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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

Vol. XLVII.

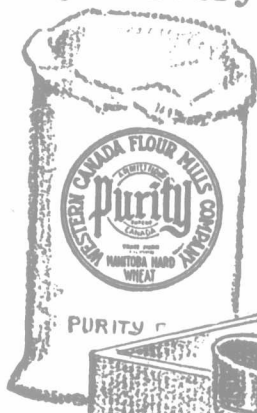
LONDON, ONTARIO, OCTOBER 24, 1912.

No. 1048

Prove the superior qualities of Purity Flour at our risk

Because we believe that PURITY is the best and most uniform flour milled—because we believe that PURITY goes farther than any other flour we say to every woman who reads this advertisement:

Go to your Grocer and buy a sack of PURITY FLOUR. Test it by actual baking and if it does not make better and more nutritious bread than any other flour you have ever used—if it does not make lighter, daintier cakes and pastry, then the Grocer will return your money.



That's the fairest way we know of doing business. Already tens of thousands of Canadian housewives have proven every claim we've made about PURITY FLOUR. Hosts of particular women declare that we are too modest in our claims—they say that PURITY is the one dependable flour. Test PURITY FLOUR for yourself. You get your money back if it does not give complete satisfaction.

PURITY FLOUR

"MORE BREAD and BETTER BREAD" and BETTER PASTRY too.

603



Know the make-up of roofing you buy
On the make-up depends how long it will last, and how little it costs you in the end.

Genasco
THE TRINIDAD-LAKE-ASPHALT
Ready Roofing

is made of *genuine* asphalt, produced by Nature in Nature's slow sure way. It has the lasting life that gives it greatest resistance to weather.

Genasco costs about the same as ordinary roofings in the beginning, and costs less in the end, because it lasts so long.

Comes in rolls with either mineral or smooth surface. Ready and easy to lay. Ask your dealer for Genasco. Write us for the valuable Good Roof Guide Book and samples—free.

The Kant-leak Kleet, for smooth-surface roofings, does away with cement and prevents nail-leaks.

The Barber Asphalt Paving Company

Largest producers of asphalt, and largest manufacturers of ready roofing in the world.
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Canadian Distributors:
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Winnipeg, Man.
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SYNOPSIS OF DOMINION LAND REGULATIONS.

ANY PERSON who is the sole head of a family, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency of the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section along side his homestead. Price, \$3.00 per acre.

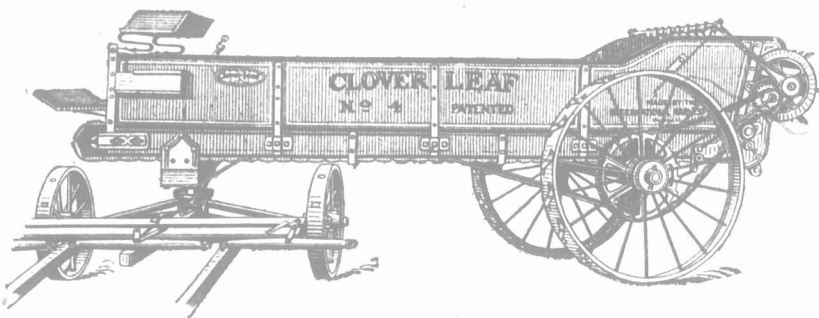
Duties—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$3.00 per acre. **Duties**—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY,

Deputy of the Minister of the Interior
N.B.—Unauthorized publication of this advertisement will not be paid for.

MENTION "FARMER'S ADVOCATE."



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**IHC Manure Spreader
Corn King or Cloverleaf**

IHC spreaders are made to do their work well. Ask the IHC local dealer to show you the self-aligning removable boxes on the main axle; notice that the axles have roller bearings to reduce the draft; study the apron construction, and note the large rollers on which it runs. These rollers lighten the work of the team to a very great extent.

There are a number of other features which are exclusive to the IHC line of spreaders. If you appreciate machines of extra merit, machines that spread manure in ample range of quantities; machines which can be equipped with drilling attachments for use on market gardens, and above all, machines which are made in sizes convenient for every farm, investigate IHC spreaders. Go to the local IHC agent and look carefully over the machine he shows you. Get catalogues and full information from him, or, write the nearest branch house.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U.S.A.



Are you anxious to save time and money on the work you are doing on your farm at present, and to get larger crops from your farm or orchard? If so, let us send you, **FREE OF CHARGE**, our pamphlets on the use of

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**Removing Stumps and Boulders
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Planting and Cultivating Orchards
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Etc., etc., etc.**

Figure yourself what clearing your farm is costing now, or what you are losing in crops through not clearing. Write us about arranging demonstrations.

CANADIAN EXPLOSIVES, LIMITED
Montreal, P. Q.

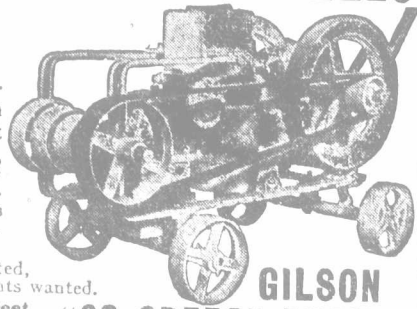
A FARMER'S POWER HOUSE ON WHEELS

Complete with Line Shaft, Truck, Pump Jack and Interchangeable Pulleys capable of 60 changes of speed.

A machine that carries its own line shaft, pulleys, gears, and hangers. The Gilson "60 Speed" Engine is a complete power plant for the farm. It can haul engine anywhere, and run at the speed desired—the only engine of its kind. Gives 100 per cent service. Goes like sixty—sells like hot cakes. 2 H. P., also 3 H. P., and 4 H. P.

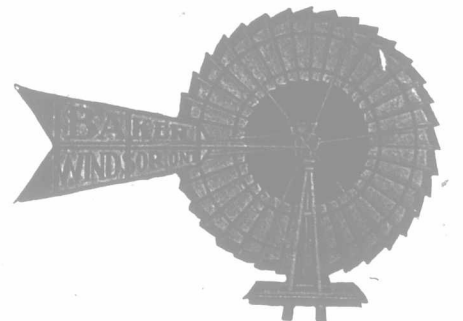
WRITE for descriptive literature and prices for illustrated, descriptive literature and prices for illustrated, descriptive literature and prices for illustrated.

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BAKER WIND ENGINES

Are built for hard, steady work, and keep at it year in and year out.



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Don't waste your trees for cord-wood. Get an "American" Portable Saw Mill and turn them into lumber worth many times what cord-wood is. Plenty of fire-wood in the limbs and staves left over from the lumber and nothing better than our "Clipper" Wood Saw to saw it up. You may not need lumber yourself, but there is always a ready market at good prices among your neighbors or in town. Get your neighbors to let you saw lumber and cord-wood out of their timber, too. A small outlay for an "American" Portable Saw Mill will put you in an independent and profitable lumber business that you can run when the farm doesn't need you. Our new book, No. 32 tells how to go about it. Write to our nearest office for it today.

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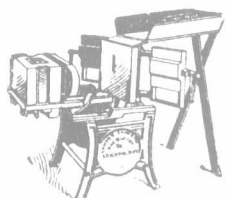


T-A Wide-Tire Steel Wheels & Handy Farm Wagons

T-A Wide-Tire Steel Wheels are lighter, stronger, cheaper, and better in every way than ordinary wooden wheels. **Make your old wagons new** by fitting them up with these superb wheels.

Our free booklet (which please ask for), tells how you can make farm work easier and more profitable.

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Build Silos, Dwellings, or any class of building from **Concrete Block**. The London Adjustable Concrete Block Machine makes every kind and size of block. High grade. Moderate price. We manufacture a full line of Concrete Machinery. Tell us your requirements.

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The housewife who owns a Gurney-Oxford—who has daily experience with it—who knows the way it works—the economy and efficiency of it—is a Gurney-Oxford Enthusiast.

The Gurney-Oxford Range is the sum total of 70 years experience in stove construction. It is a big, up-standing, handsome stove, that works constantly and unfailingly for its owner's satisfaction. It stands guard over her interests, conserving her

time and energy, effecting a daily saving in coal, adding to the household economy and increasing the pleasure which comes from a smooth-running and well-ordered household.

That's why she enthusiastically recommends the Gurney-Oxford whenever the question comes up.

She wants her friends to learn, what she knows to be a fact, that a Gurney-Oxford Range is a good housewife's most valuable and cherished possession.

The Gurney Foundry Co., Limited

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Are you a trapper? Are you a dealer? Are you seeking a reliable firm to ship to? Many thousands of shippers say we give best returns, good reasons—we pay as we quote, give a square grade and send your money as quick as the return mail can bring it to you. We post you reliably.

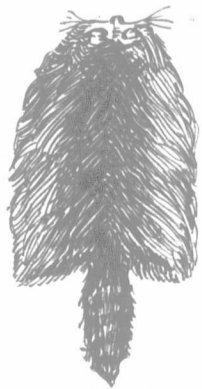
No Commissions. No Express Charges.
Write at once for price list, tags, envelopes, invoices, etc.

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147 West 24th Street, New York. (Mention this paper.)

References: Greenwich Bank, N. Y. East River National Bank, N. Y.



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IN purchasing a farm it is important that you consider SOIL, CLIMATE, LOCATION and SHIPPING FACILITIES. You will find all these combined in the MALAKWA DISTRICT, which is on the main line of the C. P. R., 35 miles west of Revelstoke, or 300 miles west of Calgary. The soil has been pronounced by experts to be the best CELERY AND CABBAGE SOIL IN BRITISH COLUMBIA.

We have two 20-acre blocks, all under cultivation, for sale at \$200 and \$250 per acre. Terms.—One-third cash, balance one, two and three years at 7%. This land is capable of producing as high as \$1,000 per acre each year. Write for full particulars.

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STOP THE LEAKS ON THE FARM



Every farmer is a large buyer and seller—and whether he is buying feeding stuffs, fertilizers, seed, etc., or selling live stock, grain and potatoes—unless he has a Scale on the Farm he cannot tell whether or not he is the victim of short weight.

Short weights on purchases and sales soon take the cream off the farm profits. But a Wilson Scale places the Farmer's business on a business-like foundation.

Every farm will pay a profit if all the profit is received—but what farm can stand constant leakage of a few pounds here and a few pounds there? Is it any wonder that profits are sometimes considerably less than they ought to be.

We make two Scales which are specially suited to the varied requirements of a Farm.

The first is No. 88—2,000 lbs. capacity—a good reliable scale—of which we have sold hundreds to Farmers, who usually fit to it a rough platform for weighing live stock.

The other farm scale is our No. 298—4,000 lbs. capacity. This is a larger and more expensive Scale, and is supplied with a cattle platform. It is in our estimation the ideal scale for all farm purposes, and is especially useful on stock or dairy farms.

Both Scales are of the best materials, solidly made and accurately adjusted. They have all the features which have made Wilsons supreme in scale manufacture. Government certificate free with each Wilson Scale.




THIS BOOK FREE

Perhaps this "leakage" thought is new to you. Perhaps you have grown accustomed to letting others do the weighing for you. But you can see that this is not good business—you are not sure of getting your share of profits. You will be interested in our book "How to Stop the Leaks," which we are willing to send free to Farmers. Do not let another season pass. Stop the leaks now. Send for your copy to-day.

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QUALITY AND EFFICIENCY ARE MAIN ESSENTIALS IN A PIANO YOU GET THESE IN A BELL PIANO

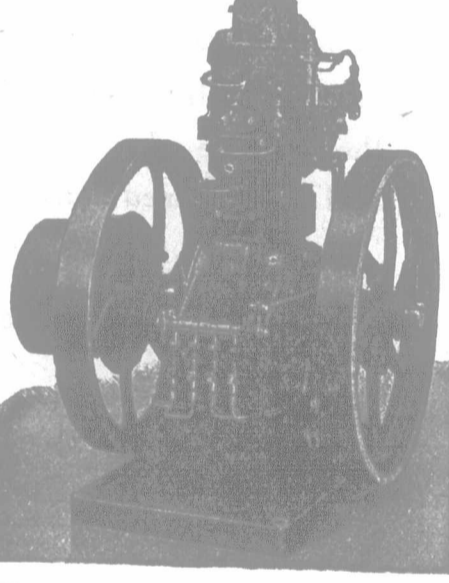
We take the time and pains to build them right. There are many good features in the BELL never found in other makes. Information in our (free) catalogue No. 40. Send for it.

The BELL PIANO & ORGAN CO., Limited
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DE LAVAL CREAM SEPARATORS

The best of all dairy investments Saves \$10. to \$15. per cow every year

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The Farmers' Power Plant

BOLINDERS SEMI-DIESEL CRUDE OIL ENGINE

This handy little tool will save you hundreds of dollars. Not alone in replacing labour but in upkeep and running cost as compared with Gasoline engines. A 12 H.-P. Gasoline Engine costs you 30 cents to operate per hour. Our Crude Oil Engine only costs 6 cents per hour. Our engines are designed and built to stand hard work. They will outlive three or four gasoline engines. There is absolutely no risk from fire or explosion as it uses non-inflammable crude oil.

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IT BEATS CORN-MEAL SUGAR BEET MEAL

When increase of weight in animals and cost of feeding are considered. That is the reason wise stockmen and dairymen use

In the feed rations, whether for young animals, stockers or dairy cows. The results are marked gains, at least cost, in every case. This meal is ready for shipment now. As our supply is always exhausted early in the year, ask for prices and particulars at once, and send in your order early.

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AFTER LABOR, REST—In Your Own Garden

Beautiful and Useful Trees and Shrubs
Evergreen and Flowering

Lovely Roses
Bush, Climbing and Tree. All shades of color.

Quick Growing Climbers
All sorts for every purpose.

Hedge Plants
Spruce, Privet, Buckthorn, Honey Locust, Quince, Osage Orange.

Shade Trees
All sorts, sizes and prices.


Specimen Shrubs
Including Weeping Mulberry, Willow, Elm, Beech, etc., and

ALWAYS Fruit Trees by the Million
Apples, Pears, Plums, Cherries, Peaches, Grapes, Raspberries, Currants, Gooseberries, etc., etc.

The right sorts for your locality
Write me your requirements. Always glad to give my opinion, gained by practical experience.

Call and inspect trees growing.

ONLY ADDRESS:
E. D. SMITH
Helderleigh Nurseries and Fruit Farms
WINONA, ONT.



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WELLAND COUNTY, ONT.

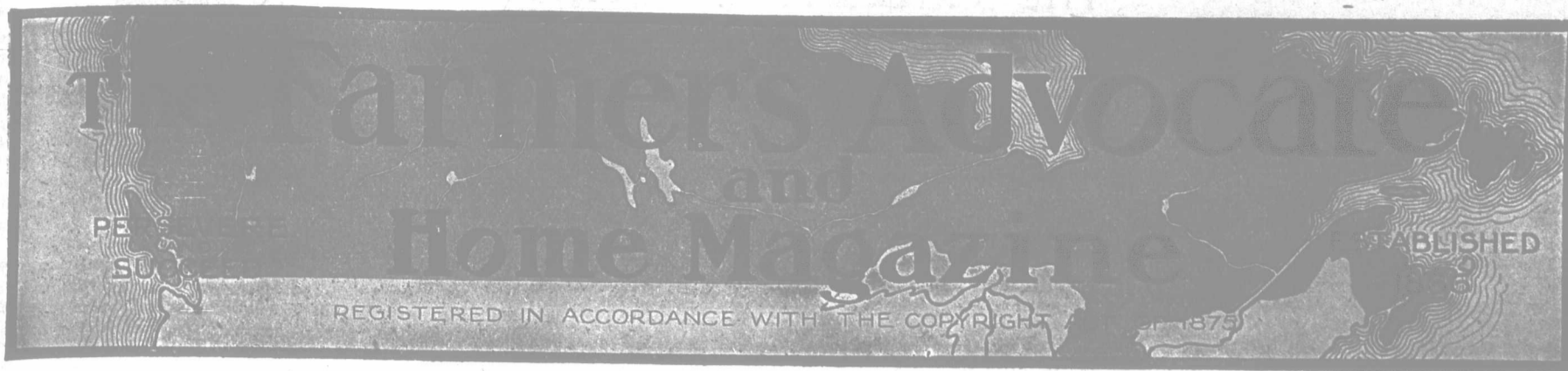
THE HARVEST TIME

Should always find the successful husbandman with a surplus on hand. Make use of a portion of this by investing in a short term Life or Endowment Policy. Make your future independence certain.

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Thoroughly protected in all countries. EGERTON R. CASE, Registered Patent Attorney, DEPT. E, TEMPLE BUILDING, TORONTO. Booklet on Patents and Drawing Sheet on request.



Vol. XLVII.

LONDON, ONTARIO, OCTOBER 24, 1912.

No. 1048

EDITORIAL.

When a writer in the University Magazine describes our educational system as a "steam roller," the definition though depressing, is apt.

It is symptomatic of change—let us hope for the better—when the Ontario educational steam roller puts on a fresh head of steam.

Even a steam roller at the expense of some jolting, has been known to change its course on the public highway in order to get out of a rut.

Other causes play a part no doubt, but little wonder that people become exercised as they witness generation after generation of the brightest, and best of farm youth steam-rolled by an educational system from the interests and occupations of agriculture.

Electricity for farm purposes was but yesterday regarded as a dream of the future. Through the offices of the Ontario Hydro-Electric Commission it now seems likely soon to become a reality over large areas of country. May the most sanguine hopes be fulfilled.

In the rush of autumn work after a summer when bad weather has impeded progress as was the case this year, it is sometimes impossible to look properly after the odds and ends of work. Still it will hardly pay to neglect the stock and implements. Inattention to the former diminishes the arterial current of revenue, while neglect of the latter opens a steady leak of loss.

In placing dependence upon educational expedients instead of dealing with root troubles, there is a danger of imitating the enterprise grocer, referred to by a recent writer, who put upon the market a line of artificial liver and bacon which he modestly advertised as "wholesome, or nearly so"—exceedingly ingenious in conception, but innutritious as a regular article of diet.

It seems to have been an excellent season for tree-planting. Out of an orchard of 346 trees planted at Weldwood the past spring all but three are living. One of the three was a peach "filler," killed by borers, while the other two were apple trees which were dried out and dead-looking when planted and only inserted in mid-spaces on the bare chance that they might survive. Every tree that had a fair chance lived, and excepting a few, where the rows ran up into an old blue-grass sod, which received no cultivation but a little digging right around the trees, all have made vigorous growth. This orchard was planted on a new seeding of clover, the trees being set on narrow ridges plowed last December and top-dressed during the winter. Between these ridges a crop of 2½ tons of hay to the acre was cut, also five loads of aftermath to thresh for seed. On the ridges between the trees potatoes and mangels were planted and have yielded heavily. The inter-cropping should thus go a long way towards paying for the first year's culture of the orchard.

Less acid and more substance is the aim in ensilage nowadays.

For all the cold, wet summer season many silos have been filled—or partly filled—with extra well-eared and well-matured corn.

Sunshine is essential to plant growth. Moisture was abundant this year, but at the very time precipitation was as heavy as at any time during the season the millet crop was noticed to practically stand still for about three weeks. The lack of sunshine was believed to be the cause.

No system of stable ventilation may be considered complete which requires the presence of an attendant to keep it working. Perfect ventilation should be secured by a system which is working incessantly with a minimum amount of attention. Of course the man in charge may aid considerably by the manipulation of parts of the system which admit of it, but on the whole the most satisfactory scheme is that which requires the least looking after.

This has been a very good season to demonstrate the value of underdrainage. In travelling through the country it was a common sight, during the harvest season, to see one farm stripped of its crop, while that on the neighboring place was still in the fields. There was a little fine weather at the beginning of the harvest, and those who had their grain sown early were fortunate because it ripened early, and missed the worst of the season's downpour. What was the secret of the early seeding? Simply underdrainage.

There is more in the variety of many of our farm crops than most of us realize. The potato experiments carried on at the O. A. C. this year have shown that certain varieties are more resistant to blight than others. We know that certain varieties of wheat stand the winter better than others, and that certain varieties yield more heavily than others, and that some varieties have better quality than others. These various points should be considered in connection with every crop. It is not enough to know that the crop is oats, wheat, barley, potatoes or corn, as the case may be. Study the different varieties. Select the best and insist upon its being true to type, pure and vital.

Drainage demonstrations have been carried on by the Department of Physics at the Ontario Agricultural College, and by the district representatives of the Ontario Department of Agriculture for several years with good success, but the first practical demonstration of digging the ditch and laying tile, was recently held in Bruce Co. This is perhaps the greatest step forward which this work has made, and it is not to end here, for extensive experiments are to be carried on in different counties in Ontario to determine the best depth and the most suitable distances apart to place tile drains in different kinds of soil. There are those who believe very heavy clay cannot be satisfactorily underdrained. These experiments will determine the point. Nothing convinces like a practical demonstration. The more of these that are held the better.

Close Touch With Farm Life.

By all accounts, the editorial "Why?" appearing in the "Farmer's Advocate" of September 20th has struck fire, if we may judge by exchange comment, correspondence and interviews. The Christian Guardian was greatly surprised to see us "break loose in such violent fashion and say such unparliamentary things about the Provincial Department of Education." The Guardian itself proceeds to discuss the subject in a more chastened spirit as befitting a religious publication, but we are pleased to note that its views are in perfect accord with our own, as once more elaborated on the editorial page of October 10th. "Some arrangement should be arrived at, says the Guardian, by which our whole educational system, from the University downwards, would be brought into closer touch with farm life." Just so. It is, indeed, time. As for our own utterance, we have only to say that repeated efforts at constructive criticism, with little apparent thorough-going heed at headquarters, had led us to try a different tack. We hope we may not have to "do it again."

