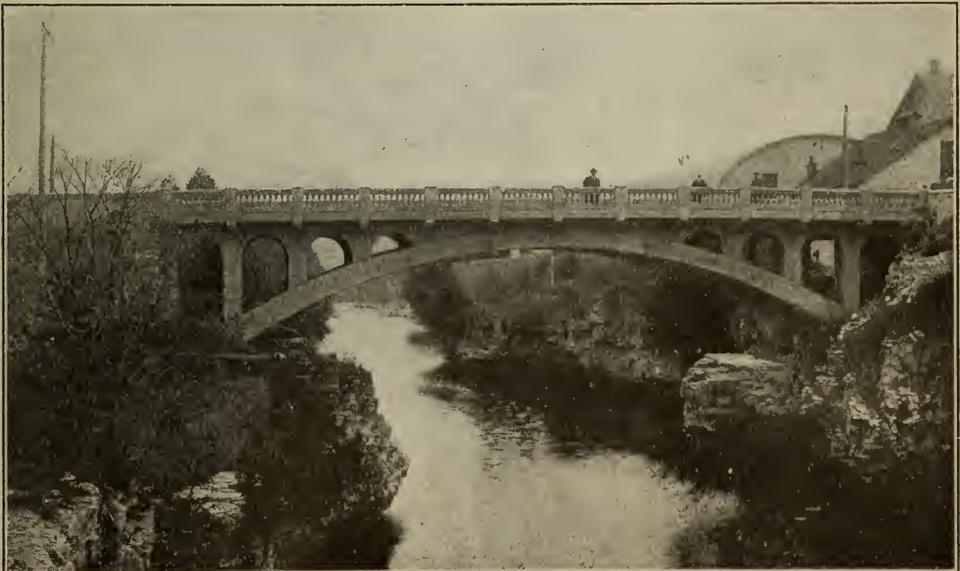
The great burden now resting on the producer by reason of bad roads has been illustrated in the publications of the United States Government as follows: Although ocean rates were higher than usual during the year 1905-6, the mean charge for carrying wheat by regular steamship lines from New York to Liverpool, 3,100 miles, was only 3.8 cents per bushel, or 1.6 cents less than it cost the farmer to haul his wheat from his farm to a neighboring railroad situation.

Good roads enable the farmer to deliver his produce to local shipping points at all seasons of the year, so that

he can select the most advantageous time to do his hauling and can take his goods to market when prices are satisfactory. Bad roads materially affect railway traffic, at one time producing a congestion of traffic, and at another permitting cars to stand idle. The cost of storage which for wheat is equal to nine cents per bushel per annum is chargeable against bad roads. It is estimated that the wear and tear on teams and waggons due to bad roads increases the cost by about 10 per cent.

LAND VALUES GO UP.

Good roads have a direct bearing on land values. At the lowest estimate permanent improved roads increase the value of farm lands from \$2 to \$9 per acre. Mr. Francis P. Loomis in writing from France a few years ago said: "The road system of France has been of far greater value to the country as a means of raising the value of lands and of putting the small peasant proprietors in easy communication with the markets, than have the railroads. In the opinion of well-informed Frenchmen, who have made a practical study of economic problems, the superb roads



A single arch concrete bridge, County of Wellington. The rock formation is especially adapted to this type of structure.

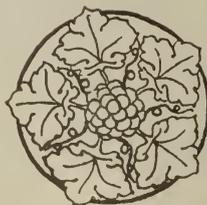


A road in Eastern Ontario, through a low tract of country, well drained and surfaced.

of France have been one of the most steady and potent contributions to the material development and marvelous financial elasticity of the country. The far-reaching and splendidly maintained road system has distinctly favored the success of the small landed proprietors, and in their prosperity, and the ensuing distribution of wealth lies the key to the secret of the wonderful financial vitality and solid prosperity of the French nation."

It is clear from the foregoing that it will pay the farmers of this country to improve their roads. The first cost of building a permanent highway averages about \$5,000 a mile; but this will be returned to the pockets of the people who use the roads in from two to ten years. The total amount saved

to producer and to consumer of farm products, the exact increase of land values, the money worth of increased facilities for social and business intercourse and for intellectual advancement have not been estimated. A close study of the whole question leads any thoughtful man to the conclusion that rural Canada cannot afford to do without permanent highways. They are essential to our well being. Every dollar devoted to good roads and properly spent is an investment that will pay increasing dividends to the farming and to the business community and will pay the State in huge aggregations of money as well as in commercial, industrial, social and intellectual development for all time.



A TRANSACTION IN BONDS

Montague Glass is one of the most prominent American story writers. He has built up a great reputation in the business story field. In this story, "A Transaction in Bonds," as well as in other tales which Farmer's hopes to secure from him, Mr. Glass has utilized the business world, and particularly big finances, as a medium for developing humorous situations.

By Montague Glass

IT was a beautiful autumn morning. A soft breeze from the river stole through Mr. Goodel's office window, and eddied so gently around his bald head that, instead of sneezing, he sighed. Thence it ambled into the outer office and tugged at every button in the garments of Jimmie Brennan, the office-boy.

"At Fulton Market dock," it whispered, "theres good swimming."

"G'wan, what yer tryin' ter do—kid me?" Jimmie's subconsciousness jeered, while its owner industriously continued to index the letter-book. "It'd freeze de insides out'n yer!"

So back it flew to Mr. Goodel.

"I ask you in all seriousness," it almost hissed, "shall commercial paper and investment securities prevail over golf?"

And Mr. Goodel, being of weaker stuff than Jimmie, closed his roll-top desk with a bang and seized his hat and cane.

"I'm going up-town on a very important matter," he said.

Jimmie looked at him mournfully. This cutting business an hour before noon was becoming too frequent of late.

"What will I tell Mr. Luddington?" he asked.

For a man of fifty-five Mr. Goodel blushed rather easily. The operation, however, might be termed painting the

lily, for normally this gentleman's face was of a hue to pale the flamingo's wing.

"Why, tell him I've gone up-town on a very important matter, of course," he declared.

Jimmy glanced at Mr. Goodel and dropping his eyes, snorted eloquently. Luddington was Goodel's brother-in-law, and the roseate hue of Goodel's countenance was largely due to his example and encouragement. Despite Luddington's convivial habits, however, Jimmie knew that he held a business engagement sacred; and on the previous day he had distinctly heard Goodel make an appointment with his brother-in-law for the purchase of some bonds. The securities were to be delivered in person by Luddington at a quarter to one o'clock that afternoon.

"How about dem bonds, Mr. Goodel?" he said.

"Oh, yes—about those bonds," Goodel replied. "When Mr. Luddington brings them here, put them in the small safe."

He went back to his room and unlocked the safe in question.

"Be careful to see that you lock it again, after you've put the bonds in," he admonished Jimmie, "and you can go home at four."

"Where will I phone you if any'ting turns up, Mr. Goodel?" Jimmie inquired artfully.

Goodel cleared his throat and looked serious. Even trivial lies have a hardy growth, and they travel so fast that no one, least of all the liar himself, can predict their ultimate size or destination.

"I shall be—er—in several places," he stammered. The small railroad folder in his breast pocket felt like an unabridged dictionary. "You'd better not attempt to reach me up-town." He paused with his hand on the door-knob. "Don't forget to lock the safe after you put the bonds in," he concluded, and passed out, whistling.

Goodel conducted his business correspondence with his own hand, and contrived to make it as brief as possible. Jimmie's task of indexing the copying-book was light in proportion, and ten minutes after his employer had left he was midway in the perusal of a tattered dime novel.

Its cover displayed, in yellow and red, a most spirited representation of the burglar-hero opening a huge bank-vault, an incident which was elaborated in the text. The author described how the "yeggman" solved the combination lock by tentatively revolving the knob and noting the almost inaudible clicks that betrayed the correct numbers.

So convincing was the language employed that it fired Jimmie's imagination. He rose from his desk, and, entering Mr. Goodel's room, closed and locked the little safe. For almost two hours he revolved the knob of the combination in every conceivable manner. In vain he listened with strained attention; not the faintest click rewarded his efforts.

As he reseated himself at his desk Luddington entered.

"H'lo, Jimmie!" he cried in his usual jovial fashion. "Where's the boss?" "Now he's gone up-town, Mr. Luddington," Jimmie replied, "on an important matter."

Luddington clucked impatiently.

"That's too bad," he said. "I have some bonds for him."

"I know ut," Jimmie answered. "He says fer you to leave 'em wit' me."

"Oh, he did, did he?" Luddington cried testily. "Why, there are ten of

them, at a thousand apiece, with the coupons attached."

Jimmie's face fell as he proffered Luddington an assurance he didn't feel. "Dat's all right, Mr. Luddington," he said. "I'll take good care of 'em."

Luddington looked doubtful.

"What will you do with them?" he asked.

"Put 'em in the safe," Jimmie stammered huskily.

The whistle of a neighboring factory shrieked a recall to its toilers from their midday lunch. Luddington pulled out his watch.

"By George!" he exclaimed, "it's one o'clock and I'm due on the exchange in five minutes! Here they are, and be sure to take good care of them."

He threw the bonds on the desk, and bolted out of the office.

Jimmie examined the securities carefully. They represented, in their crisp perfection, the highest development of the steel-engraver's skill. Each coupon was in itself an artistic feat, and the fine green lines accentuated the whiteness of the parchment paper.

He counted them again before putting them into his inside breast-pocket, and secured the opening with a bank pin. Then he ate his lunch, with the dime novel propped up against the inkwell on his desk; but a second reading failed to elucidate the matter of the locked safe.

For the rest of the afternoon Jimmie sat in front of the safe, fruitlessly revolving the knob. At four o'clock he locked up the office and wandered dissonately down-stairs. There the sunny autumn afternoon propelled him to the river front, and unconsciously his footsteps shaped themselves toward Fulton Market dock.

He picked his way through the empty fish-barrels to the string-piece, where stood Ignatius Ryan, the same they call Whitey. Ignatius was garbed in a scapular and not much more, and his teeth chattered incessantly as the cold wind smote his naked shins.

"Why don't you jump in, Whitey?" said Jimmie, seating himself on the edge of the wharf.

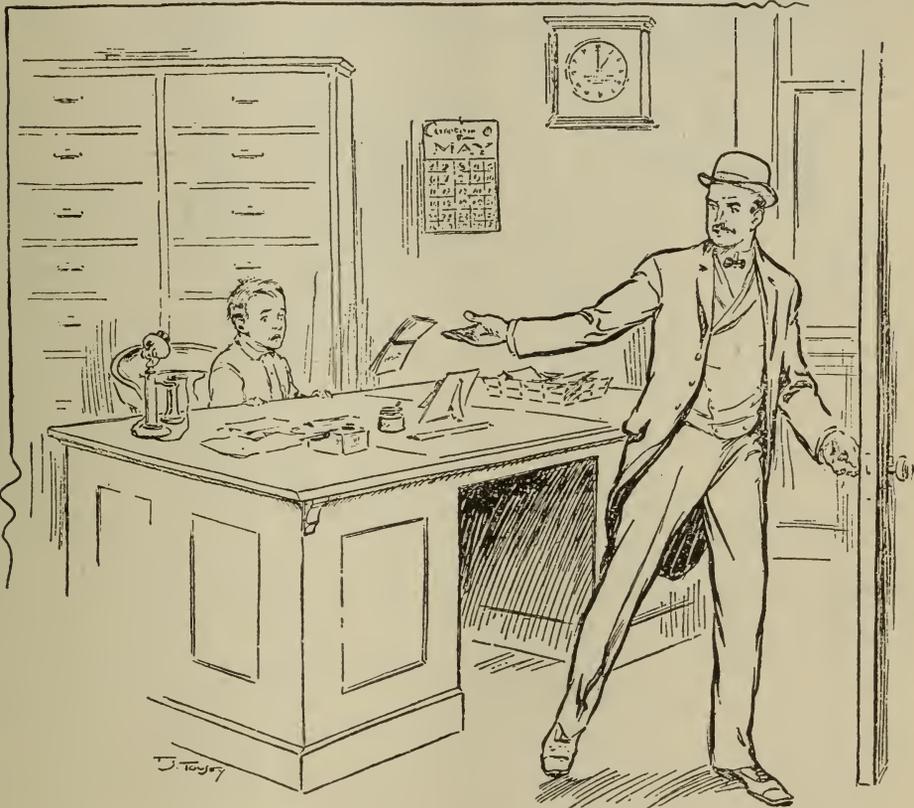
Whitey struggled with a temporary ataxia of speech.

"Aw, w-w-why d-d-d-on't y-y-y-er j-j-j-j-ump in y-y-y-ers-s-s-elf?" he barely managed to enunciate.

By way of reply Jimmie emitted a succession of jeering guffaws, which seemed to infuriate the shivering Whitey. Ignatius made a dash for his

all!" And there followed a wealth of bitter anathema that might have enriched the vocabulary of a truckman.

Jimmie proceeded up the wharf and along South Street, dripping a track of muddy water behind him. A salt stream ran down his face from his hair, and mingled with the tears which came with a realization of his predicament. His



"Here they are, and be sure to take good care of them."

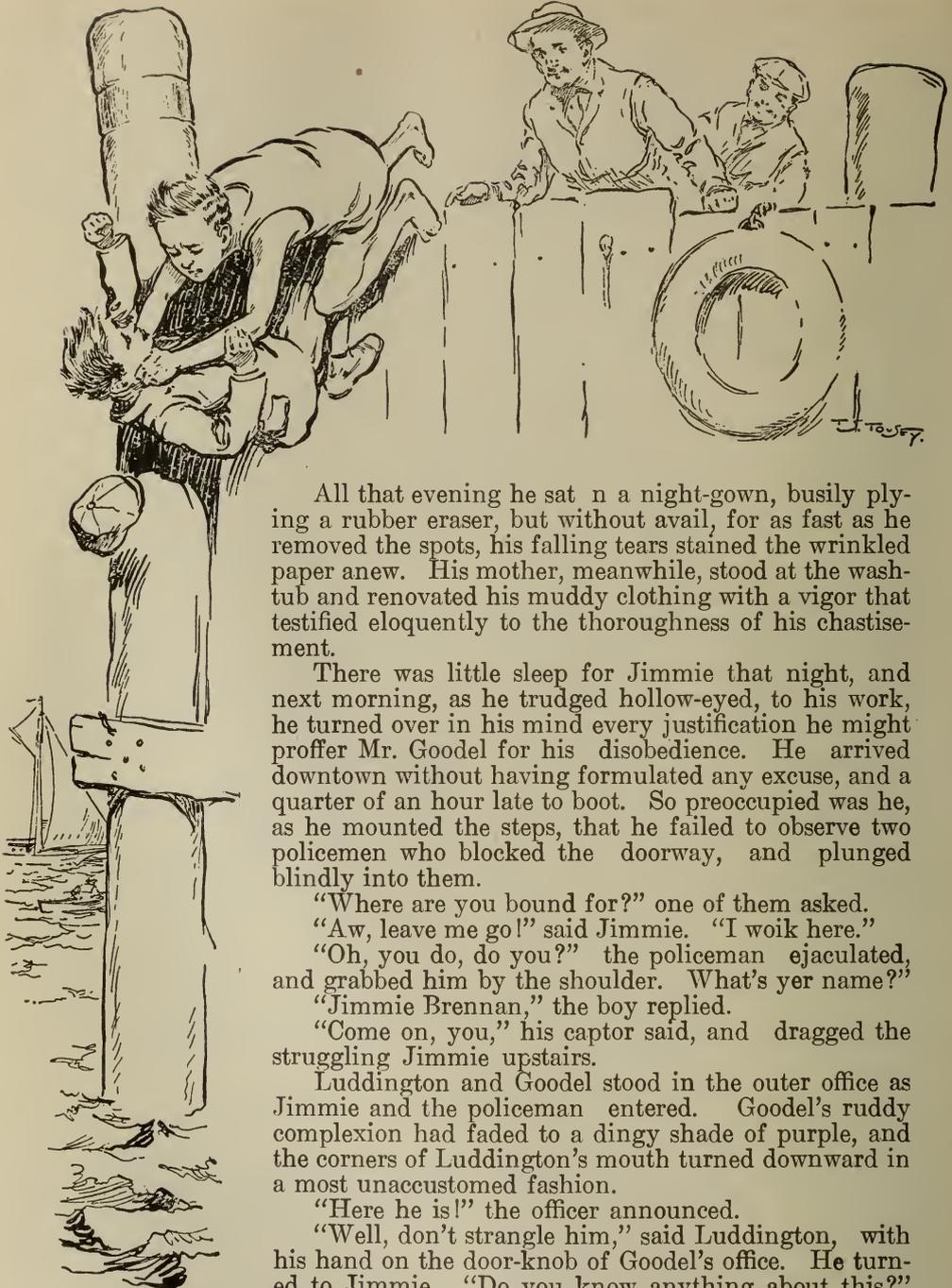
tormentor, and a moment later the two of them were struggling in a strong flood tide.

When Jimmy rose to the surface, half a dozen ropes were within easy reach. He was speedily hauled back upon the dock, shrieking lurid threats at Ignatius, whose repartee, revived by the sudden plunge, grew no less profane.

"Wait till I get yer wanst!" Jimmie shouted. "I'll lift de face off yer, dat's

cap was lost, and his only suit of clothes was dirty beyond description.

In the excitement of the past half-hour he had entirely forgotten the bonds. At the remembrance of them, his hand sought his breast-pocket. With shaking fingers he removed the pin and drew out a bundle of papers whose stained and soggy condition bore no semblance whatever to the crisp beauty of Mr. Luddington's bonds.



Ignatius made a dash
for his tormentor.

All that evening he sat in a night-gown, busily plying a rubber eraser, but without avail, for as fast as he removed the spots, his falling tears stained the wrinkled paper anew. His mother, meanwhile, stood at the wash-tub and renovated his muddy clothing with a vigor that testified eloquently to the thoroughness of his chastisement.

There was little sleep for Jimmie that night, and next morning, as he trudged hollow-eyed, to his work, he turned over in his mind every justification he might proffer Mr. Goodel for his disobedience. He arrived downtown without having formulated any excuse, and a quarter of an hour late to boot. So preoccupied was he, as he mounted the steps, that he failed to observe two policemen who blocked the doorway, and plunged blindly into them.

"Where are you bound for?" one of them asked.

"Aw, leave me go!" said Jimmie. "I work here."

"Oh, you do, do you?" the policeman ejaculated, and grabbed him by the shoulder. "What's yer name?"

"Jimmie Brennan," the boy replied.

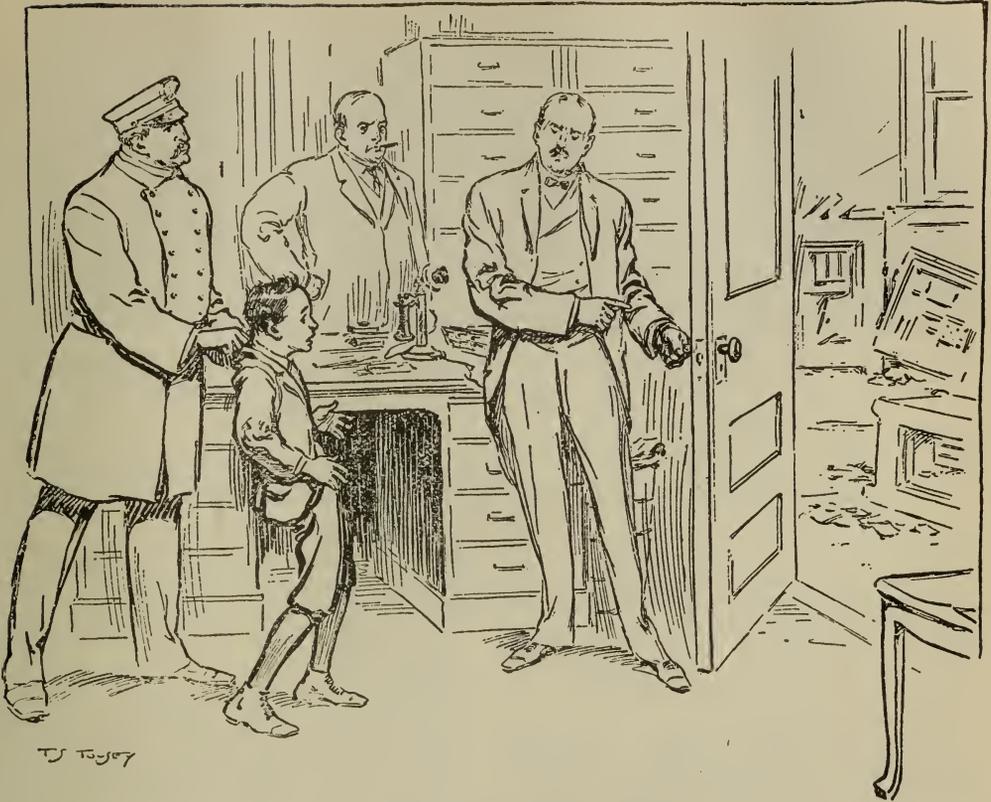
"Come on, you," his captor said, and dragged the struggling Jimmie upstairs.

Luddington and Goodel stood in the outer office as Jimmie and the policeman entered. Goodel's ruddy complexion had faded to a dingy shade of purple, and the corners of Luddington's mouth turned downward in a most unaccustomed fashion.

"Here he is!" the officer announced.

"Well, don't strangle him," said Luddington, with his hand on the door-knob of Goodel's office. He turned to Jimmie. "Do you know anything about this?" he asked, and threw wide open the door.

Jimmie gasped in convincing astonishment. The little safe stood doorless on its side, in the middle of the room, surrounded by a pile of torn and scattered papers. Its iron door rested on Goodel's desk, while the doors



"Do you know anything about this?"

of the big safe in the corner swung ajar, one of them supported by only the bottom hinge.

"He doesn't know," Goodel muttered.

"What time did you leave here yesterday?" Luddington asked.

"Four o'clock," Jimmie murmured in tear-choked accents.

Here the policeman took a hand.

"What time did you get home?" he persisted.

Jimmie sobbed convulsively.

"Six o'clock," he croaked.

"And where was you between times?" his inquisitor bellowed.

This was too much for Jimmie. He sank down with his head on the desk, and wept unaffectedly.

"Now look here," Goodel protested, "I won't have the little chap bullied any more." He laid a comforting hand on Jimmie's shoulder. "It's all my fault,

Luddington," he continued. "If I hadn't been an ass and gone off to play golf, I might have put the bonds in my safe-deposit box instead of the safe, and they wouldn't have been stolen."

Jimmie lifted his head from the desk.

"Dey wuzn't in de safe," he said.

"What?" gasped Luddington, Goodel and the policeman in concert.

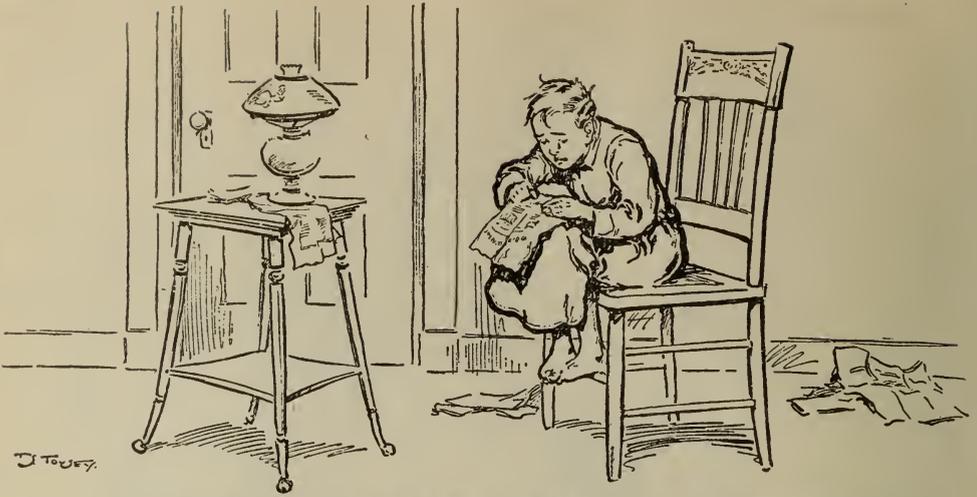
"'N' it ain't up ter me, neider," he sobbed. "Whitey pushed me in."

"What d'ye mean?" Luddington shrieked.

For answer, Jimmie unpinned his pocket and handed the soiled bonds to Goodel. They were as limp as Japanese napkins.

"I cleaned 'em as good as I could," Jimmie continued.

Then, piecemeal, they drew from him a disconnected but comprehensive account of the day's adventures. It omitted nothing, not even the dime novel.



"As fast as he removed the spots, his falling tears stained the wrinkled paper anew."

"Jimmie, you young dog," said Goodel, after he had regained his composure, "I forbade you ever to read dime novels in this office, and no sooner was my back turned than you did."

Jimmie hung his head.

"That's all right, Goodel," Luddington broke in. "You told him to put the bonds in the safe and he didn't. I guess

that makes it square, and you'd better forgive him."

A broad grin spread itself over Goodel's face.

"He gets one more chance," he said, pressing a bill into the boy's fist, "and twenty dollars to buy a new suit of clothes with. Now, get out of here, Jimmie—you smell like a fish-market!"

PEACE

A strip of sunset cloud, full fringed with gold:
 A white sail, homeward bound, o'er purpling deep;
 A woman waiting there upon the sands,
 The rosy child upon her breast asleep.

The gaudy splendors of the East may hold
 For certain ones, a sensuous delight:
 For me, earth holds no rarer, sweeter thing,
 Than this calm picture of the coming night.

—*Mary G. Fraser.*



The stacks are built around poles stuck in the ground. These stacks are about two and a half feet in diameter, and are bound on the outside with loose vines.

PEANUT FARMING IN THE SOUTH

Here is another article on outside agriculture. The man who raises wheat or barley or sugar beets, or apples or cattle or vegetables as the case may be, is always pleased to read about what other people are doing in other parts of the country. This article deals with a profitable industry about which Canadians know little.

—Editor.

By Geo. H. Dacy

To the average person the peanut means a delicacy that is essential to round out the days pleasure at the ball game or at the circus. A ball game without peanuts and pop is like a Christmas dinner without turkey. On a crisp winter's evening nothing is more appetizing to the average American than the aroma issuing from the street vendor's stand where the peanuts are roasting and the corn is a-popping. Some millions of dollars annually find their way from the pocket purse of the consumer to the money bags of the peanut vendors or the corner confectionery shops.

The production of market peanuts spells prosperity and profit to many a southern farmer who grows peanuts as his principal money crop. In the land of Dixie the peanut is known by a variety of local names such as the earthnut, goober, goober pea, pindar, ground pea and ground nut. The stranger in many of these districts who possesses a peanut appetite and desires to gratify his taste experiences some difficulty in explaining to the natives the kind of a nut he

wants as he knows the peanut by one name while the Southerners accord the nut a variety of names. As an article of food the peanut occupies special position both in the North and South although in the former section it is treated more as a confection.

The origin of the earth-nut or peanut is not definitely known but it is generally supposed that the peanut originated in Brazil and that it was introduced into Africa and the Orient from South America. From Africa the plant came by a round-about course to the United States. The peanut is one of the most important crops known to tropical agriculture while it is the most popular of all the nuts that are grown in the United States. It is only since 1870 that this crop has come into the limelight from a commercial standpoint in this country. During the Civil War the soldiers became familiar with the peanut as an article of food. They came to like the nuts and when the war was over these veterans told their families about the delicious nuts of the South. It was

through the medium of such a mouth-to-mouth campaign that the peanut gained in popularity.

THE ANNUAL OUTPUT.

The demand and market for peanuts grew until at present approximately seventeen million bushels are annually produced in the South Atlantic States. Virginia and North Carolina are the "boss" growers with an average output of about five million bushels apiece each year. Georgia ranks next in yield with an output of two and one half million bushels per year. The annual value of the market crop in the United States excluding the nuts that are retained for seed and for home consumption, aggregates \$12,000,000. And at that America also imports a large amount of peanuts each year. It is peculiar, but nevertheless true, that Japan and China can produce peanuts; export them to America, and sell them on the Pacific Coast at a lower price than they can be grown locally. However, as soon as California gets well established as a peanut-producing state recourse to the Orient for these nuts will doubtless cease.

The peanut plant is an annual, which grows to a height of twelve inches or more. The habit of the vine varies from a broad, decumbent, running plant to a compact, upright bush. From an agricultural viewpoint, the bush variety of plant is to be preferred as more plants can be maintained per acre and in consequence a larger crop can be harvested. As one authority says, "The peanut is a ripened pod with edible seeds of a plant very like the pea and bean." For successful culture this plant requires a long growing season of from one hundred to one hundred and twenty days; it abhors severe frost; it prospers under conditions of relatively light rainfall, abundant sunshine, and a high temperature during the growing period.

The peanut is a peculiar plant in as much as it ripens and matures its fruit or nuts under the soil. After the fertilization of the plant a flower stalk is formed for the special purpose of burying the fruit. Ultimately it attains a length of two or three inches and in

growing it bends down under the influence of gravity and finally forces the young fruit into the sandy or loamy soil that composes the seed bed. There the fruit enlarges into a yellowish, wrinkled seed-case, slightly constricted in the middle and containing two reddish-brown seeds that are a little larger than peas. These constitute the fruit that is sold as peanuts when fully mature. For fruit-ripening burial is essential—without it the flower remains immature and withers away.

HOW IT GROWS.

The best soil for peanut cropping is preferably light or grayish in color, although excellent results have attended the production of this crop on the chocolate soils of Virginia. A sandy loam underlaid by a well-drained clay subsoil is excellent, while a sandy loam containing a reasonable amount of humus and an abundance of lime is ideal for "goober" growing. Land that has been cropped to corn or some other cultivated crop is suitable for peanut production as ordinarily in such cases the weeds have been fairly well exterminated. Such land may be plowed in the winter or during the early spring while sod land that is broken for the earth nuts should be plowed the previous fall. Five to seven inches of loose soil is adequate for growing all the varieties of peanuts so that the plowing does not have to be extra deep. After spring plowing the land should be immediately harrowed to conserve the moisture. A fine seed bed is a material aid to the bumper crop. The plan of thoroughly harrowing the field once a week for three or four weeks is to be recommended. Ordinarily level culture is to be preferred, but where the drainage facilities are inferior it is advisable to throw up slight ridges on which to plant the seed. Such a system is of special value during a wet season.

LIME IS USED.

The preparation of the seed bed is quite similar to that practiced in the case of any cultivated crop. In many instances it is necessary to apply lime to the seed bed as lime is of immeasurable importance in developing a good



The average handpicker will pick eight to twelve bushels a day, and receives 8 to 20 cents a bushel for the work.

market crop of peanuts. Ten to twenty-five bushels of lime per acre are applied in accordance with the condition of the soil. After the land is thoroughly tilled and limed it is customary to lay it off in rows about two and one half to three feet apart, using a turning plow to open the furrow in which the fertilizer is to be scattered. Then a cultivator or weeder is run over the land in order to thoroughly mix the soil and the fertilizer. Where stable manure is used it should be thoroughly rotted and should be applied to the previous crop on the land or it should be distributed over the field the previous autumn and plowed under. Fresh manure is a prolific dispenser of weed seed and on this account it should never be used on land that is shortly to be cropped to peanuts. Fresh manure is also responsible for abnormal tips and partially filled pods known as "saps" or "pops."

Invariably the earth nut crop takes kindly to commercial fertilizers. Much of the soil does not need toning up but that which does is benefited by applications of two hundred and fifty pounds

of land plaster just as the plants come into bloom or by eighty pounds of acid phosphate, three hundred pounds of cotton seed meal, or two hundred and forty pounds of kainit per acre, applied to the seed bed before the crop is planted. Usually a complete fertilizer containing from two to three per cent. of available nitrogen, five to seven per cent. of available phosphoric acid, and six to ten per cent. of available potash applied in amount about two hundred to eight hundred pounds to the acre may be advantageously employed. Lime is essential in the soil to insure the proper filling and ripening of the buds. Accordingly it is necessary to apply from six hundred to one thousand pounds of freshly burned lime per acre every four or five seasons. In Virginia marl is used for this purpose, being scattered broadcast over the land during the winter.

PLANTING TIME.

By means of a small turning plow two furrows are thrown up in the form of a back furrow or ridge on the line of the

furrow first opened as in the system practiced in preparing the land to receive sweet potato sets. After the ridges are thrown up they are knocked off by the use of a weeder or broad scraper fastened to the back teeth of the cultivator. The planter follows on the ridges dropping the seed at eight to sixteen inch intervals, according to the variety of the seed. Two seeds are dropped at a time and they are planted deep enough so that they are on the level of the field. Usually the seeds are planted from one to two inches deep. Where the seeding is done by hand a wheel marker is usually used provided with pegs set in the wheel rim which are large enough to make marks in which the seeds can be dropped at proper intervals and depths. The seeds are covered by treading the ridges or by scraping in the dirt with the foot.

Shelled seed usually yields better than the nuts that are planted in the pod because one can select seed that is well filled. Seeds in the pod are much slower to germinate, while much seed is wasted in the pod method of planting. It is possible to shell Spanish nuts by machinery and in the case of Virginia nuts the yield and quality is always inferior where machine-shelled seed is used. The seed should never be planted until the soil is thoroughly warm, about May 20th is the usual date for planting peanuts in Virginia. The rows are set from twenty-eight to thirty-six inches apart with the plants from nine to sixteen inches apart in the row dependent on the variety. It requires one and one half pecks of shelled Virginia nuts or one peck of shelled Spanish nuts to plant one acre. Where the Spanish nuts are planted in the pod one and one fourth bushels are necessary to plant one acre. After the peanuts begin to "peg" or to form pods, they should receive no further cultivation. The old belief that the blossoms must be covered with dirt is also erroneous. The purpose of the final cultivation should be to throw the dirt towards the rows and to drain off the surplus of water.

HARVESTING THE NUTS.

The peanut crop should be dug when the vines show a maximum number of

mature nuts previous to the first killing frost. The peanut hay has a considerable forage value so that the average producer aims to reap a dual profit from his crop in so much as the nuts can be marketed as a cash crop while the hay can be home-fed to cattle, horses, mules, and swine. However, a killing frost renders the vines practically useless for feeding purposes as it causes the majority of the leaves to drop off. The average farmer aims to have his crop in the shock by the time that the first killing frost occurs. A common two-horse plow or a turning plow, minus the moldboard in order to prevent the furrow being turned, is used in harvesting the crop. A furrow is thrown away from the row of plants on either side. Men follow the plow and either with forks or by hand lift the plants out of the ground and gently shake off the sand and dirt. They then throw the plants in heaps, placing five or six rows in one general windrow.

One team and a driver, accompanied by eight or ten hands, can dig from seven to eight acres of peanuts daily at an expense of \$2.50 per acre. A regular machine potato digger drawn by two or three horses and guided by one driver is preferable for this work as it covers from eight to twelve acres daily and performs the work in a cleaner and more efficient manner. It removes the plants from the ground and shakes off the soil without losing any pods. The hand method results in a large loss of pods. Such a potato digger costs \$75, and is a valuable implement on any peanut farm.

A squad of men, who stack the crop, follow the diggers. These workers use poles that are from two to four inches in diameter and about seven or eight feet in length which are pointed on both ends. They thrust one end of the pole into the soil to a two-foot depth and lay a few cross-pieces on the ground nearby so that none of the peanut vines will come in direct contact with the soil. In some instances a whorl of branches is left near the end of the pole and these branches act as a support for the vines. Then the plants are gathered from the windrows and placed in shocks or stacks



Harvest operations in a peanut field. The vines are thrown into windrows and then shocked for curing.

around the poles. The nuts all face towards the inside of the shock in order that they may cure thoroughly without being exposed to excessive weathering. The shock is about two and one half feet in diameter and is quickly tapered off at the top and capped with a little hay or grass. This cap must be very light and permit of the circulation of air through it. In the curing process it is essential to provide for an abundance of air circulation through the shocks and to protect them from bad weather and injury by animals. The general plan is to bind a loose vine around each shock at regular intervals from the bottom to the top of the stack.

The nuts cure slowly and are susceptible to mildew where they are piled together in large quantities. The nuts are allowed to cure in the stack for three or four weeks before they are picked. Some operators lift the stacks and carry them to sheds where the picking takes place, but the majority of producers pick their crop by hand right in the field where it was grown. Excessively rapid curing is bad in that it favors the shrivelling and discoloring of the pods. However, often the devastations of field mice and rats necessitate the early picking of the crop. Although hand-picking of the peanut crop is by all odds the better, the scarcity of labor has made it necessary to resort to the aid of machinery in this operation. Hand-picking is a dusty and laborious process and is usually done by women and children. A good picker will handle eight to twelve

bushels a day for which work he will receive eight to twenty cents per bushel. The ruling price in Virginia for hand-picking is ten cents per bushel. In other parts of the South forty cents per hundred pounds is paid to the pickers. It usually costs from \$4 to \$8 per acre to pick the peanut crop.

USE OF MACHINERY.

The cylinder-picking machines handle from two hundred and fifty to five hundred bushels daily. The machine removes the pods from the vines and cleans the small stems from the pods. A machine can often be purchased co-operatively by several small growers as this union minimizes the expense per grower. It is absolutely necessary that the nuts be stored in a dry place after being picked as water or dampness cause them to deteriorate rapidly. As soon as possible the crop should be cleaned, graded, and shipped to market. Cleaning factories are operated in the peanut-producing districts of the South where the peas are cleaned, graded and polished ready for market.

The average per-acre-yield of peanuts ranges from 34 to 40 bushels over the Southern peanut districts. Under careful management 60 bushels per acre is not at all unusual while some expert growers produce 100 bushels per acre where selected types of large nuts are grown. One Spanish nut-grower has produced as high as 140 bushels per acre under particularly intensive methods of operation. Thus

far in America the peanut crop has not been subjected to devastations on the part of insect or fungous diseases. Occasionally cutworms will destroy some crops while the weevils attack the nuts that are stored under inferior conditions in warehouses or stores. Recently an aphid has been discovered that annually accomplished considerable damage, but this crop despoiler is readily controlled by the practice of a crop rotation, clean culture, and the use of the land in peanuts only once every four or five years.

The peanut crop of the United States is put to a variety of uses. The nuts are used primarily for roasting, being sold by vendors on the city street corners or in shops. They are also employed largely in the manufacture of candies and confection. Peanut butter occupies an important position in popular demand as it is a cheap substitute for regular butter; it can be kept for a long time without becoming rancid; it is easily portable; it is sold in various sizes; and it furnishes a valuable article of food in the human dietary. The earthnuts are also used in the manufacture of peanut oil, which is largely used as a substitute for the more expensive olive oil.