Real Reform for the Rural Schools

A considerable display of well-intended effort may be made in respect to the reformation of rural public-school education without reaching the real roots of the trouble, which are deeply entrenched in system. A brave show may be made on paper while the tangible results are disappointingly meagre, as the public will sooner or later learn to its cost. At a large gathering of teachers in an Ontario school inspectorate recently enquiry was made regarding the use of a very fine chart, illustrative of plant and insect life, that had been especially distributed to the rural schools months before. The response, as reported, was that but one teacher had made use of the chart, and in that case only to a limited degree. This illustrates just what is liable to occur with the superficial or merely optional, no matter how well meant. Real reforms must, as The Farmer's Advocate has scores of times pointed out, editorially and by its correspondence, reach the regular program of normal-teacher training, the public-school curriculum and the text books in daily use by the pupils from the primary classes and upward. There is little time to accomplish much in a course that hurries to its end as a high-school feeder. A few years ago when the text books in the Province of Ontario were revised a grand opportunity was missed to give them some fitting relation to the country's foundation industry and life which politicians glory in periodically extolling from the hustings. Instead of containing more material conceived with this end in view the new ones if anything had less of it than the old. Nearly everybody is deploring the drift from country to city; we lament the evils of urban congestion and the over-crowding of the professions and commercial life. It is conceded that a knowledge of rural affairs and a juster appreciation of the advantages of rural life would tend to preserve a more wholesome balance in the affairs of country and town, and be for the decided advantage of the growing city population. In colloquial phrase it would tend to "even things up" and give all a more equal opportunity. Most of the rural teachers are young ladies who had practically taken leave of rural life in early years, and not a few of the others are from the

THE FARMER'S ADVOCATE AND HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

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

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s.; in advance.
3. ADVERTISING RATES.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrearages must be made as required by law.
5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrearages are paid and their paper ordered to be discontinued.
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8. ANONYMOUS communications will receive no attention. In every case the "Full Name and Post-office Address Must be Given."
9. WHEN A REPLY BY MAIL IS REQUIRED to Urgent Veterinary or Legal Enquiries, \$1.00 must be enclosed.
10. LETTERS intended for publication should be written on one side of the paper only.
11. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P.O. address.
12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
13. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, OR
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LONDON, CANADA.

cities and towns direct. If text books, normal training and curriculum do not shape for new ends, then we may expect nothing else than that the old order will remain intact and the old results will be reproduced with automatic persistence. As a thoughtful farmer the other day observed, unless there is some radical change made in the conduct of the public school there will soon be nobody left in the country to do its work and preserve its home life. The people will be all in town.

The Long Look Ahead.

Editor "The Farmer's Advocate":

Farming is a cultivation of the spirit as well as of the soil. Patience, faith, hope, besides many lesser virtues, grow and ripen within us while we wait from the time that we turn the first furrow until the sheaves are safely stored in the barn. We cannot, as does the laborer or professional man, expect our day's pay at the end of our day's labour, for we work for the future and not for the present. Even when the golden grain is at last shaken into our hands, it is but that we may again sow and again wait. In this wise the promise is permanently, as it were, always before us; its fulfillment forever afar. Not that I would for that or any other reason, express our condition with any sense of sadness. Sorrow is rather for those who must live without the fresh zest of life which every spring re-creates anew in our hearts. What I wish to emphasize is the far-away result of almost all farm work and the need made imperative thereby, of continually looking a long way ahead. If work is but for a day it may be done without much thought, but if it is to stand through the coming years as a monument of our making, if it is to represent our character and ideals, to bear witness to our courage and ability, we need plan and system to go by; we need to look on our present efforts in the light of our results that will accrue from them; we need to look a long way ahead.

It is my firm belief that the promise of heaven has always had more power to stimulate the saint than the threat of hell has had to deter the sinner, and I likewise consider it time and labor lost to attempt to convert the careless by talk-

ing of the dread consequences of the future. More to the sharp lessons of repeated failures; more to the humiliating comparisons of our condition with that of others; more to the personal experience dearly bought and sacrificially paid for, must we owe our regeneration than to all the sermons ever spoken or written.

I concede that when the outcome of almost all farm work is so often invisible and unfelt until the remembrance of the work itself has had time to fade away more or less, it is like sliding down hill for the unheeding and inefficient—to become more comfirmly so—to work more and more without chart and compass, and trust to time and luck to finish out all right what they weakly and willfully begin all wrong.

To the ignorant and unthinking the favorable results of long and careful planning, of devoted attention, of hard work, is enviously characterized as 'luck.' If one man has magnificent crops while another, under equal conditions, has but poor returns; if one has splendid success with live-stock, while others are steadily losing ground if one has all his farming operations succeeding each other in smooth fashion, while his neighbors are continually fighting against time and conditions which they themselves create, the ignorant and shallow-minded, as I have already said, call it 'luck.' They do not reflect that this old world of ours, planned by him—

"—who through vast immensity can pierce,
See worlds on worlds compose one universe,
Observe how system into system runs,
What other planets circle other suns,"

has been too carefully fitted together to have within it such an erratic element as 'luck.' The matter simply resolved is that the successful man is the one who plans carefully and carries out conscientiously, the man who thinks before he acts, the man who thinks a long way ahead.

Every result is so from a certain cause, and every cause owes its existence to a certain authority. If we are the authority for the cause whose result is a failure, we are in immediate need of reform for the real failure is not in the result, but in ourselves.

It is true that there are forces which are beyond the farmer's control. As for instance the weather, or disease, or again unavoidable accidents, but if we cannot control the weather, or banish disease, avoid accident, or escape calamities, we can by careful consideration and looking a long way ahead so control our crops and farming operations, so entrench ourselves behind a protecting system, as to almost circumvent those forces which are seemingly hostile and assuredly beyond our control. Tile drainage for instance, can afford a certain protection against the weather, so can an abundance of light and cleanliness work in contravention of disease, so can vigilance and a preventive policy guard us from many an accident that the heedless and lazy call heaven-sent and unavoidable. It is the matter of giving a long look ahead.

It is the common failing of humanity to wish for immediate returns for whatever energy is expended, and yet how very rarely are we satisfied with what we achieve without due thoughtfulness. To act in a hurry and repent at leisure, is customary in more than a matrimonial sense. We plant trees and construct stone walls where no trees or stone walls should be, we build houses and barns that leave us wanting to the end of our days, we breed animals that are an eyesore to us until we see them no more, and all because we will not purpose or plan, or take the right precautions.

The long look ahead presumes an ideal. Too many of us live on with no special object in view. We are like the tramp—going nowhere in particular—and about as valuable, for if we give nothing to the world we are like the fruitless fig-tree—we but cumber the ground.

Every man or woman is a missionary who does something better than his or her neighbors. If a man grows the best corn, if a woman bakes the best bread, he or she demonstrates a possibility of perfection for others to emulate, and the world is the richer for their existence.

Scientific methods have of late years made so much headway into the farming industry, that the happy-go-lucky methods of the past seem now almost disreputable. Besides, the times, through the scarcity of farm help, have become more strenuous, and the standard of excellence, as quite compatible with all true advance, higher. Only if we plan and carry out carefully, can we hope for certain comfort and satisfaction. If we look far ahead and distribute our work as evenly as possible throughout the successive seasons, if for instance, we plant fall crops to lessen the rush of spring work; if we carry on winter dairying or stock-feeding, so as to engage our helpers by the year; if we practice diversified farming so as to guard ourselves from total failure, we shall, to a great extent, ensure ourselves against the untoward conditions of the present time.

It is a sad thing that we must often waste so many years before we acquire enough experience and moral force to settle on a system of work and adhere to it; that we must lose so much sub-

stance before we learn to look long ahead, and guide ourselves by what we can foresee. We lose the time of plowing while we mend the plow that should have been repaired in the fall. We lose the time of seeding, while we decide a question of seed that should have been settled months before. We lose our sons and daughters, because we drift on without plans to make them love the farm until they are ready to leave it. Ah, to be taught early to take the long look ahead, 'How much suffering would it save us,' 'How much regret.'

The long winter evening is the ideal time of the year in which to plan the proceedings of the ensuing months, and nothing is so helpful when so doing as to commit ideas and decisions to paper for future reference. There are certain days of the year when the rush of work is too great, the strain too heavy, to do more than fulfil the day's duties. It is then that the list becomes handy, and that we feel all the comfort of a well laid-out plan of action. It is of course quite possible that we may fall short of our written memoranda, for our faith is oftentimes larger than our possibilities, but we shall certainly accomplish more than if we had no plan to go by.

Carleton Co., Ont. (MRS.) W. E. HOPKINS.

Knowledge Beyond Personal Experience.

"Each one of us in life's business, whether in the office or in the store, in the factory or in the household, cannot help feeling a certain narrowing effect from his daily routine. That same experience which makes him more skillful in what he does may render his vision of the possibilities of life less broad. But the habit of reading books that deal with the subject which he pursues counteracts this tendency. Such books give him command of data a hundred times wider than his own.

"Science clearly developed and presented is but a summary of the world's experience in its several lines of observation. He who deals with the world's experience instead of his own, broadens his work and his capacity for observation instead of narrowing it."—A. T. Hadley, President of Yale University.

HORSES.

Pay particular attention to the colt's feet.

All exercise which a colt is given on the halter answers two purposes, that of exercise and that of educating him.

Take good care of the horse's legs. The greater portion of the body may be covered with a warm blanket, but the legs stand exposed at all times. Give them extra grooming.

Apply a wisp of dry straw vigorously to the legs of the work horse after the day's ploughing. It will clean the mud from them and dry them, leaving the horse more comfortable for the night.

In keeping the colt's foot to a good shape during the months of stable-feeding a rasping down is necessary every four or six weeks. Round the lower edge of the wall so as to prevent chipping.

Nothing is much more unsanitary than an old rotten plank floor with liquid manure oozing from all its cracks at every step of the horse. Plank on a cement bottom makes a sanitary lasting floor which is quite satisfactory.

The foot of the draft horse should be large and open at the hoof-heads. Too little attention is paid by some to this point of the horse. The feet are called upon to withstand concussion and strain as no other part of the body is subjected to.

Colts which do not get sufficient exercise may lay on fat and to all appearances may be making phenomenal gains, but their muscular development will not be as great, and the state of their respiratory system will not be so strong, as would be the case if regular outdoor exercise were given.

Sometimes by some cause the laws of breeding seem to work wonders, but more often their operation is simply "like tends to produce like." Once in a long time an exceptionally good colt is produced from an inferior mare or stallion, but this is not the rule. As the sire and the dam so the progeny. Select the best horse to sire the colts.

It almost makes one flinch every time he sees a lame horse put the sore extremity to the ground. If it is the result of accident and the injury is not permanent it is not so serious, but where the lameness is the result of some unsoundness the case is a bad one. No unsound horse is able to do the amount of work he could do if he were sound. This should be remembered in breeding and buying horses.

Young colts (sucking and yearling) are not often a strong feature of the horse shows held annually in connection with our fall exhibitions. There is no good reason why more of the youngsters should not come forward, for the breeder's real value to the breed and to the country lies in his ability to so mate his stock as to produce high-class colts. True, colts are more difficult to fit, and true they should not be over-fitted, but why not bring out more of them in average condition and make the shows as strong in the younger classes as in those for two-year-olds and three-year-olds and aged animals.

Effect of Exercise in Fattening Horses.

Each year a number of horses are fed up or fattened for sale. Some give the horses exercise, while some keep them as quiet as possible. It is generally necessary to give a little exercise to keep the animal's legs right, but aside from a discussion of the injurious or non-injurious effect of idleness, it is interesting to note what effect exercise has in the fleshing of the horse. In an experiment carried on at the Illinois Experiment Station where seven horses were not exercised, and thirteen were walked 2.8 miles daily for a period of 84 days, it was found that the horses getting exercise made 41 pounds less gain per head, or an average of nearly one-half pound less per day than those not getting exercise. So far as could be observed, the horses not getting exercise remained in as good health, and retained their appetite as well as those regularly exercised.

There is even a difference between the gains made by horses fed in loose box stalls, and those tied in narrow stalls. In connection with the same experiment ten horses were kept in each of these two types of stall for 84 days, and those in the single stalls gained 2.4 lbs. daily, as against a gain of 2.2 lbs. daily made by those running loose in the box stalls, or a difference in favor of the tied horse of .2 lbs. daily.

Absolute idleness with no exercise whatever is not believed to be in the best interests of any horse, taking into consideration his usefulness in after life.

Horse fattening has many problems, and the man engaged therein usually has little concern as to the horse after it leaves his hands. A mature animal is not injured by this idleness to such an extent as the younger stock, and as most horses are not fattened until they are mature, there is not so much damage done.

The full results of these experiments carried on with the fattening horses are contained in the following summary.

1. A mixed grain ration of corn and oats, when fed with clover hay, is more efficient than a single grain ration of corn for producing large gains in an eighty-four day feeding period.
2. While a ration of corn, oats, and clover hay is more expensive with prices of feeds (corn 35c per bushel, oats 30c, bran \$20.00 per ton, oil meal \$27.00 per ton, clover hay \$8.00 per ton, and timothy \$9.00 per ton), than one of corn and clover hay, the gains are such as to make its use more economical.
3. Clover hay when fed with a mixed grain ration of corn and oats, is more efficient for producing gains than timothy hay. In this test clover hay produced 58 per cent. more gains than timothy.
4. A ration of corn, oats and timothy is not satisfactory for producing finish in fleshing horses for market, but may be materially improved by the addition of oil meal.
5. Experiment No. 2 showed but little difference in the efficiency of a ration of corn and oats, where the oats and corn were fed in equal quantities by weight, with clover hay as roughage in each ration.
6. A ration of one-fourth oats and three-fourths corn, proved more economical than one of half oats and half corn.
7. A ration of corn and bran fed in proportions of one part bran to four parts corn by weight is superior to an all-corn ration for producing gains when fed in conjunction with clover hay.
8. This test seemed to indicate that there is danger of feeding too much bran for best results, when clover hay furnishes the roughage part of the ration. The bran and clover combined produced a too laxative condition.
9. A ration with a nutritive ratio of 1:10 is too high for best results in fleshing horses. In

these tests the narrower the nutritive ratio the larger the gains. Best results were secured with a nutritive ratio of 1:8.

10. Exercise has a retarding effect upon the taking on of flesh. In this test the horses receiving no exercise made 24 per cent. more gains than those having a daily walk of 2.8 miles.

11. While the box stalls are safer than single stalls for stabling horses, they are also more expensive, and do not offer merits not possessed by single stalls so far as they may influence the horse in taking on flesh. The horses stabled in single stalls made 16 pounds or 8 per cent. more gains in 84 days than those in box stalls.

12. Thin horses of some market classes will not return as large a profit in feeding as those of other classes. The kind of horses it will pay best to feed depends partially upon the season of the year when marketed. All heavy horses will pay better than light horses, and good and choice animals better than those of the lower grades.

LIVE STOCK

For quick returns few classes of live stock equal the pig.

Feed the ram a little grain through the breeding season. Stronger lambs will result.

Ewes in good condition when bred drop more lambs than those served in failing flesh.

Dip the sheep before they go into winter quarters. Choose a warm day when the sun is bright and let the sheep out in a sheltered yard to dry.

Cold rains are bad on the flock. If possible give them protection under a shed or in a pen during the raw, beating late-fall storms.

It is good practice to feed all milk to the calves from pails. Each calf gets his own share and the troughs are not nearly so likely to become sour.

Removable partitions between two or more box stalls make it possible to increase the size of the stall as the calves grow or as more space is required.

Box stalls for the calves with stanchions or chain ties while feeding will solve the problem of preventing the injurious habit so common among skim-milk calves of sucking. Twenty minutes after feeding the calves may be let loose again.

Provided the food is kept sweet and is not allowed to stale in any way, hogs will eat more when it is soaked than when it is fed dry and will make larger gains. The gains are due to the larger amount of grain consumed and not to any effect of the soaking.

Seventy good hogs fed for the entire summer on five acres of red clover and getting only twenty-five pounds of meal a day were lately seen on the Prison Farm at Guelph. These hogs made rapid gains and thrived well during the entire summer. A free run and clover pasture is an economical method of feeding hogs.

If cattle are to be fed corn they will do quite as well during the early stages of corn feeding on bundle corn direct from the field, as they will on corn that has been prepared for them at a great expense of labor, says Prof. Andrew Boss. Several feeders in Minnesota are successfully finishing their cattle on bundle corn, and secure excellent returns from their corn crop by reducing to the minimum the cost of production.

Feeding Value of Wild Flax Seed.

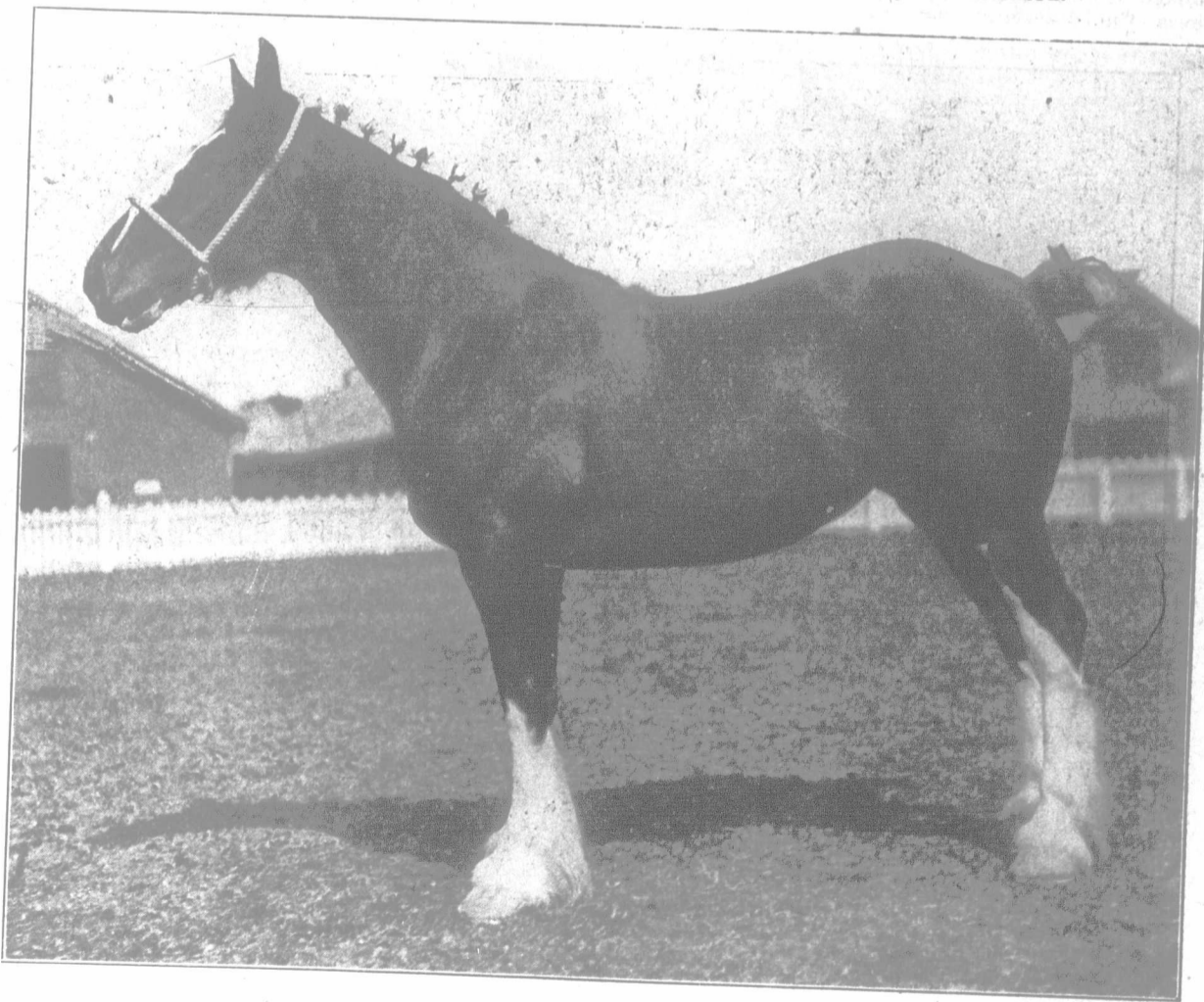
Editor "The Farmer's Advocate":

We will probably have 50 bushels of wild flax to clean out of our wheat this year. Could this not be economically used to feed our milch cows by mixing it with silage and chaff? Of course we could boil it and kill the seed and it would then be fit for feed, but we haven't a suitable place to boil it except on the stove and we doubt if that would pay us.

Halton Co., Ont.
J. W. B.

This query was referred to E. S. Archibald, B. S. A., Dominion Animal Husbandman, who replies:

"Regarding the feeding of wild flax seed to dairy cows, this seed contains a high percentage of oil, but unlike our grains, contains a very low percentage of starch. The food value of this oil in feeding experiments with sheep has proven highly satisfactory, hence the whole flax seed, if mixed with the grain ration, or if fed on the silage or pulped roots should give profitable returns. I would suggest that this be mixed with the roughage after the latter has been proportioned out to the cows. In this way no cow will get an excess of this very rich product. As yet very little data has been gathered as to the advisability of boiling flax seed for live stock feeding. This is due almost wholly to the fact that the oil of the flax seed is more valuable for commercial purposes than for live-stock feeding. Nevertheless, from the data gathered I scarcely think it would pay to boil the flax seed. This oil is in a readily digestible condition and should be almost immediately assimilated.



Boro Heiress.

First-prize Shire filly, two years old, at Toronto and Ottawa, and champion of the breed. Owned by Colony Farm, Mt. Coquitlam, B. C.

Small Flocks for Dairy Farms.

Editor "The Farmer's Advocate":

The editorial "Sheep on the Dairy Farm," which appeared in your issue of the 3rd instant, is both timely and suggestive. It requires courage to combat popular prejudice, but as an evidence that your opinion and recommendation is receiving practical support, may I instance the fact that one of the most experienced and successful stockmen and grain growers of Western Canada, with whom I discussed this identical subject during the past summer, expressed himself, without qualification, as of the opinion that sheep raising and dairy farming could be profitably combined. He went further and stated that such a combination would be the system of stock keeping he would advocate for adoption in a large part of the grain-growing areas of the Western provinces.

Conditions, of course, vary between the East and the West, but the need for and the advantage to be gained from the keeping of sheep on dairy farms cannot but be remarked in speaking either of Eastern or Western Canada. The fact is, the older-settled portions of the country need sheep, and need them badly. That they will yield a profitable return both directly and indirectly is not now denied. I believe that every dairy farm in Eastern Canada should maintain at least a small flock of these animals.

I would, however, emphasize the word "small." A dairy farm overstocked with sheep will lose out in returns on both counts. There ought to be no competition for a livelihood on the pasture land between the flock and the dairy herd. Fifteen breeding ewes on a 100-acre farm should be ample in meeting the requirements of that area of land. These, if given intelligent care, and if skilfully managed in their relation to the fields under crop, will do for the soil, and for their owner what sheep have done in a country whose husbandry is regarded as very much more perfect than that which we have yet been able to achieve.

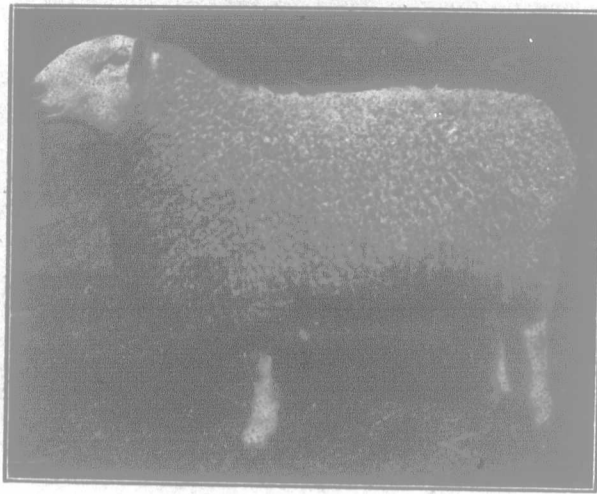
H. S. ARKELL.

Asst. Live Stock Commissioner.

Cooking Grain for Hogs.

From time to time queries come to this office regarding the advisability of cooking grain for feeding purposes. Of thirteen separate series of experiments carried on in different parts of the United States in cooking or steaming grain food for pigs, taking in cooked or steamed barley meal, corn meal and shorts, whole corn, whole corn and shorts, peas, corn and oatmeal, potatoes, and a mixture of peas, barley and rye, compared with the same foods uncooked (and usually dry), ten of these trials not only gave no gain from cooking, but there was a positive loss, i.e., the amount of food required to produce a pound of gain was larger when the food was cooked than when it was fed raw, and in some cases the difference was considerable. In the

three exceptional cases there was either no gain at all or only very slight gain from cooking or steaming, amounting to 2 per cent. in one case.



Leicester Ram.

Champion of the breed at Toronto. Exhibited by A. W. Smith, Maple Lodge, Ont.

THE FARM.**Home-made Cement Mixer.**

Editor "The Farmer's Advocate":

This is how a farmer can make a concrete mixer of his own in spare time which will mix cement just as well as any other more expensive mixer, and, at the same time, be much less trouble to build and operate.

The farmer with his mixer can build his own silo, build a concrete foundation for his barn, or any other farm building, as well as lay concrete floor in his horse stable, cow stable, hog pen, henhouse, or any other building that needs a good concrete floor. Mixing cement by hand is a very good way of mixing, but as it is so hard to get men, and wages are so high, the farmer likes to have it done with the least expense possible—he goes to work and makes a mixer himself. This can be done by using two-inch planks, making them in the shape of a box. This box is forty-eight inches long, thirty inches wide, and thirty inches deep. Two ends and brace pieces make it a solid box. A three-inch piece is bolted on each side, inside the box, to stir and mix the cement. The box is held in a horizontal position. A door is cut in one side nine inches wide and forty inches long, hinged on one side. Now you have the box and door made. It must have an axle to turn on. A hole is bored in the center of each end of the box large enough

to let an inch and a quarter pipe through for an axle.

Sand and cement will not make concrete without water. This axle being hollow, a number of holes are drilled through the pipe where it passes through the box. An elbow and a short piece of pipe are placed on one end. A funnel is placed in the short pipe, and any quantity of water can be run into the mixer where the sand and cement are. This idea makes an inlet for the water, and also an axle for the mixer to turn on, and it will work well. Now you have your mixer lying horizontally on its axle. A pulley three feet in diameter across is placed close to the end of the mixer to run loose on the axle. This pulley runs from twenty to twenty-five revolutions per minute, and by a simple arrangement of a lever, which catches the spokes of the pulley, the mixer can be started or stopped very easily, without stopping the drive pulley. The stand or frame is made out of four-by-four scantling, about forty inches high and five feet long—something like that of an Empire churn stand, but much larger.

The capacity of this mixer is a wheel-barrow load at a time. The gravel and cement are put in the mixer and mixed for about three minutes. Then the water is added and mixed for about five minutes longer. This mixer is turned by a gas line engine, and gives good satisfaction, at a much lower cost for operation than if men were hired to do the same work.

Otario Co., Ont. A. HOWARD ROWE.

Spraying and Variety in Potatoes

Wet seasons, such as the one we have just experienced, are hard on the potato crop. Reports of blight and rot are heard on every hand. Some sections which previous to this year have had little or no blight report that its ravages have caused considerable loss. Low or heavy land has suffered most, but the nature of land is not the only fault. The season has proven conclusively that spraying frequently and thoroughly with Bordeaux mixture is a preventive which cannot be ignored. S. E. Todd, B. S. A., Director of Government Farms for the Province of Ontario, states that little or no rot has appeared in the potatoes on these farms which have been thoroughly sprayed and on those farms where the work was looked after in every detail the potato tops were just as green and healthy at the time frost came as at any time during the season, no evidence of blight being noticed. He favors the Delaware variety.

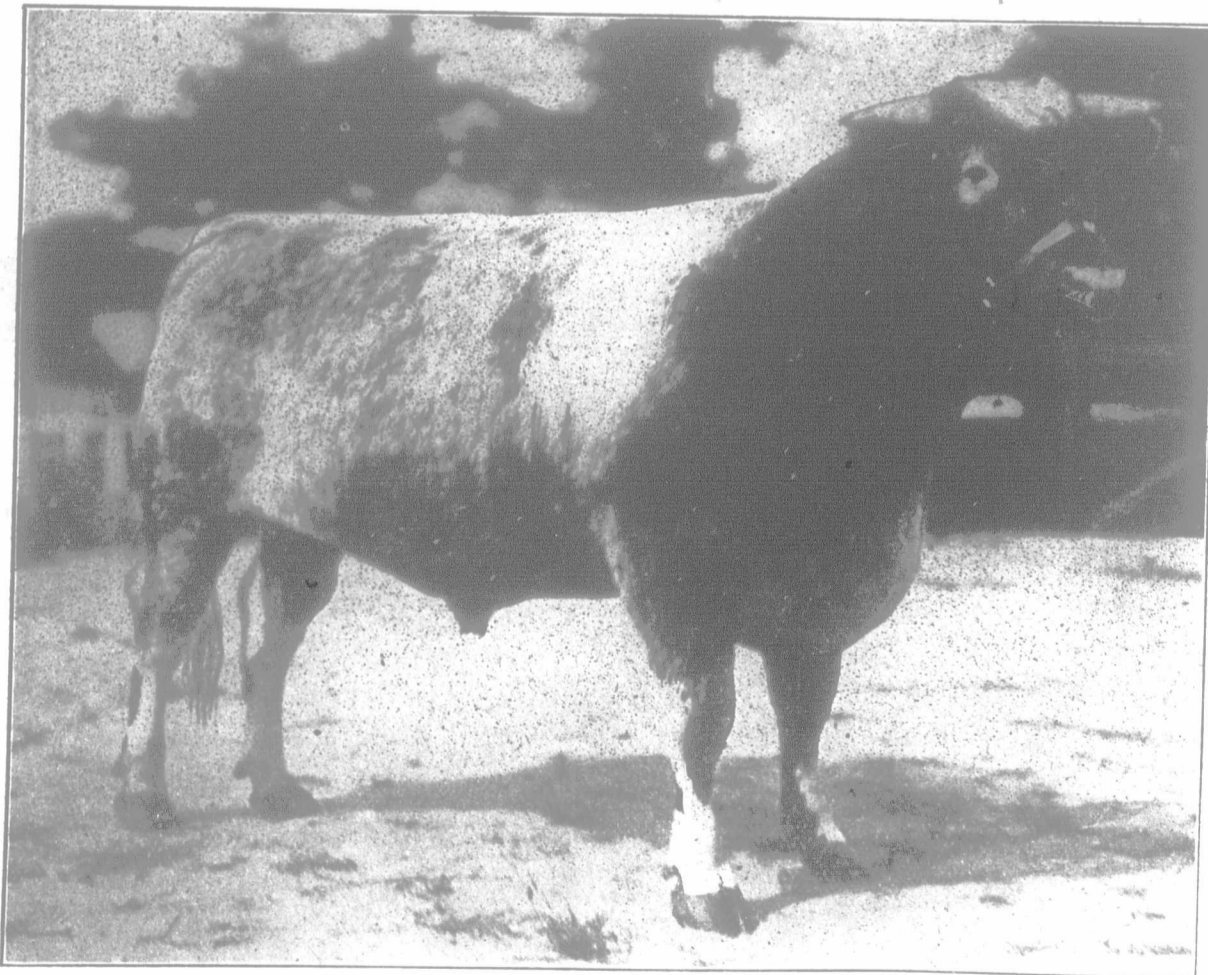
With regard to blight-resistant varieties, Prof. C. A. Zavitz, of the O. A. C., has had some very marked results this season. He finds that the four most blight-proof varieties this year are Extra Early Eureka, Irish Cobbler, Early Pink-eye and Davie's Warrior. Two of these varieties, Extra Early Eureka and Davie's Warrior, are yielding over 450 bushels per acre and no rot whatever is visible. These four varieties are all heavy yielders and where others have suffered from rot are free from it. Thorough spraying and planting of blight-resistant varieties cannot be too highly recommended.

Top-dressing Alfalfa.

It has been often advised in the case of an alfalfa stand going into winter without a strong top, to dress it with manure. It comes as a surprise, therefore, to learn that a certain writer living in the middle Western States, advises against such dressing, unless with fine and well rotted manure. "Under no circumstances," he says, "should straw or strawy manure be applied to an alfalfa field with the idea in mind to protect the plants. Such applications usually kill out the alfalfa plants. There will no harm come from the application of a light dressing of rotted manure carefully spread; but unless the soil on which alfalfa is planted is very poor, manure can usually be used to better advantage by applying it preceding some cultivated crop such as corn or potatoes."

We cannot say that we altogether agree with the foregoing advice, but the caution against overdoing by the application of course, against spread manure, may be helpful to some readers.

One of the greatest difficulties which Prof. C. A. Zavitz, of the O. A. C., has found in the growing of field-root seeds is to get them well ripened up in the fall before the frost comes. The roots selected for seed should be planted as early as possible in the spring and should receive good care throughout the summer. It must be remembered that many districts in Ontario are much more favorable to the ripening of root seeds than is the O. A. College farm situated as it is at a very high altitude, where the season is comparatively short.



Pride of Albion.

First-prize senior yearling Shorthorn bull, at Toronto, 1912. Owned by J. H. Melick, Edmonton, Alta.

Experiments and Practical Demonstration of Underdrainage.

The Department of Physics, at the Ontario Agricultural College has for several years past been doing a great work in the encouragement of farm underdrainage, but the greatest step forward has been made very recently. A part of the grant which the Dominion Government made this year to the various Provincial Governments to be used as an aid in agricultural development, is being used to demonstrate the advantages of farm underdrainage. A gasoline traction ditcher has been purchased, and demonstrations are to be held in several districts to show the people the actual operations connected with putting in drains. It was not enough to take the surveys of the land and demonstrate to the people the use of the level, how to lay out a drain, how to determine the grade over a ditch, and how to dig the ditch to a grade by use of charts. Something even more practical was needed. Besides there are many living on low, comparatively level land, which is more or less of a heavy clay, who do not believe that underdrainage is practicable, or would be at all successful on their land. Then, too, there is a great difference of opinion as to the distance apart, and the depth drains should be placed in different kinds of soil. Actual demonstration and experiment will solve all these problems.

The first demonstration was held Friday, October eleventh, on the farm of Neil McDougald, Tara in Bruce Co., Ontario. The people of this district are much interested in underdrainage, and in July last the Farmer's Club of Hall's Corners held a drainage picnic, at which Prof. W. H. Day, of the O. A. C. gave an address during the course of which he mentioned the fact that practical demonstrations were soon to be held in digging ditches and laying tile. Accordingly a field was reserved, and the demonstration held. Over three hundred farmers attended, and witnessed the underdrainage of a field which had only produced one crop in ten or twelve years. During the afternoon Prof. Day, N. C. McKay, B. S. A., District Representative for Bruce, and C. L. S. Palmer, B. S. A., Asst. Rep. for Grey, gave addresses on the value of underdrainage.

The plan of the demonstration and experiment is this. The plot to be drained must consist of from five to ten acres, must be situated on a main road lying towards the road, must be so situated as to leave so much land as nearly identical with it as possible, underdrained for a check. The owner must agree to sow the same crop on the drained and underdrained land each year for three years, and must report all differences in yield, etc. The drained portion is divided into sections with drains two feet deep and two rods apart, two feet deep and four rods apart, three feet deep and two rods apart, and three feet deep and four rods apart. This besides testing the value of underdrainage against underdrained soil, compares different depths and different distances apart for the drains. This demonstration was a decided success, as far as putting in the drains was concerned.

Next spring work of this kind will commence in Haldimand Co., where eleven of these demonstration fields will be put in. Six of these are already located and five more will be secured, each township getting one, and the two largest townships two each. All the work of surveying, digging and putting in the tile is done by the Department of Physics. The farmer must hereafter supply the tile, and as these demonstrations are bound to be of great value to the tile business, manufacturers should be induced to supply the tile free of charge. This work should eventually dispel all doubt as to the value and practicability of underdrainage.

Experimental work is being carried out with underdrainage on the College farm as well. A large field is divided into ranges on either side of a mile-long main drain. The first range on one side is underdrained, the second section is divided into plots of 1 1/2 acres each, one plot being drained by drains 30 feet apart, one plot 60 feet apart and one 90 feet apart, all drains two feet deep; the third section is laid out the same as No. 2, but the drains are three feet deep. These have the narrow drainage in the low ground, and the wide drainage on the higher ground, while plot four with three-foot drains has the wide drainage in low ground and the narrow on the high ground. The order of the ranges is reversed in the opposite side of the main drain. By the use of basins and a water meter, the exact amount of drainage from each system is to be calculated. Some of the most valuable information on drainage yet available should come from this, and the actual demonstration of digging and laying tile should prove a great stimulus to underdrainage.

Canadian Road Systems.

By W. A. McLean, Chief Engineer of Highways for Ontario, at American Road Congress, Atlantic City, October 2nd, 1912.

The creation of a thoroughly efficient system of highway construction and maintenance, is a task which, in Canada and the Canadian provinces, is being actively considered and dealt with. While some satisfactory progress has been made, measures to the present time have been those of the formative stage. Evolution rather than revolution has been the history of legislation in countries of the North, and highway systems and measures of Canada are following that general rule.

while the real improvement and construction of these roads is a municipal function, as settlement becomes established and municipal organization is created.

Canada has a geographical backbone, a rocky mineral region about the center of the continent, extending northerly from Lake Superior to Hudson's Bay. West of Lake Superior the four provinces of Manitoba, Saskatchewan, Alberta, and British Columbia are comparatively new, having been developed since the construction of the first Canadian transcontinental railway, the Canadian Pacific Railway, in 1886. East of the Lake Superior region are the old provinces of Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island.



Crowd Watching the Ditcher Work.
Drainage demonstration on the farm of Neil McDougald, Tara, Ont.

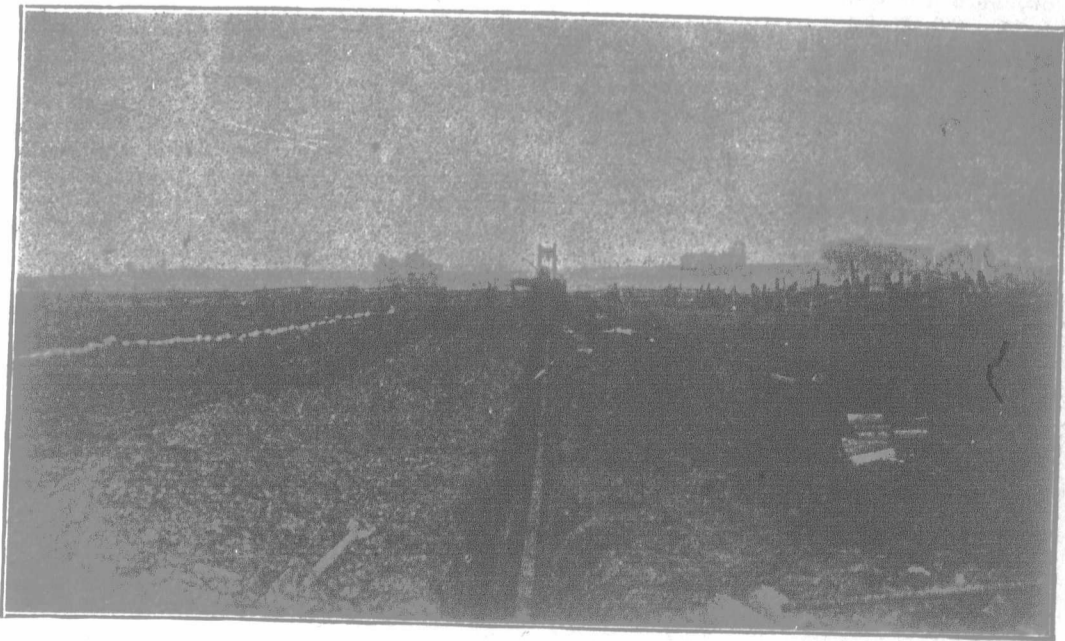
The Canadian form of government is similar to that of the United States in some respects. Canada is a union of provinces, with a federal administration at Ottawa, just as the United States is a federation of states with the seat of government at Washington. Each of the nine provinces has its own legislature, as has each of the states; and the provinces are again divided into local municipalities—the rural being townships and counties; while the urban are villages, towns and cities,—but as in the States, local government varies in the different provinces. The Canadian constitution, "The British North America Act", defines the powers and jurisdiction of the Provincial, and those of the Federal or Dominion Government. Under that Act, legislation respecting public roads and municipal organization is within the authority of the provinces, although the Dominion Government has power to subsidize road construction. The tendency in each province (with certain exceptions) until recently has been to regard the opening and grading of roads in new territory as a provincial function,

BRITISH COLUMBIA.

British Columbia, on the Pacific coast, is traversed by the Rocky Mountains, and municipal organization is, therefore, interrupted. In consequence, the Provincial Government has always contributed largely to road-building. At the present time a special fund is being spent on the construction of trunk roads at the rate of \$5,000,000 annually, under the direction of the Department of Public Works. Stone for macadam roads is plentiful, but the grading of mountain highways is expensive. The trunk roads now being built have an important scenic value, and upon completion will attract many tourists. In the past ten years approximately \$15,000,000 has been spent by the Province on roads and bridges, but the expenditure of an equal amount in the three years 1912-14 is now outlined.

SASKATCHEWAN AND ALBERTA.

Saskatchewan and Alberta, occupying the prairie country north of Montana and North Dakota, were granted provincial organization in



A Ditch Dug, and Tile Laid.
A demonstration of putting in drains with a traction ditcher, on the farm of Neil McDougald, Tara, Ont.

1905, and are in a pioneer stage of development. Earth roads, with bridges, are the present need, and very little has been done toward good broken stone or gravel roads. Each of these provinces has a provincial highway department, however, and is drawing largely on its resources for road expenditure. The provincial governments in each case are grading and bridging the main roads. As fast as settlement permits, three or four townships are organized into Local Improvement Districts with Councils to expend money raised by local taxation. In the case of Saskatchewan, an annual provincial appropriation (in 1910, the sum of \$60,000) was set aside to be drawn upon by the municipalities under a plan of provincial aid. The chief provincial expenditure in these provinces is applied, however, to trunk highways, by the Provincial Highway Departments, through their own foreman. Steel and wooden bridges are also erected by permanent "bridge gangs." The provincial departments also carry on educational work. In Saskatchewan a special appropriation of \$5,000,000 for trunk roads, was made at the last session of the Legislature, of which \$1,500,000 will be spent this year; in addition to the usual appropriation of \$400,000 from current revenue. In Alberta a special grant of \$1,000,000 was made this year for a central north-and-south trunk road in addition to the usual sum of \$250,000 from current revenue.