LIVE STOCK LIKE THEM.

As a forage for live stock the peanut hay and the peanut vine and nuts are of special value. The peanut vines may be cured into a hay that is as high in its content of feeding nutrients as is clover hay of good quality. A well-manured and thoroughly-cultivated crop of peanuts will yield from one and one half to three tons of hay per acre in addition to fifty or sixty bushels of nuts. The nuts are now harvested so as to preserve the hay in the best possible condition. The peanut vine and nut fed in the aggregate is as high in protein and fat content as is alfalfa hay. Peanuts are

planted especially for hog forage in different parts of the South. The crop is sown and cultivated as though it were being grown for commercial purposes, but instead of harvesting the crop it is "hogged off"; that is, the fattening swine are permitted to run at liberty in the fenced peanut field until all the feed is consumed. Then the fat swine are marketed. Time and labor in the production of pork are minimized in this method as the only essential work is to daily water the swine. In some cases running water may flow through the peanut field and even this work is then eliminated.

OFTEN HOGGED OFF.

As compared with ear corn fed under Corn Belt conditions, one fourth of an acre of peanuts "hogged off" produced three hundred and thirteen pounds of pork while a similar acreage of corn developed only one hundred and nine pounds of pork, according to an experiment carried out at one of the southern agricultural colleges. Work horses maintained solely on the whole nuts and vines do well as those that are fed on corn and hay. As a general rule peanuts range in protein content from 26.49 to 35.37 per cent., while their fat content varies from 41.17 to 55.37 per cent. Peanut hulls, a by product of the "goober" farm, are equal to poor grades of hay or to cotton hulls in feeding value.

From the standpoint of a soil renovating crop the peanut is of importance as like its sister legumes, this crop is rich in nitrogen resources as well as containing a generous amount of potash and phosphoric acid. The kernels are as rich in the essential elements as are the kernels of cotton seed, while the vines are almost as valuable a fertilizer as cowpeas.

A
"NEW
LOVE"



IN THE
"LITTLE
RED"

By LENA M. FIELD

The question of the rural school is becoming a bigger one every day. Too long we have dallied with the question of common school education. In several past issues Farmer's Magazine has presented some clever articles on the situation. In this article we introduce a new writer who is a practical teacher in Western Ontario and who has made a success of her efforts to instil in the boys and girls a love for the farm. In this regard every farmer who loves country life will be interested and will pray for the spread of her gospel into more of the communities of our fair Dominion where rural life is being abandoned for a questionable city employment. Our country wants men with visions to see the real joy of living and the advantages to be had "away from the madding crowd."—Editor.

"IT IS obstacles that add zest to our tasks. Almost no one wishes for an easy road,"—so we read; and we found a real satisfaction in working our way up the Hill of Difficulty on the crown of which we have dug and planted the Silverdale School Garden. But before telling you of the garden you should know something of the road thither.

It was beset with stones. Some of the larger ones are called, "The Unpopularity of a New Idea in a Rural Neighborhood," "Indifference of the Pupils at the Outset," "A School Site that is below the lawful size," and "A Soil that is a Clay, worthy of the Name," and there were other stones beside. For the removal of all we brought three tools that have proven their value: (1) "Our own belief in a School Garden," purchased chiefly through a ten-weeks' Agricultural Normal Course at the O. A. C., Guelph; (2) "A guarantee of a \$50 initial and \$30 annual grant from the government to the treasury of the section carrying out the instructions of the Educational Department in regard to the teaching of agriculture; (3) "The condition on which the agreement between the school board and the teacher had been drawn," i. e., that an opportunity for gardening

on a small scale be provided. So finally in the early spring of 1911 a quarter-acre of land adjoining the school grounds was bought and fenced, and fifteen hoes and rakes, a half dozen hand mulchers, a spade, a shovel and a wheel barrow were found in the basement of the school house.

GARDENING THE FIRST YEAR.

Three-quarters of the garden site was growing fall wheat and the remaining low ground was covered with brush. During the first week of May the members of the school-board gave their services, disced out the wheat, for it was too late in the season for ploughing, and cleared up the brush. The pupils began gardening on Arbor Day. We staked off thirty-two plots, 5 ft. by 10 ft. Six plots were used to demonstrate the value of early sowing, each being successively sown at intervals of one week, with O. A. C. No. 31 Barley. One plot was set out with forty small evergreen trees, obtained free of charge from the Government Forest Nursery in Norfolk County. The remaining plots were distributed among the pupils and sown with flower and vegetable seeds. The low ground was planted with squash, cucumbers and corn. Part of this was ex-

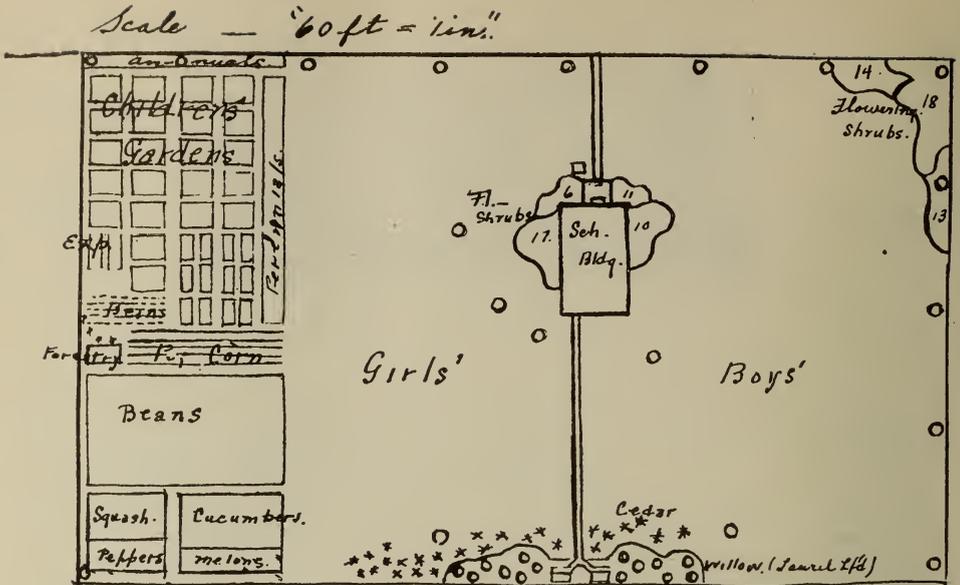


Fig. 1. Plan of Garden and Schoolgrounds.

perimental and part for profit. On account of the lack of fall preparation and of sufficient fertilization we were obliged to confine ourselves to the growing of only the hardiest varieties. Immediately after seeding there followed a rainless period of nearly four weeks. However, the seeds did sprout at last and with careful weeding and frequent mulching, we were able to disappoint the dark prophecies of our critics who said "All the posies that will grow there, won't amount to much." At the end of the season, our garden presented a fairly respectable appearance. In the late autumn the trustees hired a man to plough it and to put on the \$10 worth of fertilizer which they had bought.

ACCOMPLISHED IN ONE YEAR.

Our expenses for the year amounted to \$93.30. We drew the grant of \$50 and we were in a good position to make another year's venture. The trustees were unanimous in declaring the garden a good thing. Some of the people were convinced. The people had enjoyed it sufficiently that over ninety per

cent., quite on their own suggestion, made gardens of their own at home the following year. They had gained some practical knowledge and experience.

One father said: "Our boy staked out a few plots and put in some seeds at home. He knew what to do. If it had not been for the care he took of these and the rest of the garden we should have had but little." A little girl said "I thought I should like it but I never knew it would be so much fun." Not only this but it seems as if, with one year's closer intercourse with Nature, their souls had grown, and they, themselves were more atune with the forces of the Universe. One child was heard rebuking her brother for being afraid when a thunder storm began to threaten after that long spring drought. "Oh! don't," she said. "We need it for our garden." Another little girl, who had watched so long for sprouted seeds, when at last a sickly-looking plant was showing in an otherwise vacant flower-row, was found kneeling on the ground with her two hands placed around the seedling, hugging it, as it were, without

crushing it, and saying over and again, "Oh! you dear little nasturtium, you dear little nasturtium."

THE SECOND YEAR'S GARDEN.

On the second of May, 1912, the garden being sufficiently dry, one of the trustees disked and harrowed it. The next day was Arbor Day. We staked out thirty plots, making them 10 ft. by 7 ft. for the older pupils and dividing these in two for the younger ones. Two plots were used for experimenting with onions and lettuce and one was used for forestry. Space was left for two flower borders. This, all occupied over half the garden site and would have been sufficient. However, we set out the remainder of the garden with *beans, cucumbers, onions, squash and peppers, besides a few rows of pop-corn for the pupil's use in the winter.* The amount of work which this entailed was made possible only through volunteer assistance in the evenings. The produce was sold and the proceeds, amounting to nearly \$6, bought us some seeds and 450 tulip and daffodil bulbs. All along the east border of the children's gardens and around the shrubs at the front of the school house, we have put them to sleep. We think they will be a gay company.

FLOWERS AND VEGETABLES.

The main feature of the garden is the individual plot. All the plots, (except the small children's) were laid out with a row of flowers of the pupils selection on each end, and between these, eight rows of vegetables. The pupils being allowed to choose beets or carrots or tur-

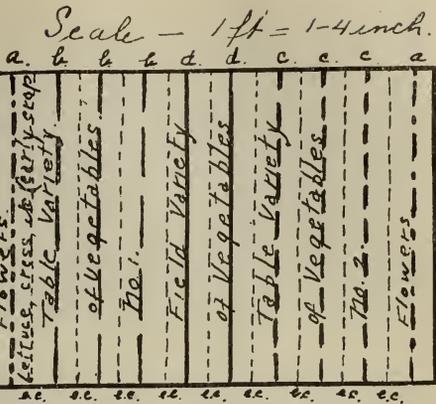


Fig. 2. Plan of an Individual plot.

nips, were then given seeds of two table varieties and one field type of the same vegetable. There are three varieties in each plot. All pupils who grew the same vegetable were given the same varieties. We had one lesson for the comparison of these at the time of harvesting. In this way the individual plots became experimental also.

BOYS GROW THREE CROPS.

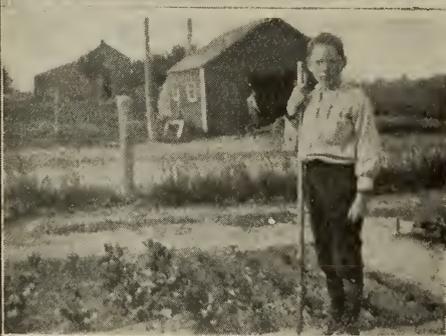
The vegetable rows were made one foot apart. We sowed lettuce, radish or cress between the rows. These grew rapidly and matured while the main crop was making a good beginning. All this was taken out at the close of the spring term. In this way each child received an early return from his labor and was spared the long waiting; and perhaps they grasped the meaning of "intensive farming." One boy raised a third crop, winter radishes, after pulling his beets. We furnished the pupils with seeds but gave them the option of bringing cabbage or tomato plants. Two children did this. At the close of the spring term and again in the autumn we took snap-shots of the best plots.

WHAT VACATION-TIME DID.

The children, almost unanimously, went away, intending to come back every second Friday to weed and mulch their gardens. Some said they wished to come oftener. Certain parts of the



A new school in New Ontario with all equipment.



Children in the School Garden.

Top: Carrots.

Centre: Tomato plants brought from home.

Bottom: Three varieties of beets.

garden-general were given into the charge of volunteer pupils. A few children did fulfil their intentions but the majority only made one or two visits to their garden to work in it. Consequently when school opened the garden did present an untidy appearance. Yet with less than five hour's work, we were able to clear off the weeds, most of which were in the paths. The vegetables and flowers were really in good condition. The inference? Summer holidays are no serious hindrance to school gardening.

AFTER TWO YEARS.

The members of the school board are as loyal as ever. Said one, "*We have the garden and we mean to keep it.*" Last spring they bought fifty-two shade trees, (including twenty-five white cedar) and ninety-five flowering shrubs, at the Nurseries and had these set out in the school-yard. This speaks well for their attitude toward school improvements. It is moreover an outgrowth of our gardening venture, since the annual garden grant must be used for just such purposes. The inspector approves of our work. The children almost unanimously say that they like it.

The people differ in opinion, but none object so vigorously as to affect our plans, seriously. Some people say they are afraid the children will be allowed to neglect their other studies. When the average of the days are taken, we *know* that this has not occurred. Rather have the pupils been making better progress than formerly. Certainly gardening is a great means to Nature study, for the study of both plant and insect life.



The plot on June 30th.



The same plot on September 1st.



The new love being worked out.

June 30th as we left it, and September 6th as we made it in five hours.

The school has become a more interesting living feature in the child's experience. Still if it were necessary to neglect one or the other would it not be wiser for a child to grow up ignorant of the physical features of Asia than never to have learned to love a garden? and his chances for loving it are sadly reduced if his only boyhood experiences therein, have been *his father's* potatoes without the stimulating responsibility of ownership. It is our aim to give to the children some practical knowledge that will help them to see,

in the pursuit of agriculture, a science; to bring to them 'the joy of gardens' in the hope that they may grow into wider sympathy with all the living world around them and so, perhaps, they will learn to love it so well that they will not lightly sell it, in a few years, for the artificial attractions of the city. It is also our aim to do a service for the parents by bringing home to them the conviction that the present school system is not beyond reproach and so to make it a little easier for the extensive and much-needed improvements to be brought to the rural school.



The winter sleep of the garden.

THE DODDS-SINDERS—THEY RETURN

The third of the Dodds-Sinders stories is published herewith, in which "The Return" of the family is featured. The previous ones have been well received. There is a certain turn in all of the stories which gives them a peculiar interest, which, coupled with their humor, makes them most readable offerings.

By Ed. Cahn

IT was the third day out, Mrs. Dodds-Sinders was able to sit up and take a little nourishment, the complexions of her daughters were fast regaining their wonted tints of pink and they awaited the arrival of the steward with the eleven o'clock broth with something very near impatience.

The sea was calm. The sun shone gloriously, their steamer chairs were placed to their entire liking and perhaps the serene knowledge that Mr. Dodds-Sinders would not emerge from his retirement for fully twelve hours, had something to do with the feeling of sweet peace which fairly radiated from the faces of the feminine Dodds-Sinders'.

Pa had marked their departure from London's famous Cecil by an argument with a cabby which would have ended in blows and blood but for the combined tears and entreaties of Ma and the girls.

Like good Christians, they had been able to find good even in the evil of seasickness, especially in Pa's case, for it kept him out of mischief.

Pa had followed up his triumph in the case of the Count and Baron by insisting upon sailing for home, declaring that the domain of Jack Canuck was cultured enough for him, and St. George Street beat Rotten Row to a standstill in his opinion, so here they were going home as fast as the biggest, finest, fastest, most expensive ship could carry them.

"Oh dear!" said Birdie despairingly.

"My head aches. I feel queer. Ugh! I'm going to be sick again!" She rose and hurried away while her Mother was sleepily opening her eyes.

Nora sat up and looked after her, then, in an excited whisper, "Ma! here comes Mrs. Toppe-Nyche and her maid! She is going home, too. I read it in the society notes. She has been visiting her cousin, Lady Lily, in Surrey. Oh I wish——"

Mrs. Dodds-Sinders, after one swift glance, closed her eyes again for she was sure that the aristocratic Mrs. Toppe-Nyche would not deign to notice her, and Mrs. Dodds-Sinders was not one to court a snub.

As Mrs. Toppe-Nyche reached their immediate vicinity, she turned pale and half stumbled. "Oh Marie! I cannot go another step," she said weakly.

"Madam!" The maid slipped her arm around her mistress and looked helplessly about.

Nora sprang up and between them they put the half fainting Mrs. Toppe-Nyche into her chair.

Mrs. Dodds-Sinders produced her smelling salts and turned to revive Mrs. Toppe-Nyche, her kind heart overflowing with sympathy, all differences in social station forgotten. She dispatched the maid for another rug and Nora for tea, talking re-assuringly all the time.

Presently Mrs. Toppe-Nyche felt better, but instead of paying polite thanks, she dismissed her maid and remained to chat with Mrs. Dodds-Sinders.

Nora was not very cordial for she had heard how the upper ten are wont to unbend when away from home and suffer complete loss of memory regarding ship acquaintances upon setting foot upon terra firma.

"She just means to get us to talking and then retail all we say to her haughty society friends." She said to her Mother, after Mrs. Toppe-Nyche had left them alone.

"Leave that to me," said Mrs. Dodds-Sinders and would say no more.

The next day and the next found the two ladies upon very friendly terms and at the last dinner upon shipboard the Toppe-Nyche's Mother and Son, were the guests of the Dodds-Sinders.'

Ma refused to reveal any of the results of her conversations with Mrs. Toppe-Nyche until they reached home and once there, the girls could hardly wait for there was a gratified twinkle in Ma's eye and Pa's joy at being at home again was mitigated a trifle by unvoiced fears of things to come.

James set a splendid dinner before the returned travellers and then remarked to the chef, that the family had "brought 'ome a haxcent wot it would give you a pine to 'ear." And expressed it as his opinion that "as soon as the Missis got her bonnet orff they would all be looking for new 'plices." Furthermore, James said, it was a mistake on the part of Providence to give a cove like Dodd-Sinders, whose 'plice' in life was assuredly that of a coster behind his barrow, fifteen millions and keep the likes of James, poor as poor. "'e karn't rightly horder a servant about, and look at me, been doing it all me life. Yuss, Louey, things ain't fair in this worl'."

While James and Louie were engaged in this conversation, Mrs. Dodds-Sinders was explaining to the girls, but hurriedly, for Aunt Hannah had sent word that she would call that evening to hear all about their trip.

"Mrs. Toppe-Nyche is really poor," said Ma. "The day we met on the steamer she was almost crazy wondering where to get enough money to get

through the season. Her cousin, Lady Lily, is just as badly off. Mrs. Toppe-Nyche says half the lords and ladies are head over ears in debt and always as poor as can be, for people who are supposed to be rich."

"Well,—don't you see—we must have someone to introduce us to the right people here, she needs a little help must have it in fact. I have told her that if we meet the social success we want, through her, we will see to it that she is more than comfortable. After that dinner on the ship, I made her out a check. Oh, a good big one; and she is going to see that we know everyone and go everywhere this season. But, of course, nobody is to know anything about our little arrangement.

She says we ought to have a house on the hill. Everybody's building up there."

"St. George Street suits me," said Pa. "If we're going to be anybody at all we ought to keep away from that hill and 'everybody.' More than one good card has been lost sight of in the shuffle."

Nora's maid tapped at the door, desiring to know what was to be done with the two pictures in the bottom of a trunk. She was told to bring them into the drawing-room and they were given places of honor by Dodds-Sinders himself.

"So long as them notes were sent to the society papers about our Art Gallery, we might's well get the use out of 'em."

The doorbell rang.

"There's Aunt Hannah! Girls, don't tell her anything. She will tell all the relations and the whole town besides all she hears; so be careful."

James ushered in a portly old lady with small shrewd brown eyes. She was clad in shiny black alpaca, there were purple flowers in her tiny black bonnet, and in one of her cotton gloved hands she tightly gripped an umbrella secured at the top by a heavy rubber band.

She kissed the entire family and after gingerly testing three chairs, settled herself upon a settee and said briefly. "Tell me all about everything. Are

you not glad to get home again to a civilized place? Is it true that all the cabs in London are handsome, and did you go into a pub?"

"I did, once, Aunt Hannah," said Dodds-Sinders, "but the liquor was worse than cold tea and so I bought a flask at the Canadian bar. Well, I'm glad to see you fatter than ever, Aunt Hannah. You must excuse me, I got some work to do." And Pa escaped.

"We motored everywhere," was Birdie's reply to the cab query.

"Oh, indeed, me lady; since when did you lose the use of your legs? Before you went away you used to say 'autoed.'"

"Oh, wasn't I awful? Count de Vere taught me to say motored. He said it was more appropay."

"Count! Mercy on us. I know you would do something foolish over there but I never thought you would buy a useless Count or anything you couldn't return and get your money back. Couldn't you leave that for the American girls?"

"We did," said Nora rather tartly. "But Birdie misspoke herself. She meant to say that the Count said frappé."

"Oh," said Aunt Hannah, and chuckled.

Mrs. Dodds-Sinders, knowing the meaning of that chuckle and hating it, contrived to whip Aunt Hannah over Birdie's shoulders. "Birdie! What have I told you about useless quibbling? It seems to me that you are beginning to lose the little sense that you went to London to get."

"Hum!" Aunt Hannah laid aside her umbrella.

"Papa bought us those two Rembrandts in London," said Nora.

"My, maybe Sandy is a good judge of ores, but he certainly can't pick out pictures. Why they are as brown as berries. I like a picture with lots of red in it, and a waterfall, or a cow. That fellow looks as if he never washed his neck and ears. Who is he?"

"Nobody knows, Aunt Hannah. It's an old master."

"Just what I thought, some old party who drove slaves, I'll warrant. Sandy —"

"Hannah, don't call him Sandy, call him Samuel."

"Mercy Sakes! Why?"

"Sandy is vulgar."

"Maybe so, but it's honest."

"Of course it is, but no more so than Samuel and why can't we be both honest and up-to-date? I may as well tell you first as last that we are going to be, and from now on our name is Dodds-Sinders. Now don't gasp and laugh. You know you always said yourself that it was a shame that a woman had to give up even her name when she got married. It's the modern idea to put the two together."

"I wonder how long it will be before the poor man will have to take the wife's name. Did you smash any windows in London, Sally? Or have you changed your Christian name, too?"

"No, but I'd rather be called Sarah."

"Aunt Hannah blinked a little and then with a hopeless sigh, enquired, "When is the wedding to be?"

Birdie smiled proudly. "Never that we know of."

"Yes, Hannah," Mrs. Dodd-Sinders smiled tenderly upon her fair daughters, "Don't mention it to a living soul, but the fact is that we had hardly landed in London until a Count was after one and a Baron after the other, a German Baron."

"Samuel and me let them come all they liked and I must say I never saw more devoted suitors, but after we had investigated their families and so on, we decided not to continue the acquaintance. One can't be too careful, and the girls are rather too young to marry."

"Yes, and a Canadian will be good enough for me," murmured Nora.

"Eh? That's right. Deary me, fancy me aunt to a Count and a Baron!"

"Don't breathe a word Hannah, but they actually proposed, both of them. But as I told Lucy I'd——"

"Lucy? Who is she?"

"Oh, I forgot! You don't know her."

Lady Toppe-Nyche. We came over together and she is so sweet."

"You don't mean that stuck up Mrs. Toppe-Nyche that was so snippy at the Colonel's party?"

"Oh that was before we really knew each other, now we are the best of friends. She is going to give a tea for me soon and invite all her friends, but it's a secret until the cards are out."

"Charles Toppe-Nyche is so agreeable," observed Birdie and blushed.

Aunt Hannah rocked her fat body back and forth in a perfect ecstasy of enjoyment. Already she was planning her calls and how she would fire these bombs of news among friends and foes alike.

"Yes, we loved London. People there are not half as stiff as folks tell. We went everywhere, and met everybody. Lady Lily, that's Mrs. Toppe-Nyche's cousin, first cousin, is charming and has a perfectly lovely country place in Surrey. You just ought to see the elms and how the farmer people love her."

"You don't mean to tell me you met a real live lady, and went to see her!"

"After having a Count and a Baron propose to us Aunt Hannah? Why not? Why we couldn't tell you everything in a month. We brought home sixteen trunks full of hats and things and Ma ordered livery for all the servants too; plum color with gold facings to match the furniture and carpets. Pa's got a new motor-car ordered and a chauffeur, specially trained to run it, coming along, too."

"I s'pose he matches the spokes in the wheels."

"No, the upholstery. It's light chocolate. Nora picked him out. Mrs. Toppe-Nyche is in love with Ma. She says she is so refreshing and Charlie Toppe-Nyche calls Pa 'Old Man' already and borrowed a dollar from him yesterday."

"Sakes! Wonder what all your old friends will think of you getting in with the Topp-Nyche's?"

James appeared to call Nora to the telephone and Birdie made an excuse

to leave the room with her. A moment later Mrs. Toppe-Nyche was announced and Aunt Hannah was persuaded to retire to the library temporarily.

Dodds-Sinders was there and under her skillful quizzing was soon busy telling her in confidence, and as a member of the family, the main events of the trip abroad.

"You see Aunt Hannah," he concluded, "that Count and the Baron were just fakirs and we didn't find it out any too soon, because the girls were all ready to say yes, and marry them. They bought them two old masters from a feller that makes 'em by the dozen and then charged me fifty thousand for 'em. Then I had the police nab them and they turned out to be just crooks and not a bit noble."

"We brought the pictures along. That was them on the mantle, because nobody, but an expert can tell an old master from a new one. We are going to have lots of fun with them."

"No, we did not go outside of London. Surrey? Never heard of it, unless you mean them kind of buggys they call Surreys. Oh, Lady Lily? She is some relation of Mrs. Toppe-Nyche's. Sarah's got some kind of a dicker with Mrs. Toppe-Nyche to put her on Easy Street if she puts us in Society, which is another name for being in misery so far as I can make out."

"You bet I'm glad to get home. Going? Wait until I order a machine out for you, I'll run you home."

But Aunt Hannah it seemed for once preferred the street cars and insisted upon leaving at once, asking Dodds-Sinders to excuse her to Sarah and the girls.

As she was waddling down the front steps she noticed that a young man was just preceding her out of the gate. At the corner he accosted her politely, and later helped her onto the car, seating himself beside her.

Aunt Hannah was not one to stand upon ceremony when she wished to relieve her mind; the young man was a nice young man and most polite, besides, he was a remarkably good listener

and the old lady; divided between rage at the deceit of Sally and the girls, jealousy, pity for Dodds-Sinders and humorous appreciation of the difference between the feminine story and honest Sandy Dodds-Sinders' account; was volubility itself. Then, too, she had not liked it at all that they had hustled her off out of sight the moment Mrs. Toppe-Nyche was announced.

Therefore, she not only recounted the early history of the Dodds-Sinders' but every step in their rise, and omitted not one detail of the matter of the Count and the Baron, the fraudulent old masters, the narrow escape of the girls from matrimony with the thieves, and even the arrangement with Mrs. Toppe-Nyche.

The pleasant young man escorted Aunt Hannah to her own modest door and once it closed upon her, he raced back to the car and raced down town, where, amid the hum of presses he pounded diligently upon his typewriter for some time, then, with a gleeful chuckle, he turned his copy over to the Editor and hung about for the praise which he felt sure he had earned.

The Editor glanced indifferently over the opening sentences, sat up with a start, and reached for the blue pencil behind his ear. He grunted, and proceeded to demolish the pleasant young man's latest effort and when he had done with it, Aunt Hannah would never have believed that so many pleasant things could have been said about anyone, much less the Dodds-Sinders.

"Why, my boy!" cried the Editor, as he finished, "this stuff of yours is great! It's a scream! A joke like that is too good to print, at least about good old Sandy Sinders. He is the best ever. Of course he's been and got rich, but even that isn't against him. He's the salt of the earth: he's helped more men than there are years to his life. No, we won't poke fun at him, or his, we'll *boost!*"

Which is how it came about that Aunt Hannah forgot her anger in pride at being related to the wonderful Dodds-

Sinders' who were written up in the paper so flatteringly, her own part in the inspiration of that account, forever unsuspected; Mrs. Toppe-Nyche though usually averse to personal newspaper mention found her way as the social tutoress of the ambitious family, smoothed for her almost miraculously; Dodds-Sinders, alone clever enough to suspect part of the cause of the article, privately determined to be more careful in future, and, since events seemed determined to thrust a polish upon him, finally concluded to cease resisting the march of progress, and turn his efforts diligently toward self improvement.

Therefore, the campaign so ably begun by the newspaper, which had put everything relating to the Dodds-Sinders' in the best light, from their earliest beginnings to the purchase of the paintings, their connection with the great of English society, and the flattering matrimonial offers of the girls, down to Mrs. Toppe-Nyche's enthusiastic adoption of them, was, with Pa's tardy help, fairly on the way toward the success it finally achieved.

The gorgeous house and kaleidoscopic library were sold, the eccentric gowns and all attendant vulgarisms dropped, the fraudulent Rembrandts banished to the lumber room and the episode of the Count and Baron treasured as an awful warning.

Now, in a home which is famous for its elegant simplicity, the family welcome the elite of the land. The girls pretend to be nothing but what they are, simply girls, and therefore charming, their Mother gives free rein now to her natural goodness of heart and is consequently vastly lovable, and their Father, though he wears a certain mellow polish now, which though partly acquired, becomes him vastly, has forever dropped the Dodds and the Hyphen and is plain, Sandy Sinders, one of the most substantial and respected citizens in the Dominion—member of the York Club and other exclusive clubs, a University Governor and a Senator at Ottawa.

POTATOES AND PULPWOOD

The Northland in the Province of Ontario grows other things than nickel and cobalt. It is a fine agricultural country and should be known especially to our incoming settlers, far more than it is. Pioneers there, are making money and being close to the old civilization of Ontario, are enjoying life quite as well as anybody can. The writer of this article made a business trip there last summer and was much impressed by the farming possibilities.—Editor.

By F. W. Disney

THE new Ontario farmer has many joys of his own. The law of compensation is always at work in this world. To the man, who is cut off from the pleasures of an old civilization there comes to him some satisfaction in his new surroundings that, to him, balances up the loss.

It is a violent change from a well-tilled farm in older Ontario and the Maritime Provinces or from the intensive fields of old Britain, to the unbroken, and often forbidden face of the Northland, where the mineral deposits of Ontario have been calling from the four corners of the world, the adventurers in gold and nickel. Here the husbandman, who loves the soil, his home, his barns, his fields and his flocks, finds difficulties and encouragements strangely entwined.

A visit to the region last year in the interests of the implement firms whom I represented, revealed to me the possibilities as well as the pleasures of farm life in this region.

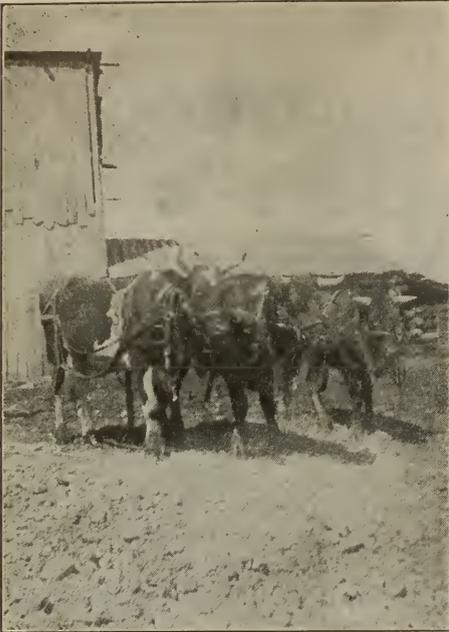
It was easy to sell machinery. Farmers are too often the victims of the machinery agent. They are persuaded into the purchase of a machine, when really they have no need for one. I saw one instance where a man had purchased a cream separator, although he had as yet no cows, but expected to have a few in a couple of years or so. Such investments are always unwise and one that the implement companies themselves would condemn as poor advertising for their goods. The number of carloads

of machinery that come in here was one of my big surprises.

I was particularly surprised with the good-looking houses and barns situated between New Liskeard and Inglehart. Fine bank barns with modern up-to-date houses, some of them fully equipped with a water service, are to be seen here, and every house has a telephone. The rural telephone here is a necessity. Private lines similar to the ones with which every farmer in older Ontario is familiar, have been erected and the whole farming country is a net work of lines. So that as far as comfort goes, these farmers are about as well off as are the older ones in other parts.

Comfortable—but hold on! I forgot the roads! Here's where the traveller draws the line. Mud and water are united in a most intimate connection to the disgust of every one who tries to go from one place to another in the spring and fall. Yet I have seen many sidelines in old Ontario just as impassable. This road question is one of the big problems for the Canadian farmer in old districts as well as in the new. One is tempted to believe in any method, whether by Federal, Provincial or local aid, so long as the roads are put into decent shape.

Farms raise good crops of clover, the best I ever saw. Timothy grows very rank. Roots cannot be beaten anywhere, while the potatoes fairly task the imagination. Barley, oats and peas, as well as wheat have yielded big returns here. The markets are near the farm-



John Gray's oxen at Suttonby. He never owned a horse.

ers. The mining towns are sending outside continually for produce.

Of course, as in the early days of other new countries, there are some sidelines for farm revenue. The selling of pulpwood is the one big source of ready cash.

One station last winter shipped 30,000 cords of pulpwood that covered an area of three acres at the station. The farmers receive \$6 per cord for spruce, \$5 for balsam, and \$4 for poplar. Small telephone poles are sold for 65 cents each. Plenty of cedar lies along this section. Some of the farmers have sold as high as 500 cords of pulpwood which at these prices, brings a nice income for the winter's work.

The pulpwood is shipped chiefly from Uno Park, Liskeard. Thornloe, Earlton, Heaslop, Englehart, Charlton and Matheson. The latter place alone sent out 150,000 cords in 1910.

These outputs of pulpwood go to about 60 different paper mills in Canada, and to about 25 in the United States. If the wood is peeled here in the summer, it makes a difference of 50 cents a cord to the farmer.

Mr. John Gray, whose oxen are pictured here, went up to this country in 1909 and paid \$450 for his 65 acres of land. He never owned a horse, but gets along fairly well. His farm is on the boundary between Ontario and Quebec, on the shores of Lake Temiskaming. The Cobalt-Casey mine adjoins his farm. To-day he has the land all cleared and comfortable buildings erected, where his family of seven are growing up full of lusty Canadian life.

For pioneer life, this section offers as good inducements as any new country. The soil is exceedingly fertile and the market for farm products is at the settler's door.

Another farmer told me that he bought 160 acres here of rough bushland five years ago, and to-day has half of it cleared and returning him good crops of grain and roots.

He had produced wheat that yielded 40 bushels per acre, and oats as high as 75 bushels. The soil is a deep rich clay with a fine vegetable mould on top. The weather is remarkably good, and all the farmers here remark upon the way the frost line has been driven northward. The long hours of sunlight make the crops grow faster and ripen sooner than one would expect.



The fat boy at Matheson.

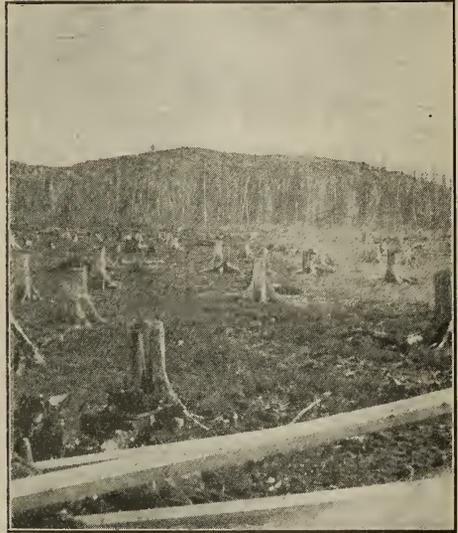
Russell Gaynor, six years old, and weighing 127 lbs.



D. J. Johnson, of Matheson, with his hired man on the ground, where they are commencing a clearance for potatoes. This soil is so fertile that grain grew $5\frac{1}{2}$ inches in two weeks after planting.

It is potatoes that the farmers find their astonishing yields. An acre often produces 250 bushels and as high as \$2 per bushel have been obtained in the

nearby towns. It is easy, therefore, with potatoes in summer and pulpwood in winter, to say nothing of the hay crops \$12 to \$20 per ton, the dairy returns with 40 cents for butter, poultry returns, eggs 30 cents a dozen, and small fruits and vegetables, for a half enterprising farmer to live well, and lay up a good nest-egg for old age, in this rich part of the good province of Ontario.



Near Milberta, fire-swept and now ready for stumping.

AN APRIL WELCOME

Come up April, through the valley
 In your robes of beauty drest,
 Come and wake your flowery children
 From their wintry beds of rest!
 Come and overblow them softly
 With the sweet breath of the south;
 Drop upon them, warm and loving
 Tenderest kisses of your mouth.

—Phoebe Cary.



Journey's End

by

Helen Williams

If readers are looking for stories that are "out of the ordinary," they will find one to their liking in "Journey's End." To be sure it is quite unusual and yet it may all be possible. The general field of action is typical of any small Canadian Town, and the author, a Canadian, takes advantage of the combination of circumstances, evolving a very interesting tale of adventure and romance.

NORA TRENCH had been exhibiting the latest "novelties" among Violet Crosby's glittering array of wedding presents to such chance happeners-in as still lingered "talking over" past details and future probabilities of the Crosby-Blaylock match, when she received a rather urgent summons to her friend's room. She found that pretty but diminutive little person raging up and down among her billowy lingeries in a state of excitement which she at first attributed to a belated nervousness over the now imminent ceremony. She was soon enlightened.

The most awful, the most appalling thing had happened. Inasmuch as "awful" and "appalling" things had not been infrequent throughout Violet's checkered college years and subsequent flirtatious career, Nora's solicitation took the form of a really curious demand to know what she had done now. Curtailed, and shorn of Violet's verbose imagery it resolved itself into what even Nora was forced to admit was an unusual, not to say embarrassing, "fix."

Mr. Brassworth, who, rumor averred, had married Jenny Spears out of hand, because she, Violet, wouldn't have him, had so far recovered from his pique as to send not only a specimen of Birks' very finest cut glass but also a letter which he should never have penned, much less have sent. Absorb-

ed in her own approaching happiness she had neglected to destroy it at once, and left it in her desk. It had gone completely out of her mind until just now when she had come across her own note of thanks to Mrs. Brassworth for the butterknife, purporting to come from both of them, in Mr. Brassworth's envelope. In her hurry to get as many as possible of her notes "off" she must have got the sheets mixed and put them into the wrong envelopes! Whatever was she to do about it! Couldn't Nora think of something? Fancy Mrs. Brassworth opening that letter and learning that "Charlie," in whose devotion she so implicitly believed, entertained reprehensible, and as he very distinctly stated "undying" sentiments for another! The two girls shuddered at the mere thought of the cataclysmic rupture which would ensue. To avert it, possible and impossible manoeuvres for the recovery of the letter (which, they reasoned, must still be unread, as the Brassworths had been away and were just coming back to-night in time to take in the wedding, at nine o'clock) were discussed, only to be pronounced impracticable.

"Rather a lark just to go to the Bank and swipe it." Nora had broken a discouraged silence, jestingly, and stared when her friend jumped up crying out, "The very thing! Oh, Nora, won't you?"