MANITOBA.

Manitoba has for several years had a Provincial Highway Commissioner whose duties were largely educational. At the last session of the Legislature (January 1912), two important acts were passed. One of these, the Act Representing Provincial Highways, set aside \$200,000 annually for provincial aid to main roads. Townships are permitted to lay out a special system of main highways, and the plans with specifications are to be submitted to the Provincial Highways Department. If approved by the Provincial authorities, the township may issue 30-year debentures and proceed with the work, receiving a grant of two-thirds of the expenditure from the Province. In this way it is expected that a serviceable system of Provincial roads will be constructed. The other Act, known as "The Good Roads Act", is one which relates to minor roads, and does not provide provincial aid; but requires any township undertaking the improvement of these roads to submit the plans to the Provincial authorities; and upon approval, the township may issue 50-year debentures to meet the cost—which debentures may be guaranteed or purchased by the Provincial Government. The work done under this Act is also subject to the inspection and approval of the Provincial Highways Commissioner.

ONTARIO.

Ontario is, physically, in two parts—Old Ontario, settled for over a century, and with complete municipal organization, and New or Northern Ontario, now being opened for settlement. In New Ontario, the Provincial Government is this year spending about \$850,000 on colonization roads—opening and grading the road allowance—and about \$250,000 for bridges. In Old Ontario, the local municipalities are spending yearly about 1,100,000 days of statute labor, and \$1,400,000 in cash. A large proportion of the latter goes into durable concrete culverts, and concrete and steel bridges. The Highway Improvement Act of Ontario is one of the most successful of Canadian road measures. County councils (composed of the Reeves of the local municipalities composing the county) are empowered to pass a by-law assuming for construction and maintenance a system of main highways. To this work the Provincial Government contributes one-third of the cost of construction as the work progresses. The Provincial Highway Department fixes certain regulations as to construction and management, inspects from time to time, and co-operates with the municipalities to obtain good results, but the active control is vested in the county councils through their own county engineer. This Act has been in operation for eleven years, and the annual outlay under it is steadily increasing. In 1911 the total expenditure was \$711,000, of which the Provinces contributed one-third. This Act is largely educational in its aim, but at the same time is producing much excellent work at a low cost. The educational effect has several features:—

- (1) It brings about an increasingly high standard of road construction, which teaches the public what good roads are, and how they should be built.
- (2) It instructs county councillors in road construction and impresses upon them the principles of good organization.
- (3) The roads and organization become models which are observed and imitated by the township councils, so that all roads are affected.
- (4) It enables the Provincial Highway Department to prescribe good principles, and the results of investigation, in an effective way.

The Ontario Highway Department is also con-

structing, at various points, model roads at the sole cost of the province, or with a partial contribution from the municipality in which the road is built.

QUEBEC.

The Province of Quebec has been extremely active in the matter of road construction, and has adopted several measures of a progressive character.

(1) The Province loans roadmaking machinery to municipalities making request, and has ten complete outfits for this purpose.

(2) Grants are made to local municipalities which dispense labor tax, and build an extent of durable gravel or stone road. Nearly 600 out of a total of 1,000 townships are this year taking advantage of the measures.

(3) The sum of \$10,000,000, borrowed under 41-year bonds, has been set aside for main highways. Municipalities may, for their construction, draw upon that sum, and are only required to meet one-half the interest (2%) on the monies so used for the term of the bond issue, the province meeting the sinking fund and remainder of the interest.

(4) Three provincial highways aggregating 350 miles in length, are now under construction. To this work the local municipalities pay \$1,000 per mile, and the Provincial Government contributes the remainder.

NEW BRUNSWICK.

New Brunswick has not as yet developed a broad policy leading to permanent road construction, but the Provincial Engineer by means of a contribution to county and parish construction, is enabled to bring technical instructions to bear on the work. The province appropriated \$100,000 annually for this purpose.

NOVA SCOTIA.

Nova Scotia is very actively canvassing the road question. The province is sub-divided by county organization only, and the counties levy a statute labor tax amounting to about \$250,000 annually. But the province spends about \$200,000 annually on road construction through an active and well-organized Provincial Highway Department. The province constructs all bridges costing over \$500.

PRINCE EDWARD ISLAND.

Prince Edward Island, the smallest, but one of the most fertile of the Provinces, has an isolated position in the Gulf of St. Lawrence. Except in the case of two cities, there is no municipal organization, and the Provincial Government exercises direct control of all the roads. The Province is divided into thirty-eight districts, each having about 100 miles of road, and a road overseer is in charge of the work in each. The Province spends about \$32,000 annually in maintaining earth roads, and very little macadamizing has yet been done.

THE FEDERAL GOVERNMENT.

The Dominion Government at the last session introduced a Bill to provide for grants to Provinces, to aid in highway improvement; to be distributed according to population, and also to provide for direct expenditure on construction by the Dominion. The Bill passed the House of Commons, but the Senate, while approving of subsidies, objected to the Dominion Government making direct expenditure. The amendments of the Senate were not acceptable to the Government, the Bill was not re-introduced into the House of Commons, and the measure thus failed to become law.

SUMMARY.

Canadian road systems have been, to the present, without enormous government appropriations or other spectacular features, and construction as a rule has been of a comparatively inexpensive type. Rather it is sought to build as substantially as possible for present requirements, and to establish efficient systems of maintenance that will thicken and widen the road crust as traffic requires. Such a policy will, we believe, lead to the more rapid and economical extension of good roads, without creating large public debts that will embarrass the future.

Summarizing the situation briefly, Canadian provinces have about 250,000 miles of public highways. Each of the provincial governments contributes directly to road improvement; generally in the form of provincial grants, where municipal organizations permit. Such grants rightly directed help the people to help themselves, combine all energy into one effort, and have a highly educative value. Each of the provinces has a highway department for building roads with which the educational object is more or less associated. The Canadian Highway Association is now carrying on an extensive propaganda to construct a road 4,000 miles in length from Halifax to Victoria, while the Ontario Good Roads Association, the Manitoba Good Roads Association, and other organizations are doing much to form public opinion. As a result of the interest created, provincial appropriations are now being

made in millions where they were formerly made in thousands. This year the total provincial expenditures, apart from the municipal levies, will amount to \$10,000,000. Canada has developed splendid railway and waterway systems, but it is evident that an era of common highway building is being entered upon that will connect the trunk lines of transportation with the homes and daily life of the people.

Plant Breeding at Svalof.

After many years of patient research at the famous institution of the Swedish Seed Association, Svalof, in regard to the variation and improvement of plants, the general conclusions of the investigators there are summed up as follows in L. H. Newman's recent work, "Plant Breeding in Scandinavia":—

(a) A progressive system of plant improvement cannot be a one-sided system, but must embrace all possible methods of reaching the desired end.

(b) Artificial hybridization provides an invaluable means of producing superior combinations of characters (sorts) which are not found in nature, and this method is now used largely at Svalof for this purpose.

(c) The old system of 'mass-selection' can still be of value in special cases, and has never been fully abandoned.

(d) Superior strains may often be found in a mixed variety, but since these need not necessarily possess striking botanical or morphological characters, their isolation, on the basis of such characters, cannot safely be effected.

That Clover Silage.

Editor "The Farmer's Advocate":

I was particularly interested, upon looking over the issue of Oct. 3rd of "The Farmer's Advocate" to note an account of an experiment conducted at Weldwood, in connection with clover ensilage. I like that Weldwood scheme. I like to think that the editor of this paper is actively engaged in the same business as I am, and that the theories which he advances are worked out in practice, and that the message of his pen has been ripened by experience. And again, I like the fairness with which the results of the operations conducted from time to time, are given for our consideration. There is no attempt made to cover up, or gild over failures. This, in my humble opinion is one of the strong points in the general efficiency of "The Farmer's Advocate." For do we not often get more from observing the failures of others, than from their success? It makes us think, and we look around for a cause, or for a way in which that same failure might be avoided, and sometimes we strike the happy solution.

The slight mistake,—I would not call it a failure,—which the editor confesses to have made at Weldwood, in connection with the clover ensilage, attracted my attention at once, particularly as this has been a pet scheme of mine for some time. I have never tried it as yet, circumstances not allowing thus far, but I have always cherished the idea, that a considerable quantity of clover, as the editor says in conclusion, cut up fine, with depth sufficient to apply great pressure, would make a pretty desirable form of silage.

Or perhaps better still, a smaller quantity placed in the bottom of the silo, and the remainder filled with corn, the corn to supply the pressure, and also saturate the clover to a certain extent with its juice, might keep as other silage, and make a perfect summer food for cows, and,—also how would it do for hogs?

But whether it would prove a success or failure does not need to concern us vitally, so long as corn is king. With it we are safe. But it is my determination, despite the reported failures; to experiment a little along this line in the near future. There is an old saying that "variety is the spice of life," but I think that it is our privilege as farmers to get a good deal of the spice of life by experimenting a little now and then in our farming operations.

[Note.—Thanks for this letter. The main purpose of Weldwood is exactly what our correspondent divines. As for clover ensilage we believe that if it can be made a success it will be in the manner proposed, or else by mixing with corn at filling. By all means experiment but, profiting by our experience, avoid risking too much.—Editor.]

Difference in Seasons.

As an illustration of the difference in seasons we will state that this year we filled two old silos at the Hoard's Dairyman farm from twelve acres of corn, whereas two years ago we ran in our entire crop on fifty acres, and then did not get as many tons of good silage as this year. The season of 1910 was the most destructive to the corn crop ever experienced in the southern half of Wisconsin, owing to the severe drought that prevailed from early spring to the last of August.

HOARD'S DAIRYMAN.

Ropes, Halters, Splices, Knots and Ties.

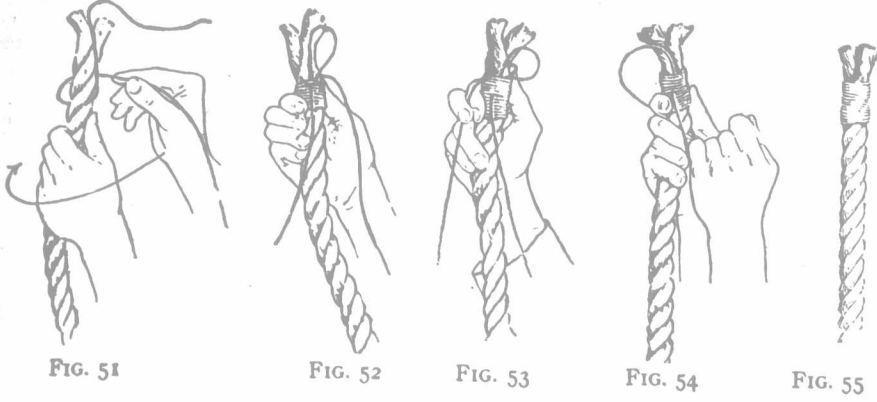
Ropes, rope-halters, splices, knots, and ties are something which every person working on the farm, from the school-boy to the proprietor himself, makes use of every day in the year. The great diversity of uses makes it necessary that such persons familiarize themselves with these different uses, and, as an aid to this, the accompanying illustrations will be found of benefit. The description of each of these is taken from a Cornell bulletin, and we can do nothing better than repeat it.

fastening the strands is needed, the wall knot may be used.

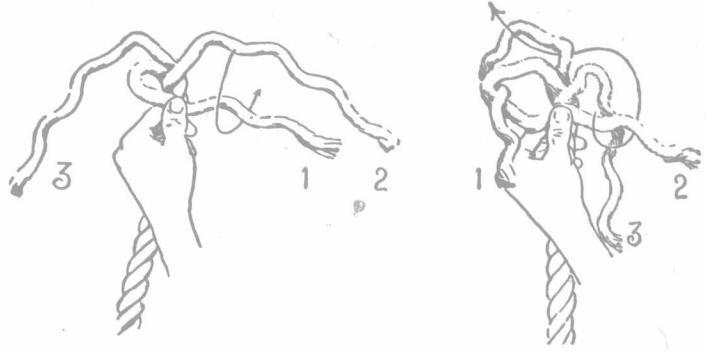
"This is made according to the following directions:—Unlay the rope for five or ten inches or more, depending on the size. Holding the rope in the left hand, with the loose strands up, take any strand, as No. 1, lay it down across the rope with the end toward the right, and hold it in place with the left thumb, as shown in Fig. 56. Take the next strand to the right, No. 2, and pass it around the end of No. 1, as shown by the arrow in Fig. 56. Before releasing No. 2, take the left thumb off No. 1 and use it to hold No. 2, as in Fig. 57. Strand No. 3 is now to be

right, and bend each rope back on itself (see Fig. 112). Note that ropes A and B are on the same side of C. Wrap A around the other rope end, producing the knot as shown in Fig. 113, A and B being still on the same side of C.

"Granny Knot.—This is frequently tied in mistake for a square knot. It tends to slip under strain, and is very hard to untie when set. The point at which a granny knot may be detected is in the position shown in Fig. 114. Ropes A and B are not on the same side of C, as they should be in making a square knot, and when the knot is completed, they are still wrong, as shown in Fig. 115.



Whipping the End of a Rope.



Wall Knot Begun.

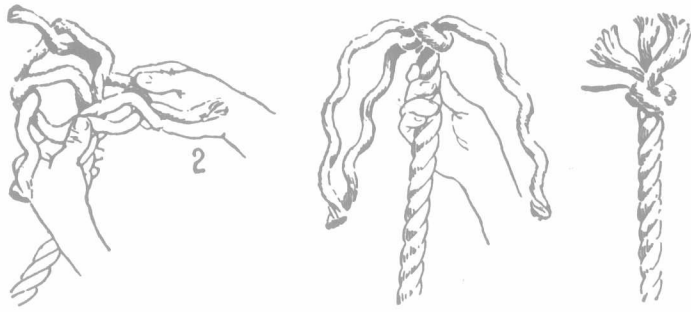
"Binding the end of a rope with twine to prevent it from untwisting is called whipping. Ropes that are to be passed through pulley blocks, or, like halter ropes, through small holes, should be finished in this way. A method of doing this so that both ends of the twine are fastened by tucking under the whipping is as follows:—

"Unlay one strand of the rope back to the point where the whipping is to begin. Under this strand lay the twine, leaving the end eight or ten inches long, as shown in Fig. 51, and then relay the strand into the rope, keeping it twisted up

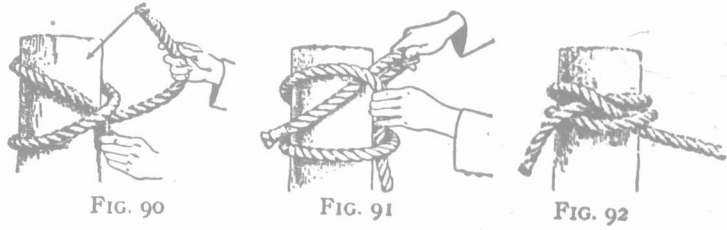
passed around the end of No. 2 and up through the loop of No. 1, as indicated by the arrow in Fig. 57, and as shown in Fig. 58. The knot should next be tightened by pulling all of the strands one after the other. The last steps are to pull the strands closely together in the center, roll the knot toward the end of the rope to hold them, and cut the strands sufficiently long to insure their not pulling back.

"Miller's Knot.—This knot is especially adapted to tying up grain and flour sacks; it is also useful in place of a clove hitch in fastening a rope to an object whose ends can not be reached, such

"Slip Knot.—This knot, the simplest slip loop possible, may be made starting either with the position as shown in Fig. 122 or with that in Fig. 124, whichever is easier for the person tying the loop. When beginning with Fig. 122, grasp the end of the rope in the left hand and, bringing the right hand upward, pick up a bight of the rope on the wrist as shown. Bend the wrist so that the palm of the hand is upward and the little finger touches the short end of the rope. Then rotate the wrist as shown by the upper arrow. This will cross the sides of the bight and form a loop around the wrist, and at the



Wall Knot Completed.



Miller's Knot.

tightly and pulled down hard into its place as directed for relaying. If an especially secure whipping is to be made, the twine may be tied about the strand under which it is tucked; usually, however, this is not necessary. Whip the long end of the twine around both the rope and short end of the twine, being careful to pull it up tightly and to leave no vacant spaces between turns. When about half the desired distance is covered, bend back the short end of the twine so as to form a bight extending out beyond the end of the rope and begin whipping both sides of the bight, as shown in Fig. 52. Continue whipping

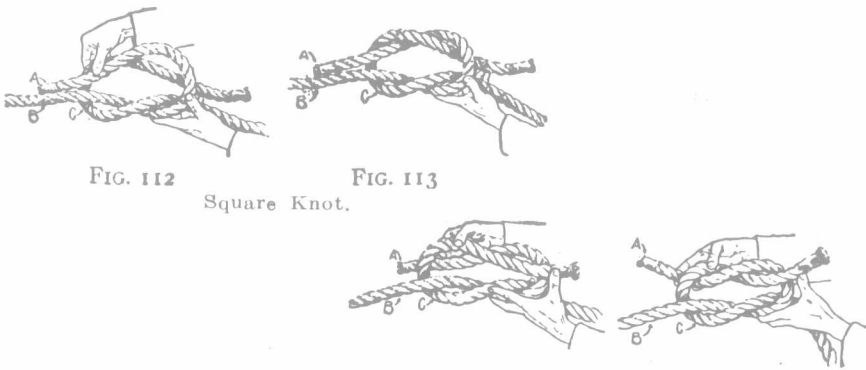
as a post in a barn. Take a round turn about the neck of the sack or fixed object, crossing the ropes in doing so, as shown in Fig. 90. Raise the main rope just above the crossing, pass the free end under, as in Fig. 91, and draw up tightly (Fig. 92). This hitch may be loosened by grasping either end of the rope and pulling it around to the right or left, as the case may be.

"In tying sacks, it is convenient to hold the mouth of the sack shut with the left hand, and to wrap the twine around the sack and the little finger of the left hand in such a way that the finger is in the place of the upper rope's end in

same time will bring the main rope in between the thumb and the first finger, as shown in Fig. 123 and as indicated by the lower arrow in Fig. 122. Grasp the main rope and draw a bight up through the loop, as shown in Figs. 124 and 125.

"In starting with the position as shown in Fig. 124, the end is held in the left hand and the loop formed by twirling the rope to the right between the thumb and the fingers of the right hand. Either method is easy, provided the end is held in the left hand at the beginning.

"Hitching Tie.—This knot is used for hitching a tie rope to a post. It is made as follows:—



Square Knot.

Granny Knot.



Slip Knot.

as far as desired, and then pass the long end of the twine through the bight and pull it up firmly, as in Fig. 53. By pulling on the free end of the bight, draw the long end of the twine downward underneath the whipping as far as it will go (see Fig. 54). Finish the whipping by cutting off both loose ends of the twine as closely as possible. The completed result is shown in Fig. 55.

"Wall Knot.—When a small knob on the end of a rope is desirable, or when such a knob is not objectionable, and a quick and secure method of

Fig. 91. The twine is brought on around the sack, caught by the finger, and drawn back under the first wrap of twine in a direction diagonally upward from left to right.

"Square Knot.—This, the most frequently used of all knots, is secure when set, and may be untied without difficulty. In making it, care should be taken not to make a granny knot (see description below).

"Cross the ropes, placing the right under the left, wrap the end of the left rope around the

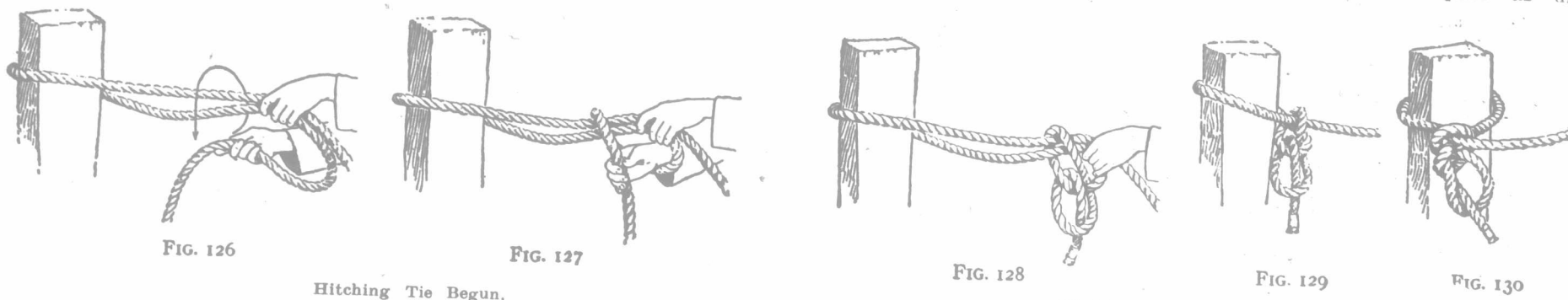
"Pass the rope around the post from left to right, thus forming a bight. Grasp both sides of the bight in the left hand, and with the right hand throw the short end across the ropes in front of the left hand, as indicated by the arrow in Fig. 126, thus forming a second bight below the left hand. Pass the right hand through this second bight, as in Fig. 127, and pull the bight, down through which the end of the rope is passed, as shown in Fig. 128. Pull the knot up tightly. There is a right way and a wrong way to leave

this tie when hitching to a plain post without a groove, ring or cross-bar to keep the rope from slipping down. If the knot is twisted around to the right of the post, as in Fig. 124, a pull on the tie rope will draw the rope tightly about the post and will thus prevent it from slipping down; if, on the other hand, the knot is at the left, as in Fig. 130, a pull will not tighten it and it will slip down.

"Halter Tie.—This is a knot preferred by some to the hitching tie, just described, for use in

with the left hand bring the long rope up and over to form a loop about the end, as indicated by the arrow in Fig. 135 and as shown in Fig. 136. With the right hand draw the end up through the loop and pass it around behind the long rope from right to left, as indicated by the arrow in Fig. 136 and as shown in Fig. 137. Pass the end forward and down into the loop again from above, as indicated by the arrow in Fig. 137, and as shown in Fig. 138. Note that this knot consists of a loop with a bight up

knots being all pulled down, the splice appears as in Fig. 164. Give each strand of the left rope one tuck toward the right, as described for splicing back the ends in crowning (Fig. 164). The splice will now appear as shown in Fig. 165. Tuck each of the other three strands once to the left. The splice will hold if carried no farther, and therefore if only a rough job is desired, the strands may now be cut about a quarter or even a half inch from the rope. If a nicely finished job is desired, however, finish the splice as di-



Hitching Tie Begun.

Hitching Tie Finished.

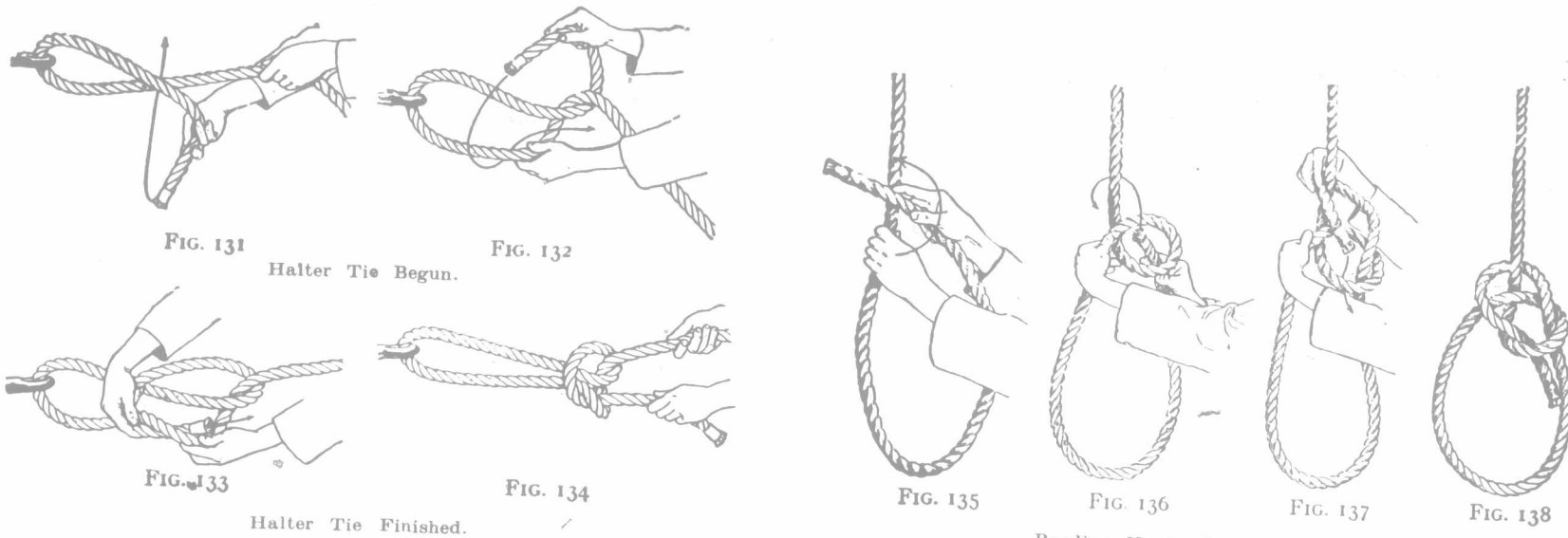
hitching or in tying the halter rope in the stall. If properly set, it is secure and may be used in some cases in place of the underhand bowline knot. The halter tie should never be used around a horse's neck, because if the tie is not set up correctly, it forms a slip knot and its use might result in strangulation of the animal. Pass the end of the rope upward through the ring, then downward on the left of the long rope, grasping it with the right hand and holding the long rope with the left hand, as shown in Fig. 131. Draw

through it, the bight going around behind the long rope.

"Short Splice.—To join the ends of two ropes by interlacing or weaving their strands together, the short splice is sometimes used. As all the strands of one rope are woven into the other rope at one place, the rope at that place is six strands thick, and the splice is of necessity considerably larger than the original rope. The short splice will not run through pulley blocks. Untwist the strands at one end of each rope for a length of

rected for Figs 165 and 166, giving the results shown in Fig. 166.

"Rope Halter.—This is used very largely for cattle and for young stock, and frequently for horses. A knowledge of the manner of making this halter may be valuable in an emergency. Procure rope of the proper size and length as directed in the table herewith. Measure from one end to A (Fig. 186) the distance given in the table, and with a lead pencil mark the point. From A measure back toward the end the re-



Halter Tie Begun.

Halter Tie Finished.

Bowline Knot, Overhand Method.

the end to the right and upward, as indicated by the arrow in Fig. 131, thus supporting the long rope as shown in Fig. 132. Now pass the end of the rope over, under, and again over the long rope, as indicated by the arrow in 132 and as shown in Fig. 133. Draw the end through as in Fig. 134, and set the knot by pulling first on the short end. This is important. If the long rope is pulled first and the kinks in it are straightened out, the tie forms a slip knot, being simply two half hitches around the rope.

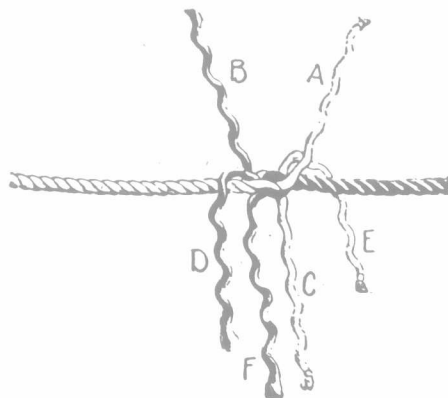


FIG. 164. Short Splice, Third Stage.

quired distance to B and mark the rope. Bend the rope at A to form a bight, and lay it on the knees with the bend toward the right and the short rope away from the body (see Fig. 186). Raise the top strand of the rope at B and pass the long end through under it away from the body, using the whole rope, as indicated by the arrow in Fig. 186, and pull the rope through until A is at the end of the loop as shown in Fig. 187. Raise a strand on the top of the long end and pass the short end through under it from

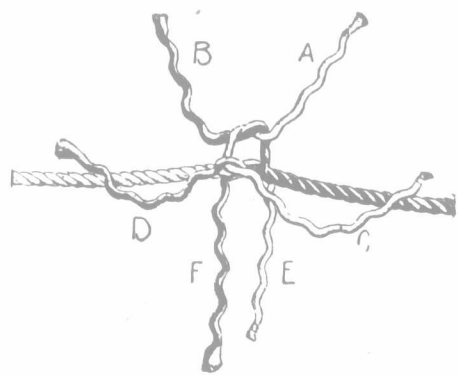


FIG. 163. Short Splice, Second Stage.

six to fifteen inches or more, depending on the size of the rope. Butt these ends tightly together, laying each strand of each end between two strands from the other end, as strand A is between strands B and D, C between D and F, and so on. This process we may call locking the strands. With a simple overhand knot, tie

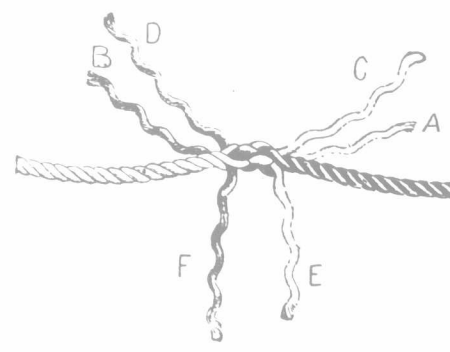


FIG. 165. Short Splice, Fourth Stage.



FIG. 166. Short Splice, Completed.

"Bowline Knot.—This is the best knot known for forming a loop that will not slip under strain and that may be easily untied. The following method is used in making the bowline knot. It is known as the overhand method, and is to be used when standing opposite the end of a slack rope and making a loop that is not fastened to any object. With the right hand lay the end of the rope over the long rope, and with the left hand crasp the long rope below the crossing, as in Fig. 135. Hold the right hand stationary, and

each strand of one rope to the corresponding strand of the other rope, as A and B in Fig. 163. Note particularly the way in which this knot is tied. The black strand just beyond the white one is the corresponding one for that white strand; as, A corresponds to B, while D does not. The

left to right, as indicated by the arrow in Fig. 187, and pull up tightly as shown in Fig. 188. From B measure along the short end the distance given in the table to C, and from B measure along the long end to D (Fig. 189.)

"If the halter is to be of the guard loop type, as shown in Figs. 190 and 191, proceed as follows: Form the halter over the knee, with the eye to the left, the short end over the knee for the head piece, the long end in front for the nose piece. At the mark C on the short end raise the outside strand and pass the long end through from front to back up to the mark D, as in Fig.

189. Just back to this crossing, raise the outside strand of the long end and pass the short end through from below, as indicated by the arrow in Fig. 189, and pull up tightly, as in Fig. 188.

"Pass the long end through the eye and knot the short end, as in Fig. 190, if the halter is to be of the loose guard type. If a standard guard loop halter is desired, whip the short end to the long one, as in Fig. 191.

"To make a spliced halter, untwist the strands of the short end down to the mark C. Form the halter over the knee, as described above, and as indicated in Fig. 192. Raise the outside strand of the long end at D and pass downward under it the middle outside strand of the short end; pulling it down until mark C is at the crossing, as shown in Fig. 192. The strands should now be arranged exactly as shown in Fig. 180. Complete the splice as directed for the side splice, and then pass the long end through the eye, as in Fig. 193. Finish the end by whipping or by crowning.

"Emergency Rope Bridle or Halter.—In the southwestern parts of the United States this is known as a hackamore. The halter shown in Fig. 200 is known to sailors as a running turk's head, and it may be used in carrying a jug or other vessel of similar shape. Procure enough rope to make both bridle and reins; about forty feet will be required. Form a bight at the middle of the rope, and fold the end of the bight back, laying it over the straight ropes, as in Fig. 196. This forms two loops. Pass the left loop

MEASUREMENTS IN INCHES.

To be used for.	End to A—standard guard or spliced type.	End to A—loose guard type.	A to B.	B to C.	B to D.	Remaining for tie rope, feet.
Sheep and small calves.	26	32	1 1/2	18	11	4
Small cows	46	56	3	34	12	6
Average cows	48	58	3	36	14	6
Horses, large cows and bul's	53	64	3 1/2	39	15	6

Farm Bookkeeping.

Farmers' Bulletin 511 of the United States Department of Agriculture contains some interesting facts and recommendations in connection with bookkeeping on the farm. "That there are over six million farms in that country which utilize land, labor, and capital as means of income making," gives the author the opportunity to discuss the subject of the value of the farmer keeping an accurate and systematic account of his farm management the same as the business man or the railroad magnate. This bulletin is not an attempt to outline a system of bookkeeping for the farmer. It is rather a discussion of the principles which are applicable to accounts on the farm. It is believed that any farmer who studies this bulletin sufficiently to grasp these

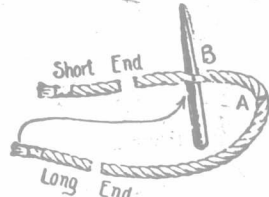


FIG. 186

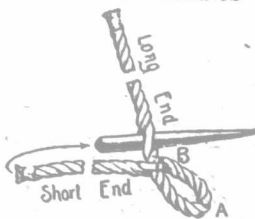


FIG. 187 Rope Halter, Forming the Eye.

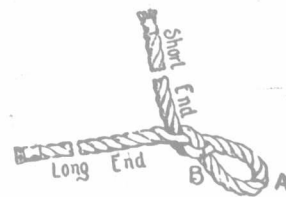


FIG. 188

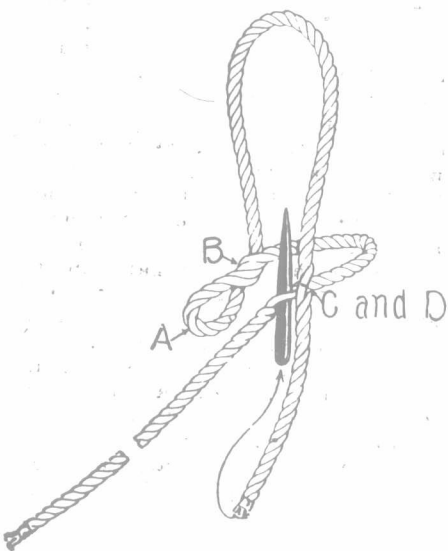


FIG. 189 Rope Halter, Loose Guard-loop Type.

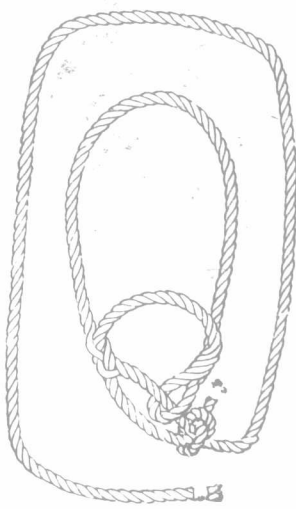


FIG. 190

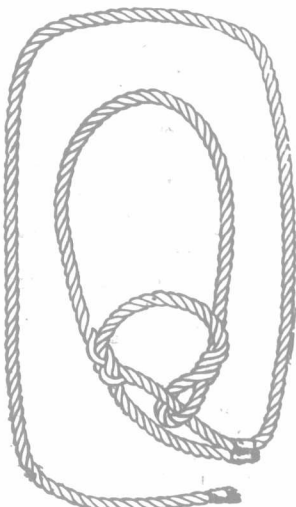


FIG. 191

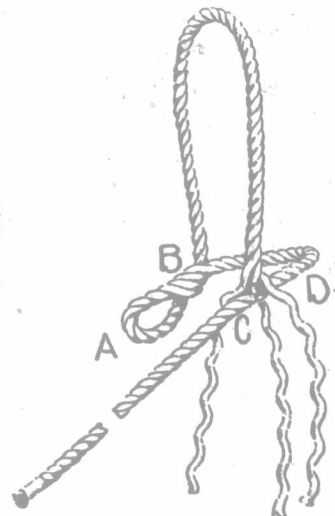


FIG. 192

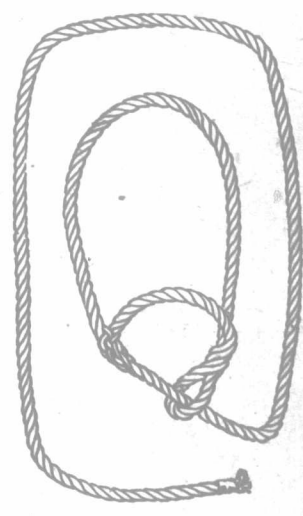


FIG. 193

(191) Standard Guard-loop Type. (192 and 193) Spliced Halter.

A upward through the right one, B, as indicated by the arrow in Fig. 196 and as shown in Fig. 197. Fold loop A back, bringing it farther than the original bight was carried, and lay it on the top of the straight ropes, as indicated by the arrow in Fig. 197, and as shown in Fig. 198. The left side of loop B we may call rope C; the left-hand straight rope we may call D, and the right side of loop B at the bottom we may call E (see Figs. 198 and 199).

"Move C to the right, as indicated by the arrow in Fig. 198 and as shown in Fig. 199. Starting at the left of C and beyond D, reach under D and grasp E at a point between the straight ropes. Draw E down under D and then up through the opening, as indicated by the arrow in Fig. 199. The result will be a running turk's head, as shown in Fig. 200, E being at the top of the loop. Draw together the two center ropes, as indicated by the arrows in Fig. 200. This produces a bridle complete with bit, nose-piece, head-piece and reins (Fig. 201). Such a bridle is not suitable for continuous service, to be sure, but it will be found useful in emergency."

APPROXIMATE DIMENSIONS FOR ROPE HALTERS—ROPE TO BE USED.

To be used for.	Diameter, inches.	Kind.	Total length for standard guard or spliced type, feet.	Total length for loose guard type, feet.
Sheep and small calves.	1/2	Cotton	7 1-4	7 5-6
Small cows	3/4	Manila	11 1-6	12
Average cows	1	Manila	11 1-2	12 1-3
Horses, large cows and bul's	1 1/2	Manila	12	13



FIG. 194



FIG. 195

Emergency Rope Halter.

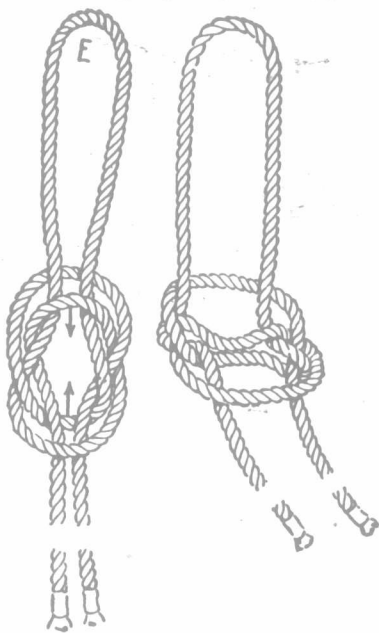


FIG. 200

FIG. 201

Emergency Rope Bridle Completed.

principles will be able to devise a system suited to his particular needs. Two important points must be considered in an attempt at farm bookkeeping. What does it cost to produce farm products? By selling at market prices, what profit is made on them? "The problem of the farmer is to meet conditions on his own farm in a way which will give him the greatest net returns for his labor and the use of his capital. He should receive interest on his capital as well as wages for his labor, but owing to the lack of proper records few farmers know what wages they actually receive. There is reason to believe that the majority of farmers are really living on the interest of their investments rather than on the profits of their farms."

These suggestions are offered: (1) Consider as one unit all that may be termed real estate, as land, farm buildings, fences, ditches, etc., whether the farm is rented or owned by the operator. (2) Do not consider that the farmer or his family receive anything for their labor unless they are paid in cash the same as hired labor. If there is a surplus at the end of the year, it is their compensation. In this way the accounts will not be confused with items not strictly cash. (3) Farm products used by the household should not be credited to the farm in the cash account along with the produce sold, but should be taken care of separately.

Old pastures, particularly on light soil, are the best breeding ground for white grubs and wire worms, two pests well known to many farmers who have broken up their old sod and sowed it with a grain crop. The only effective prevention of the ravages of these insects is the following of a short rotation of crops, leaving the land seeded down one year only.

After the roots are harvested and the fall plowing completed is a good time to remove old fences and clean up unsightly fence-bottoms. Scrubby growth around the fields detracts greatly from the appearance of the farm.

AGRICULTURE ON GOVERNMENT FARMS—III.

THE HAMILTON ASYLUM FARM.

Hamilton is known by many as the ambitious city, but ambition does not end with the city limits for just beyond them on the brow of the mountain dominating the entire city of beautiful homes, shady parks and solid business blocks, and overlooking the peaceful bay dotted here and there with specks—various craft for business and pleasure—is a farm consisting of 528 acres, which under the surveillant eye of W.M. English, M. D., has been brought to a state where in many respects it may be considered a "model" farm, and with all the success which has crowned the efforts of those in charge they still aspire to greater things, and are earnestly striving each year to eclipse previous high records. It is just 262 steps to climb from the foot of the mountain to the plateau on top, but were there many times the number anyone interested in agriculture would be well repaid for the effort necessary, for far more steps than these have been made in the advance of farm undertakings connected with the institution, and there is something for all to learn. Dr. English has been in charge for about five years, and the farm foreman, F. M. Regan, is commencing his fourth year of service. These men are not only heavy-weights physically, but also in practical and scientific knowledge of all branches of farm work. Believing in their work, enthusiastic over past records and future possibilities, there is no wonder that success awaits them at every turn.

THE DAIRY HERD FIRST.

As is the case on many Canadian farms and on all the Government farms yet visited, dairying is the main spoke in the wheel of farm operations, in fact it is practically the "hub" of them all, or to use an old-fashioned simile, the backbone of the farming carried on. During the fiscal year of 1911 a record was made of which those in charge may well feel proud. Forty-two cows were in the herd for the entire year, and they milked on an average of 262 days each giving daily an average of 31.6 pounds of milk, the best record being 11,020 lbs. of milk or an average of forty-three pounds daily. No cow gave less than 5,108 lbs., and the herd gave 425,295 lbs. of milk valued, at \$1.60 per cwt., at \$6,804.72, the milk costing 95.4c. per cwt. to produce.

This is last year's record, and to show that progress is being made and made rapidly, a pure-bred Holstein heifer, Elizabeth Johanna De Boer as a two-year-old has given 12,383 lbs. of milk in 370 days. Another cow has given 12,333 lbs. in 263 days or 46 lbs. per day, a third has given 13,859 lbs. in 340 days or nearly 41 lbs. daily, a fourth has produced 9,192 lbs. in 221 days or 41 lbs. per day. These four are all pure-bred, but a grade has produced 11,294 lbs. in 299 days or 38 lbs. per day. The best of them all is Mechthilde Ruby Burke, a five-year-old cow which in 306 days milking twice per day gave 14,466 lbs. of milk, an average of 47.27 lbs. daily. These are records which could not fail to please the most critical dairyman. Grade cows in this herd have given an average of 62 lbs. daily in a seven day test, and when at the farm the writer saw 27 lbs. milked from a cow in the evening which had given 29 lbs. in the morning, and the cow had been milking six weeks. Grade two-year-old heifers are giving 36 lbs. daily, and altogether a better lot of producers are seldom seen.