Once conceived, the plausibility of the idea grew. As everyone knew, the Brassworth's personal mail was dropped with that of the Bank's into the slit in the door opening directly into the outer office. While the latter would have been taken daily from the box, anything addressed to Mrs. Brassworth, in view of her expected return, would likely be left and not forwarded. Nothing would be easier than to climb through the back pantry window, which Mrs. Brassworth was always saying she must get mended, in case of burglars, and never did. While, once inside, Nora knew the geography of the house well enough for her purpose. And the probability of encountering anyone was infinitesimal, because to-night the clerks would not work long after hours on account of the wedding, and with the manager coming back so soon no one else would have been installed. Were it not for what was involved, and the fear of being detained and so missing Gordon Wilmot, to meet whom she had virtually come to the wedding, she rather wished there were some complications to make it more "interesting." Nora confided to her friend, as, disguised in a long ulster belonging to one of the Crosby boys, she started forth upon her quest.

Twilight was already obliterating landmarks, and few people were out in the Eastern Canadian town, for, as she had anticipated, everyone was "getting ready for" the wedding, which had been the one topic of conversation in that suburban centre for the last six weeks. Consequently, she entered the Bank premises and accomplished her window feat without witnesses. Tiptoeing through the ell of the house, she unlatched and pushed open a heavy oak door, and found herself in the Bank proper. Yes, there was the box on the wall, and as she had expected letters in it. She was about to take them out to carry to the window—with the curtains down it was much too dark to decipher writing here—when she had a feeling that there was someone else in the room. With her hand outstretched she re-

mained just as she was, straining her ears to catch the faintest sound. Yes. She could hear breathing.

A man's. She stood rigid, hoping that in that dim light she might pass unobserved. All at once there was a quick movement behind her. Something passed over her head and drew her arms to her sides, not gently. The rope tightened till her arms ached. Strong fingers knotted it securely. Hands in whose hold she struggled silently, impotently, impelled her forward, while a deep voice said grimly, "And now, my fine fellow, let's have a look at you." There was a moment in which the switch was obviously being fumbled after, and then electric lights blazed out above them, and she found herself confronting a young man who stared with almost comic dismay when he saw that it was a girl—a very pretty girl—he was gripping thus unceremoniously by the shoulder with one hand, while he pointed a revolver at her with the other.

"Oh, I say!" he murmured in confusion.

"Take this off," Nora cried, stamping her foot. "Take this off at once!"

"Of course," he assented, reddening, laying the revolver on the counter and feeling in his pocket for a knife. "I had no idea," he apologized, when the offending cord had been severed. "I hope I didn't hurt you," he added, as Nora slipped off the ulster and began rolling up her sleeve with the air of an injured goddess.

"Of course you hurt me. You hurt me d-dreadfully!"

"I'm awf'ly sorry! I thought you were someone trying to rob the Bank. Mr. Brassworth got wind that there was a gang about, and asked me to take an earlier train out and stay till he could come. Hearing you I naturally inferred—"

He broke off. His scrutinizing gray eyes went from her to the box and came back with a questioning doubt in them. Other exigencies beside maltreated arms occurred to Nora.

"I must be going," she exclaimed hastily. "The mistake, I suppose, *was* natural enough. This is the door out, I think. Will you unlock it, please?"

She tried to speak easily, exerting herself to put all her charm into the laughing little upward glance, which said, "I forgive you, and it's all rather ridiculous anyway, isn't it?" But no responsive gleam came into the other's eyes, and he made no move to open the door.

"I think this is the door," she repeated, a little more urgently.

"Oh, yes, that's the door, all right. You didn't come in it, by the way."

She looked at him silently.

"You came in through the back pantry window."

"Well, and what if I did?" she flashed back at him.

He shrugged his shoulders.

"It's my business to find out *why* you came in that way."

"Oh, you are insufferable! Do you think I came in to—— to——"

Suddenly she remembered why she had come, and stopped. She couldn't go away even if he would let her without first getting that letter.

"I see you do think that, and I could not go away mistrusted. I can't explain how I come to be here, and I don't just see how I am going to make you believe it is all right. We'll have to talk it over."

She smiled at him with engaging frankness. Really, for one of those substituting emergency clerks he was tremendously good-looking, if you came to that, for anyone. But now surprise, uncertainty, and what was evidently unwilling attraction, clouded his gaze.

"If it's as you say," he began doubtfully, "you can have no objection to my calling up someone to identify you. It may be unnecessary—probably is—but you see my viewpoint. I am a stranger, left in charge, and can't afford to take any chances. I'll get someone in, and make the whole thing as right as——"

"Oh, no! Don't! You mustn't! There are reasons why—Let me think. Oh, I am in a scrape!"

"What made you come?" he blurted out. That's what beats me. If you are not here for any reason that you can tell, why are you here at all? I can't make you out."

"Am I so different from the girls of your acquaintance?" She parried to gain time, looking at him sideways.

"Yes," he said, and nothing more.

"How?"

"You couldn't be what you are without having been told a thousand times."

"I don't understand."

"No. I don't believe you do. That is the amazing thing about you. If you did, you would hardly be here."

"I suppose not," Nora agreed, absently, her mind reverting to what was responsible for her being here. Decidedly she was not getting on. But how was she to get rid of him, and how was she to do anything unless she did? She weighed the feasibility of going casually up to the box and just taking the letter and walking away with it, and looked at him speculatively, wondering if she dared. He was pretty big, she reflected, and hardly the sort of man you would care to challenge.

"A regular deadlock, isn't it?" she smiled. "Do you in the least know what you are going to do with me? I can't stay here all night, you know."

He looked startled.

"Nor I," he frowned, turning to look at the clock. "Jove! it's nearly eight! I ought to be—I'll tell you what. I'm going to get someone in and put this business on the square. The thing is impossible as it is."

"Just as you say," meekly replied Nora, to whom a sudden thought had occurred.

"It's the only sane thing to do. It's putting you in a false position to keep you here, and yet I can't let you go on my own authority."

"No, I can quite understand that."

"And you don't blame me?" He spoke earnestly, almost appealingly, in his eyes the look that was apt to come into men's eyes when they looked at Nora Trench. "You see how it is? Just at first I'll admit I was suspicious. The

thing looked fishy. But I've eyes. You—you know I don't doubt you?"

"I—know."

"Then that's settled," drawing a deep breath. "I won't be two minutes," he called over his shoulder, crossing to the telephone.

The instant his back was turned Nora flew to the box, and began rapidly running through the letters. At the farther end of the room she could hear the other's pleasant voice asking for Jack Crosby, and illumination, belated but complete, flashed over her, explaining many things. More than ever anxious not to be caught in the act, the letters fairly twinkled through her fingers. Would she never—A-ah! At last! She had just drawn forth the little white envelope bearing her friend's dashing superscription, when there came a sharp exclamation from across the room, followed immediately by a voice at her elbow saying hoarsely; "Give that to me."

Wheeling, she nearly cried out, so unrecognizable was the face glowering down at her.

"Give that to me," he repeated, and held out his hand peremptorily.

"I will not give it to you. It belongs to—to—I have a right to it."

"Do you expect me to believe that—as I believed you two minutes ago? Give me that letter, I say."

Nora's fingers closed more tightly upon it, and she put her hands behind her back.

He came a step nearer.

"I am not in a humor for any more fooling. I don't like to use force with a girl, but—Come. The letter. Hand it over."

"I won't. I mean I can't. Others are concerned. You must let me keep it. You must let me go. Oh," she wailed, half crying, half laughing, as with a tightening of the lips he advanced

upon her, "are you utterly devoid of intuition? Are you quite quite stupid that you can't see?"

"I can see that you are a mighty clever little actress, all right. You took me in famously just now. But you won't do it again. For the last time, are you going to give me that letter, or shall I have to—"

Nora looked at him strangely.

"Take care," she said, very white. "Of course you can make me give it up. You are stronger than I. You are a man. And now I wouldn't prevent you even if I could. If you are *that* sort of man I am glad to know it," she added, scorn and a something that sounded curiously like disappointment in her voice.

"More acting? Really you have missed your vocation."

He paused, and stood looking at her with eyes that changed as they looked. Then he spoke slowly, as if the words were forced, were tortured out of him.

"Oh, but you are beautiful—beautiful. Your eyes—they bewitch me, I think—I don't know who you are—or what you are. It may get me into all sorts of trouble, but—keep the letter. I can't—doubt—you."

Nora drew a deep breath, but before she could speak, a train whistled faintly in the distance.

"The Brassworths!" she exclaimed, starting. "They will be here directly. I must go. And you ought to be dressing for that wedding now."

"You *are* a witch! How did you know I was going to a wedding? Who do you think I am, anyway?"

"Why," said Nora, slipping the obnoxious letter into her pocket and retreating toward the door, "it just happened to occur to me a little while ago that you might be—Gordon Wilmot."



A BACHELOR HOMESTEADER

Several humorous instances are herewith detailed of an experience in homesteading on the prairies of Western Canada. The writer draws on his own experience, and those who are familiar with pioneer farming will readily appreciate the way he turns a rough corner and will enjoy his quiet philosophy.—Editor.

By H. W. Hyland

IN the month of August, 1906, I was commissioned to go to the West to settle an estate. I was made to understand that it would take me about a month. I waited five weeks, and as I saw no chance of an early settlement I began to look about for a profitable means of employment.

This was not hard to obtain. I worked four days as cook on a threshing outfit at \$4.00 per day, and then I got a job teaching school forty-five miles west of Yellow Grass, and only twenty miles from the Lake of the Rivers, at \$70.00 per month.

I liked the country, and until Christmas I put in three of the happiest months of my life, with one mail a week and church once in two weeks. Everything there was so different from anything I had been used to before that it kept me always interested. But on the 27th of December I found myself once more in Regina, ready to return East if my mission were finished, but as there had not been any progress in this line, I accepted the principalship of the Davidson school for the next six months.

Davidson then was a town of 500 people, situated on the C. N. Railway, midway between Regina and Saskatoon. We had five churches, three banks, two hotels and about fifteen business houses. The land was good but stony. It was settled mostly by Americans. The most of them had brought money with them and the district was making rapid progress.

The winter passed quickly. I waited for blizzards, but none came, so when

I wanted to hear of storms I would hunt up an old timer and listen to him tell of the days when it was 60 below for a week and no one dared look out of the keyhole for fear of being frozen.

This made good stories to listen to, as I gazed in the grate at a comfortable coal fire, and although I did not doubt his stories, yet we were comforted by the knowledge that the average temperature for that winter was only two degrees below. That winter I attended fourteen hockey matches, going twice to Saskatoon and three times to Regina on the special trains which would always have you back in the morning.

HAD THE WESTERN FEVER.

In March I found the estate which I had come to wind up was closed up, and as this left me no further excuse to stay I found I had changed so that I did not want to go back to Ontario; that the big stories of the Westerners



"I could light the fire without getting up."

had got hold of me, and I resolved to become a homesteader, if I could find one fairly good, not too far from a railway.

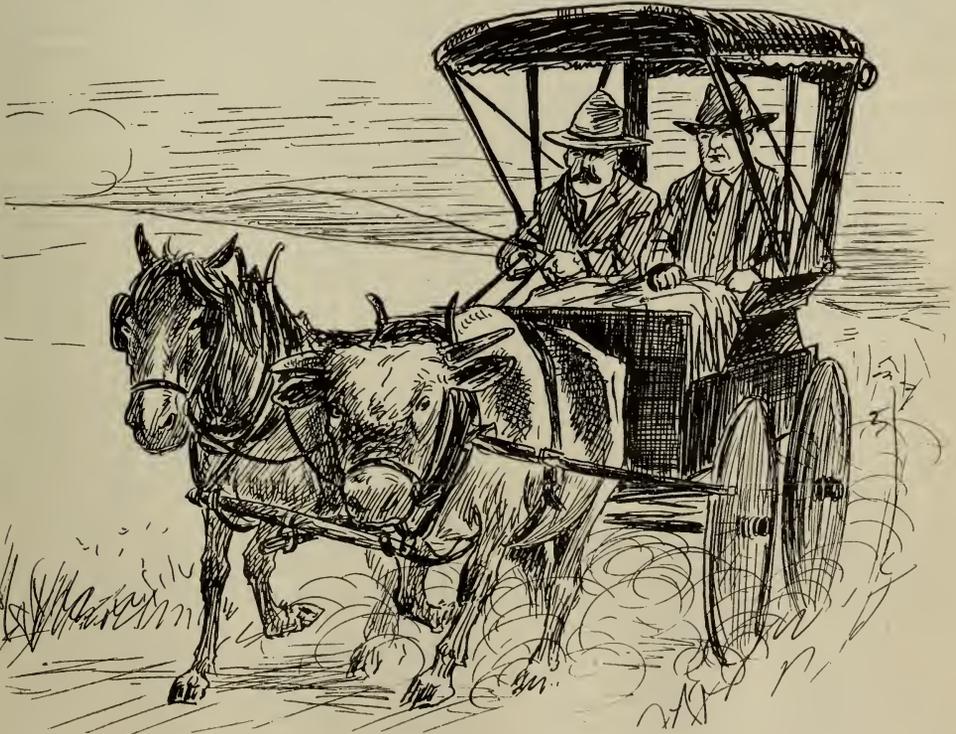
About this time there came to the house where I boarded an old gentleman who, with his wife, had come to Saskatchewan on the first C. P. R. train that came into Moose Jaw, as an employe, nearly 30 years before. In a few months he had left the road, and settled in the Qu'Appelle Valley about twenty miles north of Moose Jaw. Here he had lived ever since, having homesteaded twice. Each of his three boys had done so once. Before long I came to the conclusion that this was the man I needed to meet. He told me of a quarter section four miles from his place which had been taken up and held for some time by a young Englishman who had afterwards abandoned it when his brother died in England. The old gentleman told me that beside this quarter section, they were building a new

school, so I resolved to take both homestead and school, if possible, to start 1st of July. This was a summer school which opened when finished and was to be kept open till Xmas, then there were three months' holidays and it started again March 1st.

Time passed quickly till it came that my duties in Davidson were over, and on the 27th of June I went south to Chamberlain Station, where Mr. Bennett, my old friend who had got me the homestead, met me and took me ten miles west to his home in the Qu'Appelle Valley. This valley was about a mile wide and about 100 feet below the level of the prairie on both sides of the river, being about two rods wide, and the lake 200 yards wide by a mile long.

I GO HOMESTEADING.

Mr. Bennett had a half section in the valley, where he kept 20 milk cows, and two sections up on the west prairie,



"They traveled well together. . . . A little girl at the next table asked her mother if she had seen the half-breeds drive in with a horse and an ox."

where his sons carried on extensive farming operations, owning a steam plow and a threshing outfit. The next day we called on every resident of the valley from the Indian graveyard to the Snakes Den, a distance of seven miles. These people had all been here from twenty to thirty years, and had seen the country rise from the time they drew "Buffalo Bones" to Moose Jaw and sold them at two cents a pound. In times when the crop failed, a deputation would get the Dominion Government to make a grant for the men to dig Government ponds, which were dug half on the road, and half in some Government supporter's field. They were dug deep, and so at least 100 acres would drain into them when the snow melted in the spring. The water in these would carry the prairie over the dry summers.

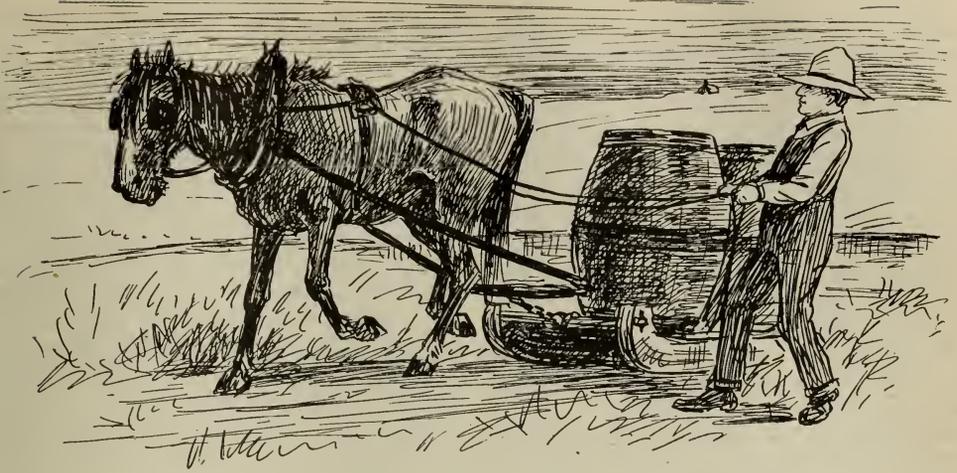


"Just then he sidestepped like a politician and played all his bucking skill."

On Sunday morning Mrs. Bennett said I could take the broncho and bring the cows if I cared to. It was about two miles, and I thought I would like the trip. I saddled the animal, and he started off at a trot. I soon saw he was making for the watering place in the river. After he had quenched his thirst I turned his head in the direction of the cows, but he refused to go a step. I sat quietly on his back for five minutes, and if it had not been that I thought they were watching me from the house I would have got off quietly; as it was I used the spur. At this he reared up till I thought he would go back over. Presently he got down on all fours again. I then made up my mind to get off at once, but before I could do so he put his head between his knees and his hind end in the air. It made an uncomfortable seat for me and I liked it less than his first trick. Then I was sure I would get off. Just then he sidestepped like a politician, and played all his "bucking skill," and I found out I could fall farther and harder than anyone, I believed, west of the Great Lakes. I alighted on my right shoulder. I tied his bridle to his front legs and walked after the cows. When I got back to him I drove the cows and pulled the broncho back to the "Corall."

After dinner my host came outside on his couch under the valley poplars. It was the hottest day that year, being 97 degrees in the shade. After a little more explanation and volunteering to send four teams that week to the town to draw lumber for my new house, I left him and his good wife. My last look at him showed him on his couch under the tree, barefooted, bareheaded, with a twelve-quart pail of buttermilk, with a dipper in it, on a chair at his side, and with a look of such perfect peace on his honest face as I had not seen in years.

As I moved up the side of the valley to the West Lake School District, which place I was to make my home, they both shouted after me, "If you need anything, let us know." In half an hour I was at the church. It was the first service ever held in the new school. The preacher was a Presbyterian student and the organist a Methodist, while the man who took up the collection had, in Quebec, been a Roman Catholic, but as he was keeping company with the organist, he thought it was his business to be near her. Anyway there were nine different denominations there that day all glad of a meeting place on the Sabbath. The congregation numbered about fifty. I was introduced to all, and as I was told to tell the Frenchman that I was to stay with him that week, he used me well and asked about a dozen of the bachelors to stay for tea. We spent the even-



"I got a stone-boat and two barrels and used to draw water twice a week."

ing together, and I was made a member of the Bush Rabbits baseball team, who were to play the Sunsets for the Valley championship on July 7th. I found out that night that the only way to distinguish a homesteader's house from another was by the empty cans around the door.

TEACHING SCHOOL.

The next morning I started school with seven pupils all of whom came on horseback, and put their horses in the school stable. The school was well equipped, and the pupils all that could be desired. That night I walked two miles and located my homestead. It was 160 acres of level prairie with grass about six inches long on it. It might be good land or bad for all I knew, but they all said it was good, and I was satisfied. On Thursday, the material for a house arrived, and on the Friday five men volunteered to build the house. It was frame, 14 by 22 feet, papered inside and out. I moved in on Saturday. The stove was placed so by reaching out your arm you could reach the woodbox and fill the stove. Many is the time I have lit the fire before getting up and, made drowsy by the heat, gone to sleep again. It was kitchen, dining room, parlor, and drawing room, all in one. It was, I came to find out, the most convenient house I had ever

been in. You could eat a hearty dinner and roll over off the chair into bed without getting up. I always swept it out once a week whether it needed it or not.

On Sunday forenoon I baked some scones on my new stove, and my nearest neighbor, William Smith, of Water-down, Ontario, who had left home because his father had selected a new man for him, watched the proceedings. He said my flour was not good, and if I would come over to his shack he would give me some. I went over that night. William was at home. He was fat and twenty-four years of age. He had a good quarter section, with a sod shack 7 x 12 feet and 6 feet high, and a sod stable. William believed in the whole Bible except that cleanliness was next to Godliness. He showed me his oxen, then brought me into his house. It was small. Inside the door he had a bag nearly full of flour. The mouth of the bag was open and the cat sat on it. I saw that he made his bread like he would plaster, by keeping a little hair in it to make it stick. He was a deeply pious soul in his way, so he gave me a dish of flour and told me I would find "that God was as near on the prairie as anywhere else." I believed it, but I was forced to admit that his home did not look anything like the accepted idea of Heaven.

Before I was there three weeks nearly every one within two miles had done something to help me. One man asked me to drive his outfit on Saturday, plowing summer fallow. I was glad to consent, so I drove four horses on a one-furrowed two-wheeled plow, with a seat on it. He furnished me with a rifle, and as the horses went themselves, except at the ends, I was to shoot gophers. This proved good sport, and I used a box of cartridges before dinner, but after dinner I gave up rifle practice, as I came near, in some way, shooting one of the horses in the foot.

At noon we arranged to go to Marquis that night for supplies. So we quit early, and had our tea, and he hitched a horse that had not been working, beside an ox in a covered buggy and went to town. They traveled well together. We got to town about eight o'clock and at half past a cricket match between the town team and Brownlee began. This lasted till ten o'clock, and still the light was good. Then we got our supplies and went to the ice cream parlor to see the crowd. A little girl at the next table to us asked her mother if she had seen the half-breeds drive in with a horse and an ox. My companion thought this a good joke, but I liked it so little that I walked a half a mile out of town before he caught up to me.

I PURCHASE A HORSE.

During the course of our trip home that night I made up my mind to buy a horse of my own. I had already paid out \$187.00 for a house and furniture. Now I resolved to buy a horse on credit and as cheap as possible. I therefore went to Peter McDougald, a farmer in that district, and we arranged to go the next Friday night to a ranch about twenty-five miles west and see if we could buy a suitable animal to convey me around the country.

The next week went quickly, and we started on our horse hunt. My companion had bought nine horses there at different times, all on credit, and had been well used. It was called the "Turkey Track Ranch," because they used the registered brand of the mark

of a turkey's foot on each horse's left hip.

We reached the ranch house about nine o'clock, and drove at once to the stable and put up the horse, then went to the house, sat down at the table in the dining-room, and told the Chinese cook what we wanted. He proved to be a good cook and in a short time we were ready to take in our surroundings. The house was a one-story building over thirty years old, with kitchen, dining room, parlor and office in the centre, lighted from the top, and twelve bedrooms in the outside lighted by windows. It was well furnished, and I liked the free and easy method of life. The manager was glad to see us and he proposed that we all go to the circus at Moose Jaw next day. I then told him what I wanted. He said they had 400 horses, and he would let me have one of the old saddle horses to keep, as long as I liked for nothing. As this was much cheaper than I expected, I agreed to go to the circus next day. The circus was the same as usual, and the same as it must always be to attract the people, and when we got home that night the manager gave me an old set of single harness. The next day we went over the ranch, or at least part of it, and that day he told me there was a buggy there a man from the Willow Bunch country had left two years ago. The next morning we left at five o'clock for home, leading behind my complete outfit, which had cost nothing, and for good measure the manager asked us to spend Christmas week at the ranch and see how it should be observed.

That night after school I began to dig postholes to fence ten acres for a pasture field to contain the first horse I had ever owned. It was a little hollow-backed from too much riding with the saddle, and was about fifteen years old, and always kept in good condition.

LOOKING FOR WATER.

My next trouble was to get water. So far I had been carrying it in pails for one quarter of a mile. Now I got a stoneboat and two barrels and used to draw twice a week. After a few weeks I tired of this and wrote to the well

drillers to come and see what they could do. They sent a man who guaranteed water for \$120.00 cash.

I let him go and sent for a digger. He made tests for some distance around and at last came and offered to get plenty of water for \$50.00. After a half a day's dickering I got his price down to \$37.00, and he started. He dug nine feet the first day, and the next morning we started at 5 o'clock, and I drew up the clay for him for three hours. At noon he came and told me he had struck plenty of water and wanted his pay. I told him if the water was still there at five o'clock I would pay him. This well was satisfactory. So I got a pump in it and was well pleased.

The harvest was now ripe, and the hum of the reaper could be heard early and late. The crop was good, and help scarce. In three weeks it was all cut and stooked and then it was left two weeks on the stook to harden the grain. Then threshing commenced in earnest.

SHOVELS WHEAT ONE DAY.

I had but little to do with this, only one day, and that was one too many. One man who had been good to me asked me to shovel wheat out of the waggons into a granary one Saturday. I did it. Three boys drove the four teams, leaving one wagon always to be loaded and one to be unloaded. The scoop shovel held a half a bushel. I had to shovel it as high as my head. In the forenoon I shoveled about 900 bushels, and I thought my back was broken in three places. After dinner they got into better grain, and of course the teams came faster and with larger loads. I stood it till night, as they bagged 400 bags at the machine. That night I did not wait for supper. "I went home to look after my stock." Next day at noon I was still too stiff to get up, but by next day I felt better. What bothered me most was that no one seemed to think it an overly large day's work. I learned so much that day that I have never got acquainted with a shovel since. I guess it is only the hard lesson that one remembers.

The threshing lasted seven weeks, and the harvest hands left for home. The

snow came on, and the weather got colder, and the people got ready to den up for the winter as far as work went.

There were one or two parties a week and they always lasted till daylight. Then came preparation for our first great fowl supper and Christmas tree and entertainment. It started at four o'clock. The supper lasted till nine. The entertainment lasted till twelve. Then there was another supper for the men who drove the cadge teams for the railway construction gang. This lasted another hour. Then they insisted on part of the programme over again. It was all over at 3 a.m., and the teamsters stayed in the school till morning, being afraid to make the trail after night.

I did not get back to the ranch for Christmas. I was at Mr. Bennett's, where five geese and five turkeys were cooked and every one had to go or send a good excuse. It lasted two days and then I sent my horse to the ranch and I went to the land of the Chinook wind and taught school near Calgary till May 1st, when I returned once more and took up the joys of life as a homesteader.

A STEAM PLOW AT WORK.

I made arrangements with the owner of a steam plow to break the whole quarter section, and I hired a man who drove six oxen on a seed-drill and had a set of harrows behind. He sowed and harrowed 140 acres of flax in five days.

Things moved quickly. We now had a daily mail. The arm of the Bell Telephone Company had reached us and many more settlers came in. It was soon harvest time. The crops once more were good. Flax was a good price. On New Year's day it was \$2.38 per bushel. I was making money. I spent that winter in Ontario as agent for the C. P.R. Land Company.

The change of climate was not good for me. I got cold and coughed all winter, and in the spring was glad to be back to put in my last six months before the homestead became mine.

That year I got my land back set with the steam plow, and put it all in oats. My acquaintance was extending.

I knew either personally or by reputation every man, woman and child within fifteen miles. I became assessor of the township and tax collector. Everything looked fine. From my doorstep I could see Tuxford, Marquis, Keeler and Brownlee towns and miles of waving grain. The 24th of May brought the annual tournament, July 1st the annual fair and July 8th, Sunset Picnic and the yearly baseball match between the Bush Rabbits and the Sunset Stars.

BUSH RABBITS VS. SUNSETS.

It was a perfect day. They set tables by the lake. A dancing platform had been erected. The first three games were over. The Bush Rabbits were champions again, only the football matches were unfinished. Then the sky got dark, and in half an hour it began to rain very heavily. Suddenly it ceased, The sky became covered with white streaks and five hundred people tried to get in four houses all at once. It was a hail-storm. The stones were not large, but they covered the ground completely. A gloom fell over the whole crowd. Then inky blackness covered the land. This storm meant a lot to these people, all struggling for a home in a new country. No one could get home in the dark. They kept up a half-hearted party at all the houses till three o'clock next morning. When it was daylight we went home. The hail-storm had leveled everything. My oats were flat. I remembered my hail insurance, which a smooth-tongued agent had insisted on making me take, and the premium had been paid by note. I looked it up. I was insured for ten dollars an acre. I was glad I let him have his way. He was the first fellow who had tried to force money on me in years. I took a holiday, as the company had to be notified within twenty-four hours after a hail storm. But things are never as bad as they look. In a few days nearly half of the oats came up again. In three weeks the valuers came around, and after an hour's wrangling I was allowed \$6.00 an acre damage. I had the crop threshed and it went 23 bushels to the acre after all, although in settling I had

offered to take the full insurance and let them have the crop.

In October the homestead inspector came and spent a night with me. He found I had complied with the law and signed an application to the Government that I be given a patent. In a month I received notice that the land was mine. I was forced to give a party in honor of the event. We had a good one and I enjoyed it as well as anyone. It was in October, the last Sunday in the month, my last Sunday on the prairie. I went over to see the Frenchman with whom I had spent my first week there. He now had 800 acres, even if it was not all paid for and he was prospering. At church time not a soul had arrived. It was the first cold Sunday and the people had to change from wheels to runners, which accounted for the lack of worshippers. The cadge team had left off at the Frenchman's the night before ten gallons of whisky for the construction gang, and as it was cold they had not yet come after it. I looked out of the window and saw the preacher coming; not the regular preacher, but the head of the Temperance and Moral Reform Branch from Winnipeg.

LIQUOR TRAFFIC SAT ON.

The Frenchman threw a horse blanket over the keg. The minister finding no one at the church came to see us. Before we could get him a chair he sat down on the keg. The Frenchman lay down on the bed and laughed. I can see the minister yet with his long serious face and thin legs. It was funny. In all my life I had never seen the "Liquor Traffic" so severely sat upon. After a chat he arose and took leave of us, thus destroying the best natural cartoon I have ever seen.

William Smith had sold at a big price and bought and located a Veteran's Scrip of 320 acres in Alberta. The residents were becoming more prosperous and two had built brick houses.

Then a summons came for me to hurry back to Ontario. The man from Willow Bunch came for his buggy, and I gave him the horse and harness also, and considered we were square. I went and spent a few days in the valley with



"Before we could get him a chair he sat down on the keg. . . I can see the Minister yet with his long serious face and thin legs. . . I had never seen the liquor traffic so severely sat upon."

the Bennett family and on the return I announced I would leave on Saturday morning. This was the excuse for a great party and presentation. It was not that they had any particular regard for me, but they welcomed the excuse as a good chance to get together for a good night's pleasure.

Friday night came and the building was full. At three o'clock next morning when the fun was at its greatest I slipped away and rode with a huckster into Moose Jaw, just twenty miles. He had an empty crate on the top of the load, and when we got half way and it was still dark he drove under a poplar

tree in front of a house where many chickens were still roosting. He roused the farmer from his sleep and told him that his chickens had got away on him out of his rig and were roosting up in the farmer's tree and would he help him catch them. The farmer grumbled but dressed himself and climbed up in the tree and handed down his own chickens. He was thanked and went back to the house. I asked the huckster if that were not stealing. He said, "No, the farmer gave them to me and you saw him do it." Then I was quiet.

We got into Moose Jaw a few minutes before the "Local" left for Winnipeg. I boarded it, and as I sat back

in the cushions I could not help but weighed 170 pounds. Now I weighed wish that the next three years would 228. It had seemed to me like a pleasant holiday and I had become an expert cook and could make the best strawberry shortcake in the world.



A MEMORY

A boyish face I met to-day,
Seemed strangely to remind me
Of school-days—over long ago—
And the Boy Who Sat Behind Me.

For, through the strain and stress of
years,
Still links of mem'ry bind me
To school-friends scattered far and wide
And the Boy Who Sat Behind Me.

In class and fun, with other girls
And boyish friends, you'd find me;
But one had won the favored place—
'Twas the Boy Who Sat Behind Me.

And, when I failed to answer right,
His whisper would remind me:
He did my sums; he wrote me notes—
The Boy Who Sat Behind Me.

A friendship innocent, unspoiled,
And yet—and yet! I mind me,
A hand found mine beneath the desk—
'Twas the Boy Who Sat Behind Me.

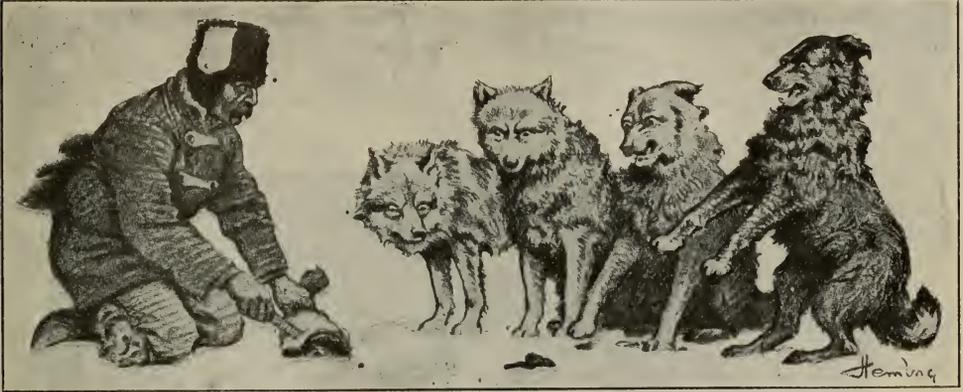
And, strolling home one summer eve,
When stars beamed on us kindly,
I found my Boy had grown a Man,
My Boy Who Sat Behind Me.

Brown eyes met blue; with trembling
voice,
He said he would not bind me,
But work for me and wait for me—
Brave Boy Who Sat Behind Me.

And many a lad I've met since then,
But never could I find me,
A knight like my young Galahad,
Like the Boy Who Sat Behind Me.

The snowflake drifts against the pane,
Its chilling breath reminds me
The snow rests on his quiet bed—
My Boy Who Sat Behind Me.

—Freda Ernst.



THE LAST PATROL

The writer of this article is one of our rising Canadian authors. Short sketches by him have appeared in *Farmer's Magazine* on previous occasions. This story is a true record compiled from the reports of the Royal North West Mounted Police. No more heroic deeds exist than those which are narrated in the annals of these Western guardians of the peace. This article is republished from the *Harper's Weekly* by special permission.—Editor.

By Alan Sullivan

FITZGERALD'S patrol was due in Dawson on February the 1st. After three weeks of storm and cold the Indian Esau arrived, saying that he had left Fitzgerald on January the 1st, at Mountain Creek, twenty days' easy traveling from Dawson.

Thereupon Snyder, commanding B division of the Yukon, thought hard, and telegraphed to Perry, Commissioner at Regina, *via* Eagle, Valdez, and wireless.

Perry's answer halted, for the wires went down under the weight of winter winds. But, when it did arrive, Dempster's patrol pulled out for Fort McPherson on the very same day. With him were Constable Fyfe, ex-Constable Turner, Indian Charles Stewart, and three teams of five dogs each.

Three weeks later Dempster, having tramped four hundred and fifty miles,

was swinging down the Peel River. His eyes, roving restlessly, picked up an old snowshoe trail. Turning sharply, he followed it up the steep bank and pushed his way into a clump of ground willows. There he stopped, stared hard and long, and stooped over something that broke the smooth curves of drifting snow.

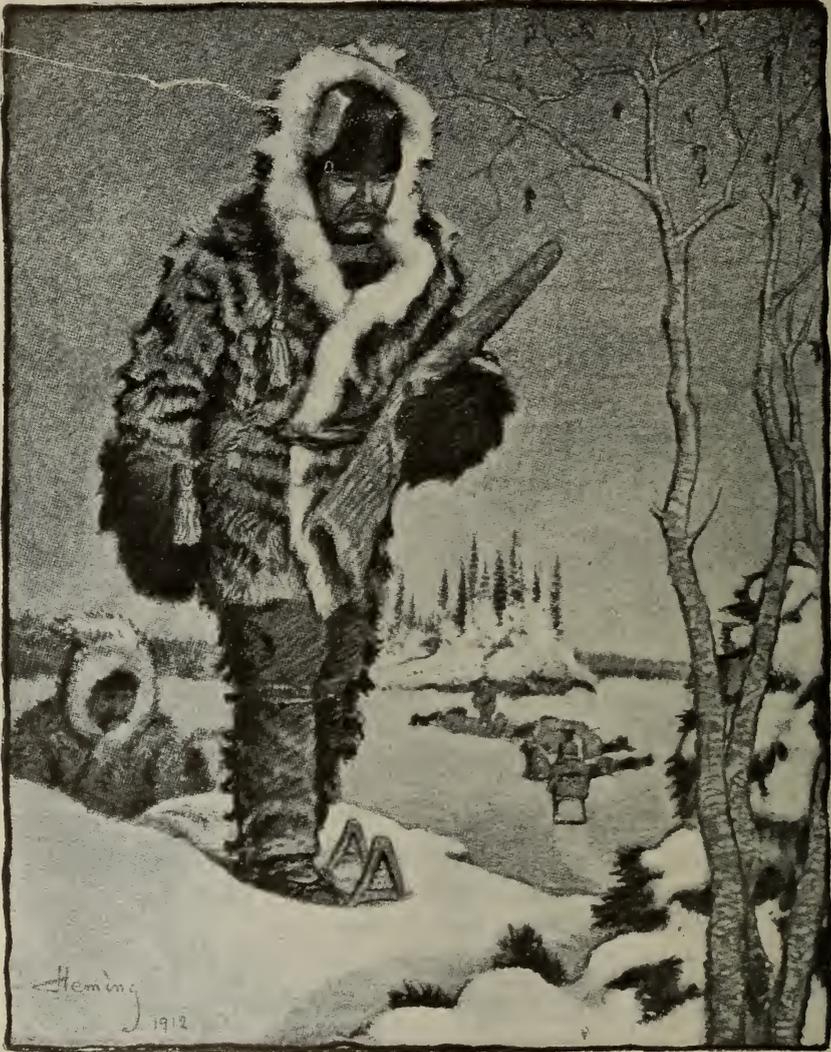
From Fort McPherson south-west to Dawson as the crow flies is three hundred and fifty miles. As man walks it is five hundred. As water runs it is a good deal more. Inspector Fitzgerald told Corporal Somers that it was just about thirty-five days, and, as you will see, Somers had reason to remember that just three months later.

Fitzgerald's orders were very brief. He was to patrol to Dawson in the winter of 1910-11. Thus wrote the Commissioner in Regina to the Comptroller

in Ottawa, the summer before. There was nothing unusual about it. The Mounted Police were threading the wilderness everywhere.

So Fitzgerald gathered in Constables

pounds of fish for the fifteen train-dogs. In other words, he allowed two and one-quarter pounds of food per man per day, which is less than the sub-arctic standard ration. It was to be a record



He stopped and stooped over something that broke the smooth curves of drifting snow.