At the present time there are in the herd twenty-two head of pure-bred Holsteins, the remainder being composed of grade Holsteins and grade Shorthorns. A start was made in pure-breds three and one-half years ago, and all the female increase has been kept since. Previous to that time a pure-bred Holstein sire had been at the head of the herd. At the present time two

heifers are entered in the R. O. P. tests, something which none of the other institutions have yet tried.

The stable accommodates fifty cows tied ten in each of five rows. At either end there are three box stalls each nine feet by ten feet. Chain ties are used, the chains being attached to a rod on each side of the stall, the tie being in the center. Dr. English believes that this gives more freedom to the cows than stanchion ties. The stalls are each five feet six inches long and three feet six inches wide. The floor is cement, and the manger has a cement front two feet six inches high. The cattle are watered from a continuous galvanized iron trough, running the entire length of each



Elizabeth Johanna De Boer.

As a two-year-old, this heifer gave 12,383 lbs. of milk in 370 days. Photo taken immediately after being milked. One of the good ones in the Hamilton Asylum herd.

row of stalls. The trough is flushed out two or three times weekly, and both Dr. English and Mr. Regan think it is more sanitary than individual drinking bowls, which they found rather difficult to keep clean. The stables are all whitewashed, are about eleven feet in height from the floor, are well lighted and kept supplied with pure air by the King system of ventilation. About fifty cows are kept besides the young stock, the promising heifers being the source from which the herd is replenished. The herd is fed the year round regardless of pastures. The grain ration winter and summer is twelve pounds, consisting of bran, oats and wheat, about one-third each. Silage is fed until the end of June. The winter roughage ration is a bushel to each cow twice per day, consisting of hay and silage, about

milk. The milk from each cow is carefully weighed in the milking room, and the milk is then taken in eight-gallon cans directly to the refrigerators in each department of the institution. Everything is sanitary, and the milk is produced under very favorable conditions.

The herd is now headed by Sir Canary Ormsby, as nice a type of three-year-old Holstein bull as any breeder could wish. Being developed to take his place later on is Sir Grace Fayne Posch, a grandson of Lady Aaggie De Kol, the 1909 and 1910 sweepstakes cow at the Guelph dairy test. He is bred in the purple. With such foundation stock, grades and pure-breds, and under such careful management, this great herd cannot but improve in quality and production. Constitution will not be sacrificed, however, as Dr. English believes this to be one of the best assets of the herd, and heifers, he believes, should not drop their first calves until at least twenty-six to twenty-eight months of age. Such is the past record of this great herd. The future is assured.

PIGS ARE PROFITABLE.

Pigs and milk cows work hand in hand toward prosperity on many Canadian farms. There is nothing quite so suitable for young pigs as skim milk, and the cows furnish this, but while this farm has a record-breaker dairy herd and is noted for profitable pork production, there is no connection between the cows and the pigs, as the latter never get a drop of milk other than that furnished by their mothers, which supply is cut off at weaning, and the young pigs must subsist and make satisfactory gains on other feed. Kitchen refuse or swill forms the bulk of the ration, especially of the younger pigs, and it is found quite satisfactory, and where milk is not available the swill and a little shorts seem to be about the best substitute, at any rate the pigs are finished at from six to eight months of age, weighing from 200 to 250 pounds each, live weight.

The piggery is an extensive one being fifty feet wide, and having two sections each one hundred feet long, one on either side of a central feed and storage room forty-five feet by fifty feet, with a loft above and a root cellar of 500 bushels capacity in one corner, and a rat-proof grain bin in another. The pen is built of lumber, being studded up with four by four scantling, with one thickness of building paper and matched lumber outside and inside. One side of the pen is eighteen inches higher than the other, leaving this space along the peak for windows and ventilation,

every second window being on the ventilator shaft to be opened or closed as required. There are thirty-eight pens in the building, the size being twenty feet long by ten feet wide. The width of the piggery being fifty feet, there is just room for a twenty-foot pen on either side of the ten-foot central passage. These twenty-foot pens are divided in the center by cement partitions, the back portion being utilized as a secluded sleeping pen, which has a raised plank floor over the cement to ensure dryness, and prevent rheumatism and "crippled" pigs. Feed carriers run from the feed room down the center passage, and litter carriers run the entire length of the pens through doors from pen to pen, situated along the line of central partitions in such a manner, that when they are opened to permit of cleaning the pens, they close the opening leading to the sleeping quarters of the pigs, thus shutting the pigs in there out of the way. The doors are wire as were also the partitions in the beginning, but on account of the pigs fighting the partitions have been cemented and solid doors will in time take the place of the wire. The fronts of the pens are wire, and swing back to allow the feed to be poured into the cement troughs. Each pen



The Young Herd.

Heifers on the Asylum Farm, Hamilton, Ont.

twice as much of the former as of the latter, with pulped roots added.

A feature of the dairy stable is a rat-proof grain bin ten feet square in one corner. This bin has a cement floor, and is encased with fine mesh wire imbedded at the bottom in the cement floor, making it vermin proof.

Milking is done in tight covered pails, the top of the pail forming the stool for the milker. A tube or pipe leads to the pail, and in it a strainer is placed to milk in so that no dirt gets into the

in such a manner, that when they are opened to permit of cleaning the pens, they close the opening leading to the sleeping quarters of the pigs, thus shutting the pigs in there out of the way. The doors are wire as were also the partitions in the beginning, but on account of the pigs fighting the partitions have been cemented and solid doors will in time take the place of the wire. The fronts of the pens are wire, and swing back to allow the feed to be poured into the cement troughs. Each pen

has a cement-walled and cement-floored outside compartment ten feet by twelve feet, with a cement walk around the entire structure. At either end of the building is a cement-bottomed manure yard fifty feet square, where the liquid from the pens drains easily, there being eighteen inches fall from each section of the pen. From the manure yard there is a drain to a precipitating tank, so that there is practically no foul odor in or around the pen, which to ensure more perfect ventilation has sixteen four-inch pipes through the wall, and extending up to about a foot and a half of the ceiling. These with the abundance of light and good drainage facilities make a very sanitary pen.

Almost thirty brood sows are kept, pure-bred Yorkshires and pure-bred Berkshires. These two breeds are crossed for feeding purposes, better results being obtained from pigs of one cross than pure-breds in fattening. Yorkshires are found a little more prolific than Berkshires. Sows drop litters of from nine to thirteen pigs, and raise on the average eight of these. Two hundred feeding pigs of all ages are on hand at the present time. Shorts forms the concentrate ration for the young pigs, and cornmeal is used for finishing. All the feed is cooked by steam and hot water is on tap in the piggery at all times. Tobacco stems are used exclusively for bedding. All the pigs fed are killed on the place, about 300 being slaughtered yearly at an average weight of 225 lbs. each, or a total of 67,500 lbs. of pork, which valued at 6.5 cents per lb. is worth \$4,387.50, a very good return for the pigs.

POULTRY.

The poultry department, while not so large as some other phases of the work, has been started upon advanced practical lines. Three poultry houses modelled after the well-known twenty-foot by twenty-foot open-front house, recommended by Prof. Graham, of the O. A. C., constitute the plant, which is to be brought up to ten such houses to accommodate 1,000 laying hens of pure-bred Barred Plymouth Rock and Rhode Island Red breeds, selected from laying strains of these breeds at the O. A. C. A daily record is kept of eggs gathered. Hens are not kept after two years of age. Thirty-five pullets in one pen commenced laying in November 1911, and during December, January and February produced from twenty-five to thirty eggs daily. Seventy laying hens produced last March 1,270 eggs. Chickens are hatched in three incubators, one fifty-egg and two one-hundred-and-twenty-egg machines. The Cockerels are crate-fattened for three weeks, and often weigh eight pounds at finishing. Pekin ducks are to be raised extensively, and poultry is to be made one of the main features of the farm, chiefly through laying strains of the best general-purpose breeds of fowl.

FARM CROPS.

Between 250 and 300 acres of the farm comes under the general rotation which is—cereals, clover, hoed crop. About thirty acres of corn, thirty of potatoes and fifteen acres of mangels and turnips are grown annually. Giant sugar beets and yellow intermediate mangels are the best yielding varieties. Nearly forty acres of alfalfa is one of the important crops of the farm. The main farm is a fairly heavy clay, and is nearly all underdrained. The last parcel purchased, consisting of 176 acres, added three years ago, is somewhat lighter soil, but will be underdrained as soon as possible. Some of the corn crop failed this year on account of poor seed, and to take its place millet and third-cutting alfalfa are being ensiled with the corn in proportion of one of millet to eight of corn. Of the form the major portion, yielding nearly seventy-five bushels per acre. About twenty-five acres of winter wheat is grown annually, it being highly valued for feed and bedding purposes. Red clover is one of the main crops, and is relied upon to aid materially in keeping up soil fertility. Some very fine catches are to be seen on the farm this fall, from seedings

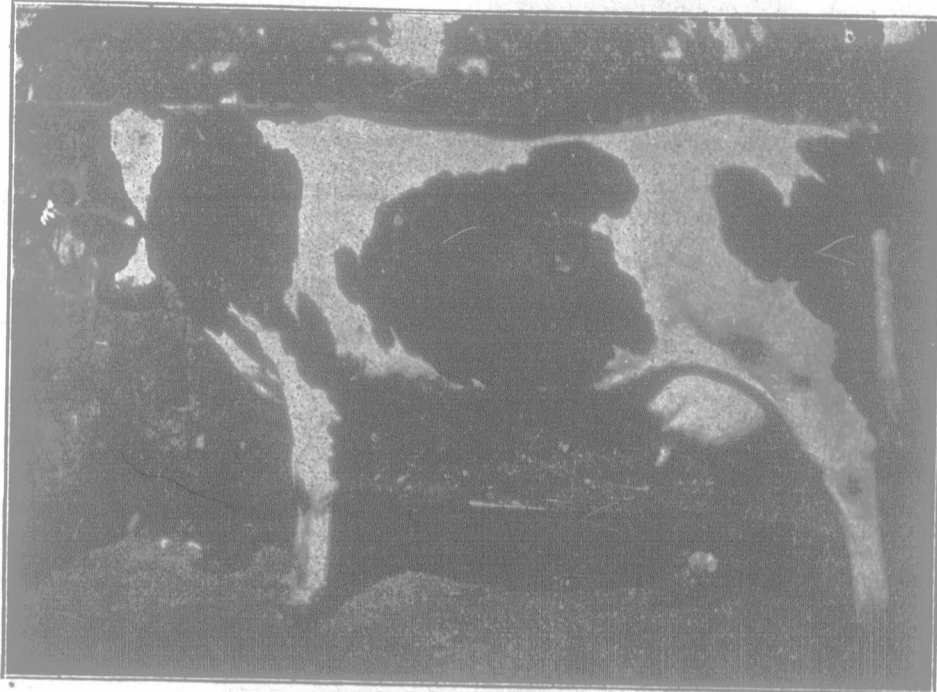
of eight pounds of red clover and four pounds of timothy per acre.

The farm is well tilled and well managed, every available inch being put to some remunerative use. As an instance of this the last farm which was purchased had most of its fence rows overrun with scrubby undergrowth. In many places this had crowded for several yards out into the fields, and was gradually covering more of the good soil. These rows have been cleaned up, and useless trees uprooted. Many others might take a good lesson from this as not only does it improve appearances; but it renders land otherwise worthless, productive.

The present silo is rectangular in shape, fourteen feet by eighteen feet and thirty feet high. It has given good satisfaction, but is to be replaced by a cement-block structure twenty

9,029 pounds of green onions, and over six tons of dried onions; two acres of cabbages has yielded fifty tons, less than one-half acre of beets between nine and ten tons, the same acreage of carrots nine tons, while 47,000 pounds of tomatoes, 1,437 lbs. of radishes, 6,107 lbs. of lettuce and 3,532 lbs. of spinach have been taken off. Large yields are possible where the land is well fertilized and well cultivated. The garden rotation is—cabbage, tomatoes, carrots following each other, and with every root crop a heavy application of manure is made.

As with other farms which have formed the subject for this series of articles, it is impossible to cover all the good things in one short essay. An ice pond, 340 feet long by 120 feet wide and five feet deep, filled from a spring on the farm—absolutely pure water—is the source of a pure, handy and abundant ice supply. Little features like this are deserving of special mention if space were available. New departures are ever to be expected in agriculture on these farms. It is now contemplated in connection with this farm to operate a large peach orchard, probably nearly one hundred acres, the fruit to be used at the institution, and at other institutions of the kind not situated in the fruit belt. S. E. Todd, B. S. A., agricultural expert, who acts in an advisory capacity to the superintendents of all these institutions, and the able staff of the latter in charge are raising the standard of agriculture as carried on at these farms very rapidly. Their work may be made instructive and helpful to agriculture generally, for many of their principles may be applied wholly or in part to average farm conditions.



Mechthilde Ruby Burke.

The heaviest producing cow in the herd at the Hamilton Asylum Farm. Record, 14,466 lbs. of milk in 306 days.

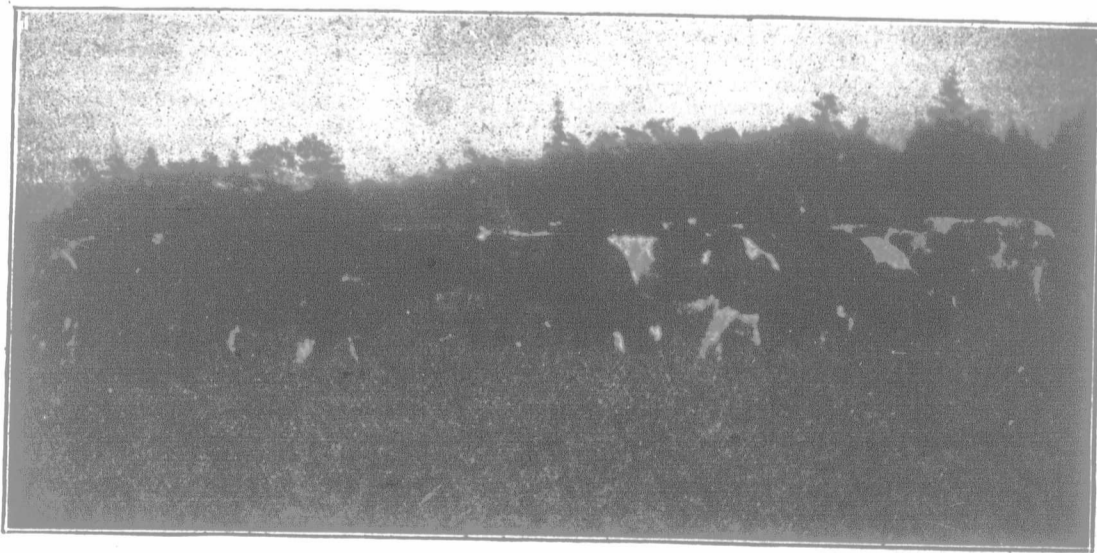
feet by forty feet. The blocks have been made—1,600 in number—in wooden moulds on the farm, each row of blocks to be strengthened by a reinforcing rod. Silage and alfalfa are two of the main crops for the dairy farm.

GARDEN CROPS BY THE TON.

About thirty acres of land is devoted to intensive horticulture. Everything taken off this land is weighed, and is not measured in pounds but tons. The land is a heavy clay loam, about fifteen acres being in apples which last year produced sixty-six tons of fruit, and this year will easily reach seventy tons. The apple orchard gets no manure, and is operated on the clean cultivation plan. It has been sprayed twice each season for two years, and thanks to this the apples are improving yearly in size and quality. Fifty plum trees produced four tons of fruit, forty pear trees three tons, and one-quarter of an acre

purpose. Weldwood is different. We promised when announcing the undertaking that it would be conducted in the interest of our readers, full details being published from year to year. Such a policy was pursued in connection with the Demonstration orchard work, and while in that case the returns from the first year's operations were better than we could have dared to hope, still the facts would have been given just as frankly had it turned out otherwise. The cause of agriculture will never be really promoted by a policy of half truth or evasion. People want to know the whole truth, and the fact that they are confident of getting it is what makes our work of such particular interest and value. It is easy to tell big stories and figures can always be manipulated to appear impressive, but practical men want to see the other side—the side which is usually turned to the wall. They know full well there are difficulties and disappointments in connection with the most roseate proposition, and when these are withheld they have a right to suspect the reliability of what is published.

In the Christmas-number review of last summer's work at Weldwood, we intimated that the farm was not expected to pay interest the first year, and might fall somewhat short of meeting expenses. The final reckoning showed that after paying for all labor, including good wages to a foreman, meeting usual and unusual running expenses, including taxes to the amount of \$71.35, and allowing \$250 depreciation on stock, buildings and equipment, the receipts, including as assets the various improvements effected during the year, came \$167.30 short of breaking even. This looks on the surface



At Home in Alfalfa.

A part of the dairy herd at the Hamilton Asylum.

of grapes one and one-half tons. Winter pruning is practiced, and lime sulphur and arsenate of lead forms the spraying mixture used.

Few people realize the possibilities of vegetable gardening. The amount of various crops which may be taken from small strips of land are almost incredible. In this garden one acre of rhubarb produced this season eleven tons of stalks, less than an acre of onions has produced

like a very unfavorable showing even for the first year. There are, however, some facts to be considered in connection with it, which put a different face on the matter. Our own view of the situation may be inferred from the fact that the area of the farm was enlarged to 137 acres, by the purchase of a contiguous 25 acres which came on the market last spring.

INITIAL EXPENSES AND HANDICAPS.

It is unnecessary to dilate to any farmer or other business man upon the handicaps besetting a first-year's operations, such as the time lost and general disadvantage of having to buy, haul out, set up, and start a full stock of implements, purchasing unproven live stock picked up here and there, and the disadvantage of not being intimately acquainted with all the particular features of one's farm, stock and plant in general. Seldom, either, is a farm in condition to commence the line of cropping one proposes to follow, and all sorts of minor facilities are liable to be lacking. For instance, on taking possession of Weldwood, we had not a field or paddock that it was safe to turn a horse or hog into. As an experienced friend remarked, "Every time you go to do anything you have to do two or three other things first." It is a general experience in almost any business that the first year is by all odds the hardest year, and farming is no exception to the rule. A business which declared dividends the first year, should be regarded as an exceedingly good one indeed. Few do.

DROUTH AND SHORT CROPS.

It happened, too, that our first year coincided with a season of short crops, the summer being the hottest and driest, while the ensuing winter was the hardest within recollection. With many producers the shortage in quantity was partially offset by high values for products, but our main product up-to-date has been milk, for which no higher prices prevailed locally than in former years, when feed was plentiful and cost of production low. We actually sold milk (wholesale of course) last winter during two or three months, for less cash per hundredweight than was received by creamery patrons getting their skim milk to the good. With a dairy and cream separator, we are now in a more resourceful position.

UNSTATED PROFITS FROM INCREASED FERTILITY.

As a matter of fact we could have made a much better showing by selling the crops outright for cash. This, however, would have been robbing the land, whereas by buying some feed to use with what we had, we bought fertility, and by carefully saving and applying the manure we have decidedly enriched the farm, as is already apparent by the effects on some of the 1912 crops, and will be cumulatively evident as years go on. Could it be accurately appraised, it would really be fair to allow two to three hundred dollars in the inventory for increased fertility by the 280 loads of manure put out, of which about one hundred was on hand when the place was bought, but none of which could be applied in time to benefit last summer's crops. We might also allow something for decided progress made in subduing weeds and other pests, but it would not be easy to estimate these improvements fairly, and besides it would look to many like trying to figure out profits on paper, so we have left them out of consideration. The benefits should appear in the form of future profits.

PLANNED ON A PERMANENT BASIS

Endeavor has rather been to lay the foundation for a permanent system of farming. Ninety-five dollars was expended for clover and timothy seed, and not a bite of the new seeding was grazed last autumn. Instead more seed was sown on it in August, while part of the area was top-dressed with the manure spreader, and as a consequence even the oat seeding, unpromising as it seemed last summer, cut, over a ton and a half of excellent hay per acre with expectations of a small crop of clover seed from the aftermath. Eighteen acres of land was plowed and worked last summer after haying and harvest with a view to the eradication of bindweed. Ten acres of thin woodland was left ungrazed that it might grow up with seedling trees. Again mature poultry was deliberately kept off the place last summer in order to eliminate parasites and disease from the premises. Various pests with which the premises were overrun have been practically exterminated. And so throughout. All these factors militated against temporary success in revenue production, but we believe they will pay in the end.

ATTENTION CONCENTRATED UPON IMPROVEMENTS.

During 1911, and to a considerable extent during 1912, attention has been concentrated upon improvements rather than upon production, as may be inferred from the details which have been published from time to time. Some of the more important outlays incurred were for tiling seven acres of land and seeding ten acres to alfalfa; building a silo, 14 x 40; an implement shed, 26 x 60, and a new barn approach with root cellar underneath; rearranging cattle stables, cementing the floors and installing steel stanchions and litter carrier; bringing water to the stable and barnyard; building poultry houses; hauling building material for new house and so on. These eighteen or twenty more or less important betterments costing a trifle over three thousand dollars, have all been very carefully thought out

in consonance with the general scheme of the farm, and they have all been well made, a day's labor or a barrel of cement never being spared to make things solid and good. It is perhaps sufficient comment on this score to say that we are well pleased with all of them. The cost seems high in some cases because extra good work has been done, and everything counted, including much time and many odds and ends of material usually thrown in or overlooked. Our teaming and most of the other work has been accomplished at less than ruling contract prices. In one or two instances where the cost was excessive, the value has been discounted in the inventory, but mostly the improvements were estimated at what they represented, except that no allowance was made for use and wear of machinery, utensils, etc. This was charged against general expense. There were various minor jobs in the way of improving lanes and roadways, tearing down 250 rods of old fences, plowing up the fence bottoms and so on. These have been charged to account of general upkeep, though some of them represent a decided improvement in appearance and earning value.