Kinney and Taylor, and Special Constable Carter, who had made the trip once, from the other end, four years before. Also he requisitioned, to be exact, twelve hundred and fifty-six pounds of supplies. These included nine hundred

patrol. Every pound of weight was a handicap.

Now the recognized route is up the Peel a hundred miles, across the big bend eighty more, hit the Peel again, then turn up through the Big Wind in-

to the Little Wind River, till you strike Forrest Creek. This takes you by way of Mountain Creek to the gaunt backbone of the big divide. Here the waters on your left hand flow into Bering Sea and on your right into the Arctic. Once over the big divide you strike Wolf Creek, then down hill, across the glaciers, the Little Hart River and Christmas Creek and the Blackstone. These are Yukon waters. All of this sounds geographic. In winter-time in the North, it is something more, for here geography is vital and insistent.

On December the 21st, which was a Wednesday, a pygmy caravan swung out on the broad expanse of the Peel. Three men, three dog teams one man—that was the order of going. The wind was strong and the cold was bitter. Fifty-one below on the tenth day—you have the figures in Fitzgerald's diary for it. Half-way over the eighty-mile portage is Caribou Born Mountain. Eighteen hundred feet above the stark wilderness it should, mantled with great drifts, plas-

tered with ice, searched and harried by every wind that lifts across these speechless wastes. The trail clings to its bleak flanks; and over the trail toiled Fitzgerald's patrol.

What shall be said of the trail to you who know it not? The air is tense and sharp, it almost rings. The nights are luminous with ghostly fires that palpitate through the sparkling zenith. The days are full of aching, destroying, indomitable effort, when the body summons all its powers to live under the weight of arctic frosts. And through the body run the pain and torture of burning sinews and scorched sight, till the innermost essence of courage and fortitude and contempt of death rise up to laugh out in these silences. Here the soul of a man shouts aloud, for life is terrible and fierce.



The Indian Esau Arrived.

On January the 8th, on Little Wind River, it was sixty-four below, with a strong head wind. A day or two before the temperature was the same, and Fitzgerald records some slight frost-bites. What eloquence of brevity!

Then began the search for Forrest Creek, that led to the big divide. It will be remembered that Carter had come from Dawson once, but he had come north. There was a vast difference. In between times he had been roaming the sub-arctics, and, with the exception of a few gaunt landmarks, the great ridges and plains of the Yukon district are like brothers all. There was also the map that Darrel drew the summer before. But Darrel was on his way in a canoe from La Pierre House, near the Alaskan frontier, to the Red River, south of Winnipeg. This was a matter of some three thousand miles. So he was in a hurry and did not spend much time when he stopped at the Fort, and Fitzgerald was not there to see him draw it and ask questions.

A few days later the inspector pulled up. The Dawson trail was lost. The tributaries of the Little Wind River, among which somewhere lay Forrest Creek, had yielded no clue. Precious days were spent in which dauntless humanity had braved the double rigor of cold and a gradually increasing hunger. In these latitudes the body cries out for food. Its demand is primordial and relentless, and what the body receives it almost instantly transmutes into strength and bodily warmth, into an inward glow to fortify it against the death that otherwise is sure. In the north to be hungry is to be cold, and to be cold is to invite the end.

All this Fitzgerald knew, and yet, when his lean brigade faced backward on the trail, there was left of the provisions only ten pounds of bacon, eight pounds of flour, and some dried fish, the latter for the dogs. The delay was the price of his contempt for hardship and danger. But you must know that hunger and cold were no strangers to the police. They met and grappled yearly with no quarter asked.

On the seventeenth of January began the retreat of beaten men. Who shall say what thoughts animated them, moving like specks, infinitesimally small, over a blank and measureless

expanse? With nightfall came the first tragedy. The first train-dog was killed.

Now the dog of the north is cousin to the wolf and kindred to the fox. He is very wise and his teeth are very sharp. But here, more than in all the world, he is the friend and servant of man. By the trail you will know him, when his shoulders jam tight into the collar and his tawny sides break into ripples with the play of tireless muscles underneath. Man may at times kill man, but not, save in the last extremity, may man kill dog.

Fitzgerald's ax fell. There was a quick twitching of sinews and a snarling from the fourteen comrades of the trace. Then something older than man himself rose in them and they drew back from the gory fragments of their brother. Their bellies were empty, their eyes glanced shiftily and winking at their masters. Insensate hunger was assailing their entrails, but dog would not eat dog.

Thus continued the agonizing march. Their bodies lacking natural food, began slowly to capitulate their outposts to the frost. Gray patches appeared on faces and arms and there was no rush of warm blood to repel the invader. Day by day with dwindling strength these indomitable souls fought on, giving of themselves to the fight, but day by day having less to give. That is the great drama of the North. It demands, it seizes, it usurps; but, for itself, it does nothing but wait. It closes in little by little, by day and night, always waiting and always taking, till, after a little moment of its eternal silence, it has taken everything.

By February the 5th many things had happened. The dauntless four had travelled about two hundred miles on dog-meat. The river ice was weighted down with its burden of snow, and both Carter and Taylor had plunged through into numbing waters while the temperature was fifty-six below. The human organism shrank from its savage portion of canine flesh. The skin began to split and peel and

blacken. The tissues of their bodies shrank and contracted closer and closer round hearts that still beat defiantly. Feet and hands began to freeze, and ominous gray patches mottled their high cheek-bones that stood out sharply from hollow faces.

When and where Taylor and Kinney dropped behind is the secret of the North. But soon after the fifth a morning came when they did not break camp with the others, and the fort was only thirty-five miles away. The parting must have been brief. Then, in the gray of the arctic morning, Fitzgerald and Carter summoned their last reserves of failing strength and staggered on for help.

The day waxed and waned in the little camp and all around closed in the stark and stinging wilderness. Food there was none. By now the organs of the body, lacking sustenance, had turned upon each other to destroy. Hunger had changed from a dull pain to a fierce gnawing and snatching at the vitals. With cracked fingers they chopped at a moose hide and boiled the fragments. But their stomachs, which receded to the backbone, refused to harbor it. So beneath the Alaska robes they lay and waited.

Taylor spoke. There came no answer. He looked into Kinney's face. It stared up blankly and the hardening body did not yield to his touch. The comrade of the trail had changed places with Death—with a new bed-fellow from whose chill embraces he he struggled weakly to escape.

Strange visions came in to his mind; thoughts of running water and warm weather and bronzed men sitting round big camp-fires telling stories of patrols. And the most interesting of all was about the Dawson patrol that broke the record from Fort McPherson under Fitzgerald. Just as he was getting a light from the next man his elbow touched something, and, turning, he saw a corpse that looked like Kinney. He thrust out a hand and it encountered something cold. So his eyes traveled slowly till they saw Kinney's face, and it was gray with frost. The fire

went out. The men stopped talking. All at once he heard something coming through the underbrush. It was strangely difficult to move, for he was still very sleepy, but he did manage to get hold of his carbine. Then something lurched toward him, lumbering and dreadful, and he pointed the carbine straight at its crimson, dripping mouth, and crooked his finger.

A shot rang out, sudden and sharp. It rolled from the little camp, through the scant timber fringing the river-bank, up into the motionless atmosphere and toward the diamond-pointed stars. There was no one left to hear it. But Christ is wise and merciful, and He understood how it was that Taylor lay with the top of his head blown off, beside his comrade of the trail.

The price was not yet paid; the North demanded full tribute. Ten miles nearer home, twenty-five miles from the cheer and warmth of Fort McPherson, it was paid in full. Ex-Constable Carter lay on his back, with folded hands and a handkerchief over his face. Beside him crouched Fitzgerald, battling for life. His stiffening fingers wrote laboriously with a charred stick on a scrap of paper. His stricken eyes moved from it to the still figure, then back to his writing. "All money in despatch-bag and bank, clothes, etc., I leave to my beloved mother." It was all very clear and plain. Then, as the ultimate distress seized him, he added, "God bless all."

He was now conscious that it was left for him to balance the account. The physical struggle was ended. There remained only the mental anguish. So Fitzgerald must have summoned to his aid all the heroic traditions, all the magnificent discipline of the service. He faced the end like a soldier and an officer, without rancor, fear, or complaint. He gave himself, all of himself, to that baptism of mortality with which the vast spaces of this silent country are being redeemed.

Winds blew. Snow fell. The hollow caverns of the North emptied themselves of storm and blizzard. And after weeks of silence came Dempster.

He had searched Forest Creek, but found no sign. Little Wind River did not speak of the vanished brigade. The Big Wind had no word of them save deserted camps and the black hearts of dead fires. Caribou Born Mountain held its peace, for they were not there, but the sign came when the Peel began to broaden to the Arctic.

First, a despatch-bag in Old Colin's lonely cabin; then a tent and a stove; then dog-harness from which had been cut all hair, and hide that might retain anything of nourishment. Thus grew the tokens that tightened the cords round Dempster's breast and chilled the hot blood pumping through his heart.

And, at the end of it all, two rigid forms beneath their sleeping-bags. The face of one blue and blotched, painted with all the fearful coloring of frozen death. The other no longer the face of a man.

A few miles farther on, their brothers of the trail, the hands of one cross-

ed, his eyes decently closed and covered. Beside him the lost leader, the last to die.

Race now with Dempster to Fort McPherson, only twenty-five miles away. Call Corporal Somers and make with him the last short journey that brought Fitzgerald's patrol back home again. Stand and watch the three Indians dig a great grave in the iron earth. Listen to Whittaker, English Church missionary, speaking trembling words over the four rough coffins. Guard your ears while the red flames leap and the echoes crash from the rifles of the firing party. And, when you have done all this, do one thing more: Remember that while the wilderness endures there will also endure those to whom its terrors are but an invitation; those who will meet its last demands with the calm cognizance that mocks at danger.

Brothers of the pack-strap and the saddle—well-tried comrades of the trail—sojourners in silent places—honor to the Service and to you all!

In The Garret

Cold, is it? Maybe so. I'm used to it.
 (But chillier still the notice—"Please remit!")
 Why do I do it? Why do birds sing?
 And night stars shine and flowers fling
 Their fragrance to a quiet world at night?—
 Ah, if you knew one thought of the delight
 Pulsing the veins, when one's whole being throbs
 With ecstasy, like laughter amid sobs!

Joys? There are many. Sorrows? Maybe, too.—
 She dwells not here—and I am glad, 'tis true—
 But oft she comes with violets in her hair,
 And lingers lovingly about my chair,
 And her warm fingers flit o'er mine, so cold!
 And, then, ah, then—my life holds wealth untold!

—Amy E. Campbell.



BE GOOD TO MARY ANN

Note.—In the March issue of Farmer's Magazine the question was asked by Mrs. Muldrew of Red Deer, Alta., if farm girls were worth educating. An answer to this question has been given by the author of this sketch who makes out a good case. We all have known of the "Mary Anns," also of the dearth of social life in the country. Particularly good is that line in this sketch which says, that "home is the school of the soul and when it fails to be this, it is just a den for the animal or a lair for the beast."—Editor.

By Ethel M. Chapman

IF THERE is any member of society whose significance is not generally appreciated it is the girl on the farm. I do not refer to the girl who grows up on the farm and leaves it, but to those who live there, month in and month out, a vital part of its machinery. We find that such girls are rare, that the flocking of young women, as well as young men, from the farms to the cities, every year presents a more serious problem, and that, although it is a pitiable condition, considered from the standpoint of the girl as well as of the community, it is not to be wondered at.

How often the eldest daughter in a home remains on the farm, working,

planning monotonously, faithfully, gradually losing sight of all outside the narrow horizon of her duties. She sees each of her sisters go out into the world to meet either achievements in professional life or her affinity, (if there be such a thing), but little of reward or romance enters her own life. Then, when it is too late for her to learn any new way of earning a living the father dies, probably leaving each of his sons with a farm of his own and the fatherly admonition—, "*Boys, be good to Mary Ann.*" Had Mary Ann been worldly-wise, how long would she have remained on the farm?

There are several respects in which

farming does not offer the most attractive prospects to girls, yet in every way it should be the ideal life. In the first place, it means a steady routine of daily tasks likely to become both wearing and monotonous, unless the girl educate herself to see the beauty and worth of the commonplace. This is where Domestic Science has one of its chief values and with Macdonald Institute founded primarily for farmers' daughters and largely supported by farmers, it is to be regretted that more girls from the farms do not avail themselves of its course. Yet how often I have been asked "*Couldn't your mother teach you to cook at home?*" or "*Why even an old hen knows how to rear and care for the chickens. Instinct teaches those things.*"

I grant you, the old hen could get along quite successfully if she had only natural conditions to contend with, but let china eggs be substituted for Nature's product, and she will sit on and on, wasting valuable time and probably ruining her own constitution. Instinct cannot teach us to cope with artificial conditions, and in this advanced age of scientific invention women must have a certain knowledge of the science underlying problems arising every day in the home. Then cooking means not merely preparing meals, but the physical building of human beings, the intelligent study of balanced rations. *It is no longer drudgery, but the work of a dietician, a chemist and an artist. Even the washing ceases to be a merely mechanical process. Home decoration assumes an artistic phase whose study never ceases to be a delight. In short, her work has assumed a dignity which makes the girl feel herself to be indeed a sharer in the world's useful work, and in this value and dignity of the rather strenuous labor of farm life lies its own reward. There can be no accusation of "female parasitism" here—, the woman can justly feel that she is a necessary partner in the business; the industry would suffer without her.*

IT MUST HAVE A MONEY VALUE.

Now, since we know that the girl's work on the farm is profitable or bene-

ficial to the industry as a whole, we must know too, that it has a money value. The same work done away from home would command wages according to its value. "*But,*" some parent will say, "*we get her everything she asks for. What we spend on clothes, etc. for her in a year would amount to more than she could earn away from home.*" Even so, that system does not enable her to live up to her best as a social factor. She should have money of her own, either an allowance, or what she can make from poultry or some farm product. Whatever arrangement is made, it is both unjust and little short of cruel, that the girl working constantly at home should be subjected to the humiliation of having to ask for every cent she requires; yet the home-maker is about the only unpaid worker in the state. Is it surprising that she sometimes envies her independent sister?

WHOLESOME PLEASURES ESSENTIAL.

Again, farm life in some communities offers so little in the way of social enjoyment that it becomes distasteful to young people. A "good time" is the birthright of every girl. By this I do not mean a butterfly existence, but a chance to develop the free love of wholesome pleasures. The relaxation of nerves and the freedom from worry during the years of her girlhood, will build up a reserve force to draw upon later when added responsibilities come, and her children, if she have any, will be the better for it. Now, although the city may appear on the surface to offer better social advantages, in reality the society in rural communities should be safer and more enjoyable for the girl because she has a better opportunity of knowing the lives and characters of her companions, and in the social life of her community, she has the best field in the world to use her influence. It is to be regretted that girls so rarely appreciate this.

Through all history, among all races, and nations, the degree of civilization, the progress in culture and refinement, and the general morality of the state has depended primarily upon the character of its women, and the truth is

shown just as plainly to-day in the tone of every home fireside or barn dance or church social. It is the girl who decides whether the entertainment of the neighborhood shall take the form of little gatherings in the home with music and sweet home games and dancing if you will approved and participated by parents,—or questionable balls in the nearby town; it is she who sets the standard of conduct for the youth of the place, though, of course, they never admit it; and it is her refinement and sweetness or their opposites which determine the ideal of home life as an object of attainment for the swain of her acquaintance. Think, girls, what this means to the social standard of our country as a whole, and then consider lightly, if you can, the sphere of the girl on the farm.

Since the influence of the country girl is of so much consequence, it is obviously desirable that she be enabled to make it count for the most good possible. For this reason, if for no other, her education should not be limited to merely what is considered necessary for practical purposes of farm life, but in cases where it has been impossible for her to have the advantages of a high school or college education, there are innumerable methods of culture at home. In the first place there is a wealth of pleasurable education in good reading, but the difficulty often lies in the choice of books. The young girl is invariably attracted by fiction, and sad to say, many of our public school and even Sunday school libraries are filled with the foolish, impossible stuff which reads something like, "With both arms clasped about her slender waist he fondly stroked her hair."

To overcome the difficulty of procuring good reading matter at reasonable cost, I would suggest the circulating library in connection with the Women's Institute, each member contributing the price of a good standard book, and at the end of the season, after reading all the books, retaining her own. Further, where a Reading Club could be formed

and some of the heavier writings studied in class, the benefit derived would be multiplied. Sometimes it is possible to form a mixed class of men and women, the members taking turns in leading the discussion of certain passages each evening. Nor as a means of personal culture must we overlook the literary society or debating school with its facilities for entertainment as well as education. Then if the girl on the farm be allowed some time and means of cultivating her own talents, whether they be music or art or expression or any one of the ever-increasing lines along which a woman may develop her individuality, she will be not only able to give pleasure to others, but will have something to fill the empty spaces of her own life if it be a secluded one. And we must remember, too, that once the individuality is stunted or crushed out of a girl she ceases to be a factor of society—its routine just becomes a treadmill.

Then above all, the world has come to recognize the rural woman as the nation builder. Where are we to look for these women except to the girl on the farm? When her value to the state and to the agricultural industry is appreciated, and the dignity of her sphere recognized, I hope more girls will take it up whole-heartedly as one of the most noble professions. To the farm homes the city looks for most of its professional men; upon the young life of the country the nation depends for its reputation for industry, intelligence and morality. "*A nation never rises higher than its homes,*" and while home-life may rise higher than its men, it never reaches a level above that of its women. Home does not mean a place to stay, a boarding-house. *Home is a school for the soul and when it fails to be this it is just a den for an animal, a lair for a beast.* Who then can think lightly of the position of the girl on the farm? Who can consider narrow the sphere of her commonplace tasks, or place any limit to her possibilities as a social factor?

A Tribute to the Pioneer Women

By Alberta M. Kepper

"The lingering charm of the dream that has fled,
The rose's breath when the rose is dead,
The echo that lives when the tune is done,
The sunset glories that follow the sun,
Everything tender and everything fair
That was, and is not, and yet is there."

Such is the impress of the lives of women that brave hardships of a new country and there become the cornerstone of future national greatness.

With all the burdens of pioneering upon her young shoulders, less strong and less sincere women would have turned back; but simple living—just enough to meet the needs in food and clothing—contributed to a splendid physique, a clear brain and a steady nerve—capital material out of which to build foundations.

To-day we find women of this stamp upon the frontier, not minding the pressing problems of pettiness, where caste counts above merit, but fixing their ideals high, unmindful of all save right, they bow before no shrine but truth. They are the trustees of destiny, trained in habits of industry and thrift, and in that stern religious life that mark all things worldly as sacrilege; like unto the foremothers of the Mayflower.

LIKE SWEET INCENSE.

The records of the lives of these women that have gone out of our possession forever (except as their abiding influence falls as a benediction on the children of men) would be a history of strength and power radiating down through the years. She might better afford to lose record of the world's greatest conquerors than allow the memory of these women to die, for none has done a better, braver work, nor made greater sacrifice for her country than she that leaves kindred—the ties of love riven and strikes bravely out

into the varied portions of earth to help build a home; and be it cabin, shack, dugout—whatsoever the land affords—she accepts and bestows the crowning touch of woman's hand without which the palace is not a home.

The pioneer woman has the wonderful inspiration of the land and sky. The new earth refreshes; the untainted winds are as a breath from heaven.

The courage of strong men breaks under the ill-balanced load of a life all toil and struggle; and the spirits of the children droop when left to their own resources, but oh, the refuge of the mother's arms. She is the fountain head of courage. Hiding the ache in her own heart she comforts them. *She mends the break in her own voice* then croons the old lullaby in the new land.

A PIONEER'S STATUE.

At last all this courage and devotion to duty is to be fittingly recognized. My heart leaped up when I beheld the model of the statue in bronze that is to commemorate the pioneer women. The suggestion must have been inspired.

With one arm about her boy, her eyes towards the setting sun, there seem garnered up all the power and purpose of a fixed and wonderful love and hope. A sacred vision! Where is the great man that had not the influence of a great mother all the way from the cradle? Her's is the story behind his glory. So with nations!

One not distant day there can be no more pioneering in all America and, lest we forget, let us tell the story to our children and our children's children in this lasting tribute to her worth.

Somewhere along the international boundry line, mother and son, the one, the hope and stay of the other, will guard the great good will of neighbor nations that have so much in common.

The molten metal of the lines of the pioneer women of both nations was cast in broad moulds and in humbled spirit her daughters offer this undying tribute to her memory for "she hath done what she could."

DEFERENCE TOWARDS AGE

While boys will be boys, and girls will be girls, and while captious critics will find the lack of manners in our young folks a subject for discussion, the facts remain, that there is a great deal of politeness in the world as well as many cases where there is an incivility that justifies the comment. The children from a good home rarely offend by their rudeness. It is this home-making business that is dignifying the work of the Women's Institutes in Canada. The writer of this article is a member of one of the local County branches, Ontario.—Editor.

By. E. M. Thompson

JUST recently, a lady entering one of our village stores was confronted with the following remark: "Miss Blank, I think that the Woman's Institute, instead of talking so much about cooking and baking, had better give some of their attention to the manners of children."

The lady addressed noticed a group of children from the village school collected in front of the delivery of the mail,—boys and girls, apparently varying in age from ten to fourteen years, jostling each other in their eagerness to get the daily mail. "Gimme the mail." "I want John Thompson's mail." "Git out of the way," shouted a burly lad that was making an effort to block the doorway to prevent other young Hercules from entering.

A gentleman, evidently about the age of sixty, stood behind the delivery quietly distributing the various parcels to the young insurgents, while the woman behind the counter occasionally intervened the following phrase: "Say please, children," while Young Canada paid no attention whatever to the lady's effort to teach them a little respect.

The lady addressed was a member of the Women's Institute, and was not disturbed in the least, by the apparently abrupt manner of the merchant's wife, as she knew her to be a woman of admirable qualities, and very friendly and kind to children.

The lady patron of the store fully realized the situation and had noticed

many times before the growing evil among the children of the neighborhood. She felt impressed that this display of animal spirits and dis-respect for older persons would naturally annoy many, and she determined to use her influence in every way possible to avert the mischief and make better citizens of the coming generation.

"The powers that be, are ordained of God." If I understand correctly this assertion of Holy Writ I feel that it appeals most emphatically to all those who are in authority over us, whether in the home, the school, or the State.

A few months ago the Melbourne Argus, of Australia, complained that in the large schools of that country there is a tendency toward "cubbishness" or "showing off" as it is phrased, that might be classed as one of the modern diseases of youth, and there is no doubt about its wide prevalence; it shows itself most generally by a kind of boorish or studied insolence toward seniors — all those whom the young are supposed to respect. The Argus asks: "Is it possible to teach manners in the public schools?" I know from personal experience that it can be done.

We have an old maxim: "Example is better than precept." Example, though most important, is not alone sufficient to cope with this prevalent evil. I know instances where parents seem to be entirely ignorant of either example or precept. In a neighborhood in which I

once lived, dwelt a family of three children. The incorrigible Arab in the family was a boy of eight years. The father directed him to bring a chair from an adjoining room for the accommodation of the music teacher who had just entered. "Oh, I won't do it; let Blanche do that." When the younger of the two sisters offered a reproof the paterfamilias boastingly retorted: "I would not give a fig for a boy who has not some lip."

I leave the reader to draw his inferences. In instances of this kind it is difficult for the teacher to accomplish much by moral suasion, but precept as well as tact, must be brought into requisition. One is not required to assume French manners or social affectations, but we can teach reverence as successfully as music, geography and drawing.

Some sage recently writing on the above subject, called attention to the defects of bearing which go with the virtue of independence. On the course of his remarks he said: "In my opinion no nation would become great unless the spirit of reverence entered into the composition of our national character." He knew boys that thought it effeminate to be well-mannered, and manly to be rude. Civility did not mean servility, and he felt that mothers

and teachers could render no greater service to the country than by training their boys to be courteous, reverent and fair. Now we can place most beautiful ideals before the youth of the country, but we only solve the problem partially.

I can quote a number of other instances in which this insolence has been carried to greater extremes, where profanity and indelicate language has been thrust upon the ears of modest women, and I feel impressed that stringent methods must be brought to bear powerfully on these evils.

One is inclined to ask: Where is the sea of morality? What is it that can make a child reverent, kind, just and pure? In many cases authority does not seem sufficient. It may have its place in the training of the race but often children indulge in these evil practices when isolated from the authority of parents and teachers. Rewards and punishment often fail at the final test and children grow indifferent to them.

This subject impresses me as no theory, but as a most important and vital one, and I appeal to the readers of the Farmer's Magazine, to parents and teachers, as well as the members of the Women's Institute to consider the importance of it, and to aid by their influence in correcting this modern evil.

LOVE'S LAST FAREWELL

Farewell, my own beloved, long farewell,
 Since dawns the hour when we must ever part.
 My prayers shall be that with you e'er may dwell
 The pure and perfect peace of God, dear heart.

Farewell, dear love, farewell through all the years,
 The yawning years that drift us far away;
 I'll plead that angels guard you; through my tears
 One earnest prayer for you I'll always say.

Farewell, beloved! While with throbbing breast,
 I watch alone the even skies above,
 Oft to my heart this pleading prayer I'll press,
 That you may have sweet dreams, sweet dreams of love.

—*Mabel Aileen Nard.*



**HOUSE HELPS
FOR THE
FARM KITCHEN**
by
WINNIFRED MARCHAND



For Spring Flower Beds.

When planting flowers in the spring, if your beds are given a good spraying with boiling water (previous to sowing, of course) it will destroy all weed seeds and insect life existing there.

H. M., Sask.

Pineapples for Throat Troubles.

Pineapple for diphtheria is said to be one of the best remedies known. It has been tested with good effects in very severe cases.

W. M., Que.

To Clean Knives.

Take some fine wood ashes and half a raw potato; dip the potato in ashes and rub knife thoroughly. Wash in warm water and dry with soft cloth. This is cheaper than knife polish when one has to be economical.

J. C. R., Ont.

To Remove Smell of Onions.

Wash the hands in water to which a small quantity of mustard has been added. This will take away the unpleasant smell and will not hurt the skin.

H. W. B., Alta.

Chili Sauce.

Take ripe tomatoes, pour boiling water over them and remove the peeling, slice into sauce pan with about 1 dozen onions to 1-2 pail tomatoes, 4 cups vinegar, 2 cups sugar, a little salt and spice. Boil 3 hours or until thick.

E. B.S., Que.

Prevent Windows Frosting.

To prevent the windows of the house frosting up in the cold winter months take a clean cloth dip it into alcohol and rub over them.

M. F., Alta.

Pie Crust.

When baking pies, to have brown flaky crust, moisten crust with cream before placing in oven. Also by adding a little vinegar to the water when mixing, it will save lard and help to make the crust flaky.

S. G., Alta.

A Wholesome Drink.

Clean some barley and roast to a very dark brown or black, in the oven. Then put through coffee mill, boil the same as coffee. This makes a wholesome drink and children may drink it without harm.

S. G., Alta.

Stains from a Rug.

A safe method to remove ink stains from a velvet rug is to apply warm milk directly to the stains. This will remove the stain when acids would be ruinous to the colors. Have the milk quite warm and soak the stained part absorbing the inky fluid with a sponge, and applying more milk until gradually the stain disappears. This is a sure method and only requires patience in applying it.

L. H., Ont.

To Preserve Game.

Ground coffee sprinkled freely amongst the fur or feathers of freshly shot game will keep it sweet for a considerable time.

It should always be treated in this way when packed for travelling.

H. W. B., Alta.

To Freshen Vegetables.

When vegetables are wilted, add the juice of a lemon to a pan of cold water and let them stand in it for one hour. They will be almost as fresh as when gathered. This is especially good for lettuce, spinach and celery.

W. L., B. C.

To Run Curtains on a Rod.

When running curtains on a rod, slip a finger of an old glove on the end of the rod, and this prevents the curtains catching on the end of the rod.

W. L., B. C.

Removing Paint From Glass.

Paint may be removed from glass by using a mixture composed of three parts of Caustic Potash, and one part unslacked lime. Apply this to the glass letting it remain for some time, and it will remove either paint or tar.

H. E. L., Sask.

Canning Beef at Home.

Cut the raw beef into pieces as large as can be crowded into the cans. Use some fat pieces in every jar, but do not let a drop of water touch the meat either before put-

ting it in the can or afterwards. If any of the meat is carelessly handled and should become soiled, scrape or trim it carefully; but do not wash. Pack the meat into cans, but do not fill them too full—that is, leave a little space in the top of each can to allow room for the meat to swell while cooking. Put one heaping teaspoon of salt into each can. Put on the rubbers and screw the covers down as tightly as possible. If the old covers are used, be sure they are thoroughly sterilized.

Put some pieces of shingles in the bottom of the boiler and set the filled cans on them as close as possible. If you have not enough cans of meat to fill the boiler, put in some cans filled with water instead. This will prevent any of the cans of meat from tipping over while boiling. Fill the boiler to within three inches of the tops of the cans with cold water, and set it over a hot fire. After water begins to boil, keep it boiling for three and a half hours, taking care to add more boiling water from time to time to replace what evaporates. Be sure to use new rubbers, as old ones would get soft with continued boiling.

After the meat has cooked the specified time, lift out each can and tighten the covers. Let the cans cool, and the next day remove them to the cellar, and anticipate the pleasure of furnishing your table with delicious meats, when the thermometer forbids the thought of fire.

A. C., Ont.



Feeding the farm hens just before roosting time.

HINTS FROM THE COOK

By Jean McKenzie

It seems no time at all since we were exercising that part of our brain devoted to matters culinary (if there is any special part set aside for that purpose), over that wonderful array of good things which makes up the Christmas dinner. But how the winter has flown! Easter has passed. Suggestions for the housekeeper who prides herself on being "foresichtit," are always in order on the farm. And with so many attractive, yet simple dishes to choose from, her task is not a hard one. Following are some rather novel ways of serving the fresh spring time egg, and a recipe for a new marmalade:

Baby Omelets.

Beat four eggs, yolks and whites separately. To the yolks add one teaspoon flour, stirred in a little milk, and a pinch of salt, then one cupful of warm milk, and lastly the whites, beaten to a stiff froth. Bake in buttered gem-pans until set, and serve with cream dressing.

Swiss Eggs.

Butter a baking dish, and sprinkle the bottom thickly with grated cheese. Break eggs on to the cheese, being careful to keep them whole; then add another layer of grated cheese. Season with salt and pepper, and bake five minutes, just before serving add small pieces of butter.

Stuffed Eggs.

Boil hard six eggs; remove shells, and cut a little off each end to make them stand well, cut each in half, and remove the yolks. Rub the yolks to a paste with two table-spoonfuls of melted butter, season to taste with finely chopped green onion, minced parsley, mustard, lemon juice, a little chopped cucumber pickle, and half the quantity of minced ham, tongue, or chicken. Season with salt and pepper and fill the whites with this mixture. Empty the seeds from six small red tomatoes, and fill with the remaining egg-mixture; sprinkle buttered crumbs over the whole, and bake until the crumbs are a dark brown. Serve with a white sauce.

Eggs in Potato Nests.

Take boiled mashed potatoes, and form them into balls, making a little depression in the top of each, so that they look like miniature nests. Warm the potatoes first in the oven, then break eggs into each hole, season with butter, salt, and pepper and bake in the oven long enough to cook the eggs.

Escalloped Eggs.

Take twelve hard-boiled eggs, two cups of milk, one cup bread-crumbs, one tablespoon each of flour, salt, pepper, and a piece of butter the size of an egg. Slice the eggs, and arrange them in layers in a baking-dish. Sprinkle with crumbs, which have been thickened with the flour, and seasoned with the salt and pepper. Proceed until dish is full, pour the milk over it, and sprinkle butter on top. Bake for twenty minutes.

Grape-Fruit-Marmalade.

Four grape-fruit, two lemons. Wash thoroughly, and pare rinds like you would an apple, then cut pieces into very fine shreds. Peel all the tough white membrane from the fruit, and keep it separate, then cut up the fruit, keeping the seeds in a bowl by themselves, and cover them with cold water. Put the fruit and parings in one dish, and the white membrane in another, and add cold water to each in the proportion of three pints water to one pint fruit. Let all soak for twenty-four hours. Then strain the water from the seeds in with the pulp and parings. Boil the pulp and water, and membrane and water, in separate dishes for one and a half hours, let stand again for twenty-four hours. Then drain all liquid from the membrane. Measure the mixture, put it on to boil for forty-five minutes, stirring frequently. Add three-quarters of a pound of sugar to each pint of pulp. Stir until sugar is dissolved, then boil until liquid jellies when dropped from a spoon. Pour at once into scalded jars, and seal.

A FARM REVIEW OF REVIEWS

This Department seeks to acquaint the reader with some of the best things that appear in our contemporary farm journals. Each subject will be found to contain much to interest the average farmer.

Knots and Slings

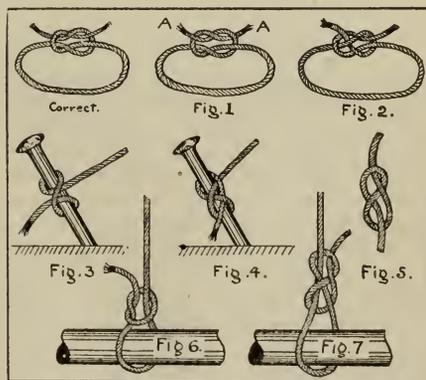
Every Farmer Finds it Useful at Times to be Able to Make a Knot

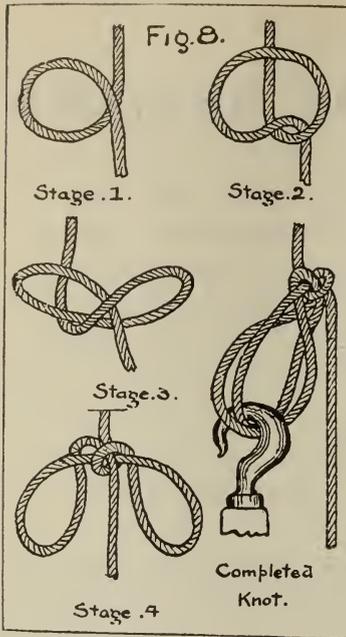
Amongst the duties of engineers, power-house attendants, mechanics and erectors generally is that of handling awkward-shaped and sometimes cumbrous masses of metal, engines and engine parts, machines, girders, joists, gearing, shafting, etc. There are innumerable little lessons to be picked up in this direction, which, when learnt, are invaluable as time savers and aids to safety. Many lives have been needlessly sacrificed through the snapping of a twisted link in a chain, a faulty knot in a rope, a rotten sling, eye bolt or shackle, or a job slipping out of its tackle when hoisted. Many of these accidents might have been avoided had those in charge known the right and safe way.

Slings and methods of slinging, the right and the wrong way of tying knots, hitches and bindings, are worth serious attention. Simple knots, simple as they may be in themselves, form the very foundation of that knowledge which any erector finds indispensable. Fig. 1 shows the right and wrong way of tying two ropes together, or the ends of one rope in order to make a sling. In the right way no amount of tension will cause the ends to slip, but if wrongly tied, with ends (A) (A) as shown, these will have a tendency to withdraw themselves directly the pull is applied. A variation of this knot is also shown in Fig. 2. A scaffold knot, or as it is sometimes termed, two half hitches, is another simple tie, over which frequent mistakes are made. This is a knot useful for various purposes, not the least of which is securing the ends of guy ropes to stakes driven into the ground when erecting high derricks. This

application which is the correct method of tying, is shown in Fig. 3. Fig. 4 is another knot much in favor in some quarters, used for the same purpose, and really an adaptation of the simple twist or figure eight knot in Fig. 5. If you make a slip in the end of a rope like Fig. 6, you are courting trouble; see that the loose end is tied like Fig. 7.

To make a bight in the middle of a rope on which to hang lifting tackle. — If the two ends are engaged and there is some loose rope in the middle, proceed as shown in the first stage of Fig. 8. The second stage shows the single loop given an upward twist, thus forming a double loop—half on each side of the vertical portion of rope. Another twist in the same direction, keeping the loops equi-sided, brings the knot to the third stage. Take the two loops, fold them backwards (from you) and bring them together, and you are then ready to hitch





and note the difference. A basket hitch is shown in Fig. 13, and its application in Fig. 15, attached for lifting (A) a cast iron column. When one sling is short join two together in the manner indicated by Fig. 14.

In splicing Derrick poles, a good plan is to dovetail the poles to be joined, as in Fig. 16, whipping the joint with rope, and to ensure neatness with strength, it should be done as shown. In starting the bind, leave sufficient of the first end of the rope so that it can be pulled tight when wound, and when finishing interpose a stick or hammer shaft between the pole and the last half dozen coils, so that when the latter number is completed, the stick can be withdrawn, and the rope end pushed through. Next, tightly pull up each of these coils singly, finishing off with a stout pull on the rope end. If this is done carefully, the coils being hammered down with a wooden mallet, as you proceed, and the ends pulled tight and afterwards cut off, you will have an excellent splice.

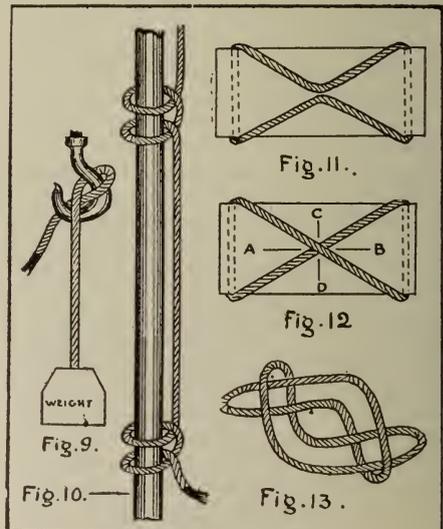
It may be of interest to describe the methods employed when a rope end requires to be bound around a "thimble" and afterwards whipped, as in Fig. 17. This, if done by hand alone, does not result in a satisfactory job, owing to the degree of tightness required. Therefore, it is best to have recourse to the method adopted by many old sailors. They use what is termed a "serving board," as illustrated in Fig. 18. It is made throughout of hard wood, finished with a round smooth handle, and longitudinally grooved to fit the diameter of the rope. The method of using it is shown in Fig. 19. The cord is twisted once round

in the hook of the lifting tackle. If this is done correctly you will have a bight which will never slip. It is quickly made and as quickly undone—which cannot be said of the ordinary doubled loop knot when strained tightly through lifting. In all knots of this description the primary object to keep in view is that each tightening curve or twist of the rope bears on the one which has the most tendency to slip. This is best exemplified by a study of the old and extremely simple loop seen in Fig. 9.

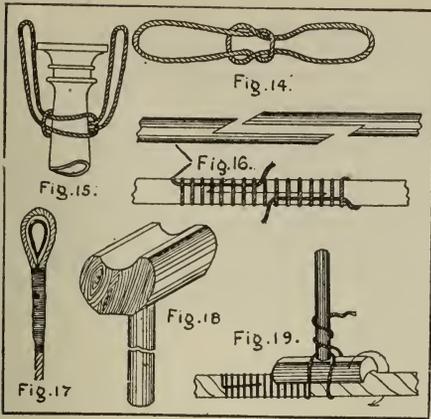
To lift a shaft into perpendicular position. — Some do this by lifting from a collar or a lathe carrier affixed to the top end of the shaft; but an effective and secure way of doing it without the use of these is shown in Fig. 10.

The Rope Sling.

A sling is a rope with the ends spliced together. It serves a variety of purposes and can be readily adapted to many requirements that a rope falls short of, but one can easily go wrong in using it, simple as it appears, for there are several wrong methods to the one right one. Fig. 11 illustrates a wrong method; the right method being to cross the sling as in Fig. 12. Here again there is a liability to go astray when attaching the hook for lifting. This should never be put through the loops in the direction (A) to (B), but from (C) to (D), and should this appear a trivial detail, try it



Care of Ropes and Slings.



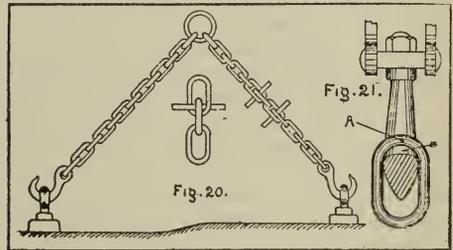
the instrument as shown, the loose end round the the handle held tightly, and the board turned in the direction of the arrow. By this means, the whipping can be done quickly, and as tightly as the strength of the cord will allow.

Sling Chains.

If, when lifting with coupled sling chains, you find one end of the sling too long owing to the points of attachment being out of level, don't on any account knot the sling—it is dangerous practice. Adopt the course shown in Fig 20. Bolts or pieces of round iron interposed between the links will allow to a nicety for a limited amount of variation, and the work may be slung level without endangering the safety of the links.

Another danger with sling chains is that of using a link too small for the body of the lifting hook—one which does not bear properly but forms an arch. This danger is illustrated in Fig. 21, the tendency of the link being to fracture it (A) when strained.

Just a few concluding remarks on the care of ropes and slings. Don't allow ropes or slings to get alternately wet and dry, this rots the fibres. Don't keep ropes in a damp place. Don't permit ropes to get more greasy than can be avoided; remember that a knot always grips better in a dry rope than a greasy one. Don't put knotted ropes away in the store, always untie them and give them a few blows on the floor in order to straighten out the fibres. Don't allow the ends to become frayed; keep them whipped. Don't fail to protect a rope sling against contact with sharp edges or corners when lifting; interpose old sacking, waste or board. Don't fail to run your eye down a rope always before using. Don't under any consideration, permit a twist or a knot in a chain sling. Don't hitch a chain sling over a girder or joist in such a manner that a part of a link lying horizontally is overhanging the edge, and so has to bear the whole strain of the load. Don't fail to have your chain slings periodically annealed; the links become crystalized through repeated strain in one direction. Finally, don't forget that you can always have your slings tested by competent people at a nominal charge.



A \$65,000,000 Farmer

Vincent Astor Decides that Agriculture is the Best Field for Service to Humanity

Vincent Astor, on the day he came into the \$65,000,000 fortune left to him by John Jacob Astor, who perished in the Titanic disaster, was appointed head of the New York State delegation to the International Institute of Agriculture which meets in Rome next May, says Moody's Magazine. Mr. Astor recently visited Albany to ask

the Governor how he could make himself useful to the world.

"He spent the night in the People's House," Governor Sulzer said, "and we talked over many things.

"I told him he was living in a house with only one window; that he was looking out of that window every day, and his views

consequently were limited and contracted. I said, 'You have come to me for advice and my views. I am going to put nine new windows into your house. You can look out of each of those windows with me and you will get a greater perspective. After you have looked out of all the windows, select the view you like best, and the field wherein you think you can be the most useful, and then go to work and do something for your fellow men. Nobody can do more than you to make the world better and happier.'

"He spent some time looking out of those windows and he didn't seem to take much interest in any of them until I went to the agricultural window, and the moment he looked out of that he said, "That is my field; that is what I should like to do. I have one of the finest farms in the State down along the Hudson River—over 6,000 acres. My father never did anything with it. I am going to make that farm an experimental farm along scientific farm lines, and everything I do there will be told to the people of the State."

Vegetables as Food

The Sustaining Value of What the Garden can Grow. Moral: Have a Garden

A vegetarian diet includes all edible plants, regardless of the more technical division into the three classes, fruits, grains and vegetables, says Dr. Green in the Rural New-Yorker. The two main classes of food elements are carbonaceous and nitrogenous. The carbonaceous foods are the fuel foods which supply heat and energy and are made of carbon, hydrogen and oxygen. The nitrogenous foods contain the above and also nitrogen and sulphur. The carbohydrates (starch, sugar) and fats. Starches are found only in vegetable foods and are the most abundant of all the food elements. Starch abounds in the grains, but is found in the legumes, and some vegetables. Sugar is quite unlike starch in its general properties, although closely related to it. Through the developments of plant life the insoluble, tasteless starch is converted into sugar. Fats are both of vegetable and animal origin, but are found in large quantities in nuts, olives, peanuts, cotton-seed, corn, oats and oil of sesame. Nitrogenous or proteid foods are albumen, casein, beans, peas, gluten and fibrin. The white of an egg is a good example of albumen. Casein is found in milk and vegetables. All the vegetable foods contain albumen; the most important of all albumens is gluten, which is found wheat, rye and barley.

The two minor classes of food elements are cellulose and mineral substance. Cellulose is woody fiber and forms the structure or framework of foods, the skins and sections of fruits and vegetables and cell walls of foods. It is particularly indigestible, but furnishes bulk, which is necessary for proper digestion. The mineral portions go

to build bone, brain and nerves and are important constituents of all the tissues of the body.

How the Elements are Used.

Iron is found in some vegetables and fruits. It is an important constituent of the blood. Foods poor in nutritive elements make a poor quality of blood, which make poor tissues and consequently a defective body. Phosphorus is needed for building and repairing the bones and nerves. Potassium is required by the red blood cells and muscles. Sodium is essential for the proper constitution of the fluids of the body giving alkalinity to the blood, its normal reaction, favoring osmosis, the passage of a fluid through an animal membrane, removes carbonic acid from tissues into the circulation and through the lungs in expired air.

Chlorin goes into the composition of hydrochloric acid, an important element in gastric secretion and the digestion of foods. Sulphur is one of the constituents of the albumens or proteids in both animal and vegetable matter. Calcium enters into the bone structure, its most important element. A theory is now being advanced and receiving some consideration that the prevalence of tuberculosis is due to a lack of lime salts in the body. If this proves to be true it is certainly another score in favor of vegetable diet, which contains these salts in solution and readily assimilated. Fluorin and silicon is found in bones and teeth. Silicon gives support to the stalks of grain, etc. All these elements so lavishly supplied by nature in the vegetables indicate the great var-

ity of elements required by the body for a proper balance of its repair and wastes supplied by its foods.

Nuts in general have about four times the nutriment that meat has. In the gluten of the grains, nuts, peas, beans and lentils there is an excess of albumen or proteids. A high protein or flesh diet tends to lessen the alkalinity of the blood, a condition which, when present, indicates decreased vital resistance, a diminished efficiency of the blood as a germicide.

From tables showing chemical compounds and food values by Office of U. S. Experi-

ment Station, Department of Agriculture, the total nutritive value of cereals is about three times that of lean beef and about the same as beans and about one-half that of nuts. They contain a large amount of carbo-hydrates which beef does not at all contain. Fruits are made up of water, protein, fats, carbohydrates, cellulose, mineral matter and the oils which give them their characteristic odor and flavors. The juice of fruit is a most healthful and refreshing beverage and consists of distilled water impregnated with the carbo-hydrates and other constituents.

Renting Orchards

Is There a Great Fortune in the Business ?

THE demand for special effort to preserve orchards is so great in Michigan, the enemies so numerous and so aggressive, destroying not only fruit but the trees, that it would be wrong to turn one who is qualified and might be successful from putting his best efforts into the work, says an expert writer in Rural New Yorker. The owner could well afford to, and should preserve the orchard as a matter of sentiment. The State would be more justified in saving the orchards than the forests as a matter of conservation, considering them as a natural resource. The renter, regardless of how these reasons appeal to him, can only base his operations on how he answers the question, "Will it pay?" The following figures from the census bureau are for Hillsdale county, Michigan:

	Trees of bearing age	Production in bushels
1889	318,278	638,283
1899	287,219	336,396
1909	150,694	164,432

In 20 years the decrease in numbers of bearing trees is over 50 per cent., while the reduction in bushels produced per tree has decreased a like amount. The next census will show a greater reduction of trees, in fact, I doubt if there will be 50,000 bearing trees even in 1915 in the county. Possibly the remaining trees will produce proportionately more fruit.

Five years ago we brought the first power sprayer into Hillsdale County and began renting orchards, believing that spraying had reached a stage where certain methods would have definite results. This we have

proven beyond a doubt. We tackled an orchard of 600 trees of the right age, medium size, good varieties, near shipping point, and felt sure we had a winner. We knew the canker worm had defoliated the trees for several seasons, but felt we could handle them. And we did, but could not immediately compensate the trees for the loss of vitality that several years of abuse had placed upon them. This orchard has had good care in the way of trimming and spraying ever since and so far no satisfactory results. I have had occasion to notice other orchards with the vitality seriously reduced from various causes—scale, no trimming, too close pasturing, and other causes, full of dead twigs. Such an orchard might be worth the owner's efforts to redeem, as its greatest profit comes from the increased value of the farm, but the renter is not justified except by the most liberal terms and a very long lease in attempting to handle it.

Our next orchard was a little older, but reasonably healthy, quite tall, possibly a little more favorable soil, had been producing a few cider apples, but showing no profit to the owner. This was trimmed heavily, not really dishorned, but cut back during the first summer to produce fruit buds rather than wood growth, properly sprayed but not cultivated. The response was immediate and very satisfactory.

Terms of the Lease.

Our plan has been to make a five years' lease at about 50 cents per tree, per year, renting contracts containing a clause that provides for no pay if the crop is a failure. This is essential, as renting on a large scale

a couple of failures would spell ruin. We have worked on a share basis of one-half the fruit on the trees, the owner to trim, burn brush, etc. It has not proven satisfactory to either party in most cases, as few owners will think as we do regarding trimming. On the other hand, having some orchards that all the fruit belongs to us on the cash basis, we are less interested in the share deals and inclined to slight them in the rush seasons.

We find our sprayer with water convenient can handle about 1,500 trees. Two sprayers, with an extra engine to pump the water and a man to mix and oversee the filling of the tanks and care of engines, will handle 3,000 trees satisfactorily and by keeping the whole crew together, one can have oversight of operations on this scale.

Some Costs to Consider.

Some of the established costs will be about as follows, on an average for five

years: Trimming, 20 cents per year; spraying, 50 to 70 cents per year; picking, 15 to 25 cents per barrel; packing, 15 to 20 cents per barrel; hauling, 10 cents per barrel; with board and wages at \$2 for man, \$3.50 for man and team; 7 per barrel for lime and sulphur, and seven cents per pound for arsenate of lead. Don't bank on over one barrel per tree the first two years. If one finds an orchard that does better than this, they are quite sure to have another one that will bring it down. We have been best satisfied with letting the picking of the orchards in a neighborhood to some one near there at a price per bushel that warrants him in looking up help and managing the specified orchards as though they were his own. To secure a uniform pack we, with others, have found it necessary to bring all apples to a central point for packing. In a smaller way, packing in the orchard will prove more economical and possibly can be done satisfactorily, depending on the disposition to be made of the fruit.

Can We Contract Bovine Tuberculosis?

L. P. Bailey, Before an Ohio Farm Gathering says that Cases are Rare

OWING to the stand taken at the Breeders' conferences in Toronto in February by the Dominion Minister of Agriculture on the question of bovine tuberculosis, this view of the case as given in a recent issue of the Orange-Judd Farmer of Chicago, will be most interesting to readers of Farmer's Magazine.

Dr. Robert Koch, the great German scientist, made a special study of the use of tuberculin and the relation of human to bovine tuberculosis. He concluded that they were different diseases and not transmissible one to the other. He made this statement at the tuberculosis congress, held in London, July, 1901, and it was challenged by other scientists. At the tuberculosis congress, held in Washington in 1908, he reaffirmed his statement, made eight years before, with the admission that the liability, if at all possible, for the human to contract tuberculosis from the cow, by consuming either milk or meat, is so slight as to merit little consideration. Since Dr. Koch's claim of 1901, Dr. A. Weber, a member of the imperial German board of health, has been collecting reliable facts as far as possible, as to the effect of milk from cows with udder tuberculosis. He has had physicians

keep track of people who they know for certain have taken milk or its products from such cows. From the collected results of five years' work in this line, he reports as follows: "Three hundred and sixty persons, of whom 151 were children, have, as positively stated, consumed unboiled milk from cows having udder tuberculosis, or the products of such milk, such as butter, buttermilk, sour milk and cheese for a longer time. Of all those persons, in only two families has an infection with cattle tubercle bacilli been shown with certainty, a child in each case." Dr. Weber further says that the udder tuberculosis was very bad, that the children used the milk for a year and a half, that the milk was only mixed with that of one other cow, and that the other members of the family have remained well, up-to-date, though they also drank of the raw milk, etc. Dr. Weber concludes as follows: "The danger which humans run by drinking milk or consuming the products of milk from cows, even with udder tuberculosis, is very, very small, when compared to that offered by humans suffering with open lung tuberculosis, to their neighbors."

Commenting on Dr. Weber's report, Prof. B. Bang, of Copenhagen, perhaps the greatest living authority on bovine tuberculosis, says: "It cannot be denied that if the tuberculous milk were equally dangerous for humans, calves and pigs, then we must have expected many more and much worse cases of tuberculosis among this group. There is evidently a difference in the susceptibility. But it is sure also that there are but very few nowadays who will not acknowledge that the greatest danger to humans lies in the infection from tuberculous humans and that the cattle, as a source of infection, can only be deemed to be secondary." Dr. Henry L. K. Shaw, physician of the Albany child's hospital, says in reference to the transmissibility of tuberculosis from cattle to mankind: "I have watched this matter very closely, I insist upon all infants brought under my care being fed on raw milk. I regard as little short of a crime, the fear that has been instilled in so many minds that there is danger of consumption, in any of its manifestations, being contracted by human beings, by eating beef or drinking pure milk. In all my study of this subject, I have been able to accept as fairly established, not more than eight or ten cases of tuberculosis throughout the civilized world that were traceable to bovine origin."

Evidence of a Small Town.

Thomas J. Edge, while secretary of the Pennsylvania State Board of Agriculture, made the following statement: "In my practical experience of over 15 years I have not yet found a case of tubercular consumption, in the human race, which I could by any means trace to tuberculosis in the animal. At the same time, I do not wish to be quoted as saying that tuberculosis in cattle may never to be a menace to the health of others. My judgment, based on actual observations of postmortems or reacting cattle and the number of carcasses passed by Government inspectors, is that over 80 per cent. of all reacting cattle are not a menace to other cattle and only have the disease in a curable form. It is admitted by all that a reaction in nowise tells the extent of the disease, whether curable or incurable. Again, advocates of the test admit that the animal may be so badly diseased that there will be no reaction. There are many cattle that reacted even as long as 10 years ago, still doing business and apparently healthy, and many do not react on the second test, months or years afterwards.

The Ohio station at Wooster, June, 1897, found they had some tubercular cattle. Eleven head were quarantined, two not giving positive reactions, but regarded as suspicious. All were well cared for and kept isolated for 18 months. All were slaughtered. The carcasses of the two suspicious cows were passed by the inspectors as free from tuberculosis. One calf, perhaps six months old, that had been fed the raw, untreated milk from all those cows showed no disease germs and was pronounced free from tuberculosis. All the balance were pronounced tubercular, but in two of them the inspectors used a microscope to find disease germs. Two cows showed tubercular orders. None of the animals showed a breaking down of tissue except one bull, with lungs badly diseased and also parts of the carcass. The meat of this bull was condemned. All the others were passed for human food. In February, 1911, the State of Ohio slaughtered on the State fair grounds during the corn and dairy show 10 head of cattle that had reacted. I was present while four were slaughtered. While all perhaps showed tubercular nodules, not one of the four showed any breaking down of tissue. I learned all were diseased, but none in the advanced stage. Had I the time I could give hundreds of similar cases, where cattle have been condemned by the tuberculin test alone and the post mortems did not show such a diseased condition to justify the slaughter.

Summed up, the case is as follows: First. The danger for man to contract tuberculosis by the use of cow's milk is so slight as to merit but little consideration. Second. Tuberculin is not a safe, or within itself a dependable diagnosing agent. Third. Tuberculin testing as a means to rid a state of tubercular animals is not practicable, and it is an impossibility. But I will not leave you without a remedy. Have your cattle out in the open air every day in the year, during some period, and your stables free from animal life a short period each day. Never allow your cattle access to the manure pile. Ninety per cent. of all tuberculosis in cattle is contracted through the feces. The direct rays of the sun should strike every part of all stables inside and all yards. Dr. John Weinziri found that the direct rays of the sun killed tubercle bacilli in 10 minutes. The principles outlined here are freeing the human race of tuberculosis and will also free our cattle, and it will not be necessary for the state or any interest to suffer.

Danes Teach Neighborliness

Three-Fifths of the People on Farms, and Country Life is Attractive

NEIGHBORLINESS of the people is the measure of the strength and stability of a country. The Danes have made this very clear to the outside world by their readiness to help one another to profit by experience and also in their ability to work together in co-operative schemes, says the Montreal Star.

It was this characteristic of the people that appealed most forcibly to Dr. J. W. Robertson in his recent visit to Denmark, and it was the contrast with Canadian conditions that led him to the conclusion that the spirit of neighborliness was what Canadians lacked. Every Dane, said Dr. Robertson, gathered first out of his own experience and then from his neighbors', any good practice that he can adopt for himself. In Canada men have not learned the meaning of being neighborly—a harsh thing to say, and yet the truth of it is more deeply impressed by observing other people.

There are no doubt reasons for this strong trait of character in the Danes—the circumstances under which they live are different from those prevailing in Canada, and the need for mutual help has been more pronounced. Yet the Danes have not had half the chance that our farmers have had. Fifty years ago they were the poorest people in Europe without exception. Indeed, it is not much over a hundred years since they were in the position of serfs. So rapid has been their progress that in 1910 Denmark was rated the richest nation in the world after England, and all their wealth is evenly distributed. Dr. Robertson did not see one poor man in his tour of the country which was taken in a zig-zag direction to include as much as possible.

Twenty People to 100 Acres.

Quebec farmers could obtain a good idea of the size of Denmark by picturing it as equal in area to that part of their province lying south of the St. Lawrence from Beauharnois to a point south of Quebec city. Copenhagen, the capital, is a city of half a million, or about the size of Montreal. Three-fifths of the population live on the farms, making about twenty people for every hundred acres of land, hence a spirit of neighborliness is more or less of a necessity. So strong is the attraction of rural life for them that there is no drift

to the cities. The farm population has been increasing in these days of congestion in the large centres.

Their Public Spirit.

The case of Mr. and Mrs. Neilson was cited to show the pride which farmers take in their vocation. They are a prosperous couple on a holding of 70 acres, doing their own work, with the aid of their oldest boy, and public spirited to a degree seldom seen in this country. They had in their younger days taken the courses in the high schools and are intensely interested in education. Mrs. Neilson declared that the few months spent in the study of household science, history, and especially the singing exercises, had put a new meaning to her life. The inspiration of meeting hundreds of other young people in these schools had been of lasting benefit, and the progressiveness of the Danes is to be attributed largely to this source. No one can enter these schools under seventeen years of age when several years of work on the farm or in the house has laid a practical foundation. At least one-fifth of the young men and women enter for these courses and so excellent is the control that cases of expulsion are almost unknown.

A love for the beautiful in nature is cultivated with the result that the farm houses have nicely planted grounds with flowers in profusion. The farmstead of Mr. Neilson was a notable example of this, as a large space was devoted to what might be termed a pleasure ground, since it was the resort of young people in the evening. They sat on the benches among the trees and sang the folk songs of the country. It was such gatherings as this that promoted neighborliness and harmony.

Extra Quality Pays.

To indicate the material progress of the Danes, Dr. Robertson quoted figures of the increase of products in recent years. Thirty years ago (1881) the exports of butter, bacon, and eggs amounted to \$11,500,000; mostly to England, where the goods are recognized to be of the highest quality. As a matter of fact the extra prices which these Danish products commanded over those of other countries more than paid for the expense of the educational system. Cow testing and selection has brought the average yield up to 6,170 pounds per annum. In

ten years there has been an increase of 16 per cent. in the number of cows, and at the same time an increase of 169 per cent. in butter, which is undoubtedly a gain in economy of production.

They Can't Grow Corn.

One of the handicaps of the Danish farmer is the inability to grow corn. If he could get ten or twelve tons of silage corn to the acre he would consider himself fortunate, and would be able to make money half as fast again as at present. Roots grow exceptionally well, and in thirty years the acreage has increased from 46,000 to 600,000. The ordinary clovers, alfalfa, barley, oats and peas are staple crops. Sugar beets are produced more largely every year, sugar factories are increasing and breweries are decreasing.

"I have seen more weeds in half an hour in parts of Eastern Canada than in a six days' tour of Denmark during the growing season," declared Dr. Robertson. Rotation of crops and close cultivation enable the farmers to keep in subjection all their troublesome plants. About one-tenth of the farm is planted to roots which are looked after so carefully that weeds get no chance. Having overcome these pests the struggle is not so discouraging as in Canada. In this connection, Dr. Robertson gave a solemn warning that Canadians are face to face

with the hardest problem of any country in the prevalence of weeds. Great stretches of land have been cropped in careless manner with the result that crop yields are reduced, while to aggravate the situation the laborers are scarce.

Profit by Experience.

One means by which knowledge is diffused among the Danish farmers is the agricultural association. Members tell of new discoveries on their own farms and every three months there is a general meeting for the district at which the best of the new ideas are discussed and when found practicable are made public. This is where the neighborly spirit is seen at its best, for they are always willing that their brother farmers should reap the benefit of better methods. A novel feature of farm life is the walking tour organized by twenty or more farmers to visit the best farms in the locality. They provide their own fare, and in two days will gather much information to apply on their own holdings.

The Royal Agricultural Society conduct a testing station where new implements brought into the country are examined by experts to determine if they are strong and suitable for the work. If satisfactory they are then purchased by the individual farmers through co-operative societies.

The Best Perennials to Plant

Flowers that Bloom in Canada for Every Farmer Who Cares to Have Them

Early in the year when the eye is greedy for color after the long colorless winter, come radiant tulips stimulating everyone to an awakened interest in Nature, said F. E. Buck, B. S. A., before the Quebec Pomological Society recently. But lest they might shock us with their gay attire, they bring along as companions the delicate cream-white narcissi and the yellow daffodils. These heralds of the flower tribes should be always grown. They are inexpensive to purchase and last for several years in a perennial border before they need to be moved or renewed. Most of them come to us from foreign lands, and the tulips are generally called Dutch bulbs. They are not the very first flowers of spring, the snowdrops and crocuses appearing a week or two earlier, but on account of the great display of color which they produce

it is well to think of them as forming the first great group of the season's flowers. They blossom from late April till June.

The Ardent Flowers.

A second great group is that of the peonies, the old-fashioned "piney," changed in form, color and fragrance, but essentially the same in that quality of "ardent appeal" which in the old days gave to it its charm. The modern peony is a close rival of the queenly rose. Wonderful flowers are these beautiful named peonies. There are three varieties, one white called Avalanche, a red named Felix Crousse, and a pink named Magnifica, which, if there were no others to rival them, would rank among the immortal flowers of the twentieth century. But about a thousand named varieties of peonies claim our attention and fill our

gardens with magnificent masses of color during the month of June. They are ideal flowers for a perennial border.

While the peonies form the second of the great groups, the irises might rightly be given that place, as perhaps they would be by some people, and the peonies shifted up a place to group three. The iris is the "rainbow flower" and has few rivals. I am really sorry to pass it by. There are, however, so many beautiful flowers of this period that it is impossible to do more than just mention it as being worthy of a much longer reference. Of the other flowers, there are the quaint columbines, which are very numerous in variety and color; the sweet low-growing plants as violets, pansies, and forget-me-nots, and the woody flowers as the trilliums, spring beauties, spring anemones, Solomon's seal, lilies, lady's slipper, and many others that might be mentioned. The roses, of course, occupy a place by themselves. They come in at the end of June and last through July.

The Showy Flowers.

The phlox, or third group, I have called the showy flowers, because they come in at a time when flower bloom is getting a little scarce. The word "Phlox" means a flame. They are of American origin. Phloxes have a wide range of colors and are prime favorites.

The fourth group last from August till late in October, and have a wealth of color. These are the Shasta Daisies, the Golden Sunflowers, and the Asters.

Certain flowers which grow in the perennial border give the extra finish, the charm, the color, the life. They make it an artistic whole, a masterpiece. They include the dazzling Oriental poppies, the soulful campanulas or bellflowers; the majestic delphiniums or larkspurs; the glittering gallardias and pyrethrums, or blanket flowers, as the first are called; the delicate gypsophila; the flaming torch lilies, commonly called red-hot pokers; the formal foxgloves and hollyhocks; the rainbow iris; the fragrant pinks; the modest lilies; the plume-like spiraeas, and the glorious yuccas.

Fun and Common Sense

These are Two of the Living Ideas that Ought to be Fed and Matured

Did it ever occur to you that ideas are living things? I know Plato did not go as far as that, but he thought of it, writes Peter McArthur in the Toronto Globe. In speaking of the archetypal ideas that he held to be fixed in nature as the immaterial patterns of all things, including qualities and notions, he represents Parmenides as questioning Socrates whether these ideas have a separate life, and Socrates replied that he was in doubt whether to include such living ideas in his philosophy. Now I see no reason why the world should be bound forever by the philosophical hesitancy of Plato. Ideas are very much alive. They come fluttering into our minds, either as a little rush of words that give us a new point of view regarding something in the everyday world or as a compelling impulse that forces us to act about something.

Some time ago a little naked, smiling idea came to me, and I liked it so well that I gave it an empty corner of my mind and fed it on my best thoughts. As it grew plumper and stronger I amused myself by questioning it, and it has told me a lot of interesting

things about the whole race of ideas. It has shown me that all our troubles are due to ideas that we have allowed to escape from our control. It has also taught me what Plato did not; that ideas grow just like other living things and become good or bad, according to their environment. And it is because ideas are immortal, while we are mortal, that they are able to control us either for good or evil, generation after generation. Because of what it has taught me I can now see that other men are neither our friends nor our enemies. It is the ideas that control them that are our friends and our enemies, and the battle for human freedom must be fought against ideas by the help of ideas. When I understood this clearly I interviewed my little idea for your edification, and now I am going to give you the result.

These are the words of the idea; 'Do you know that you human beings are the most foolish creatures in all the world? You were given ideas to teach you what to do and you have become the slaves of your ideas. Worse than that, you have fed up

your ideas until they have grown too strong for you, and too clever, and now that you are beginning to groan under their tyranny you do not know how to fight them. Instead of fighting them you fight one another, and the more you are disorganized by your struggles the stronger the grim ideas grow. Money at first was only a pleasant little idea that made trade easy, but because men found it good and loved and pampered it, it has grown until it is now an insatiable monster. You call it capital, and build temples for it and worship and pay to it, and it grinds you into the dust. Capital is now as much alive as you are, and no man can control it. Morgan and Rockefeller are just as certainly its slaves as the men who are sweating out their lives for it in the mines and fields and factories. It is at once the most greedy and most cowardly of all the ideas to which you foolish mortals have enslaved yourselves. It is always grabbing for more, and is as ready to snatch the crust from the mouth of the orphan as to break into the safe deposit vault for the bonds of a millionaire. But at the first hint of danger, if human beings in their struggles happen to wound the least of its grasping tentacles, it immediately rushes to cover and causes panics and all kinds of disasters in its insane haste. In order to satisfy its own greed capital has taken a lot of other nice little ideas that were not only harmless but helpful at first, and has fed them and trained them until they have grown almost as cruel and powerful as it is itself. What you now call trusts and big interests, and shudder before, were once kindly little ideas called co-operation and organization and economy and elimination of competition, but now they have grown into monsters that are sucking the life-blood of all the people of the earth. And you have no one to blame but yourselves. You were given ideas to help you, and because you did not keep them under control they got the mastery, and now you are the slaves of your own ideas. There are no evil spirits or devils in the world but human ideas that have escaped from control.

* * *

"That is all very well," I replied; "but how are we going to regain our freedom and be men again?"

My little friend looked at me quizzically, then drew himself up to his little height, squared his shoulders, and replied confidently:

"Leave that to me?"

His appearance puzzled me. There was something familiar about him, though I

could not say exactly where I had seen him before.

"Who are you?" I asked.

He bowed gravely.

"I am Common Sense."

As he spoke, a big, nimble, irresponsible idea that has occupied the back of my head ever since I can remember suddenly started forward and took Common Sense by the hand.

"Hello, Common Sense, I am glad to see you at last."

"Hello, Fun. You and I should get along together famously."

After this introduction we all laughed together until the tears came and I felt better.

"Now," said Common Sense briskly, "let Fun and me show you around this mind of yours. I think you will agree with us that you are sadly in need of a mental house-cleaning."

Hurrying about together, they aroused for my observation all those ideas that "inhabit the dim caves of human thought." One after another they prodded out my Hopes, Fears, Desires, Ambitions, Virtues, Vices, and all the mob of useless ideas that have been living in me and sapping my strength and keeping my steps in the path of Folly. Under the cold, searching stare of Common Sense and the satirical smile of Fun these ideas shuddered and "fled howling." When Common Sense and Fun had routed out the last of them they stood before me again and bowed.

"At your service, sir."

"Thank you kindly," I said. "You have made me feel better personally, but I can see with half an eye that the monsters that have been oppressing us are still ranging through the world as before."

"Wait," said Common Sense. "Leave them to me."

He was so little and self-confident that Fun began to laugh, but I checked him instantly.

"It is quite true that I cannot do very much myself, but I am one of millions like me. In every human mind there is a little Common Sense, and if people would only feed it with a few good thoughts and let it put their minds in order it would not be long before they would set the world in order. But they must not let Common Sense run wild or it will develop into stupidity, reaction and a lot of other unprogressive monsters. There is nothing of which the monster ideas are so much afraid as of well-controlled Common Sense. The light of Common Sense is as deadly to them as sunlight to microbes."

"Still, you seem a very unsubstantial little thing to undertake so much," I complained.

"Tut!" he replied briskly. "Have you forgotten that you are such stuff as dreams are made of?" Everything in life is a dream, and the affairs of the world are only a dream within a dream. The way to combat the ideas of injustice and oppression and greed and money lust that are troubling you is with other ideas, and when you are ready for them I shall invite into your mind ideas of beauty and kindness and brotherly love that will chase the other monstrous ideas off the face of the earth."

"Is there anything I can do while you are busy with this work?" I asked humbly.

"Well, you might ask your friends to search through their minds to see if they

have a little Common Sense in them, and if they have to feed it and cherish it and give it scope."

At this Fun threw back his head and laughed uproariously.

"Some of them will have a long hunt!" he chuckled.

But I checked him for I remembered the words of the poet: —

"For I dip't into the future far as human
eye could see,
Saw the vision of the world and all the
wonder that would be.

There the Common Sense of most shall hold
a fretful realm in awe
And the kindly earth shall slumber, lapt in
universal law."

How My Silo Paid for Itself

A Glengarry College Lad Proves the Value of Scientific Methods in Dollars and Cents

My father was a farmer of the old school and practiced the old system of growing grain, keeping a few milch cows and enough horses to do the work, writes A. D. Cameron in the Country Gentleman. The selling of the grain provided the greatest source of revenue, although the cows during the summer months, while the pastures were good, yielded considerable milk, which was sent to the neighboring cheese factory.

The cattle were wintered principally upon straw, with hay generally fed during the latter part of March and all the month of April so that they would be, as my father termed it, "in good strength when they calved."

Now when I returned, having been taught that the first thing necessary to good farming is to practice a good short rotation of crops, I suggested to father that we draw all the manure out of the barnyard and manure well one field for corn; then the next year sow that field to grain and seed it down to clover. The third year it would be in hay and the next year we could pasture it. We could continue this field after field and in reality practice a four-year rotation.

I also suggested that we erect a silo to put the corn in. This would furnish the milch cows with a good, succulent feed,

which would increase the milk flow and keep them up in their milk for a longer period. He thought these suggestions of mine were all bosh. "Oh," he said, "it is all right for those government-paid fellows to talk about these things; but I am too old to change my way of farming now! You can go ahead and manage the farm the way you please. Your mother and I have worked long enough."

I Start to Work.

So with that understanding I started to work. Now it was in the spring and the winter's manure was all in the barnyard. A couple of heaps had been drawn out in the field the previous year. This left me considerable manure at my disposal, so I hired a man and we started spreading this on a piece of sod plowed the previous fall. We worked for several days until we cleaned up every bit of manure to be found round the place and covered about six acres.

This, after giving the ground a thorough disking until I had every particle of the manure worked up with the soil, I planted with Leaming corn, which I bought from one of the large seed houses in the city. The summer was one of the hottest I remember. The showers seemed to come just at the right time, although they kept

me busy, because I was determined to put the cultivator through after every rain to keep a mulch and stop evaporation.

That fall I had one of the finest fields of corn in the county. Every one passing on the road was remarking on it. I intended to cut the corn and stack it, then draw it and feed the cows as I needed it; but just when I was about ready to cut it an agent came along who was selling silos. My capital being very limited I didn't think I could afford one unless he would give me lots of time to pay for it. He promised then to sell me a silo, 14 by 28 feet, for \$175, and give me two years to pay. I thought this was the easiest way to get my silo, so I told him to send it along at once.

Stave Silo Costs \$195.

It was a stave silo, made with a patent front, having continuous doors. I hired a stonemason for two days, and we built the foundation and the company sent a man to put the silo up. So I had the whole thing done within a week.

We were not long in filling it. One of my neighbors had a steam engine and blower which I hired at the rate of \$15 a day. I got four of my neighbors to send

their teams over for a day and we filled that silo. Now the full cost of the silo to me, not counting my own labor or that of my neighbors' teams—because I paid that back by sending my team to work the time in for them—was as follows:

Stone mason two days at \$2.50	....\$	5.00
Silo .. .. .	.....	175.00
Filling .. . . .	.....	15.00
Total .. . . .	.....	\$195.00

I started feeding the cattle about the fifteenth of October and fed them twice a day till about the fifteenth of January. Then it started to freeze considerably round the sides, so I stopped feeding silage until the fifteenth of March. I fed them twice a day till the cows went on grass the fifteenth of May.

Now, to show how much this silo saved for me, in previous years it took all we grew on the farm—straw and hay—to feed the stock, and only in exceptional years did we have a ton or so of hay left over. But the year I bought the silo I had ten tons of good roughage left over, which I could have sold for \$15 a ton, making \$150—almost enough to pay for my silo the first year.

The Boy and The Farm

It Has to Do With the Unending Miracle of Birth and Growth

Mr. Thomas McGillicuddy, in the March Farmers' Magazine, tackles in a new way the old question of why the boy leaves the farm, says the Toronto Star Weekly. He takes the point of view not so much of the farm as of the boy. And that is right. Farms are made for boys and other human creatures, not boys for farms.

To interest the boy in farm work you must show him that there is "something doing." Give him nothing but drudgery, and he will become disgusted and drift away to the town. Give him the special care of a horse or a plot of ground, and he will become interested. Mr. McGillicuddy quotes a letter from T. G. Raynor, an expert in the Department of Agriculture at Ottawa:

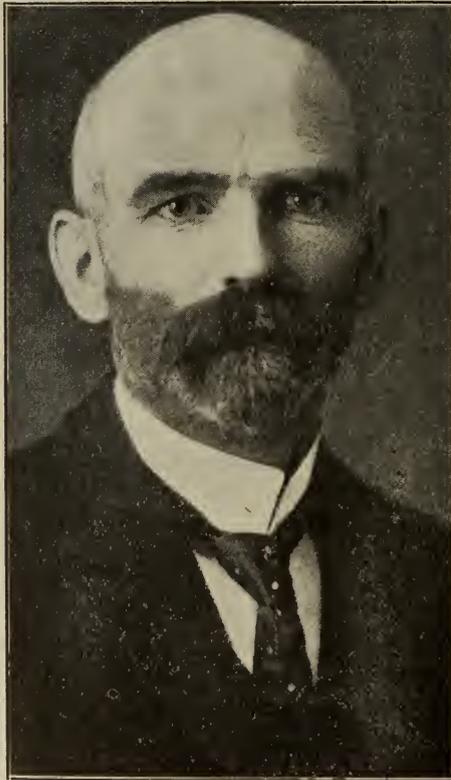
"A good deal has been done, and much more can be done, to interest the boy in the

farm along the lines suggested. For instance, in 1900, Dr. James W. Robertson, chairman of the Conservation Commission, started the Macdonald-Robertson Seed Competition, in which boys and girls of eighteen years and under were allowed to compete all over the Dominion. Some 800 started, and about 400 finished out the three years. They were to select the best heads of wheat or oats they could find in the open field; at first enough to sow a quarter acre plot; second year they selected from that quarter of an acre plot, and the third year also. The results were an increase in yield per acre of 10 bushels of wheat in the three years, and about 20 bushels of oats. The outcome of this competition has been the organization of the Canadian Seed Growers Association, which is growing in numbers and in usefulness each year."

No work in the world is more interesting than farming. It is not monotonous. It is of infinite variety. It is not one industry, but a score of industries. It has to do with the unending miracle of birth and growth; the tiny seed that is full of energy, and that seems almost endowed with intelligence as it thrusts out its feelers for meat and drink through the soil. If the boy has not been interested, it is because the whole business has been clumsily handled. Did you ever know a city boy who did not like to keep rabbits and pigeons? Is it likely that any country boy would fail to be interested

in horses and cattle, if the business were rightly managed?