NOT ALL PLAIN SAILING.

In addition to the several handicaps enumerated above, we have experienced rather more than a full share of unavoidable vicissitudes, and it is a noteworthy fact that the two branches of husbandry in respect to which the manager had always prided himself, viz., hogs and cattle, were the two in which most trouble occurred. For the



J. H. Martin, St. Valentine, Que.

Maker of butter which scored 100 points at the Western Fair, 1912.

most part the difficulties were such as could by no process of logic be charged to neglect or ill-management. In fact it was only close personal attention that discovered them in time to prevent loss. We were unfortunate enough to introduce into the herd from unsuspected sources two contagious diseases—a bad form of cow pox, and another, much more serious, which may not be appropriately mentioned in this article. The first one, though stubborn, we think we have under control, the latter will probably have to run its course. Both helped to curtail production.

Whatever the public may think of the foregoing statement of facts, we feel satisfied with the work accomplished, and anticipate a steadily improving showing from year to year. As supporting this view it is in order to note that receipts for the first six months of the second year have been over twice as large as in the corresponding months of 1911, while running expenses have been less, notwithstanding that we have still been busy with improvement work, planting a six-acre orchard, putting up five hundred rods of woven-wire fence, fighting eighteen acres of bindweed with cultivation, building a house, dairy and so on. Pressure of work in connection with these affairs delayed somewhat the completion of the records.

THE BOOKKEEPING.

A particular feature of this farm is the system of accounting which we are endeavoring to work out. It is not easy, and we have not yet succeeded to our full satisfaction, but progress is being made. Complete time cards have been kept and full records of all building costs, but feed records were more troublesome. Owing to lack of bins and other facilities, we finally gave up

hope of keeping feed records during 1911, but a simple system has been worked out and is being followed for 1912, by which we can tell just how much grain, about how much roughage, and approximately how much bedding is utilized for each particular class of stock. Our system of book-keeping will be more fully described at a later date.

The total outlay for wages, including board at 20 cents per meal for day laborers, and \$15.00 per month for regular men, was \$2,300.53, but against this is to set \$347.01, earned by men and teams in our rented orchards, and \$30.00 for other teaming done off the farm. The balance, \$1,923.52, includes wages to cement contractors, carpenters, ditchers and day laborers. The bulk of it went not towards crop production, but towards the three thousand dollars' worth of improvements noted above and the other minor improvements not reckoned in the inventory. For building material, including brick for the new house, \$1,717.48 was laid out. To assemble and construct that amount of material into a dozen or more structures during the first year on a place requires a good deal of labor and thought, as those who have had experience will appreciate.

FROM AN ORDINARY FARMER'S POINT OF VIEW.

But, someone objects, if with all your advantages in the way of information and capital, you were unable to make up anything towards interest the first year, what would happen to an ordinary farmer with interest on a mortgage coming due? That is a fair question and is worth an answer.

Without dilating upon the recognized difficulties of making a general stock and dairy farm pay under the conditions obtaining in such an enterprise as ours, it may be pointed out that an ordinary proprietor would probably have left, over and above his living, a part of the six hundred dollars we paid our foreman. Also he would have applied towards interest the \$250.00 we have written off the books as depreciation, and if necessary he would have sold a quantity of hay or other raw farm produce. In ordinary practice this is how it would have worked out. Not all years are equally good; the first one is often doubly difficult, and every business has a testing time, but by one means or another the thrifty man gets through and ultimately gets ahead, though it is idle to say, as many city residents do, that farm management is easy or farm profits excessive. It is one of the most exacting businesses known, affording scope for talent of the highest order. In return it offers a comfortable living with a fair return for invested savings, a reasonable competence in the end and a deep abiding satisfaction and content.

THE DAIRY.

Making 100 Per Cent Butter.

At the 1912 Western Fair a package of creamery butter entered for competition by a Quebec Province exhibitor, J. H. Martin, of St. Valentine, was awarded the extraordinary score of 100 points. While other judges might not have rated the sample quite so high, it was nevertheless a most excellent box of butter and The Farmer's Advocate has been at pains to obtain from Mr. Martin an account of how it was made. The reply came in French and a translation appears below. Mr. Martin has been an extensive and very successful exhibitor of butter for three years past, having won numerous prizes and medals at Toronto, London, Ottawa, Quebec and Sherbrooke fairs. This year, for instance, he secured first on five-pound packages at Ottawa, first on creamery solids at London (scoring 100 per cent., as noted above), also four firsts and a silver cup at Toronto. It is to be remembered, of course, that this butter was made at a milk-gathering creamery and has thus a distinct advantage over the product of cream-gathering creameries for the reason that where cream is received it is collected less frequently than milk. The score is, nevertheless, highly creditable to Quebec dairying.

Editor "The Farmer's Advocate":

Following are the methods adopted by the Butter-Making Society of St. Valentine, of which I have the charge.

I receive at the factory nothing but first-class milk, that is to say, milk that has been strained, aerated, and cooled; I am very particular on this point, as it is the principal point in butter-making to have the raw material good, if one wishes to succeed in the rest of the work, and attain perfection.

The greatest cleanliness should be observed in the whole process of manufacture, from the milk pails to the churn. The use of tobacco is not allowed in the factory, and care is taken to allow no bad odors of any kind.

After separating, the cream should be immediately cooled to a temperature of 50 degrees F,

when a good culture is added in proportion of 10 to 20 lbs. of culture to 100 lbs. of cream, and ripened at that temperature till the following morning when the churning is done; the cream should not exceed 40 degrees of acidity at this time. A culture of good flavor should be used, and great care should be taken in the making of it. All these vessels, as well as those used in the butter-making, should be washed thoroughly, and then passed through steam, or sterilized.

Use only very pure water; not too cold, else the butter will be too hard at the time of working and it will be necessary to break the grain of the butter to complete the work.

It is preferable to work the butter twice. After having added the salt to the butter, work it partly, then leave it for sixty minutes at least to give the salt time to dissolve; then finish the working and pack it immediately in boxes clean and of good quality.

An Example of Herd Grading.

The accompanying half-tone shows one of a pair of grade Holstein heifers in the herd of W. Edgar Watson, York Co., Ont., who, from his letter, we should judge to be an enterprising young dairy farmer, typical of a refreshingly large number of wideawake men, seeking an avenue to success along the way of better stock and up-to-date methods. We quote in part from Mr. Watson's letters.

"These heifers are half sisters, being sired by the same bull, and, as their records are exceptionally good, I consider they show the value of the pure-bred sire.

"The one illustrated as a two-year-old produced 11,150 lbs. of four per cent milk in her first lactation period, which at Toronto wholesale prices sold for \$185.00.

"The other one freshened at 22 months of age, and produced 10,350 lbs. of 3.8 per cent. milk, which at Toronto wholesale prices sold for \$172, and this in her first lactation period.

"The dams of the two heifers whose photographs I have sent, I got from home when I started. They were good individuals, but had never been tested as to the amount of milk they would give till I got them. They had been bred to a pure-bred Holstein bull whose dam had a record of 17,000 lbs. milk in one year, and dropped the two heifers in question. I weighed their milk, and each one exceeded 10,000 lbs. When the heifers freshened their milk was also weighed, each one exceeding the amount given by their dams, as mature cows, they being two-year-olds. I have never used anything but a pure-bred bull. I milk seven cows, a couple others being dry. My herd last year averaged 9,250 lbs., three of them being two-year-olds, but expect a higher average this year."

The new dairy barn at the Ontario Agricultural College, now under construction, is to be one of the best in America. It is 142 feet long and 40 feet wide. It will hold 50 head of milk cows tied in stalls facing the windows, the stalls being 3 feet 8 inches wide, and graded in length according to size of cows. The barn is of plank-frame construction. The new cement silo is eighteen feet in diameter and thirty feet high. At present the barn is far from complete, but with an abundance of light, the Rutherford system of ventilation, and every known device to ensure good health and economy of labor, this when finished will be one of the most sanitary and well-planned dairy barns yet built.

For the information of buttermakers and cheesemakers, and others interested in dairying, there has been printed a verbatim report of the proceedings of the Dominion conference of dairy officials and experts held at Ottawa early this year. Copies may be procured by applying to the Publications Branch of the Department of Agriculture, at Ottawa.

POULTRY.

The Last Lap in the Egg Race at Storrs.

The North American International Egg-laying Contest at Storrs, Conn., which began on Nov. 1st, 1911, is now on the last lap, and the Canadian pen of Beulah Farm Wyandottes are pushing the leaders, F. G. Yost's White Leghorns, hard for first place at the finish. In the 49th week the latter's pen laid 17 eggs and the Beulah pen 26, the total score up to that time being 1,035 for the Leghorns and 1,017 for the White Wyandottes. Only three out of the five Leghorns were laying, but all the Wyandottes were "on the job" still. Barron's English pen of White Leghorns made a strong score earlier in the year, but losing two birds they fell behind. However, the Canadian contingent from Hamilton, Ont., patriotically filled the breach, and may yet snatch the coveted trophy.

Care of Turkeys.

Editor "The Farmer's Advocate":

This has been a season altogether against turkey raising, and the fortunate owner of a good flock of turkeys will reap his reward when they are put on the market.

Young turkeys do best in warm, dry weather with plenty of sunshine, which this summer has been almost unknown, but poultry raisers in general are hoping for an open mild fall to counteract the effects of a cold, wet summer.

Flies, moths, spiders, etc., go largely to make up a turkey's ration, and when fine weather prevails and they have a good pasture to run over they are no trouble to their owner, and will get

blackhead, which is fatal and incurable after a certain point. I always put a little muriatic acid in their drinking water, about twice a week in the fall. This is a good cure for diarrhoea and a preventive of blackhead.

Much of the trouble of illness in fowl of any kind can be avoided if proper precautions are taken, and an eye is kept on the appearance of the fowl every day. Smooth plumage is an indication of the good health of the bird. A turkey or other fowl with rough plumage promises trouble in the near future. When lice and mites are at work the feathers will be found sticking out all over the bird. When a fowl is badly affected with a contagious disease, it is a mistake to keep it alive. The best thing to do is to kill it, and either burn the body or bury it very deep at some distance from the fowl run. If let live, and measures are taken to cure it, the chances are that germs of the disease will be conveyed to other birds, and more will be affected and perhaps lost. The disease germs have a habit of finding their way to other fowl, unless every precaution is taken to prevent them.

A great many diseases can be prevented by providing the essentials to health, such as grit, charcoal and dry grains. Feeding sloppy feed will bring on diarrhoea, indigestion and very often liver trouble. Mash should always be fed in a dry, crumbly state. The difference between a sloppy mash and a crumbly one is the difference between sickness and health, and that is sufficient to warrant the feeding of nothing but a crumbly mash, or, better still, a dry one.

Carleton Co., Ont.

NONA.

Poultry Fattening.

Editor "The Farmer's Advocate":

Having been engaged in the marketing and fattening of poultry on up-to-date lines for the past twenty-two years, I will endeavor to give the farmer and average poultry producer a few practical hints on how my business has been carried on. In the first place, I might say that I have handled some thousands of chickens annually, and have met with constant success. The best breeds, I find, for marketing purposes are the following: Andalusians, Dorkings, Plymouth Rocks and Wyandottes, and, in purchasing for fattening purposes, would certainly give a higher price for birds of the above breeds.

In purchasing, considerable attention should be given to the condition of the fowls. It certainly does not pay to attempt to fatten sickly-looking, puny birds, as the aim is to bring into a marketable condition as quickly as possible, with as little attention and feeding as possible. The best time to commence operations is about the second week in May, as usually you can demand a higher price for birds that are placed in the fattening pen in this month. I prefer buying birds about 1 1/2 lbs. in weight and not less than two or more than four months old.

I have tried both pen- and crate-feeding, also cramming, and would advise the pen-feeding method, as I find it reduces the labor to a minimum. I do not lay any hard and fast rule down to the variety of food given; neither to the quantity allowed each bird. I usually feed on bran, shorts, feed-flour and ground corn for the morning meal, and wheat, corn, and a little buckwheat occasionally, for the evening feed. I find two meals a day quite sufficient, with a liberal allowance of green food at mid-day.

I also have found fasting the birds for twelve hours to be the most satisfactory before commencing fattening operations. Some producers advise a twenty-four, or even a thirty-six hours' fast, before commencing, but I think, or at least my experience has proved, that this is apt to throw the birds backwards a little. Condiments or spices should never be employed.

By varying the above mentioned feeds, I find it costs me on an average about 8 cents for every pound of gain. I find one attendant (experienced) can properly care for some few hundred during the season, but would advise a beginner to handle not more than 150 during the first season. Usually I allow from four to six weeks for the process of fattening, and can always manage to obtain at least 25 per cent. more than the ruling market price for farm poultry.

From the above facts it will be seen that it certainly would pay the farmer and average producer to study the question of fattening more closely. In conclusion, I might say that one should always keep in mind the following:

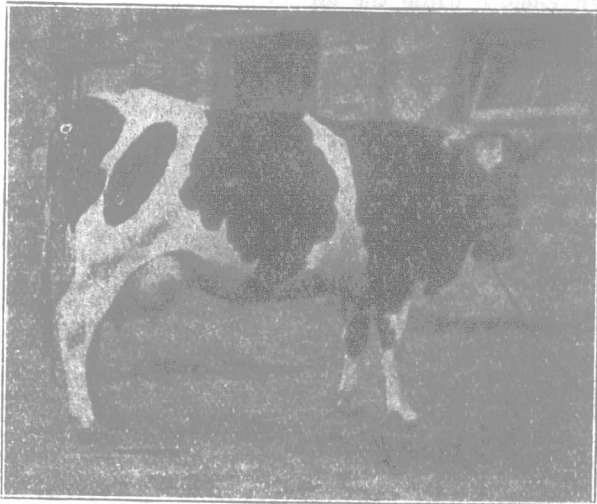
The cleaner your poultry is picked the more they will realize on the market.

Do not send to private customers, as a rule they are more trouble than profit.

When you find a good, reliable salesman to send to keep him.

Always grade your goods, whether they be chickens or eggs. A bad or small article spoils ten good ones; one large one will not sell ten bad ones. Keep large, medium and small separately.

The best way for the ordinary farmer to mar-



Product of a Good Bull.

Grade Holstein heifer which produced 11,150 pounds of four-per-cent. milk in her first lactation period.

half their rations or more. In a season like this has been, however, they have to be confined to their coops so often that they are not so thrifty as we would like to see them, so that they are requiring extra care and careful feeding in order to bring them to maturity in good form.

At any time it is not policy to try to rear turkeys on rubbish, and at this season of the year they should be getting some good sound wheat in their ration.

If your turkeys have been properly cared for so far, and yet appear dull and sleepy without any apparent cause, catch one or two and examine



To the Feast.

them for lice. Lice are the direct cause of more disease among poultry of every kind than any other cause in existence, therefore, be on the lookout for them everywhere around the poultry premises. Should the turkeys be infected, go through the lot and dust them with insect powder. Repeat the process about three times in a week or ten days, after which if you have done the job properly very few of the pests will be left on the turkeys.

Diarrhoea is a complaint turkeys are very subject to, and if it is let run it will end up in

ket his poultry to advantage is to become acquainted with a good, reliable store, and stick to them.
Brome Co., Que.

WILMIER.

THE FARM BULLETIN

An Indian-Summer Job.

By Peter McArthur.

Feeding Laying Hens.

"The hen that lays is the hen that pays," and the hen that lays during the winter months is the one which makes the most profit for her owner. Laying hens require four classes of food material, including grain, vegetable food, some kind of meat food and grit. They also require a constant supply of drink, water or milk. Because they will pick in all sorts of filth around the place, does not mean that they do not require clean feed and clean drink. Dirty, sour feeding troughs and slimy vessels to hold the drinking water are the cause of many poultry troubles and never should the laying hens be forced to feed from such.

The various grains which hens will eat and give good returns from makes it impossible to state which is the best for all conditions. However, most economic results are generally obtained when a mixture of grains is used as compared with any fed singly. Wheat is a good poultry food, but the high price often makes it necessary to use some other grain with it for economy's sake. Corn is a good winter feed, but should not be fed exclusively. Oats contain the right nutrients for egg production, but because of a large percentage of hull should be crushed or rolled. Barley is fed extensively and is valuable in a mixture, and buckwheat is one of the best after the hens have become accustomed to it. Many good poultrymen feed all the oats rolled, keeping them in feed hoppers in the poultry houses constantly. This is perhaps the most satisfactory method practiced for feeding this grain. A mixture of the others, all of them, any three of them, or of two of them, is quite satisfactory. For winter feeding a little corn is advisable, owing to its heating tendencies. Too much of it tends to fatten the fowls, however, and a reasonable amount of care is required to maintain the proper balance in the ration. A third of the whole grain feed corn gives good results. Wheat, corn and buckwheat, one-third each, is a good mixture.

Most farm flocks are fed by the simplest methods possible. Simplicity is always advisable, and while many are not practicing economic feeding, they could do so and still be free from any great amount of complication. A hen to do her best should be fed three times daily during the winter. With the rolled oats constantly before them a whole grain feed of the foregoing mixture night and morning disposes of this part of the ration nicely. The night feed should be given in a trough and the hens allowed to eat all they will just before dark. Any feed that may be left in the trough should then be emptied in the litter and the morning feed scattered in this and the litter forked over onto it. This is to encourage the hens to take exercise, which is absolutely necessary if eggs are to be produced regularly. The noon feed should consist of vegetables, mangels, turnips, cabbage, clover hay, or whatever is on hand. It is a good practice to change the vegetable diet from time to time. Some hang the cabbage or mangels up so the hen has to jump to pick them, thus getting exercise. This is not necessary where the morning grain feed is well-covered with litter.

The only other class of food to be discussed is the animal foods. These are the most expensive of all, and are considered as forcing foods to promote egg production. Most poultrymen believe that good egg yields cannot be got in winter without green-cut bone, beef scrap or meat of some kind, and while they are in a sense correct, there is a limit to profitable egg production as the direct result of feeding these feeds, and most farms have a supply of a food which is equally as effective and far more economical. This feed is sour milk, which also solves the problem of supplying drink for the fowl to a certain extent. Sour milk is just as good as, and in fact a little better than sweet milk, as experimental results have shown, and is equal in value to any of the meat foods. Where it is not produced on the place it is profitable to purchase it up to 25 cents per cwt. Keep their drinking dishes clean and well supplied with it.

The only other feed requisite is grit. It matters not in what form this is given as long as it serves the purpose. Oyster-shells are good; old plaster or fine gravel may be utilized. Feed the hens well, keep them well exercised, clean and sanitary; keep young fowls of good laying strains regardless of the breed and gather eggs in winter when eggs are "gold nuggets."

A new poultry house, 240 feet long, to be divided into breeding pens, is to be erected in connection with the poultry department of the O. A. C. Some valuable work in the intricacies of breeding show and bred-to-lay stock is to be carried out in an experimental way.

Packing apples is an ideal job for an Indian-summer day. The year seems to be as ripe as the fruit and a poet might pick off perfect days to store in song for future meditation just as we pick and store the apples for future use. Last night there was a sharp frost and when "the sun, new risen, shone through the misty horizontal air shorn of his beams," the fields were white with rime. While the air was being warmed and the south wind began to stir was a good time to carry apple barrels from the shed to the orchard.

Having been shown how to carry two at a time by placing them against my hips and catching the outer rim, I felt as if I were trying to fly. I would gladly have employed a professional packer to do the work, but being unable to get anyone to help, a demonstrator of the Fruit Branch showed me how the job should be done, and I tackled it myself. He assured me that after I get through with the Peewaukees it will be fun, as the Spies and Baldwins are all over No. 1 size, and all I will have to watch for will be the culls. In the Peewaukees the side worms were particularly active and did a lot of damage. Wherever apples touched one another or touched a leaf the worms burrowed around in the skin and made culls of what would otherwise have been prime fruit. The cut made by this worm "is not so wide as a church door, nor so deep as a well, but 'tis enough, 'twill serve." I have heard it said that experienced packers can tell a defective apple by the touch and go on picking up three apples in each hand and looking at the scenery at the same time. I am not yet an experienced packer, and though I wore my glasses and did not handle more than a couple of apples at a time, defective ones would still get past me. I would find them in the sorting basket, and later on in the barrel when I was racking it after emptying each basket. Those first barrels caused me a lot of work and worry, and though I did my best, I am haunted by the fear that some culls may have got past me. This leads me to sympathize with at least some of the farmers who get into trouble by packing improperly branded fruit. Unless one is skilled at the work, he is almost certain to make mistakes, and the man from the Fruit Branch told me that culls were so sure to get in that one might as well forget about the ten per cent. allowed by law. You may do your level best and the ten per cent. will still be there. This goes to prove that packing apples is a thoroughly artistic job. Art critics tell us that no work of art is great if it does not contain some slight error. If it is mathematically perfect it is beyond human sympathy. But the artist need not take the trouble to deliberately put in the error. Being human, he is bound to do that in spite of all his skill. Only machine-made art objects can be absolutely perfect, and they never appeal to a cultivated taste. But let us get back to the apples.