Mr. McGillicuddy shows how the boys are being interested in farming by intelligent methods. Thus some of the most difficult problems of modern life may be solved. The congestion of cities may be relieved, the food supply may be increased, the monotony of toil may be diminished. The standard of health and strength may be raised. And the real cure for the commercialism which some deplore is to ennoble every honest calling.



Prof. C. A. Zavitz, the little bright-eyed man with a pointed beard.

See page 19.

AN OPEN FARM FORUM

What Our Readers are Talking and Saying. Short Concise Expressions
from Subscribers are Always Welcome in this Department

Differs With Brown's Naval Article

Editor Farmers' Magazine.

Permit me to offer some comments on an article appearing in your February number entitled "The Naval Issue" by W. J. Brown.

After citing the stand taken by the Grain Growers' Associations of Western Canada, Mr. Brown says: "It is difficult to believe that the Grain Growers have studied the questions involved with intelligent interest." In justice to himself Mr. Brown should credit the organized farmers of the West with a moderate degree of both interest and intelligence, so far as the Naval question is concerned. At all events it is no argument against their position to hint that they have not given sufficient consideration to the matter. Mr. Brown, indeed, throws himself open to the very same criticism which he directs against the Grain Growers when he says: "Certainly no one in intimate touch with the thinking men among the farmers of Ontario would agree for one moment that their views were in harmony with the Grain Growers' resolution." It strikes me that Mr. Brown, when he wrote the above statement, was either ignorant of the stand taken by the Dominion Grange, or wished to imply that it in no way represented the "thinking farmers" of Ontario. The fact is that, with practical unanimity, the only independent farmers' organization in Ontario took the very same stand on the Naval issue as has been taken by the organized farmers of the West.

Those of us who live amongst the farmers are disposed to look upon the position taken by the Grange as fairly representative of rural opinion in Ontario. Some weeks ago the Editor of the Weekly Sun sent out to a number of Ontario farmers whose views he did not know, a request for a statement of their opinions on the Naval ques-

tion. The replies were published, and showed a very large majority opposed to any departure from Canada's traditional policy. In the face of these facts Mr. Brown's statement, above quoted, is amazing.

Mr. Brown goes on to state and criticise the views expressed by Messrs. Drury and incidentally takes exception to the Referendum because, as he says, it "ignores the principle of responsible government."

I venture the assertion that the principle of Direct Legislation is not inconsistent with the principle of responsible Government, but rather a fuller realization of it. Were it possible for every election to be fought out upon one specific issue, and involve no more than the settlement of this one issue, then, indeed, there would be little call for the Referendum. It is often the case that a dozen issues are blended and confused in one election and that after the election has taken place, and a party put in office for a term of years, one or more new issues may arise on which the people have made no pronouncement, and that legislation may be enacted contrary to the will of the people in respect to these new issues. The Referendum has been designed to meet the needs of the people on such occasions, and that it will enable the people to single out special questions of legislation respecting the settlement of which they take upon themselves the direct responsibility, and, by so doing, relieve the Government of the responsibility in that particular matter.

Responsible Government in practice in Canada in this 20th century is a travesty upon responsible Government in political theory; and it is little wonder that there is already before the Saskatchewan Legislature a bill to establish the Initiative and Referendum in provincial politics. Had we the right of demanding the Referendum

upon specific issues, the Canadian people could, even now, compel the submission of the Naval question to a popular vote, and thereby thrust the responsibility directly upon those who must ultimately bear it.

Mr. Brown is quite right in saying that the question before the country is not "defence or no defence," but, how shall the defence be provided? He is, however, quite wrong in saying that there are some who are opposed to defence measures because of their religious views. What he means is that there are some who are opposed to certain kinds of defence measures because of their religious views. For my part I am convinced that we are much better protected from the United States, as we are, than we should be if the great lakes were covered by ships of war. The real question is not shall Canada defend herself? That we may take for granted as answered in the

affirmative. It is rather,—How shall Canada best defend herself? And it is quite conceivable that there are better methods of defence than either of the policies now being discussed in Parliament. The creation of armaments may be a menace and a provocation to warfare, and our best defence may lie in having no navy. That at least, is a debatable question. It is one that ought to be settled before we consider the respective merits of two plans, each of which provides for navy building. There are at least some Ontario farmers who have given enough "intelligent interest" to the questions involved in the naval issue, to perceive that it is folly to wrangle over two ways of doing the same thing while leaving unconsidered the fundamental question as to whether or not the thing is worth doing at all.

Brantford, Ont.

W. C. WOOD.

English Politics

Editor Farmers' Magazine.

Referring to your editorial in the February number, entitled "The Insidious Politics." I may say that I do not think this is a legitimate subject for you to enlarge upon in your Review of Rural Life.

Crediting Mr. Lloyd George with the best possible intentions, it is hard to see where his benefits are to come in for the "down and out classes." The increase of his own salary from £3,000 to £5,000 was not a happy start. "Self interest—not emotion—is the cement of our far-flung Empire," somebody has said, and, possibly, it was the *raison d'être* in this minor detail. The payment of members of Parliament, especially those of the Irish and Socialist coalition, probably comes under the same head.

No man in England—in a position of such responsibility has, as far as my recollection goes, abused his right of free speech to such an extent as Mr. Lloyd George, and often with the purpose of meeting "Class Prejudices." Mr. Healy last month said of him, in the House of Commons, that, "he never answers anything except by insult."

It is these high-handed methods quite apart from the merits or demerits of the measures that have embittered public feeling and brought down a vial of wrath from the National Review.

The starving of Industries by heavy rates and taxes falls first on the poor, and has, in the cases of Yarrow and the Thames Iron Works, thrown hundreds of men out of work.

Perhaps it may be of interest to state that under Free Trade in Britain—every man, woman and child pays £1 10 9 a head in food taxes! and the price of living has increased very considerably in the last ten years.

Over population seems to be the root of the unrest and discontent that undoubtedly exists in the Old Land.

The seats of the mighty are occupied by Cosmopolitan Financiers who are certainly a doubtful improvement on the old Feudal Lords; but the poor will be with us always, and my advice to all and sundry, who find life burdensome under home conditions is to "up stakes" and come to Canada if they can.

Barrie, Ont.

(Capt.) E. E. G. BIRD.

CARING FOR THE BABY

By Carolyn Edgelow

BEFORE dealing directly with the care of the child I wish to make known to mothers, for whom this article is particularly written, just exactly in what capacity I hope to be of use to them and what put the idea into my head. I wish to try as nearly as possible to duplicate the work I personally conducted in connection with the Board of Health in Ontario, last summer.

Everyone knows the awakened interest in the Infant Mortality Question, and the strenuous efforts to reduce the terrible death list which grows rapidly during the hot summer months.

In Ontario in the year of 1911 three thousand five hundred babies died under two years of age—one out of every four—and these deaths were directly traceable to ignorance on the part of the parents, in most cases. Think of it! three thousand five hundred infant lives in one province, for want of proper knowledge in the care of them.

In the city in which I was appointed Board of Health nurse three summers ago the death list among babies under one year of age was 60%. . . . I am going to show you how proper enlightenment brought this down to 2%. What happened? You may well ask. Something was bound to happen where half the town were mourning the loss of their young. Everything happened, and the Medical Health Officer never rested until those statistics were brought down from sixty to three per cent.

The whole town joined in the campaign to save the lives so dearly brought into the world, so highly treasured, and yet so easily snuffed out. Banquets were given where the question "How to Save the Baby" was the one topic of conversation; a milk by-law was passed whereby pure milk was assured, lectures were given, pamphlets were published, a Board of Health nurse was appointed whose work was solely in connection

with the care and upbringing of babies. Every house where there was a child under two years old was visited by her. House sanitation, feeding, everything pertaining to the care of the infant was examined by her and advice and help given if desired. No one knows except the mothers, and the visiting nurse, how much this was needed and appreciated. Not one child but was visited by her and help given if needed, not one bottle-fed baby but she ascertained the purity of the milk, not one case of cholera infantum (summer complaint) but what scientific knowledge was added to mother's love in the effort to save the infant life. As the result of this the death rate of the city during that summer was two, instead of sixty per cent.

This is what I want to do for you: I can't test your milk but if you are not sure of it I can show you a simple way to make it safe for the baby in your own home; I can't come and see your babies but I intend to have a talk with you about them through the columns of this magazine, how to feed, bath, clothe, and care for the child, as well as the treatment and prevention of disease.

When we have finished our talk about the babies I will endeavor to also give some general helpful talks in regard to ordinary ailments and the care of the sick in the home.

Every girl ought to have some knowledge of the cause of disease and its treatment; every girl ought to know about babies. How many infant lives would be saved if more instruction in this respect was given in our schools, and the girl did not have to wait until she became a mother with a strangely dear and fragile life dependant upon her care, about which she knew so hopelessly little.

My next article will be an illustrated one on the care of the new-born child.

OUR PATTERN DEPARTMENT

Note.—An immense number of orders for Farmer's Magazine patterns arrive at the office daily. Strange as it may seem there are many who forget to sign their names, many who forget the money, many who neglect to state the size of the patterns required and many who send their orders to our Branch offices instead of to the Central office at Toronto. Ladies ordering patterns of Farmer's Magazine so as to avoid error and delay will please observe the following conditions:

First, address your letter to the Farmer's Magazine, 143 University Avenue, Toronto, Ontario.

Second, write on one side of the paper only, state clearly what you want.

Third, enclose the money.

Fourth, sign name and address plainly.

Comply with these conditions carefully and it will be our fault if you do not get your patterns within a few days after the arrival of your letter.



4142—LADIES' CORSET COVER.

This corset cover is designed for flouncing. It has the V-shaped neck, front and back, and is made with a seam at the centre back.

Longcloth or muslin can also be used to make this cover.

The pattern, 4142 is cut in sizes 32 to 44 inches bust measure. Medium size requires 2 yards of 16-inch flouncing.

Price of pattern, 10 cents.



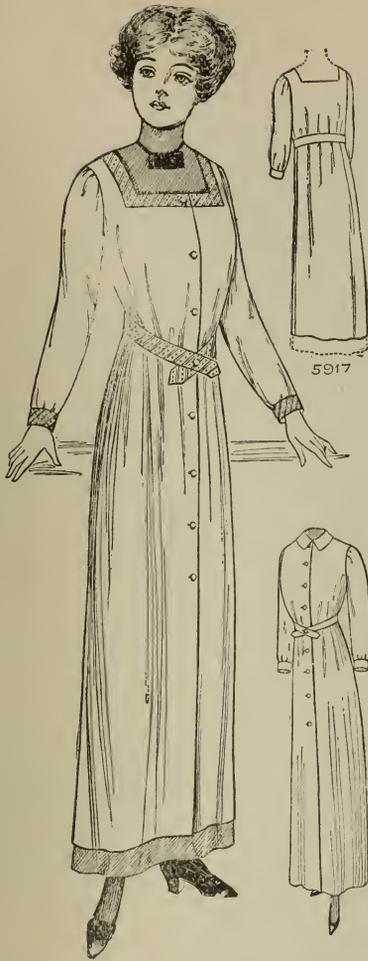
4575—LADIES' NINE-GORED SKIRT.

A straight cut model, fitting the figure snugly. This skirt can be used for completion of a coat suit or it can be worn with separate shirt waists.

Serge, chevot or broadcloth can be used to make this skirt.

The pattern, 4575, is cut in sizes 22 to 32 inches waist measure. Medium size requires 4 3-8 yards on 44-inch material.

Price of pattern, 10 cents.



5917—LADIES' HOUSE DRESS.

Here is a dainty design for a house dress or work apron as the model can be used for either. It is protective, yet stylish and has the merit of being simple of construction. It closes at the front and can be made with square or low neck or with rolling collar.

Gingham, percale, chambray or lawn may be used and the trimming is of contrasting fabric.

The pattern 5917 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 6 3-8 yards of 27-inch material 5-8 yard of 27-inch contrasting goods.

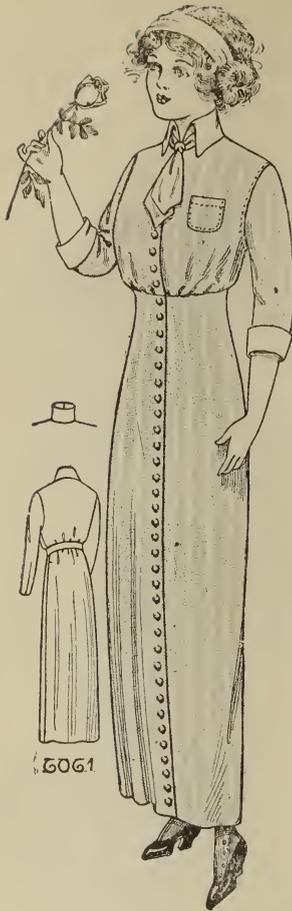
Price of pattern 10 cents.



6067—LADIES' DRESS.

A delightful frock is here pictured and one quite easy to make. It has the fashionable and convenient front closing and may be made with empire or regulation waistline. The skirt is a four-gored model having inserted plait or habit back.

The pattern 6067 is cut in sizes 34 to 42 inches bust measure. Medium size requires 6 yards of 36-inch material and 5-8 yard of 22-inch all over. Price of pattern 10 cents.



6061—MISSES' DRESS.

This address is for the miss and small woman. The pattern provides for two styles of collar and the three-gored skirt may be made with empire or regulation waistline. The closing is at the front.

The pattern 6061 is cut in sizes 14, 16 and 18 years. Medium size requires 4 3-8 yards of 36-inch material and 3-4 yard of 27-inch contrasting goods.

Price of pattern 10 cents.



5964



5964—GIRL'S DRESS.

Plaid woolen with plain collar and cuffs of white or a color matching the predominating shade of the plaid will develop this chic little frock in charming manner. The dress closes at the left side of the front and has three-piece skirt joined to an underwaist. The model is excellent for school or general wear and nice enough for dressy service.

The pattern 5964 is cut in sizes 6 to 12 years. Medium size requires 3 3-8 yards of 36-inch material for the dress and one-half yard of 36-inch goods for the underwaist.

Price of pattern 10 cents.



Dress showing many new features. The material is woollen brocade. The skirt is slight draped in front so as to give the effect of drapery, and is slashed to show the foot. There is a narrow panel of bright colored satin masked by a line of Venise edge. Flat Venise trims the corsage, and a vest of pleated net fills the opening. The long sleeve ends with a puff of net and a band repeating the panel and on the shoulder and sash ends is an embroidered motif in Bulgarian embroidery.



Tailored shape of fancy straw, the brim faced with smoothly laid black Malines. A folded band goes round the crown, a blondine mount shoots out at the side.

CANADIAN PUBLIC AFFAIRS

In the following contribution Mr. E. W. Thomson argues that the Ottawa Ministry illegally withhold a Redistribution of Representation Act; that this is a necessary preliminary to a general election; that it cannot be proper or wise to persist in attempting to establish the Premier's "Naval Aid" Bill without submitting it to the electorate; that such submission is the more desirable inasmuch as the Bill itself is largely good; and that prompt agreement of both parties on measures to provide coast defence for both Canadian shores is urgently required by those dangers which Canada, as a Realm of the King, plainly incurs through the alarming nature of the European international situation.

By E. W. Thomson

HIS Royal Highness the Governor-General possesses constitutional authority to untangle the "snarl" at Ottawa. It has happened because his Ministers have ignored and therefore violated the British North America Act, Canada's fundamental law. Clause 8 ordains a general census in every tenth year. Clause 5 declares that "on the completion of the census" the Representation of the Provinces shall be readjusted in a specified way. The census of June, 1911, was officially completed on April 30, 1912. Strict regard for our fundamental law required passage of Redistribution Act last year. It is now long overdue. That the Premier would obey the Law was properly assumed by the present writer in *Farmer's* of April, 1912, and again in November last. Mr. Borden did not appear determined in October to prolong defiance of the B. N. A. Act in this important matter. Since then he has intimated that he does not mean to obey it this session. He is free to change his mind, and so put himself right. Persistent disobedience of plain Law is not to be fairly expected of a Prime Minister so honorable, respectable, and respected. Mr. Borden's incessant labors, his much travelling last year, his pre-occupation with his Navy scheme and with his connected design to ascertain clearly whether "Imperial Federation" be feasible in his time—these items may account

for and somewhat excuse his seeming obliviousness to the gravity of his infringement of the B. N. A. Act. Our Royal and most admirable constitutional, unmeddlesome, wise, tactful Governor-General has not been burdened and distracted by immense and confusing labors. His mind is clear from party passions. He cannot but be aware that ruin of Constitutions and Institutions; prevalence of public disorders; usurpation by Dictators, Oligarchies, Aristocracies, Mobs, Autocrats, have commonly begun, not in Mexico and the Latin American countries only, but in Europe ancient and modern, with arbitrary breaches of Law analagous to that of Mr. Borden. This Dominion, like Great Britain, exists under what a great authority defines as "parliamentary government with an hereditary regulative agency"—the Monarch—whose Deputy is here the Governor-General. If King George V. perceived his London Cabinet to be clearly ignoring Law, surely his duty would be to exercise his regulative agency by requiring his Premier to conform to Law or resign. It seems most unfair of Mr. Borden to put H. R. H. in the dilemma of having to share responsibility for a plain breach of the B. N. A. Act, or else dismiss his Premier. It must be presumed that our Governor-General will not flinch from the right constitutional course, in case his patient waiting for the Premier to comply with Law be interpreted by that

gentleman as warranting or approving indecent continuance of its violation.

If such flagrant breach of the Constitution were not itself of immense importance this would accrue to that breach by consideration of the restiveness of the West, and of how that restiveness cannot but be fevered by plain, illegal, special injustice to that region. Its heterogeneous population consists largely of immigrants less patient than born-Canadians and other Britons. Their cup of exasperation is full already. In recent debate at Ottawa Western representatives have testified that their constituents cannot sell their grain profitably for lack of that free admission to the U. S. market which they hopefully craved in 1911. It was related that an hegira of proved-up settlers to the Republic is imminent; that farms are generally heavily mortgaged; that agricultural-implement dealers cannot collect one-tenth of their dues; that a proper bank-restriction of credits has almost wholly shattered the long boom in town lots and farm lands. Some of us have long familiarly known the West. We remember how great and dangerous political troubles sprang formerly from *Hard Times* on the prairies. We remember that every item of grievance originating at Ottawa was then urged as reason for disturbance and secession. We who continue to read the Western press see now precisely the former alarming symptoms. They should deeply concern Ontario, because Ontario's prosperity depends largely on tranquillity of the huge Western market for Ontario manufactures and other products, and on such Western immigration as has been invariably checked when Western turbulence occurred.

Let our readers in Ontario calmly consider whether the West, while denied Redistribution, is treated in a way that Ontarians could, were the wrong theirs, calmly endure. Alberta, having now 7 representatives, is entitled to 12 by the census of June, 1911. If Ontario, having now 86, were illegally deprived in like ratio, this Province would be short her just representation by 36 members. Saskatchewan, having now

10 M. P.'s at Ottawa, lacks 6 of her right. Ontario, similarly deprived, would lack 32. The Provinces west of Ontario, having now 35 federal representatives, are entitled to 57, almost 63 per cent. more. If Ontario and the Provinces to her eastward, now collectively having 186 M. P.'s, were similarly shorn, their representation would be 117 short of the due—their M. P.'s would number but 69 at Ottawa. This would be more intolerable to the East if the West were at the same time illegally over-represented, as the East now is by 9 M. P.'s, or a little more than one-twentieth of the legal quota. In illegally refusing Redistribution the Premier entrenches a House in which the East has one M. P. for each 29,340 inhabitants, and the West one for each 49,739. Fair play is here a missing jewel. To allege that Ontarians wish to prolong their illegal advantage would be to credit them with the political arrogance of Mr. Birdofreedom Sawin's, "We air bigger and tharfore our rights air bigger'n their'n." If wise Queen Victoria's wise son put up much longer with that sort of thing in his Ministry the lieges may well wonder.

Some Ministerialists say,—“O, but the West could not get its due representation by a Redistribution Act. The B. N. A. Act does not require a general election to follow Redistribution closely. This House of Commons may legally hold on till 1916.” True. But the legal may not be always the moral or practical or constitutional. John S. Ewart, K. C., in “Kingdom Paper No. 11,” quotes Anson's “Law and Custom of the Constitution”, — “When any large change is made in electoral conditions, as in 1832, in 1867-8, and in 1885, it is proper that those new conditions should be put to the test, and the newly enfranchised enjoy their rights at the earliest opportunity.” Upon which Mr. Ewart comments,—“The change effected by the increased population in the West, while not comparable, in one respect, to the changes worked by the statutes referred to by Mr. Anson, is, in another, more important; for while those statutes added many thousands to the polling list, they did not material-

ly affect the proportionate voting of the various parts of the United Kingdom. The greater significance of our case is that it is precisely the proportions (between East and West) that are affected." The reasons why the Premier should hasten to Redistribution are two,—(1) the Law requires it; (2) the West cannot get its due representation without Redistribution. A general election, if soon forced, as it may be, on the basis of the census of 1901, would necessarily be followed by Redistribution according to the census of 1911, and then, immediately, by another general election, no matter which party were "in." To avoid thus cursing the country by two elections, with a period of something like business anarchy between them, would surely be the moral duty of the Premier, even if immediate Redistribution were not his plain legal duty. It does not appear conceivable that Mr. Borden, so honorable and so respected by all Canada, so fair as he has shown himself this session on points of order in debate, could be capable of so mean a design as to withhold Redistribution for the very reason that the West cannot get due representation without it, and because, if he were beaten at an early forced election, he might soon have another chance! Would he illegally withhold Redistribution by way of entrenching himself in office through Sir Wilfrid Laurier's reluctance to put the public to the trouble of two elections? Would not such reliance on an adversary be too shabby? I have such respect for the Premier as to believe that he will put himself right soon. It cannot be for that gallant gentleman to imitate the dead-beat tenant who won't pay overdues because he feels that a merciful owner probably won't distress the whole street by forcing Mr. D. B. and his children out into the open!

If the Law did not require immediate Redistribution surely the "Naval Aid Bill" would, in order that this may be submitted as solely as possible for approval or rejection by the electorate. If it be largely a good measure, as the present writer still inclines to believe it, why risk it at a forced election in which it could not be everywhere the main ob-

ject of discussion—why? Because at such early forced election, one brought on by Opposition tenacity, the main discussion in the West would probably turn on the impropriety and illegality of the Ministry's refusal to redistribute representation. This would infallibly be regarded by the West as requiring rebuke. Quebec, being ostensibly unaffected by Redistribution, since her representation stands constant at 65, would be, as in last election, free to whack the Borden Navy harder than her majority whacked the Borden proposals of 1911. British Columbia is certainly very susceptible to attraction by Sir Wilfrid's proposal to build and maintain a fleet unit on that Coast. Nova Scotia, and the other eastern Maritime provinces, together with their formidable iron and steel and coal producers, are equally susceptible to his scheme for spending many millions to construct and maintain a similar Unit there. Everywhere those very numerous timid electors who dislike "militarism," who regard both navy plans as obnoxious, who shun declaring their "anti" sentiments for fear of being reproached or would be enabled to proclaim themselves overflowing with horror at Mr. Borden's illegal arbitrary refusal of Redistribution. Hence his Navy Aid Bill might be heavily defeated by "side winds." Did he lay it aside, hasten to Redistribution, thus put himself right, and himself then promptly call an election on his Naval project, it might be approved on its merits, particularly if he disclosed details of his plan for building cruisers, etc., in Canada. His scheme, once so approved, would be safe from reversal, as it could not possibly be made by forcing it through an unrepresentative House, with a general election sure to come next year. There could be no need for any such forcing had the Ministry accepted the various Opposition tenders for conference intended to harmonize the Laurier and the Borden Navy projects, which could well be fitted together. The Premier's three battleships, and Sir Wilfrid's two coast-and-commerce-defence Units could be all alike forwarded under the Laurier Navy Act.

As for the alleged profound difference of the two schemes in point of "Imperialism," "Centralization," "Decentralization," "Autonomy," "Tribute," and all the rest of that contrary hullabaloo, let him that difference excite who can perceive immensity between Tweedledum and Tweedledee! Mr. Borden proposes that Canadian warships shall be continually at the disposal and under the command of the London Government. Sir Wilfrid virtually proposes that they shall be under Ottawa when they are in Canadian waters, and under London whenever they sail the deep, or visit a foreign port, war or no war. This reminds me of a footman's grandiose profession that he is his own master when the Master isn't ordering him. Lord Roseberry, as quoted by Mr. Borden, declared that the Dominions adhere to "a fool's bargain" while they remain liable to be dragged into the United Kingdom's wars. The Premier and Sir Wilfrid alike declare that Canadians will remain ready to lavish their "last man and last drop of blood" in U. K. wars, which is oratorical bosh.

Mr. John Ewart, K. C., and many other native Canadians, including the present writer, wish to see this country freed from liability to be "dragged" into any war, which wish is entirely consistent with desire to see Canada speedily provided with defensive armaments proportionate to her existing liability to be "dragged" into war, or her possible inclination to engage in war, voluntarily. It is not because the Premier proposes to build three battleships in England for Great Britain's defence, but because reinforcement of that defence implies speedy lessening of Canada's liability to be invaded, that the present writer has incurred reproach from some Liberals by contending that the Premier's scheme is, so far as exposed, not bad but good. M. Borden indicated, in his introductory speech, that the Admiralty will detach squadrons capable of defending both Canadian coasts, and will maintain them with bases in British Columbia and Nova Scotia, when or soon after Canada shall have placed in England an order for Mr. Borden's three dreadnoughts. Those squadrons

would, of course, be supplied with the torpedo and floating-mines apparatus by which the channels of approach to Nova Scotia, New Brunswick, St. Lawrence, and British Columbia coast cities, coal mines, settlements, etc., could be promptly closed, did any enemy of Great Britain threaten them. As a military scheme this has the immense merit of supplying a sufficient defence for Canada far more speedily than such defence can be obtained by Sir Wilfrid's proposal that we go undefended until Canada can build and outfit floating armaments. The debate at Ottawa has revealed, with some other valuable information, that the Admiralty maintains constantly, in good order though out of commission, a great many strong ships entirely capable of Canada's defence. Did the Premier reveal an arrangement that a sufficient number of these ships should be immediately stationed for Canada's defence, then his project would seem suitable and sufficient to the needs of the hour. With our coasts so insured Mr. Borden could, if backed by Parliament, hasten to construction of those cruisers, etc., which he designs to build in Canada. Upon their completion Canadian crews and officers, trained in the meantime, could be put in charge, whereupon the King's Old Country squadrons could be relieved from Canadian defence. This military plan would involve no infringement of Canada's real independence. It would consist perfectly with our existing political relation to Great Britain, which the Opposition incessantly declare they wish to preserve intact, which Ministerialists allege they wish to conserve pending that "Imperial Federation" for which they long, and which appears to some of us impracticable and undesirable. A Voluntary Union of British self-governing countries exists now. It has become firmer with every increase of independence in the Dominions. The clear inference is that complete independence under the common Crown would imply a Voluntary Union quite unbreakable, the most perfect kind, such as exists between loving independent brethren of any sound family.

THE ESCAPE

This story might be said to carry a moral. Opinion may differ on the question; it is largely a matter of viewpoint. But be that as it may, the story is a wholesome one, touching ordinary home life, and the reading of it cannot but prove helpful and stimulating. And in most instances the result should make for more rational living and real contentment.

By Annie Steger Winston

THE substantial form of Mrs. Mike disappeared through the door of the small dining-room, and the master of the house looked at his wife, facing him at the table.

"As the countryman said when he saw the giraffe," he remarked with impressive slowness, "there ain't no sich critter!"

Yet Mrs. Mike, reappearing with a plate of irreproachable griddlecakes, was, to outward view, ordinary enough; a rather more than middle-aged woman, with flat bands of hair about a face carved with honest wrinkles, and a broad wedding ring upon a large, serviceable hand. Only, perhaps, the way she paused—palms comfortably planted upon her hips—and watched with benevolent patronage their enjoyment of the fruits of her skill, was not strictly the way of a first-class servant.

But first-class servants—"servants" of any sort, in fact—were not to be found in Steel City, except, of course, in "Millionaire Row." There was only help—so-called. Until now, the undeniable wistfulness with which young Mrs. White would look toward the magnificent region around the corner from their own modest street was not alone because of her husband's so far futile hope of finding scope there for his art, but because there was no "help" there—no naive blonde casually requesting, in broken English, the loan of her employer's tooth-brush; no breezy, red-armed young compatriot whom one must address as "Miss," and admit to a share

in the conversation, as she waits around the table.

"I hate the very name of 'help'!" she confessed once to her husband, in a moment of unwonted irritation.

"Blind Southern prejudice!" he assured her, with his unfailing cheerfulness. It was in Norfolk, Virginia, that they had married, the winter before, upon the strength of his prospects. Had he not studied mural painting, with conspicuous success, under the best masters at home and abroad. And what mattered a little poverty—*together?*

"'Help,'" he went on, "is a beautiful word for a beautiful idea—service without servility, community of effort and interest upon the part of employer and employee——"

"It is," she agreed—"a beautiful idea!"

She was more than half ashamed of the cynicism of her own tone. But how could he know the effort required to have things tolerably comfortable? Dear as it was to him, if he only would not be so absurdly obstinate in not letting her do her own work!

That was before Mrs. Mike came.

He pushed his chair back from the table.

"There's simply no end to the poetry of American life, if you have eyes to see it. Take the careers of half the magnates around the corner there——"

"Or supposed to be," she said. "They seem to be true birds of paradise in keeping continually on the wing. *Have*

you heard when Thomas M. Kennedy will be back?"

Nobody ever gave that man less than the full name which was so mighty a power in the business world.

"No," he answered, and swept on.

"Take him, for example. It hasn't been a dozen years, all told, since he was in the "poor but honest" class; and now——! Take the titanic youth of this place, itself. Look at that street of palaces, risen in a night, as it were—'like an exhalation,' as old Milton says." He smiled a little ruefully. "Painting and all complete, I suppose, from the hands of the genii."

"Places like those," she said, with the practicality she was learning at Steel City, "never are complete, to people who don't know what to do with their money. And 'Thomas M. Kennedy's certainly isn't, stupendously splendid as it is. I saw in the paper yesterday that his object in going abroad was to buy old tapestry and pictures and cathedral glass and fifteenth-century Venetian furniture and staircases. But one thing he can't buy and bring home with him, and that is the painting of his walls to harmonize with it all. And so it is with the rest of them. If there was just any way in the world of getting in with those people enough to show what you can do!"

But how was that possible? One palace was divided from another palace by a great gulf of strangeness, and how much more from the little jig-saw cottages around the corner? The cottages might echo the boast current in Steel City that Elm Avenue was the most magnificent avenue in America, but how could the palaces be expected to do more than to forgive—and forget—the propinquity of the cottages?

Not that they were not nice cottages enough, in a modest way. Mrs. Mike, when she applied for the place of help, in answer to their advertisement, fairly gloated with approval as she scanned the premises.

"'Twas just such a snug little place I went to housekeeping in when I was married," she said—"out in Iowa. You couldn't swing a cat around in a room in the house, no more than this. And

as for furniture—how much of it was made of packing-boxes, at first, you wouldn't believe!" Her frankly scrutinizing glance passed to Mrs. White—who could well stand scrutiny.

"Why don't you do your own work?" she asked.

"My husband won't let me," the mistress of the house replied with meekness. There was small fear now that she would not be as propitiatory as the haughtiest help could demand, if there was any sign of competence. And competence, with Mrs. Mike, was stamped upon every lineament.

"Work never hurt anybody yet!" said Mrs. Mike stoutly. "But I know husbands!"

A profundity of problematical meaning was in her tone.

"You are slender built, but you don't look sickly," she resumed. "Still, I don't suppose you was brought up to work, and that makes a difference. But, lor' me! If I had a nice little cottage like this to fuss over——"

It was not until she had gone, with the understanding that she would return in the morning, with her box, that it occurred to Mrs. White that she herself had asked no questions whatever, except, rather tremulously, what wages would be expected.

"I guess I can be satisfied with what you have been paying," Mrs. Mike responded. And so it proved.

"She actually seems to like us!" Mrs. White joyously confided to her husband.

About a perfect treasure, it behooves one to step carefully. What if she still knew nothing whatever of Mrs. Mike, except through her own singularly fragmentary bursts of confidence!

"Save your soap-wrappers," she adjured Mrs. White. "You can get lots of tins and things for them. Once I got a chiny tea-set, with gold bands and moss roses. I've got a piece or two put away now at the house."

"At the house?" Mrs. White interrogated.

Mrs. White took up her broom.

"Where I was before I came here," she said, in a tone which invited no further question.

"I wonder where she could have come from?" Mrs. White mused afterwards.

"It doesn't matter in the least," stoutly affirmed her husband, "so long as she is here!"

She came, she stayed, and was to all appearance satisfied. Nay, even unmistakably pleased and eager to please.

"It's been hard for her to get a place—or to keep it," Mrs. White shrewdly divined. "But whatever the objection to her is, I don't want to know it!"

Yet the inevitable happened. She could not help watching Mrs. Mike with more or less—not of suspicion ("I know she's good!" she would say), but of uncertainty.

"Doesn't she strike you sometimes as a little curious?" she asked her husband.

"Tolerably curious about us, in a friendly way, if you mean that," he admitted. "She stands over me, broom in hand, when I'm at work, and catechises me about myself and my plans."

"She's made me tell her every secret of my soul!" Mrs. White exclaimed. "But I don't mean that. Isn't there something about her just a little—singular? I suppose, out here, it's nothing for her to speak of us as her 'young people,' and join in conversation at the table; I'm past caring for anything like that; but——"

"She is singular only in her perfections, so far as I can see," he maintained. "In fact, I think she is remarkably commonplace — if the commonplace can be remarkable. She is normal to the point of abnormality — a walking type——"

"But the way she gloats!"

"Gloats?" he questioned.

"And over the strangest things! Over the pots and pans of the kitchen — a dish towel, a gingham apron, a feather duster! But the really touching thing is the way she admires our living-room furniture. Of course, dear, you *know* I'm not complaining. Anything will do now, when we are just starting out. It won't make a particle of difference, after we get our old mahogany, that we had to put up first with cheap, shiny things, reeking with newness. Only, it is funny and pathetic to see her stand before

them, lost in wistful admiration. 'They look so nice and new!' she was saying this morning. 'I can't abide old things. Out in Lowy——' and then she stopped and sighed. It's perfectly evident that she's seen better days."

No enlightenment as to her past came from Mrs. Mike. But her present, at any rate, was all that could be desired; unless perhaps ——

"She doesn't do the smallest thing in a perfunctory way," Mrs. White said to her husband.

He replied to a note in her voice.

"You don't want her to be perfunctory, do you?"

"No," she said; "but still——"

"Out with it!" he commanded.

"When it comes to kissing a broom——"

He looked at her stupidly, though he was not a stupid man.

"Kissing a——?"

"Broom. The handle of the one she sweeps with every day. I saw her do it, though she didn't know I did. Now, what do you think of that?"

"I think," he said dryly, "that it was an act wholly consonant with decency and morality."

Yet he too was plainly puzzled — to say the least of it.

"I can't help wondering if she's exactly safe," she said, another day.

He lowered his newspaper, which he was reading by the lighted lamp, and looked across the shiny centre table so admired by Mrs. Mike.

"Don't borrow trouble, little woman," he said, more sombrely than was his wont. "We'll have some, without borrowing, if things keep on this way. And I don't see what's going to change them."

She dropped her sewing into her lap.

"George," she said, "there's no use talking. I'm going to do my own work!"

"And right you are!" approved Mrs. Mike from the doorway, so unexpectedly that they started. "Right you are — if you are able. That's not for me to say. All I know is that when you take me and coop me up with nothing to do, it's next door to killing me. If I hadn't

taken my chance, and escaped when I did"—

("You see!" said Mrs. White's eyes.)

"I don't know what would have become of me! But I've had a real good rest this month and a half, and now I'm ready to go back. Any way, I've got to—and 't was that I was coming to tell you. But you needn't think you've seen the last of me."

"We don't want to lose sight of you," Mrs. White hastened to assure her. "You've been so good, and such a comfort! And if there's ever anything we can do for you——"

A vague intention was forming in her mind of gladdening the simple heart of Mrs. Mike with the furniture she admired, when they should be able to discard it. Though, of course, in an — institution ——

"Whatever I can do for you and him," responded Mrs. Mike heartily, "you can count on, sure. And I haven't got any idea in the world of letting you lose sight of me. I haven't got too many friends. Seemed like I'd die of loneliness, almost, after my husband left me!"

Poor Mrs. Mike!

"Your husband left you?" said Mrs. White gently. "Was it that that preyed on your mind?"

"I made him do it," replied Mrs. Mike, with disappointing coolness.

"What preyed on my mind, if you choose to put it that way, was that house, with everything going on in it like clockwork, and me sitting there with my hands folded in my lap and pins and needles in my very soul! Many's the day I've felt that nothing would save my reason but a broom and a dust-pan. I was like something hanging up with all its roots out of the ground, just fainting and famishing. Let them have waiting on that likes it. Give me a chance to get my blood up with good honest work, and I ask no letter! But there's Mike," she said, and sighed.

Then she smiled a little.

"Think of anybody's trying to please me by building a palace fit for a queen, and expecting me to live in it like a wax dummy, not lifting a finger! And I'll do it; too — for Mike. When he gets back, next week, he's got to find me there."

"Is he——?" said they together, recovering voice.

But Mrs. Mike was absorbed in her own reflections.

"I'll stay there, if it kills me — with a French maid to button my shoes for me! I won't say a word against it if he buys Egyptian mummies to put in it! A better man don't walk this earth than Thomas Michael Kennedy!"

DISILLUSIONMENT

It has gone!
 Out of thine eyes that swerveless look,
 That gave thyself, in love, to me,
 —Gave until all my spirit shook
 At its poor insufficiency—
 Awed—as some little novice pale,
 Breathing to Christ her child-white vows
 By a new altar's rail.

It has gone. . . .
 And having gone, I know—dear God—
 It cannot come again. We meet
 And smile with rigid lips, or nod.
 The wound has dried, but incomplete,
 Stealthily changed is life. Alone,
 With eyes awe-starved, I crouch beside
 My broken altar-stone.

Mary Linda Bradley.

THE GRANGE FUNDS

AT THE last annual meeting of the Dominion Grange voluntary contributions amounting to some \$150 were made by delegates to assist in the work of organization; and it was decided to issue an invitation, not only to the members of subordinate Granges, but also to the public generally, to contribute towards this work, writes W. C. Good, master of the Dominion Grange.

The Grange is the only independent Farmer's organization in Eastern Canada, and is affiliated with the Grain Growers' Associations of Manitoba and Saskatchewan, and with the United Farmers of Alberta, forming with these three, the Canadian Council of Agriculture.

The work of the Grange is mainly educational and social, with commercial co-operation as a side line. The delegates assembled in annual convention concern themselves chiefly with public questions having a direct bearing upon agriculture. During the last few years the Grange took the lead, in co-operation with the Canadian Manufacturers' Association, Toronto Board of Trade, and other bodies, in pressing for the establishment of the Railway Commission. It was mainly through its efforts that legislation was secured under which railways are made responsible for loss caused by the destruction of cattle due to defective cattle guards. It was by the aid of the same organization that friends in Parliament were enabled to secure a fair law governing the drainage of farm property across railway lines. The Grange has fought, too, for equalization of taxation between farm and corporation property; it has opposed the granting of public money to railway and other corporations, has constantly pressed for the abolition of our protective tariff and for an increase in the British Preference, and has urged reorganization of our educational system as will help to fit our country boys and girls for effective country life.

At the present time, apart from questions of local interest which are best dealt with by subordinate Granges, the Dominion Grange has the following objects in view:—

1. The establishment of a Parcels Post system in order to bring producer and consumer closer together.

2. The elimination of the protective principle from the tariff, and the gradual substitution of a direct tax upon land values

and upon public franchises for the indirect tariff tax. The Grange believes that this will be of tremendous benefit to agriculture generally, in appropriating for the public treasuries some of those extraordinary increases in the value of city lands that have marked the last few years, which increases are due to the activities of the community and should therefore return to the community to supply its needs.

3. The establishment of freer trade with all countries, but particularly with the United States and with Great Britain.

4. The discouragement of all militarist propaganda and the encouragement of international amity; arbitration instead of war as a method of settling international disputes.

5. Local option for municipalities in methods of municipal taxation.

6. The extension of the principle of Direct Legislation through the Initiative and Referendum.

The above objects, together with those dealing with rural education, constitute the main work of the Dominion Grange, and should, we think, appeal to the majority of our farmers, as well as to many city residents. The officers of the Grange indeed, rarely find in our rural districts, any opposition either to the organization or to its aims. They do find, however, great difficulties in maintaining and extending the organization, owing to the serious handicap under which our farmers are laboring, due to the rapid depopulation of our rural districts. The difficulty in securing help, the emigration of many of the younger men and women, and generally, the economic burden, makes it hard to maintain any kind of rural organization; and in this respect the Grange has to meet with the very same difficulties as the Farmers' Institute and other agricultural associations. The officers of the Grange, therefore, realizing that upon the maintenance of an independent and intelligent yeomanry depends the future of our civilization, and realizing that one of the greatest aims of the Grange, namely the regeneration of rural life, is especially difficult to accomplish by reason of the very fact of rural decadence; the officers of the Grange therefore extend this invitation to assist in the work to all those who are in sympathy with the Grange and its aims, and have confidence in the integrity of its officers.



By Grasmere

Watch the Horses

Have you exercised reasonable care during the winter in the matter of feeding and exercise? The working horses will be in fairly good shape for heavy work as soon as seeding operations begin. If, however, you have not given proper exercise and have not kept the horses in good condition, it will be little short of criminal to put the animals into heavy, steady, work. Some people practice clipping and if the animal has a very heavy coat of hair this is advisable. Still extra care is needed not to overwork the animal as it cannot so readily be told where the perspiration is not easily seen.

Watch the shoulders. A wash of cold water and salt after the days work will be beneficial. See that the collars fit perfectly and that no parts of the harness irritate the animal. The remark is frequently made that farmers take the least care of their horses of any body of men. A glance at the stables of the big departmental stores will tell you that a well cared for horse is the most efficient horse.

The yearlings should be in good condition to go out on grass. The writer has kept his on alfalfa, and clover hay, oats

and molasses meal during the past winter, being careful not to overfeed the youngster with too bulky feed. As a result they are coming out in fine shape and will go on to the grass to do well.

A little exercise daily is good for the brood mare. Keep her in good heart, and where there is a tendency to swelling of the limbs, daily exercise is absolutely necessary.

The Fat Cattle

The stables of fat cattle will be largely emptied this month. Prices are good because the cattle are scarce and good money should be made on the turn-over. Every farmer should invest in a platform scale. He then knows exactly what his animals have done during the past winter and he cannot be deceived in the weights at selling time.

The Stockers

Young cattle are scarce on the average farm in Canada. Because prices are high is no reason for allowing the animal to shift. Feed liberally this month to prepare for the summer's growth so that when

they are turned on to the grass after the middle of May they can go right ahead. Purchases of stock this season to be put on the pastures will be made at high figures. The possibility of the American duty being taken off by the Democrats is making some uneasiness in this field for if the duty is taken off the cattle scarcity will be accentuated.

In the Dairy

In Western Canada, especially, are the dairy cows on the increase. The best advice that can be given for this month is to have the stables thoroughly cleansed and disinfected at once. All refuse and manure should be taken from the yards. Start cow-testing in your herd if you have not already done so. This will enable you to discard the poorest cows before they become boarders upon you. Allow daily exercise in the open. It is a mistaken fad of some dairymen to keep the cows tied in the stables all the time.

The milking shorthorns are making favorable progress throughout Canada and good accounts are given in all their work. Mr. David M. Fyffe, of Ohio, writing in the "Breeder's Gazette," tells of the dairy shorthorn cow "Dorothy," whose average milk production for nine years has been 9,953 lbs. Every farmer should petition his member of parliament for his influence in securing the admission from England of her splendid dairy shorthorns free of duty.

Spring Fencing

On nearly every farm there are some fences that need attention if not rebuilding. The old worm-rail fence is rapidly disappearing from Eastern Canada. These fences answered very well in their day, but now they take up too much room and allow the growth of too much rubbish. Often these can be used to advantage by putting up the patent Russell fence which will last for fifteen or twenty years yet, if properly done, and the cost runs about thirty cents a rod. Wire fences are so cheap that it is economy to use them. Cedar posts are the best where they are obtainable and should be set from a rod to twenty feet apart. The greatest care should be taken with the end posts upon which the draw is made. These should be set four feet in the ground and braced. Barbed wire fences are common on the prairies as a temporary make-shift, but they are being discarded by good stockmen in favor of the woven wire fencing. It does not pay to use much of this wire fencing on the Eastern farms as the damage that might result to one animal would easily offset the saving in price of the wire.

Use Some Dynamite

Dynamite is coming to be looked upon as one of the farmers best agents in clearing his land, loosening the sub-soil, digging ditches, and planting trees. This is one of the things that railway construction has



Onion planting in May.



MR. DAVID F. HOUSTON, L.L.D.,

Chancellor Washington University, St. Louis, Mo., the new Secretary of Agriculture for the United States in succession to Mr. James Wilson who has been at the helm for three administrations.

demonstrated the use of to the farms. The old stones can be broken up, old stumps can be torn out to make room for a level field at a minimum of cost. Often the hard sub-soil in a field when broken up by dynamite will allow the production of a much better crop of grain. Try it this year on a small scale to convince you.

Prepare Good Seed-Beds

Take time to put your grain in well. Wheat and oats should be in as early as you can get on the ground, but a little time taken to pulverize the top and to ensure a good seed-bed will mean bushels in the extra yield. Use big implements where possible.

The Sod Land

Many fields of sod will be plowed up this spring for spring crops. Unless the land is well drained farmers might better leave it in sod. Have it plowed up and it will produce much better with a thorough dising, rolling and harrowing. This makes a fine seed-top and fills up all the air spaces below.

Put in Tile Drains

Are you draining any this year? The ditching machine has not as yet been placed on the free list much as it is desired by the farmers of Canada. Yet every farmer should do as much draining this year as he can for nothing pays so well. Inquiry at your nearest agricultural college will bring you their best advice as to methods of taking levels and probably you may get some more assistance from them in your work. In putting in leading drains do not make the mistake of too small a tile. The drains should be built to carry off the heaviest rainfall on your land within twenty-four hours or else the crop suffers. A three-inch tile cannot drain a ten-acre field in several days.

In the Orchard

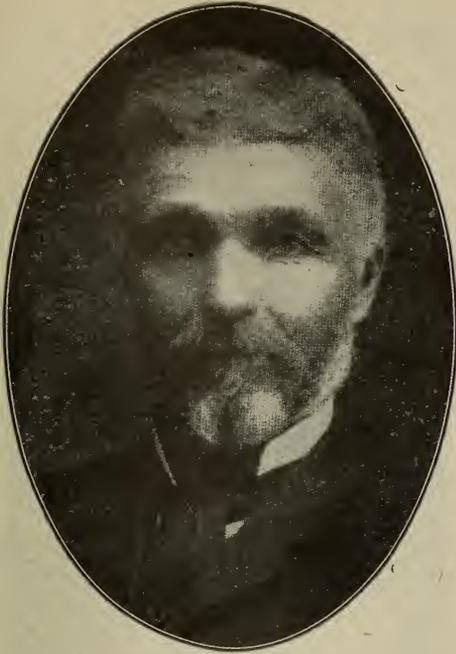
Spray this month before the buds swell, with bordeaux mixture or lime-sulphur. Use strong solutions and thoroughly cover the tree to ensure the killing of all fungus diseases and scale. You can use commercial lime-sulphur for old apple trees, although the usual amount is one of the mixture to ten of water.

The chief diseases in the apple orchards are: Apple scab, apple leaf spot, sooty blotch, bitter-rot, black-rot, canker, blight, San Jose scale, oyster shell, the bark louse, blister might, aphids, bud moths, codling moth, tent caterpillars and and railroad worm.

The second spraying should be made just as the leaf buds begin to burst, and the lime-sulphur should be used with a poison in this spraying. Do not use Paris green with lime-sulphur. Much damage is done by the aphids or green lice and if these are present it will be wise to spray with kerosene emulsion which is made by dissolving half a pound of soap in one gallon of rain water and adding two gallons of kerosene and stirring vigorously until the mixture



Rushton's Old School House in South-Western Ontario.



The late John Davidson, of Ashburn, Ont. Mr. Davidson was a son of the late James I. Davidson, ex-M.P., one of the best known shorthorn breeders in Canada. He was a neighbor of the late Hon. John Dryden. He owned a beautiful farm and was highly respected by a wide circle of friends. His counsel and advice was often sought and in every case his sympathy and kindness made the persons whom he met feel that life was worth living. The Editor of Farmer's Magazine is indebted to him for his helpful advice and optimism on many occasions.

is the consistency of cream. If you use the bordeaux mixture four pounds of copper sulphate to forty gallons of water for the dormant spray would be well without the addition of lime. For the second spraying add four pounds of lime and two pounds of Paris green.

Spraying cherry trees must be carefully done as they will not stand a strong solution. Pear and plum trees should receive the same as apples. All bushes should be sprayed as well. In the Niagara Peninsula the peaches are sprayed early with lime-sulphur. Perhaps there is no place where spraying pays better in the prevention of leaf-curl and other diseases of the peach. Spraying is the orchardist's biggest insurance.

Planting Trees

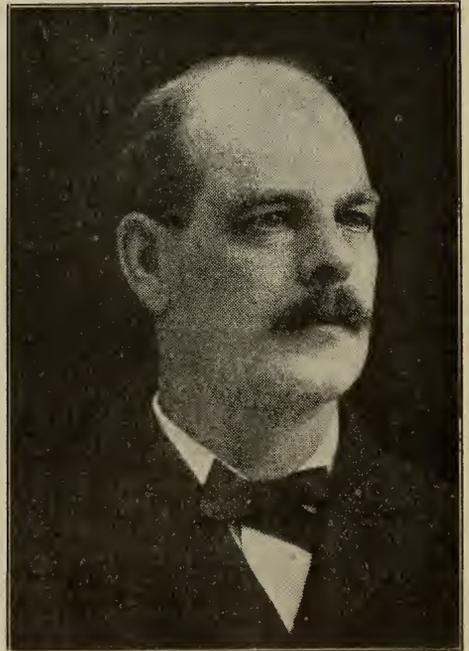
Many young orchards will be planted this spring. It is coming to be looked upon

as good practice to plant one and two-year-old apple trees as they have a better root system and are less liable to be damaged from winter killing. In laying out your orchard have the trees at least thirty feet apart. If fillers are used plant the main trees forty feet apart. Prune the tree back and mulch the top of the ground around it.

In the Garden

The first work should be done this month. All rubbish should be scraped off and burned. All bushes and trees thoroughly sprayed. Plant your small bushes either by roots or slips. Use plenty of manure and cultivate well. One horse with a special set of harness with no hame tops and a leather protection over the whiffletree clip will be found of much advantage.

Plant onions, leeks, lettuce, raddish, peas, spinach and parsely, just as soon as you can get on the ground. Sprout some potatoes in a cool place and plant for early potatoes just as soon as you can get the



Colonel Bellows of Missouri, who was accidentally killed by his automobile last month. Deceased was well known as a breeder of shorthorns and a live stock auctioneer both in Canada and the United States. He was highly respected for his geniality of manner and for his sterling integrity.



A boy finds much enjoyment with a goat. Goat's milk is coming to be looked upon as most nourishing for children and invalids.

ground ready. In sowing peas remember the smooth varieties are the hardiest and should be planted first.

Trim the brambles. Cut out all old and small canes. Leave a few strong ones, the red raspberry about three feet high and the black berry about three and a half feet, and build a support to hold them up.

Rake the mulch off the strawberry patch and cultivate between the rows.

Grafting

Many trees can be grafted to advantage this spring. A good general purpose wax may be made as follows: Rosin, 4 lbs.,

bees-wax, 2 lbs., tallow, 1 lb.; melt altogether, cool somewhat and pour into cold water. Grease the hands well and as soon as the wax becomes cool enough to handle, pull and work it until it assumes a light brownish yellow color. If a softer wax is desired, use linseed oil instead of the tallow.

In grafting trees, especially their large limbs, see that the scion is not pressed too severely by the two sides. The insertion of a wooden plug is often advisable. The best grafting time is the last week in April.



A Happy Bunch of Babies.

FRIENDS

Little they know who say—"Two staid old souls,
 Boring each other, for their days are long!"
 Faith, and it may be that we act the roles
 Assigned us, well—but ah, the world is wrong!
 We have a pleasure in old-fashioned ways—
 We love to tilt our chairs back from the fire,
 And linger over tales of other days,
 And each for each a new regard inspire.
 Matches are cheap—a great pile by your chair,
 Shows where your thoughts were when you told that tale,
 While I smoked on, and filled the air
 With rare tobacco fumes, the wife calls—"stale!"
 Boring each other—Ah, the joke of it—
 For when we part, sure it's reluctantly!
 To fret for each, tho' quietly we sit
 And watch the hours go passing silently.

How Royalty Reads the Daily Papers

THE popular idea that kings live their lives apart, and know little or nothing about what is going on in the outside and workday world, may have had some foundation in fact in the old days. Speaking generally, it has absolutely none now. The leading monarchs of Europe are all careful readers of the daily press, through which they keep in touch with conditions throughout the world.

King George is a firm believer in doing things himself, and he personally reads the leading newspapers. His Majesty's private secretary saves a certain amount of time and trouble, however, by marking articles and items of news of special interest. The King often jots down notes while he is reading. Some of these notes take the shape of queries asking for further information on some particular subject, and it is the duty of the private secretary to see that this is supplied. His Majesty has a remarkable keen memory, and is therefore able to converse on a very wide range of subjects.

In this respect he resembles the Kaiser, who is a very "hungry" reader, and is able to absorb a vast quantity of information in a very short time. He reads the papers quickly, and is specially interested in technical and engineering papers and in journals dealing with shipbuilding, gunnery, and other warlike matters. He has also a sense of humor, and always glances at the leading comic papers. Should any subject appeal particularly to him, he has experts thereon summoned to the palace, and over cigars and beer he fires off his questions and expects to receive the fullest information. The annual cruise which he takes on the Imperial yacht is the great occasion for these cross-examinations. A distinguished company of naval, military, scientific and business men accompanies him,

and if any details he is in search of cannot be supplied no time is lost in telegraphing to some one who is in a position to give them.

The Emperor of Austria very rarely reads himself. He is read to. The aged monarch still takes the keenest possible interest in the political movements in his country; he also likes to keep abreast of the time in military subjects. Literature and art do not, however, appeal to him.

The Czar has a paper of his own, specially printed each morning. It is the most exclusive paper in the world, for only two copies are supplied, one for the Czar, the other for his private secretary. It is a two-page sheet containing a digest of the news of the world compressed into tabloid form. Needless to say, everything calculated to disturb His Majesty's peace of mind is carefully omitted.

The King of Italy has a literary leaning and is fond of reading magazine articles, a taste shared by the King of Denmark, who is thoroughly informed on the literary movements of the day and well able to converse on them.

The King of Spain has a great admiration for everything English, and English papers and magazines figure on his study table. His Majesty is more a worker than a reader, however, and it is the Queen who supplies him with much of his information. Details concerning his own kingdom are supplied by his secretaries and an official who holds the post of Court Newsman and is supposed to be up in all the social gossip of the hour. The King takes much interest in motoring, flying, shooting and other sports. He also follows the trend of masculine fashions in London, and is kept advised as to the latest styles. This information is sent by a firm of tailors in London, from whom the King gets the bulk of his clothes.

HINTS FOR FARM BUYERS



WE all buy manufactured goods, and wisdom demands that we read the catalogs issued by the manufacturers. Reputable firms live up to what they claim in their catalogs. This department gives a review of the recent catalogs issued by the firms who are manufacturing up-to-date goods for the farm.



Here is an interesting photograph of one of a small army of farmers who have discovered a comparatively new and highly profitable business by which they can greatly increase their earnings during the off season—boring wells for farmers.



Progressive farmers everywhere, regardless of rainfall or local or local weather conditions, now consider a good well a necessity, because it is the only dependable continuous source of water supply, which every one can have, at small cost, on his own place, where it is owned and controlled by himself alone.

The picture shows Mr. A. W. Crandell, of St. Joseph, Arizona, and one of his wells—the sixth of the season, when this picture was taken last December. Wells like this are worth real money out in that country.

Mr. Crandell uses a Powers Combined Well Boring and Drilling Machine, manufactured by the Lisle Manufacturing Co., Box 563, Clarinda, Iowa, and is highly pleased with it.

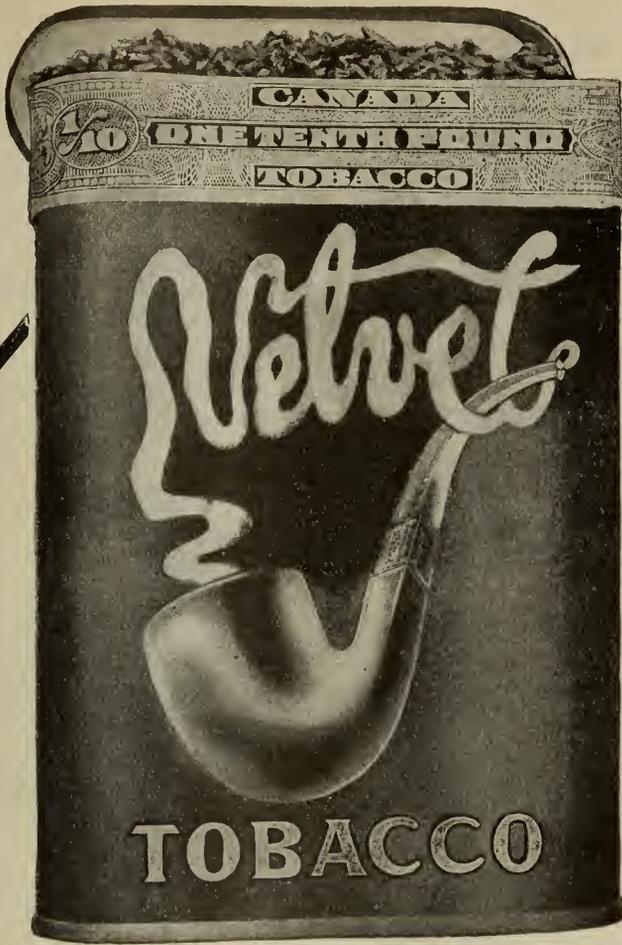
The manufacturers of this machine say that thousands of these outfits are in use all over America, from Canada to the Gulf of Mexico, and that many of their owners make as much as \$2,000 and more per year extra money, without interfering with their regular farm work. This firm have a very interesting proposition—one which it will pay every farmer to investigate.

The Massey-Harris Co., Limited, have purchased the entire capital stock of the Deyo-Macey Engine Company of Binghamton, N.Y., U.S.A.

The Massey-Harris Co., Ltd., has been for years selling engines manufactured by a company in the United States. They have, however, had in view ultimately manufacturing engines themselves in Canada.

To carry out this idea they have secured this growing concern, and its officers, who are men of wide experience in the engine business, are to continue with Massey-Harris Co., Ltd., in connection with the manufacturing of engines, and it is expected that within the present year a new factory, specially designed for engine construction, will be erected in Canada. In the meantime, the Binghamton factory will be increased to provide for the Canadian trade until such time as the manufacturing of engines is begun on this side of the line.

The Deyo-Macey Engine Company has built up a good business in the United States, the output of the factory consisting of a complete line of agricultural gasoline engines, ranging from 1½ to 20 horse power, both stationary and portable, together with the best known line of orchard spraying outfits in the world.



“VELVET” is the smoothest tobacco—mellowed to perfection—rich in flavor—different from other smokes.

An ideal tobacco for the pipe.

15c. tins at all dealers.



There is a Difference and a Distinction About MAPLEINE

Different because it can be used as easily as Vanilla for cakes, icings, candies and desserts, producing an original flavor that is delicately refreshing and satisfying,—AND IT IS

Distinctive in this way.—by adding it to hot water and granulated sugar (without boiling) you may make a smooth, creamy syrup that is delicious for hot cakes, waffles and biscuits.

Somebody has said "Mapeline Makes Maplescent."

50c 2-oz. bottle, which flavors 2 gallons syrup.

Your Grocer should have it, if not write our Brokers, F. E. ROBSON, 25 Front St. East, Toronto, or ask us for a sample, send a 2c stamp.

CRESCENT MANUFACTURING COMPANY
SEATTLE, WASHINGTON

Take a Scoopful of Each—Side by Side

Take "St. Lawrence" Granulated in one scoop—and any other sugar in the other.

Look at "St. Lawrence" Sugar—its perfect crystals—its pure, white sparkle—its even grain. Test it point by point, and you will see that



Absolutely Best

St. Lawrence
Sugar

Absolutely Pure

is one of the choicest sugars ever refined—with a standard of purity that few sugars can boast. Try it in your home,

Analysis shows "St. Lawrence Granulated" to be "99 99/100 to 100% Pure Cane Sugar with no impurities whatever."

"Most every dealer sells St. Lawrence Sugar."

ST. LAWRENCE SUGAR REFINERIES, LIMITED, MONTREAL

65A

My Dear: Your Baking Is Excellent!

Every good housewife delights to hear such favorable comments upon her baking and usually gets them when she uses REINDEER FLOUR, the special Bread Flour which gives that sweet wholesome bread, making each meal a joy to the family.

TRY IT WHEN YOU BAKE TO-MORROW.

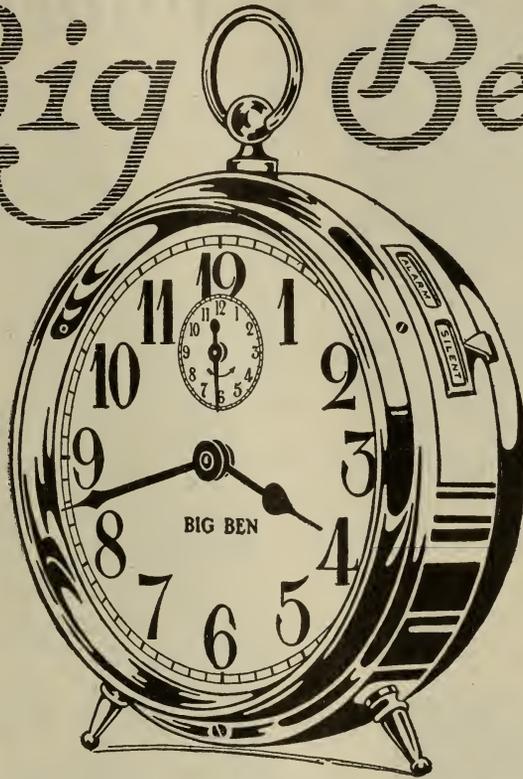
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PETERBOROUGH CEREAL COMPANY
SIMCOE ST. PETERBOROUGH



TRADE MARK

Big Ben



The Men Who Make Big Ben

About 26 years ago a German clockmaker came from the East to La Salle, Illinois.

His only baggage was an idea—the plan of an automatic process he had invented, and which would make more alarm clocks and better alarm clocks than hand labor could ever hope to turn out.

With the backing of some local merchants and with a handful of clockmakers, a small factory was started on the edge of the town. —Beginnings were hard, competition intense. They weathered storms that would have knocked the fight out of weaker hearted men.

But when success at last came in sight they had built one of the best equipped clock plants in the world and one of the greatest names in the

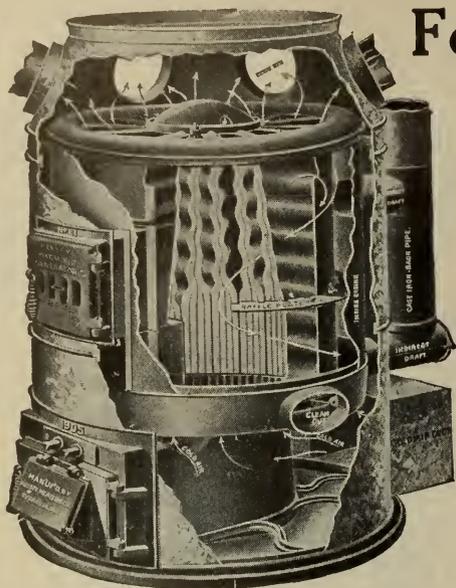
American clock industry—*Westclox, La Salle, Illinois.*

Today, the Westclox people number 1,200. Every week day of the year they turn out 10,000 alarm clocks—alarm clocks of every description and style—their name “Westclox” is on every one of them and *Big Ben* is the king of them all.

Big Ben is the ideal of the Westclox people. He is their conception of what a perfect alarm clock should be. He is only two years old, but in this short time 6,000 Canadian dealers have already adopted him.

Only the finest materials are used in his making—he is strong, massive and punctual. His face is frank, open, easy to read. His keys big, handy easy to wind. He rings steadily for five minutes or intermittently for ten. He calls you every day at any time you say. If you have him oiled every other year, there is no telling how long he will last.

Big Ben's price is \$3.00 at any dealer's. If you cannot find him at your dealer's, a money order sent to *Westclox, La Salle, Illinois*, will bring him to you, carefully packed and express charges paid.



Feeds Coal in at the CHIMNEY

For every shovel of coal you put in the fire-box of "A Kelsey Warm Air Generator"—a half shovel is fed back from the chimney. It is automatic. It costs you nothing for this extra coal.

It is accomplished by our patented device, known as —The Zig-zag Heat Tubes—This special feature enables the Kelsey to circulate three times as much Fresh Warm Air as any other Furnace with the same grate area.

The Kelsey System of Heating is healthful, efficient and economical. "We guarantee results."

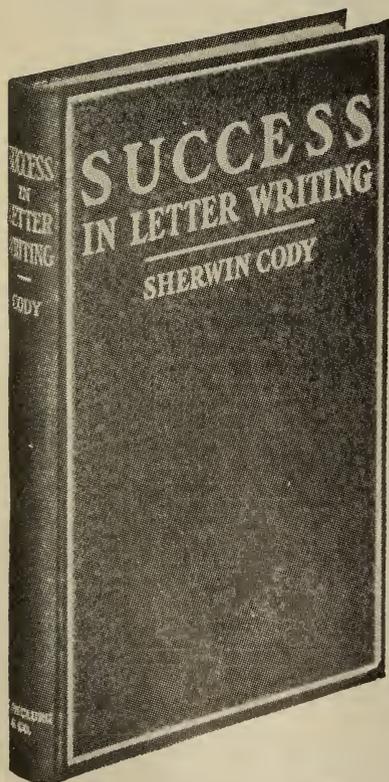
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Every pipe's a jimmy pipe if it's packed with P. A.

You enlist in the jimmy pipe army—whether you boss a briar, clay or meerschaum. Just jam it chock full of Prince Albert, make fire with a match—and you've certainly got yours!

Prince Albert kicks the grouch right out of any old pipe you ever saw or smoked—or *tried to smoke!* It tunes 'em up and puts in sweetness and fragrance and *real* pipe joy!

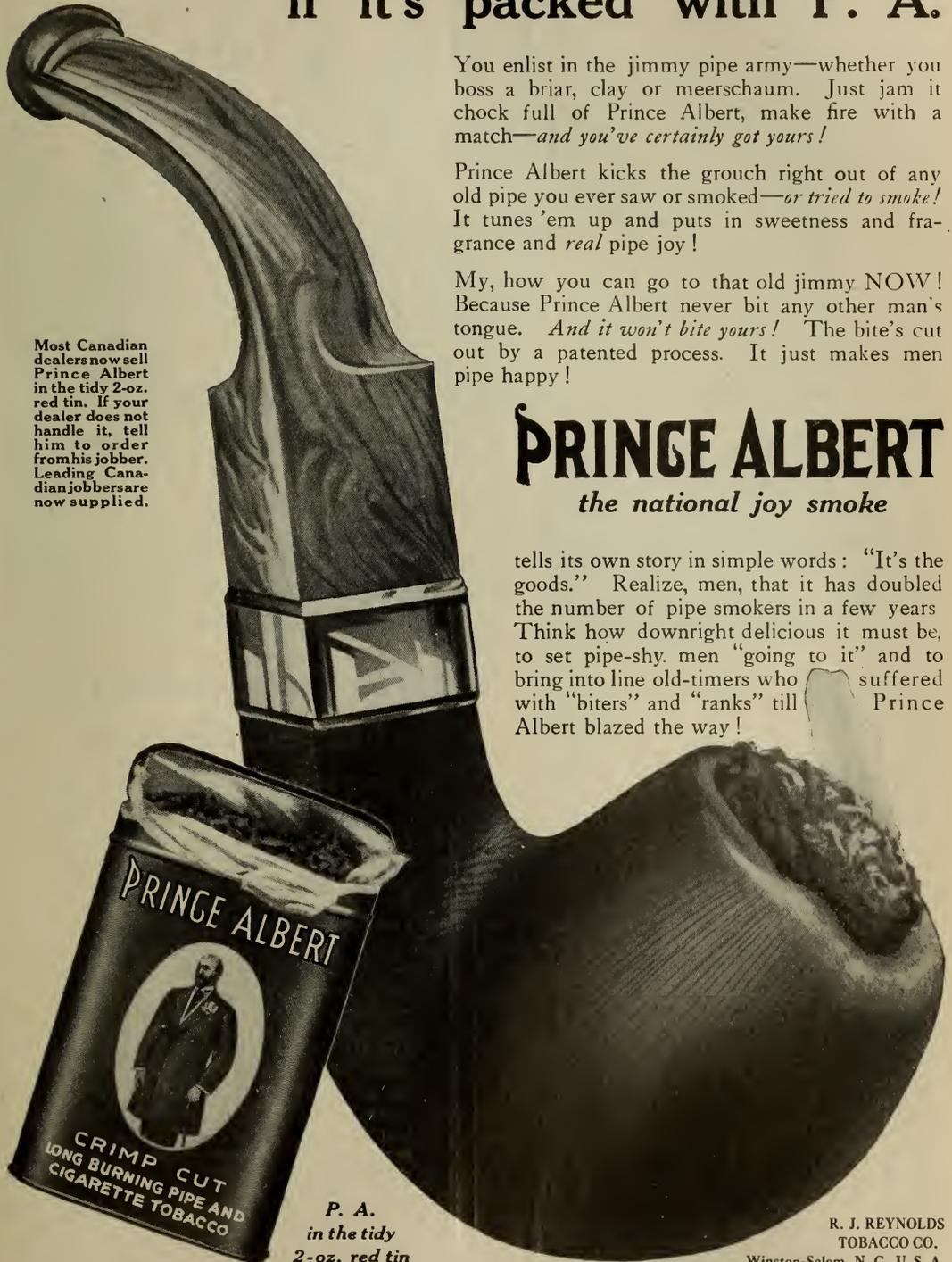
My, how you can go to that old jimmy NOW! Because Prince Albert never bit any other man's tongue. *And it won't bite yours!* The bite's cut out by a patented process. It just makes men pipe happy!

PRINCE ALBERT

the national joy smoke

tells its own story in simple words: "It's the goods." Realize, men, that it has doubled the number of pipe smokers in a few years. Think how downright delicious it must be, to set pipe-shy men "going to it" and to bring into line old-timers who suffered with "biters" and "ranks" till Prince Albert blazed the way!

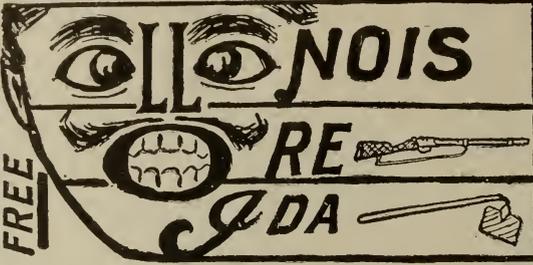
Most Canadian dealers now sell Prince Albert in the tidy 2-oz. red tin. If your dealer does not handle it, tell him to order from his jobber. Leading Canadian jobbers are now supplied.



P. A.
in the tidy
2-oz. red tin

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It is to your advantage to mention Farmer's Magazine.

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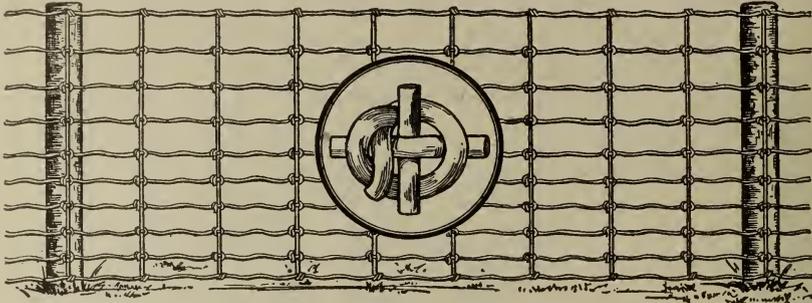
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Hard to
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Indispensable in office, shop and factory. Takes off grime, grease and skin stains which soaps cannot remove. Leaves the hands white and smooth.

THIS is the fence of 9-gauge, tested, hard-drawn steel wire, smoothly and thickly galvanized and set together with the wonderful **THREE-GRIP LEADER** Lock that insures springiness that lasts.



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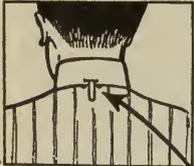
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Apple Trees, all varieties, No. 1 stock, \$25 per 100.

Ornamental Plants, fine hardy stock, \$30 per 100.

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To make a success of poultry raising, you should have pure-bred stock, then poultry raising would be profitable.

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SAMPLE TIN MAILED FREE FOR 25 CENTS.

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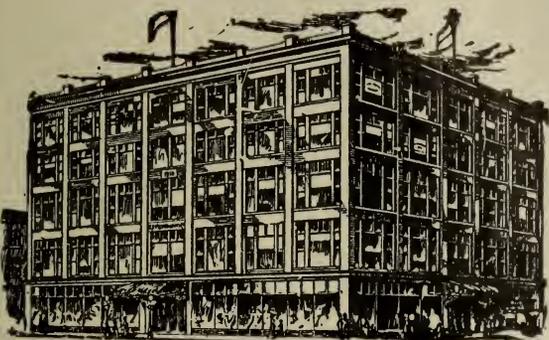
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A704.—Ladies' Long Milanese Silk Gloves:—Every pair carries manufacturers guarantee, will not cut or wear out at the finger ends, with reasonable wear. 16-button length, in colors of cream, white, champagne, black and tan. Every size. Special per pair98c.

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There'll be no one to object to the sweet tones floating through the dimly lighted halls, the brilliant drawing room, even to the busy kitchen. There will be unanimous expression of delight when the piano is the

SHERLOCK-MANNING 20th Century CANADA'S BIGGEST VALUE

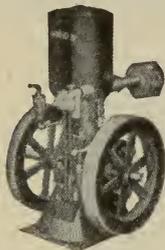
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YOUNG MAN

Before deciding to leave Ontario consider well the opportunities which she offers on every hand. Consider the various types of soils capable of producing all the products between No. 1 hard spring wheat and the tender fruits such as peaches, apricots, and also early vegetables and melons. Consider the equable climate possessed by the more southerly portions, while that of the northerly parts is to be preferred before many others in Canada. Consider carefully the transportation facilities offered for the marketing of these various products both by rail and by water; remember that Ontario is centrally situated in North America, practically surrounded by the greatest inland waterways of the world. Remember that suburban lines are being projected into various districts and every day surveys are being made for other new ones. Also remember that competition between various transportation companies is keener here than in some other places. The greatest home market in Canada is in Ontario; the great manufacturing centres are either in the Province or just on the border. New Ontario offers one of the best growing home markets on the continent. Ontario offers the greatest inducements to the upbuilding of large centres—cheap power.

She is a complete and self-sustaining Province. The southerly parts can supply the

tender products in abundance; the more northerly districts can furnish the grains, meats, dairy products, horses and the rough fodders. Internal trade is bound to be the outcome—the north will be bound to the south by an interdependence impossible in other parts of our Dominion. The south will also demand the lumber of the north, besides claiming a share in the development of the rich mineral lands.

Ontario's soils cannot be outclassed elsewhere in America. They are easily cultivated, easily fertilized, easily drained and easily obtained. Production per acre is higher in Ontario than in other parts. Intensive agriculture is the dominant note. Increased returns are the result. Thousands of acres are still undeveloped—these offer greater opportunities than do the majority of the far away lands.

Agricultural organization is finding its greatest development in Ontario. Remember this means larger prices and a better reputation. Don't leave when the boom is on, when the people are just awakening. Remember you count one in the development of these untold resources.

Remember that wealth is only part—Ontario offers the greatest social advantages; telephones, rural mail, good roads and public libraries. Remember Ontario's possibilities—do not procrastinate but consider and

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By FRANKLIN O. KING.

"Every Man is the Architect of His Own Fortune," was a Copy Book Precept when I went to School "in '61." Since then My Experience is that Every Man is Not Only the Architect, but usually the Mason, Carpenter, Hod-Carrier, Plasterer, and Almost the Finisher of His Own Destinies, so far as this World is Concerned. About the Next I am not so sure.

Why Are You What You Are To-day? Answer—because You are What You deliberately Chose To Be. Somewhere, Sometime, in Your Career, You have Stood Halting Between Two Courses. To Your Eternal Shame you took The Easiest Way—"The Primrose Path of Dalliance," Perchance, and Here You are To-day. You Might have been a Leader Among Men, but You are Merely Carrying a Spear in the Rear Ranks because You didn't have the Moral Stamina to say "Yes" or "No" at the Right Time.

I Remember a Little Coup-let I read as a Youngster, which ran something like this—"Our Little Lives are Kept in Equipose by Opposite Attractions and Desires; the Struggle of the Instinct that Enjoys, and the More Noble Instinct that Aspires." The Trouble with Most of Us is We let the Instinct that Enjoys overcome the Instinct that Aspires. For a Few Foolish, Fleeting Pleasures we Neglect the Greatest Opportunities Life has to Offer, and the Sunset of Our Days Promises to be One Long, Repeated Refrain of Regret.

They Say There is No Royal Road to Riches. Gray, in his Elegy, said:—"The Paths of Glory Lead but to the Grave," but for that Matter, so do All Other Paths. While we are Rehearsing for the Funeral, however, Let Us Live by the Way, but Let Us Try to Leave a Good Living for the Loved Ones Left Behind. I want to Point Out to You To-day the Pathway to Prosperity, and You, and You Alone, can Pave the Way. To-day is Short; Yesterday is Gone; To-morrow may Never Come; the Path to Prosperity Lies Before You—Why Not Start NOW!

Statistics bring out the Deplorable Fact that Not One Man in Ten saves \$1,000 in His Lifetime. Of Course, the Possession of \$100 or \$1,000 never Made Any Man Rich, but the Judicious Use of These Amounts has put Many a Man on the Path to Prosperity and Carried him Through to His Goal. Once Again I Repeat It, Saving is the Antidote for Slaving.

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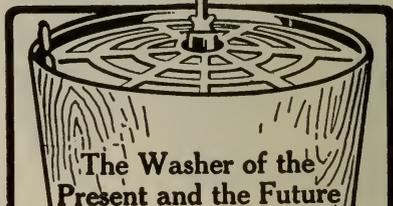
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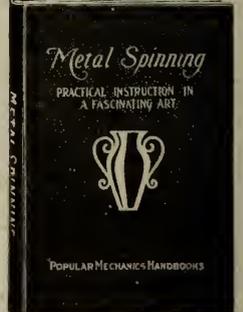
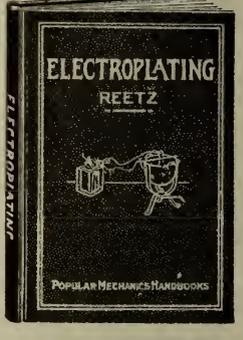
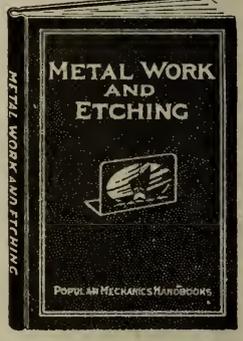
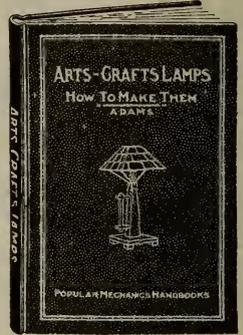
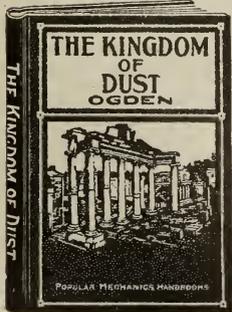
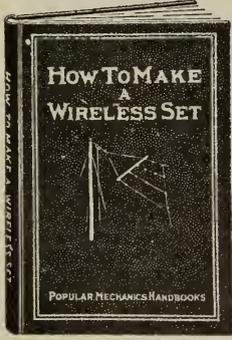
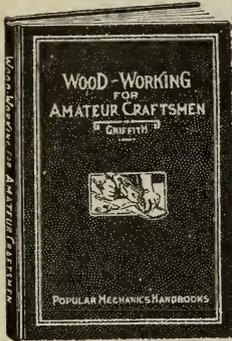
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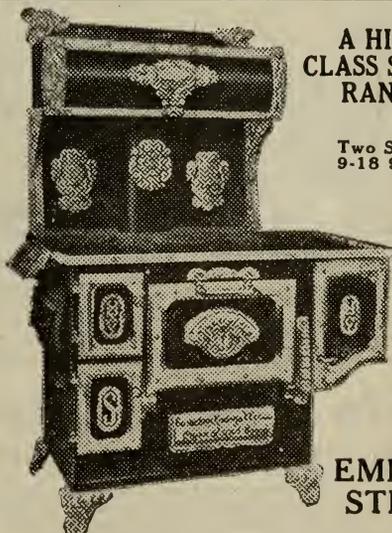
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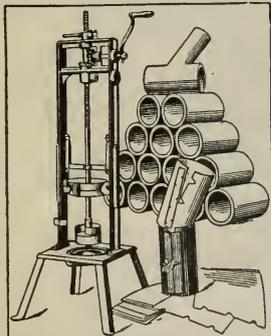
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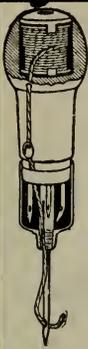
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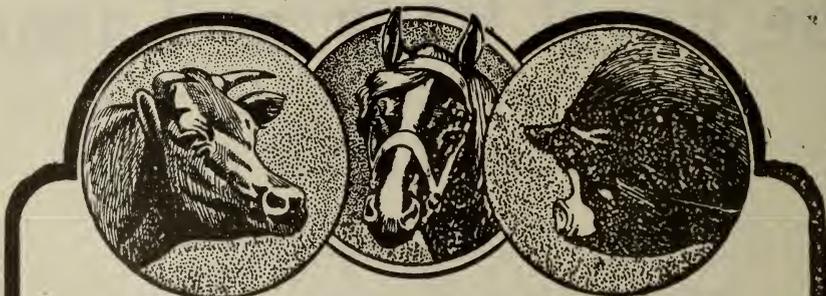


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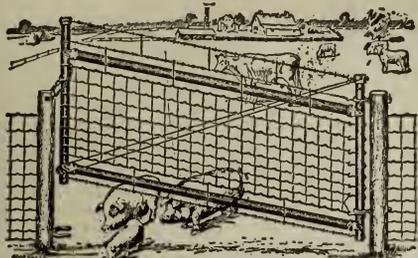
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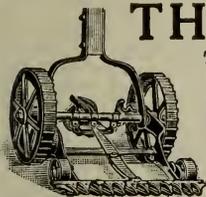
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There is no time for ill health, no room for the unhealthy. To the well man age is a far-off thing. To the broken down dyspeptic age is knocking at the door, no matter how young in years he may be.

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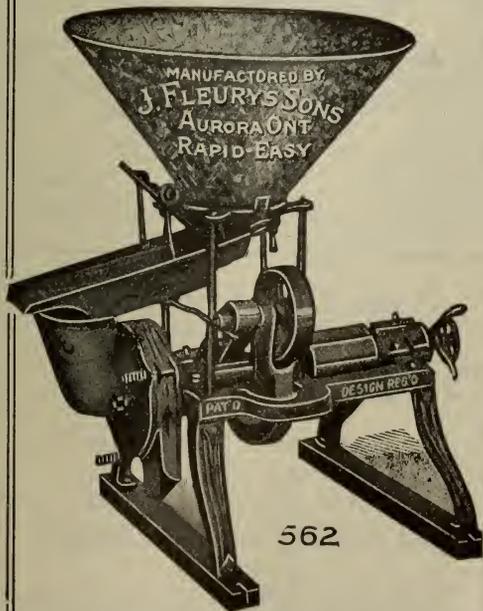
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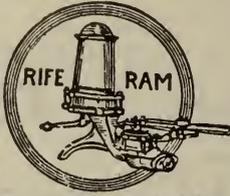
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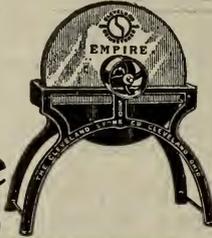
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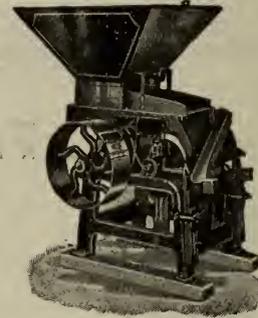
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SPECIAL FOR SHREWD BUYERS

- Barley, O.A.C. No. 21\$ 1.00 per bus.
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- Red Clover, No. 2 14.00 per bus.
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- Alfalfa, Domestic, No. 3 11.00 per bus.
- Timothy, No. 2 3.00 per bus.
- Seed Corn, dry, sound, and showing a germination of 90% to 100%, Dents, \$1.00 per bus., and Flints, \$1.50 per bus.

Above prices are cash f.o.b. Brantford, immediate acceptance, samples if desired. Goods are 2 1/2 bus. to the bag; where full bags are ordered, bags free; broken lots bags 25c. Make club order and get bags.

BRANT SEED CO., - Brantford, Ont.

Feed Your Poultry Well

Nothing Like

LAING'S

Bone and Meat Meal

for results

GET DESCRIPTIVE CIRCULAR

MATTHEWS-LAING, LIMITED

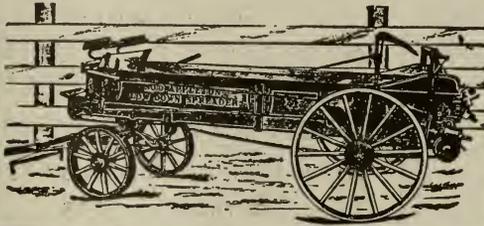
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APPLETON

RETURN APRON ENDLESS APRON
AND LOW DOWN

MANURE

Solid oak, trussed frame; worm and worm gear apron drive, encased, runs in oil; wood or steel wheels.



SPREADER

So simple a boy can run them. Apron works over chilled rollers. Wide seat, comfortable foot rest.

Appleton Manure Spreaders always give long service; spread even, pull easy; because they are perfectly designed and honestly constructed. An Appleton Manure Spreader is a profitable machine for you to buy. Its use keeps your land healthy and in highest productive condition—that means paying crops. Write today for Free Catalog illustrating and describing our 10 styles.

A complete line of machines in stock in your territory.

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is behind the products cultivated in the Auburn Nurseries. Trees, shrubs, hardy plants receive the continuous attention of men who have made the propagation of hardy plants, shrubs, etc., their life work. With the services of such men as RODERICK CAMERON, we are in the position to do full justice to the highest class patronage. Ornamental Shrubs, Trees, Plants and all varieties of Nursery stock—some most rare—also Fruit Trees—Apples, Pears, Cherries, etc., for which we already have a high reputation—can be obtained at the Auburn Nurseries at the most reasonable cost.

OUR PLANTS WILL THRIVE AND BRING YOU THE RESULTS YOU DESIRE.

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Established 1856

SIMMERS SEEDS

NEED NO INTRODUCTION

They've been used for nearly 60 years

CATALOGUE FREE

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SEEDS, BULBS, PLANTS

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Big Chicks

with robust constitutions, full of vigor, are not secured by careless methods of management. Worth-while chickens are the kind that have developed steadily from the day they tumbled out of the shell.



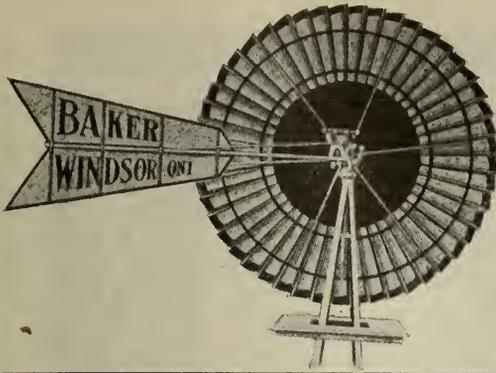
- Pratts** Baby Chick Food to save them and give the vigorous start. Use
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- Pratts** Poultry Regulator to keep them well, with hearty appetites and perfect digestion. Dust them frequently with
- Pratts** Powdered Lice Killer to insure freedom from troublesome vermin.

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Pratts 160-page
poultry book
10c by mail



Windmill Power is Growing in Popularity
for pumping, and it is not equalled by any power.

Thousands of farmers who have done their first power pumping by gasoline engine have become tired of it and are buying windmills.

You Can Save the Cost of a Baker in One Year.

The cost of gasoline, oil, batteries and repairs in pumping for 150 head of stock and the average farm home with a gasoline engine will buy a BAKER Back Geared Ball Bearing Pumping Mill every year. You can't afford to waste both money and your time. Look into this proposition.

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HELLER-ALLER COMPANY, Windsor, Ont.



Making the Soil More Fertile

Thirty-eight years' experience in the use and manufacture of manure spreaders has enabled us to give you the **New Kemp Manure Spreader**, by far the best manure spreading machine ever built.

It is equipped with what we call the **Reversible Self Sharpening Graded Flat Tooth Beater** which handles every grade of material successfully with **Less Power; Less Friction** and a great deal **Better Pulverizing**. The advantages of a spreader having a cylinder with the teeth so arranged that they will handle different grades and conditions of manure are numerous and will be recognized by comparison with other spreaders.

The Kemp Spreader is just what you have long wished for—a **Guarantee** with every machine.

Write to-day for catalogue and **J. S. Kemp's** article on **Saving and Application of Manure.**

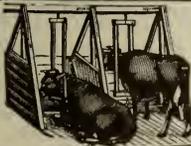
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The W. I. Kemp Co., Limited - Stratford, Ontario

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CRUMB'S IMPROVED WARRINER STANCHION



"My barn that was
BURNED

was fitted with Crumb's Warriner Stanchions. If it had not been for the ease with which these fasteners were opened I should have lost my cows," writes Mr. Everett Gains, Bernardstown, Mass. Booklet Free.

WALLACE B. CRUMB, #5, Forestville, Conn., U.S.A.
Canadian orders filled from Canadian factory.

All correspondence should be addressed to the home office. State in inquiry if you prefer booklet in French or English.

{One of Our} Satisfied Customers

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Dear Sir:—"The sample stanchion you shipped us in October was put up alongside of several other samples and studied closely ever since. On the first day, it was plain to all of us that, everything considered, yours was the best, and we intend to use them when we build our new barn next year."

CLOVERLAND DAIRY FARM,

New Orleans, La.

They have since purchased one hundred and forty-four Crumb's stanchions for the new barn.

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PAINT WITH THE PAINT OF QUALITY

Don't be deceived by the paint that only looks well at first—get the paint that looks well, wears well and retains its color. You get durable quality in

Jamieson's Pure Prepared Paints and Varnishes

Made of the best materials, perfectly mixed by special machinery under the supervision of experts.

ASK YOUR DEALER FOR JAMIESON'S.

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Have You Diabetes?

SANOL'S ANTI-DIABETES, a standard and specific remedy, the formula for which was recently secured from a celebrated German scientist, has worked wonders in the way of immediately relieving and later completely curing many stubborn cases of Diabetes. It is frequently prescribed by physicians of standing, and is being used in first-class hospitals. Cases cured in which the patient suffered open sores, cases of several years' duration completely cured—these are a few instances of the results obtained by the use of SANOL'S ANTI-DIABETES. We can send copies of most forcible letters from patients. This remedy is sold by all druggists or by the makers at \$2.00 per bottle.

Have You Gall-Stones?

A very large number of people throughout Canada are using the standard remedy SANOL for Gallstones, Kidney-stones, Gravel, Kidney trouble, and all other diseases and complaints due to the presence of uric acid in the system. People who had trouble of this nature for periods which vary in length from a few days to ten years have been cured by SANOL. We can refer interested parties to any number of people who have been cured through this remedy and can also send copies of letters of unquestionable convincing power. This remedy is for sale by all Drug Stores, at \$1.50 per bottle.

Both the remedies described above are manufactured only by the SANOL MANUFACTURING CO., LTD., 377 Main Street, Winnipeg, Manitoba.



The publisher of the best Farmer's paper in the Maritime Provinces, in writing to us, states: "I would say that I do not know of a medicine that has stood the test of time like MINARD'S LINIMENT. It has been an un-failing remedy in our household ever since I can remember, and has outlived dozens of would-be competitors and imitators."

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COMPLETE ANIMAL FERTILIZERS
 Improve the Soil and Enrich the Farmer.

CHICKEN FEEDS

Including Bone Meal, Meat Meal, Ground Chicken Bone, Ground Oyster Shells.

Prices and Samples on Application

The Hen that Lays is the Hen that Pays.
 Agents Wanted in every District

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Montreal

Mr. Farmer:—

**Can You Answer
These Questions**

? ? ? ? ?

Do you intend to get rid of those unprofitable stumps? How are you going to do it?

Will you use a machine which is the hardest kind of work, often injuring your horses and requiring a great deal of work to get rid of the stumps afterwards?

Or will you burn out the stumps—which procedure destroys the fertile elements of the soil all around the fire?

Or will you try the modern method which does the work at one-third the cost of pulling and chopping them up—a method that will remove fifty stumps in the time it would take to pull and chop up one or two—a perfectly safe and sane method? Do you want to know all about this labor and time-saving method?

THEN WRITE FOR OUR FREE BOOK-LET which is full of valuable information. Many have benefited by the information gained from this book. Send to-day, before it slips your memory.



REDWOOD STUMP.
Cut, page 52, Book.



THE BLAST.
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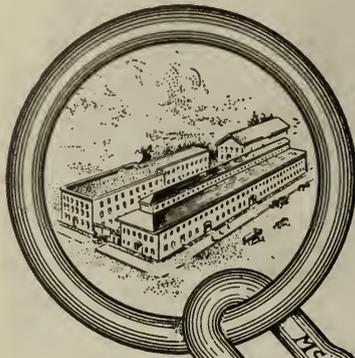
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in our chain of connection with the trade in Canada are:

SERVICE,
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that place us ahead of all competitors.



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Weld,
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We have some choice fruit and ornamental trees, small fruits and shrubbery on land that is sold and must be cleaned off this spring. This is an excellent opportunity for anyone wanting choice hardy stock at right prices.

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Home of the Herbert Raspberry

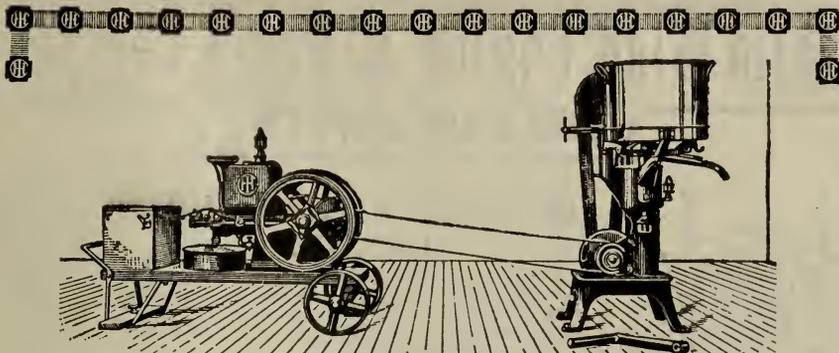
== \$300.00 ==
IN TWO MONTHS

THIS is what one of the circulation representatives of **Farmer's Magazine** earned in commissions during the months of August and September last year. You can secure a position in your town similar to the one which enabled this man to earn the \$300 by writing to

The MacLean Publishing Co.

141-149 University Avenue

Toronto



“That’s Just What I’ve Been Looking For”

WHILE we were getting the opinion of farmers on our new cream separator power outfits, one of them said: “I have been looking for such a combination as this for a long time. I need an engine with that kind of a gear on it to slow down the speed. There are half a dozen small machines on my farm for that engine to run. I want that outfit.” You, too, will want it when you see it. The outfit consists of an

**I H C Cream Separator
Dairymaid or Bluebell**

and a one-horsepower back-g geared I H C engine. The engine is mounted on a portable truck, and can be used for any farm work to which power can be applied. The back gear adjustment runs at the proper speed to operate any hand turned machine.

The working parts on I H C cream separators are accurately made and all bearings are well lubricated. The shafts and spindle are the strongest used in any separator. The gears are easily accessible for cleaning. Both separators have the famous I H C dirt-arrester chamber.

See the I H C local agent and ask him to explain carefully all of the good points of these outfits. You can get catalogues and full information from him, or, write the nearest branch house.



International Harvester Company of Canada, Ltd

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At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton



Hard Service---Long Life

is what you should get from your harrows. This Harrow fully fills the Bill in this and other respects.

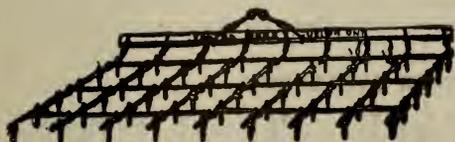
TOLTON'S SECTION AND FLEXIBLE ALL STEEL HARROWS

are the most durable harrows manufactured. Their record is unequalled for strength, efficiency and superiority of manufacture.

THIS IS ABSOLUTELY GUARANTEED.

Send for descriptive catalogue and satisfy yourself regarding our claims.

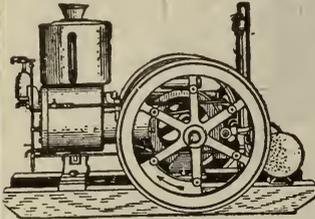
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TOLTON BROS., LIMITED,

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Ontario Wind Engine & Pump Company's LINES ARE SUPREME



"Stickney" or "Chapman" Engines.

GO DEEPER THAN THE SURFACE

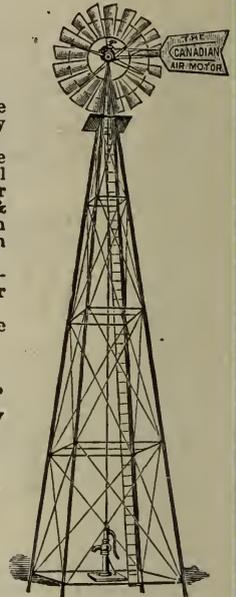
Instinct and experience have taught the wise old hen to scratch below the surface and carefully examine everything she eats.

Intelligence and necessity have convinced the progressive farmer in need of an Engine, Well Drill, Feed Mill, Windmill, Pump, Tank or Water Supply Goods to buy the Ontario Wind Engine & Pump Co.'s lines because he has gone deeper than the crate, has looked them over and tried them out.

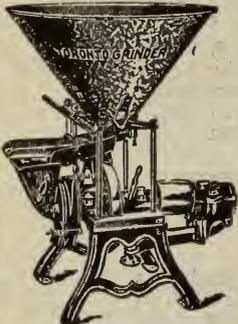
Buy what experience has proven supreme, because you are backing your judgment with your money.

If your dealer does not handle our lines, write the

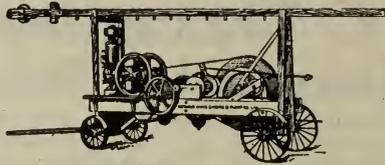
Ontario Wind Engine & Pump Co., Ltd.
at Montreal, Toronto, Winnipeg or Calgary



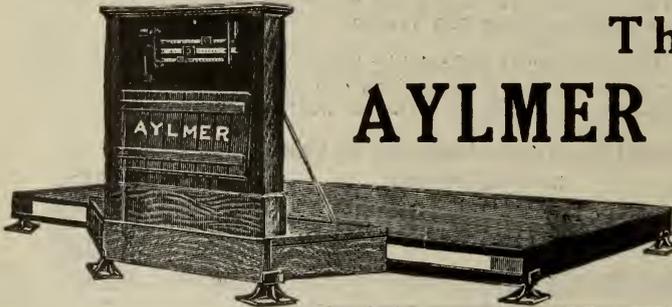
"Toronto" Wind Mill.



"Toronto" Grinder.



"Chapman" Well Drill.



The AYLMER PITLESS SCALE

Capacity 4 or 5 tons.

Brass Triple Beam and Sliding Poise. No loose weights. Full capacity on beam. The platform is only 8 inches above the ground without feet, and 12½ inches with feet. Can be set up or taken down in a very short time. The Main Bearings are protected by Cast-Iron Shields. Dust, mud, or water cannot possibly come in contact with them, thus prolonging the life of the Scale. We furnish this Scale complete with platform plank ready for setting up.

Best Scale on the market for Weighing Hay, Grain, or Stock. It is inspected before it leaves the factory. Government Certificate and Blue Print Plans for Scale and foundation accompany each Scale.

ASK FOR OUR DESCRIPTIVE CATALOGUE.

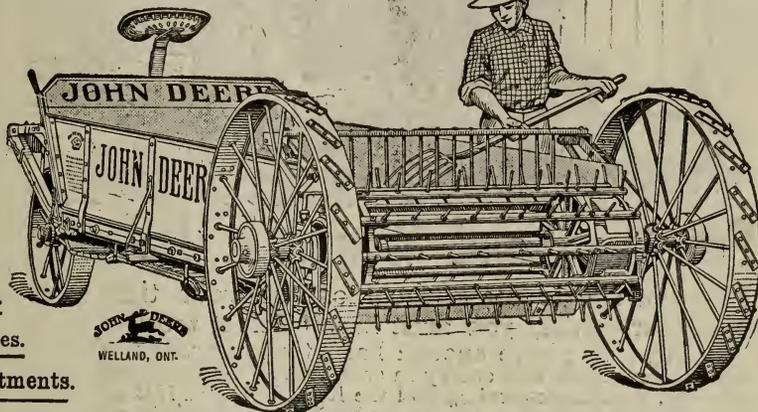
AYLMER PUMP & SCALE CO. LIMITED

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John Deere Spreader

The Spreader with the Beater on the Axle



Simplest
and
Strongest
Spreader
Made.

No Chains.

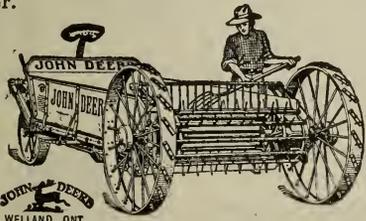
No Clutches.

No Adjustments.



On the John Deere Spreader, the Spreader with the Beater on the Axle, two hundred working parts that continually give trouble are done away with. This spreader is so simple and strong that it does not get out of order. It has no clutches, no chains, no adjustments.

The John Deere Spreader is the greatest improvement in spreaders since their invention. It is as much in advance of ordinary spreaders as the self-binder was over the old reaper.



The Beater on the Axle

Mounting the beater on the axle makes the John Deere Spreader possible. This feature is fully patented. You cannot get it on any other spreader. The beater on the axle does away with all chains and clutches. It puts the strain and stress of spreading on the main axle—where it belongs—not on the sides of the box or the frame of the spreader.

Mounting the beater on the axle makes the John Deere Spreader easy to load—low down.

Roller Bearings.

Roller bearings, few working parts, the centre of the load comparatively near the team and the

VALUABLE SPREADER INFORMATION FREE. Contains reasons for using manure—how to apply it to the land, how to store it, and a description of the John Deere Spreader, the Spreader with the Beater on the Axle. Ask us for this information as Package No. Y-129.

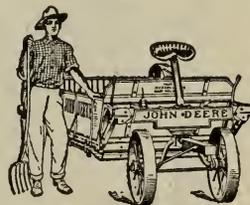
John Deere Plow Company, Limited, Toronto, Ont.

weight distributed over four wheels, make the John Deere Spreader light draft. There are four sets of roller bearings, two between the main axle and the beater, and two in the front wheels.

Only "Hip-High."

Sides of the John Deere Spreaders are only "hip high." The first three feet you lift a fork of manure are easiest of all. From there on to the top of the ordinary spreader is hard work.

You lift manure only three feet with the John Deere Spreader. You always see into the spreader, just where each forkful is needed. Wheels do not interfere with loading.



Easy to Load.

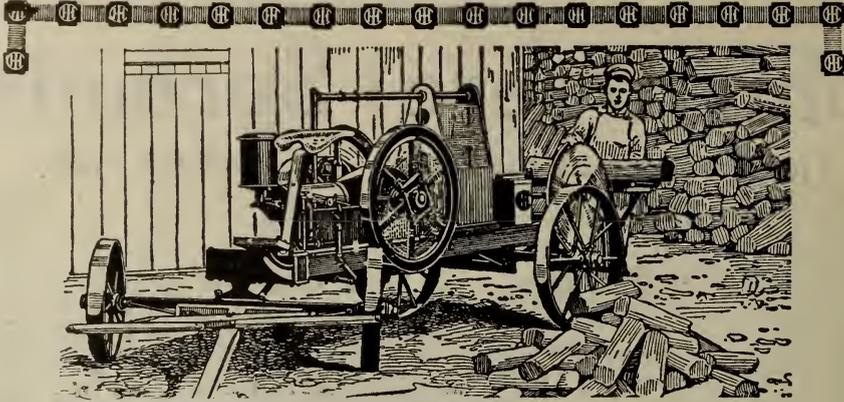
Few Parts.

There are no clutches to get out of order, no chains to give trouble, and no adjustments to be made on the John Deere Spreader. On old style spreaders, ten to twenty adjustments are necessary before they will work at all. Anyone of these, wrongly made, might put the spreader out of business.

The John Deere Spreader does not get out of order. It is always ready for use.

Bridge-Like Construction.

The substantial steel frame on John Deere Spreaders has high-carbon structural steel side sills. Like modern railway bridges it is built on the best known principles of steel constructions.



Put the Load Where It Belongs

IF you are to make the most of your time and opportunities, you must have efficient tools to work with. You have enough hard, tiresome work without wasting your time and energy in such jobs as wood-sawing, water-pumping, grindstone-turning, and the like. Use an IHC engine to furnish power for such work. In far less time, the wood is sawed, the stock watered, the tools sharpened, all at one-tenth the expense of hand work. Put the heavy load where it belongs. Buy and use an

I H C Oil and Gas Engine

and save money as well as hard work. It is the cheapest engine you can buy—because it costs less per year of service than others. It is so simple that it is practically troubleproof. Perfect combustion makes it economical.

IHC oil and gas engines operate on gas, gasoline, naphtha, kerosene, distillate, alcohol. Sizes are 1 to 50-horse power. They are built vertical, horizontal, portable, stationary, skidded, air cooled and water cooled. Sawing, pumping, spraying outfits, etc. IHC oil tractors, 12 to 60-horse power for plowing, threshing, etc.

Look over an IHC engine at the IHC local agent's place of business. Learn from him what it will do for you, or, write the nearest branch house for catalogues.



International Harvester Company of Canada, Ltd

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At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton



MARTIN'S GRINDERS ARE THE GRINDERS THAT GRIND.

Martin's Grinders are conceded the
WORLD'S BEST

MARTIN'S GRINDERS have a Guaranteed Capacity to pay their cost in less than 20 hour's use at 5c. a bushel. All sizes from 1 H.P. up. They will save you money.

WRITE FOR CATALOGUE B. AND GET FREE TESTIMONIALS.
JOBBER AT WINNIPEG.

MARTIN MFG. CO., St. Louis Park, Minn.



The McCormick Drill Deposits the Seed in the Bottom of the Furrow Where It Is Properly Covered

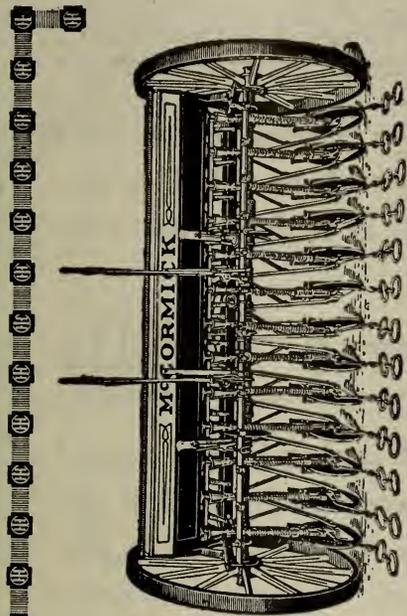
THE disk boot on the McCormick drill deposits the seed in the ground at the point where the disk is the deepest. It is designed so that the opening is closed on the inside. This gives the grain a clean passageway from the feed run to the ground without interference, depositing the seed at the bottom of the furrow. Because of this and several other good features, the McCormick drill

Insures Good Planting

of all kinds of seed. The double run feed makes the McCormick drill practically two drills in one. It adapts the drill for every kind of grain and seed from flax to corn and beans, and is the best feed made for the purpose.

The accurate and durable driving mechanism is exceedingly simple. The change in quantity of seed is easily made.

The disk bearing is simple in construction, having few parts to wear. Only clean oil can reach it and that from the inside, tending to keep out all dirt and grit. This bearing is appreciated by every owner of a McCormick drill. A McCormick drill does good work in all con-



ditions of soil—hard, dry, trashy, muddy, sandy, hilly, loamy, stubble, or in well-prepared seed beds. You can change it from a single disk to a double disk or a shoe drill, depending entirely on the kind of soil you must plant in.

The McCormick line includes drills, disk harrows, cultivators, peg and spring-tooth harrows, land rollers, etc. The nearest I H C local agent will gladly give you full information and supply catalogues. If you prefer, write the nearest branch house and catalogues will be mailed at once.

International Harvester Company of Canada, Ltd
EASTERN BRANCH HOUSES

At Hamilton, Ont.
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These machines are built at Hamilton, Ont.



DRILLS YOU CAN DEPEND ON

WHEN the time comes for seeding, it's a great source of satisfaction to have a Drill which you know will sow your grain as it should be sown.

Massey-Harris Drills

are famous for uniformity of sowing in any desired quantity and at any depth required—the seed is not bruised or crushed and is well covered. The Massey-Harris Line of Drills is complete—many styles and sizes, but Reliability is the Keynote of all.

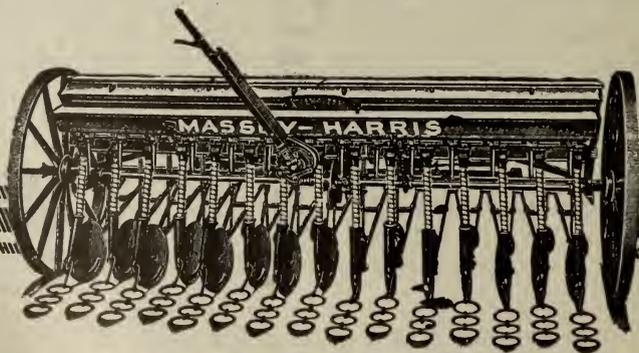
Massey-Harris Co., Limited.

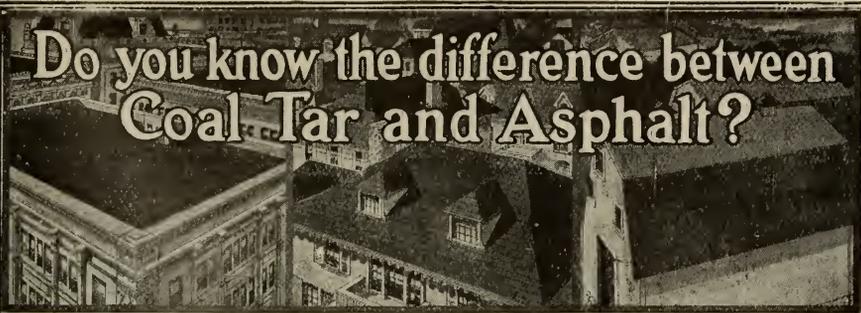
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The "General" says:—"Coal Tar is a by-product from gas works and coke ovens. It is driven out of the coal as a gas, then as the gas cools the tar is condensed into liquid form. When used in Roofing it dries out, becomes brittle and in a comparatively short time loses its life. Being of a gaseous nature, it dries out rapidly. Asphalt—the basis of **Certain-teed** Roofing is a blend of mineral asphalts and mineral asphalt oils taken out of the earth. These asphalts were never a gas—they dry out very slowly. Nearly a quarter of a century of experience and tests have proved that these asphalts make an ideal roof."

Certain-teed Roofing

(Quality Certified—Durability Guaranteed)

in Rolls and
Shingles

You can now buy Ready Roofing with absolute Quality Assurance—no more guess work. On the back of every roll and on every crate of shingles you will find the **Certain-teed** label of quality—a 15-year guarantee of durability. The users of this modern, easy-to-lay **Certain-teed** Roofing are saving thousands upon thousands of dollars—it comes in artistic shingles and in rolls for general use.



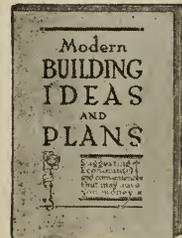
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Get Our New Book "Modern Building Ideas and Plans." A book of this kind would ordinarily sell for \$1—but as it illustrates the use of our **Certain-teed** Roofing on all kinds model city, factory, and farm buildings, we offer it to you at 25c. We prefer that you go to your lumber, hardware or building material dealer, who will gladly get you a copy **Free**.

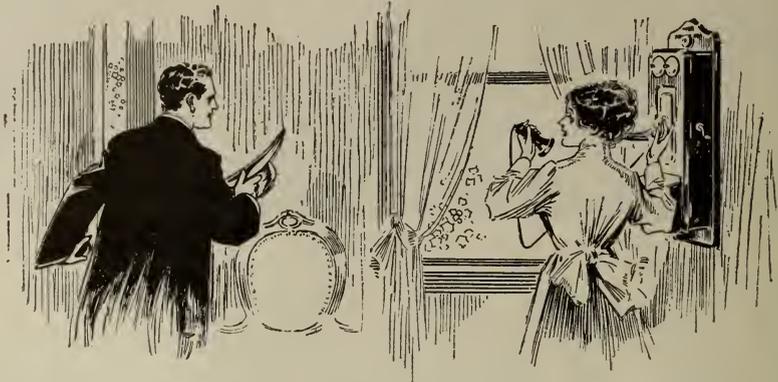
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General Roofing Mfg. Company

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San Francisco, Cal. Winnipeg, Can. London, England
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Get this Valuable
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Is Your Home Protected in Your Absence?

Experience with fires, sudden sickness, burglaries, and the like, brings to us the realization of what good telephone service really means.

The simple, reliable operation of the Kellogg telephone, with its superior talking qualities, makes it the "friend in need" on many occasions.

Our No. 2696 farm line telephone, especially designed for heavily-loaded country lines, is the most popular rural telephone on the market.

It is built out of the best material obtainable and warranted to give many years of good service. Let us give you further information on Kellogg rural equipment. Send for our latest bulletins.

KELLOGG SWITCHBOARD & SUPPLY COMPANY

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