There is always something to learn about apple-growing. This summer I learned more about the work than I thought there was to know before I began, and as each expert I meet tells me something new, I am being forced to the conclusion that as yet I haven't got rightly started. The last thing I have learned is that if a man is not careful when picking this year's crop he may pick next year's crop along with it. When apples are pulled too green, as altogether too many have been this season, the twigs on which they grow are liable to break off with the stems. As these twigs are the ones that have the fruit buds for next year's crop, careless picking can do a great deal of damage. When an apple is properly matured, the stem separates from the twig naturally without breaking close to the apple or pulling off the twig. As the fruit on one Peewaukee tree was somewhat green, I had a chance to see just what this destruction amounts to, and it was surprising. This leads me to wonder if there will be much fruit next year on orchards where the fruit was picked at least a month ago, when the apples were decidedly green. It is bad enough to have to sell this year's crop for a small price without destroying next year's at the same time.

Although the apples are being packed, they are not definitely sold, but the probability is that they will be shipped to Edmonton, where people's mouths seem to be watering for choice Ontario apples. As I know with whom I am dealing, I feel sure of fair treatment, and the prices suggested are so amazing that I am compelled to take a chance. Arrangements are being made to

get a fruit car that will be heated if necessary and every precaution will be taken to insure the delivery of the apples in good condition. It looks as if we would have a carload of No. 1 fruit, about one-half Spies and Baldwins, and, according to the information I have received, Ben Davis's will rank as first-class apples in the West. If the venture turns out well, others may be encouraged to act independently, and if I do not realize the wonderful prices that are being suggested, I shall be like the man who was kicked by a mule, I shall not be as pretty as I was, but I'll know more.

And now let me say good-bye to the beauty of the world for at least a couple of weeks. I have been through rushes of work like this before and know just what they mean. From daylight till dark it will be one monotonous round of steady work that will dull the senses to the wonderful things that are going on in nature. The trees will put on their bravery, but I shall be peering through my spectacles for worn-holes, scales and bruises in apples, instead of rejoicing in the glory of the maples. I shall, no doubt, feel grateful to feel the warm sun beating on my back, and shall grumble if it chances to rain, but I do not expect to be able to take any further interest in my surroundings until the last barrel is packed and loaded on the car. If I deliberately stopped to enjoy the Indian-summer weather, I might get so rebellious that I would neglect the packing, but that would never do. The apples represent a summer's work, and they must be marketed somewhere, somehow.

Since I cannot revel in this Indian-summer weather myself and try to describe it, I shall do something better. William Wilfrid Campbell has written a little poem on the subject, which every Canadian should know by heart, and I shall quote it:

Along the line of smoky hills
The crimson forest stands,
And all the day the blue-jay calls
Throughout the autumn lands.

Now by the brook the maple leans,
With all his glory spread;
And all the sumachs on the hills
Have turned their green to red.

Now, by the great marshes wrapt in mist,
Or past some river's mouth,
Throughout the long still autumn day
Wild birds are flying south.

Beans, Fruit and Tobacco in Kent.

In a radius of from six to ten miles east, south and west of the little town of Blenheim, in the southern part of Kent Co., Ont., is one of the finest sections of farming country in Canada, if not in the world. Here can be grown all the fruits and vegetables that mature outside of the sunny South. Here is the largest and best bean district in Canada. The farmers here grow and market hundreds of acres of white beans. They market them largely through their own warehouse, as they operate the Kent Farmers' Produce Co., Ltd., with which the readers of The Farmer's Advocate are already acquainted. At one time this district produced large quantities of fruit, apples being shipped from here by the train load. Twenty years ago farmers thought they were ruined if their apple crop fell below \$1,200 or \$1,500. Here also was one of the first places to take up the fight against the San Jose scale. Of the many fine orchards then to be found, there are only a very few left to-day that are productive. However, many new plantings are being made. Within the last year there has been upward of 75,000 fruit trees planted in this district, most of them peaches and early apples. This is also a large tobacco-producing district, about 175 carloads being shipped from Blenheim last year. Tobacco has paid big returns for several years now, as crops have been good and prices fair—10c. per lb. for 1910 and 12½c. for 1911. The crop this year is not so large, but the quality is far better. An average crop is 1,500 lbs. per acre, many getting 2,000, and some even more. The canners are looking to this country for supplies now, buying quite a lot of their fruit here this past summer.

A. L. J.

The contract has been let for a new Agronomy Building at the Ontario Agricultural College. The new building will be placed just south of the present Horticultural Building, leaving room between the two for another building when conditions warrant its erection. Work will begin this fall on the foundation. The house of Prof. G. E. Day, just north of the main building, is being moved to make room for the new dining hall.

Canada's Crops.

A bulletin issued at Ottawa October 16th by the Census and Statistics Office covers the crop conditions in Canada for the month ended September 30. It states that during this month disastrously wet weather continued to prevail over most parts of Canada, especially over the Provinces of Quebec, Ontario and Manitoba. At September 30 large areas of grain, both in the East and West, were still either uncut or were exposed to the wet in stock. Much damage has been caused by sprouting and in the Northwest Provinces second growth has in numerous instances caused uneven ripening and consequent lowering of grade. Frosts during September in those Provinces did some damage, but as a rule only late-sown crops, including flax, were seriously affected. In parts of Southern Ontario the ground was so wet that many farmers abandoned the sowing of fall wheat for next year.

The estimates of yield published a month ago could only be regarded as of preliminary value, because in consequence of bad weather and late-season harvesting operations had made so little progress.

The new estimates of yield obtained from correspondents at the end of September confirm generally the previous estimates for most of the crops, but inasmuch as very little threshing had been possible and large areas of grain were still unharvested, it is feared that the final estimates, after completion of the threshing, may turn out lower than the figures now given.

For spring wheat the estimated production is 188,816,600 bushels, as compared with 189,904,500 bushels last year. For fall wheat the estimate is 18,868,700 bushels, compared with 26,014,000 bushels last year, the total estimated wheat production being therefore 205,685,300 bushels, as compared with 215,918,500 bushels in 1911, a decrease of 5 p. c. The yield per acre is 21.08 bushels for all wheat, as against 20.77 bushels last year. Oats show a total production of 381,502,000 bushels, compared with 348,585,600 bushels last year, the yield per acre being 41.29 bushels, compared with 37.75. Barley is estimated to yield a total of 43,895,100 bushels, compared with 40,631,000 bushels last year, the yield per acre being 31.00 bushels, against 28.94. The total production of rye is 3,086,000 bushels, against 2,668,800 bushels in 1911, the yields per acre being, respectively, 20.75 and 17.41 bushels. Of oats, barley and rye increases in total production, as compared with last year, represent percentages of 9, 8 and 15. The estimated production of peas is 4,202,200 bushels, of beans 1,106,800 bushels, of buckwheat 10,924,100 bushels, of flaxseed 21,148,400 bushels, of mixed grains 17,940,900 bushels, and of corn for husking 14,218,400 bushels.

The average quality of these crops at harvest time, measured upon a per cent. basis of 100 as representing grain well headed, well filled, well saved and unaffected to any appreciable extent by frost, rust, smut, etc., is as follows: Spring wheat 83.70, oats 86.01, barley 84.48, rye 80.82, peas 66.41, beans 68.81, buckwheat 80.87, mixed grains 90.59, flaxseed 83.86, and corn for husking 71.92 p. c. Of these crops wheat, oats, barley and flaxseed are above, while peas, beans and corn for husking are below the average quality for either of the two previous years. Rye is slightly below the average. Flax is well above the quality of both 1911 (75 p. c.) and 1910 (73 p. c.)

Root crops continue to show excellent figures as representing average condition during growth. The highest are potatoes, 90.12 p. c., and the lowest corn for fodder, 80.63 p. c. The last named crop has improved by over four points during the month.

ARCHIBALD BLUE,
Chief Officer.

Professor of Horticulture, Macdonald College.

APPOINTMENTS AT MACDONALD COLLEGE.

T. G. Bunting, B.S.A., Assistant to the Dominion Horticulturist, at the Central Experimental Farm, Ottawa, is resigning his present position to undertake the duties of Professor of Horticulture at Macdonald College, Que. Mr. Bunting is an honor graduate in horticulture of the Ontario Agricultural College. He has had the advantage of practical training and experience on his father's fruit farm in the Niagara district in the commercial raising of fruits and vegetables on a large scale.

F. M. Clement, B. S. A., the new Lecturer in Horticulture, was born and brought up on a fruit farm in Niagara Township, Lincoln County, Ont. He is the author of Bulletin No. 201, of the Ontario Department of Agriculture, on "Peach Culture."

S. A. Bergey, B. S. A., who has been appointed to the newly-created position of Assistant in the Poultry Department, is a graduate of the

Ontario Agricultural College, having specialized in Animal Husbandry, taking special interest in poultry.

Sheep Sales and Fairs in Nova Scotia.

Editor "The Farmer's Advocate":

The sale of pure-bred rams and grade ewes at Antigonish on Oct. 4, conducted by the Dominion Department of Agriculture and the Dominion Sheep Breeders' Association, resulted in the disposal of sixty or more animals. They have been scattered fairly well through the county, the numerous sections being well represented. This will have a decided beneficial effect on our sheep industry, and there is no excuse why any farmer should be without good sheep, as the prices were low and within the reach of everyone. A few Cotswolds were included in the sale, but bids were not numerous, and as a consequence they were not sold. It is stated that the climate would not be well suited to them; anyhow for some reason they are not liked in this part of the Province. They were forwarded to other sales. All sheep sold were in excellent condition.

The pickling season is just passing, and the housewife is finding difficulty in procuring tomatoes (green). The whole Province was toured, but a great shortage is reported. The tomato plants went to vines and did not bear, the latter part of the season being so wet; the plants blossomed all right, but did not form fruit.

Farmers at present are busy digging their potatoes, and report, where the potatoes were planted in upland and well-drained soil, dry as a consequence, a banner crop of large potatoes of good quality, while on the other hand, the potatoes in fairly wet ground are reported half rotten. One young farmer planted two lots of potatoes—in one lot seven bushels and the other four, but was surprised to find when the lots were harvested that the four-bushel lot yielded more potatoes than the seven-bushel lot. Potatoes are selling at present for about forty-five cents.

The Nova Scotia Provincial Exhibition was a grand success this year, so the authorities say, and so it was, but ask the farmers in Eastern Nova Scotia, the men who could not attend the exhibition on account of delayed haying and harvest necessitating their remaining at home during exhibition week, and they will tell you that the Halifax dailies did not use them right, for the simple reason that the prize-winners were not published as should be. We must admit that a few of the cattle winners were published, but the big corner was horse racing. What does a good farmer care about horse racing? Nothing. One farmer, in Pictou Co., while talking to a reporter, stated that if you want to see how your exhibits do, you would have to accompany them to Halifax, and he was very correct. Leaving the newspaper question alone, we can say that the Nova Scotia Provincial Exhibition was quite successful.

Perhaps there was never a year before when so many exhibitions (county) were held throughout Nova Scotia. They were all very successful, too, as a result of fine weather. It is the county exhibitions that are bringing the Nova Scotia farms to the front to-day. A few years will tell, as friendly competition is a grand work. We see the young men of every county taking an active part at all the small exhibitions.

The Antigonish Co. Exhibition, held on Sept. 26th and 27th, was an unqualified success. The prize-winners were greatly pleased when the Antigonish Casket published a full account and also a complete list of the prize-winners. Herbert Smith, of Clydesdale, Antigonish Co., won the "T. Eaton" set of dishes for the best crock of butter. J. M. Antigonish Co., N. S.

The Duthie Shorthorn Sale.

The annual sale of Shorthorn bull and heifer calves from the herd of Mr. Duthie, Collynie, Aberdeenshire, which took place on September 8th attracted a very large attendance of breeders, and some splendid prices were realized. The 24 bull calves catalogued brought an average of \$1,890, and the 12 heifer calves an average of \$360. The highest price of the day was 2,000 guineas, about \$10,000 for the dark-roan, six-months-old bull calf, Collynie Cupbearer, sire, the Missie bull, Merry Stamp, dam Proud Queen, by Achilles, purchased by E. N. Casares, London, for the Argentine. The next highest price was 1,000 guineas for the dark-roan six-months-old Collynie Golden King, by Adbolton Regal King, dam the Goldie Cow, Golden Thorn, by Scotch Thistle, purchased by The Edgcote Shorthorn Company, Banbury; Collynie King Royal, by the same sire, was taken at 950 guineas, by Mr. Casares; and twelve others brought prices ranging from \$500 to \$3,500. The highest price obtained for a bull calf at any previous Collynie sale was 1,102 guineas in 1910, and the highest previous average was made in 1907, when 17 averaged \$2,000.

The Cox-Furness Holstein Sale.

The auction sale on October 11th, at Ennis-claire Farms, Oakville, Ont., of pure-bred and grade Holsteins, the property of H. C. Cox and P. S. Furness, was not largely attended owing to very unfavorable weather, but prices obtained were on the whole satisfactory, especially for the grade Holsteins offered which, in the case of an auction sale, established record prices, the average for the grades being \$91 for cows, and \$56 for heifers and calves, and the highest, \$150 for each of two. Following is the list of pure-bred Holsteins in the sale, selling for \$100 and upwards.

COWS.

De Kol Mantel 3rd, W. J. Kelleher, Pickering	\$115.00
Goodie of Hilton Farm, Jno. Lee, Palermo	100.00
Clinton Girl, Dr. Watson, Burlington	125.00
Summer Hill Maid, D. Watson, Burlington	100.00
Woodland De Kol's Beauty, Jas. Liddle, Dundas	102.50

CALVES.

Johanna Woodland Mercedes, 7 months old, Munro & Lawless, Thorold	150.00
De Kol Mantel 4th, 8 months old, W. J. Kelleher, Pickering	150.00

YEARLING BULL.

Beauty's Victor, Wm. Barker, Oakville	75.00
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\$17,000 in Prizes for the Winter Fair.

In a little over six weeks, or on Monday, December 9th, the Ontario Provincial Winter Fair will be in full swing at Guelph. Exhibitors who have been successful at the shows should at once get a copy of the prize list from A. P. Westervelt, Secretary, Toronto, to see the generous prizes for which they may compete in 1912. In all, over \$17,000.00 is offered for the leading kinds of horses, beef and dairy cattle, sheep, swine, poultry and seeds.

Special attention is devoted to the horse department of this year's fair. This department has grown tremendously since its inception. The prizes offered and the value of the fair as an advertising medium has resulted in the bringing together of some of the finest classes of breeding stallions and mares ever shown in Canada. With the new building, which was used for the first time last year, there is stabling accommodation for 250 horses. Any farmer who has a good horse which he wishes to advertise for service or sale should exhibit at the fair. The classes are for Clydesdales, Shires, Percherons, Hackneys, Standard-breds, Thoroughbreds, Ponies, and Heavy Draught Horses. The cash prizes for horses amount to over \$3,800.00.

According to a cablegram received at Ottawa last Saturday from Rome, the 1912 production of wheat in the twenty-two countries which had so far reported to the International Institute of Agriculture is 107.2 per cent. of that of the same countries in 1911. Barley is 105.2 per cent., oats 120.7 and corn 116.4 per cent. The twenty-two countries reported to date include Russia, United States, India, France and Canada, with wheat estimates in the order named.

From many parts of the country reports continue to come of damage to the potato crop through the prevailing wet weather. In the digging it is not uncommon to find more than half of the tubers rotten in clay and clay-loam soils; and some that appear sound at first go bad afterwards. Luckily for those on sandy soils, their crops are very much better, but it is very generally forecasted that prices for another season will rule high.

George Hilton, V. S., acting for the Veterinary Director General, informs The Farmer's Advocate that the Ministerial order of July 16th last, prohibiting the importation or introduction into Canada of any hay, straw, fodder, feed stuffs or litter accompanying horses from Continental Europe, has been extended for a further period of three months, from Oct. 16th last.

A great deal of the apple crop in some Ontario sections is going to waste this season. More urgent work has accumulated because of wet weather, and there are no hands to spare for apple-picking.

The date of the Canadian National Exhibition, Toronto, for 1913, has been fixed to begin Aug. 23 and continue to Sept. 8, inclusive. Quite a number of important changes and improvements have been recommended by the directorate.

MARKETS

Toronto.

REVIEW OF LAST WEEK'S MARKETS

At West Toronto, on Monday, October 21, receipts of live stock numbered 47 cars, comprising 1,008 cattle, 119 hogs, 449 sheep, and 23 calves. The hogs were sold at \$8.60 fed and watered, and \$9.25 f. o. b. cars. Prospects for cattle about steady. Chicago receipts this morning are 26,000 cattle, 60,000 sheep, and 34,000 hogs. Market easier in all classes. This will be felt here to-morrow.

The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars	69	355	424
Cattle	975	5,401	6,376
Hogs	1,247	4,918	6,165
Sheep	1,315	6,180	7,495
Calves	33	729	762
Horses	—	35	35

The total receipts of live stock at the City and Union Stock-yards for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	268	253	521
Cattle	3,830	3,554	7,384
Hogs	4,776	4,778	9,554
Sheep	3,892	3,464	6,856
Calves	473	130	603
Horses	—	29	29

The combined receipts of live stock at the City and Union Stock-yards, show a decrease of 97 cars, 1,008 cattle, 3,389 hogs; but an increase of 639 sheep, 159 calves, and 6 horses, compared with the same week of 1911.

It will be seen by the above figures that the deliveries of live stock were large, especially in the common grades of cattle, which depreciated in price, while the good to choice remained firm, at our last quotations. Sheep and calves remained steady to firm, while lambs and hogs advanced in price. Milkers and springers were firm, at our last quotations.

Exporters.—The Swift Company, of Chicago, were the only buyers of export cattle, which were bought at lower prices than was paid for selected lots of butchers' cattle. On Tuesday, this firm bought 100 cattle for the Liverpool market, averaging 1,150 to 1,250 lbs., at \$5.85 to \$6 per cwt., and on Wednesday they bought 100 steers for London, 1,260 lbs. each, at \$5.90 to \$6.25 per cwt.

Butchers.—The highest price paid for a select load of butchers' heifers was \$6.35, while the bulk of sales of choice butchers' were from \$6 to \$6.20; loads of good, \$5.60 to \$6; medium, \$5.25 to \$5.50; common, \$4.50 to \$5; inferior, \$3 to \$4.25; bulls, \$2.75 to \$5.25; cows, \$3 to \$5.25; canners', \$1.75 to \$2.50.

Stockers and Feeders.—Receipts were large, and for the common, light cattle, prices were easier. Steers, 1,000 to 1,100 lbs., \$5.40 to \$5.60; steers, 900 to 1,000 lbs., \$5 to \$5.30; stockers sold all the way from \$3.25 to \$4.75.

Milkers and Springers.—Receipts were liberal, especially of the medium to good cows. Prices were firm and unchanged, at \$50 to \$90, and one or two large, breedy cows, sold at \$95 to \$100 each.

Veal Calves.—Receipts were fairly large, and prices were as firm as at any time this year, selling all the way from \$3.50 to \$9 per cwt.

Sheep and Lambs.—Receipts were large. Sheep, light ewes sold at \$4 to \$4.50; heavy ewes and rams, at \$3 to \$3.50; lambs sold from \$6 to \$6.60; cull lambs, \$5 to \$5.50.

Hogs.—Receipts were not equal to the demand, and the packers failed to reduce prices, although they tried hard to do so. The bulk of hogs fed and watered, sold at \$8.50 to \$8.60, and \$8.10 to \$8.25 f. o. b. cars at country points.

Horses.—There was little doing at any of the horse markets. Good-quality drafters were in demand, and sold at high prices, but second-hand, serviceably-sound horses, of which there are more than the demand calls for, were much lower in value. Prices were reported as follows: Drafters, \$275 to \$325; general-purpose, \$225 to \$260; expressers, \$175 to \$225; drivers, \$100 to \$150; serviceably sound, \$40 to \$75 each.

BREADSTUFFS.

Wheat.—Ontario, new, 93c. to 95c., outside. Inferior grades, 70c.; Manitoba, No. 1 northern, \$1; No. 2 northern, 98c., track, lake ports; feed wheat, 70c., lake ports. Oats—Ontario, new oats, 42c. to 43c.; Manitoba oats, none offering. Rye—No. 2, 72c. to 78c. per bushel, outside. Peas—No. 2, 90c., outside. Buckwheat—55c., outside. Corn—No. 3 yellow, old, 72c., lake ports. Barley—For malting, 60c. to 63c. (47-lb. test); for feed, 48c. to 60c., outside. Flour—Ninety-per-cent. Ontario winter-wheat patents, \$3.85, seaboard, Manitoba flour—Prices at Toronto are: First patents, \$5.70; second patents, \$5.20; in cotton, 10c. more; strong bakers', \$5 in jute.

HAY AND MILLFEED.

Hay.—Baled, in car lots, track, Toronto, No. 1, \$14; No. 2, \$12 per ton. Straw.—Baled, car lots, track, Toronto, \$10 to \$10.50 per ton. Bran.—Manitoba bran, \$22 to \$23 per ton; shorts, \$26; Ontario bran, \$23 in bags; shorts, \$25, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Market firmer. Creamery pound rolls, 30c. to 31c.; creamery solids, 27c. to 28c.; separator dairy, 28c. to 29c.; store lots, 24c. to 26c. Cheese.—Market easier. Large, 14c.; twins, 15c. Honey.—Extracted, 12c.; combs per dozen, \$2.75 to \$3. Eggs.—Strictly new-laid, 35c. per dozen, in case lots; cold storage, 28c. to 30c.

Potatoes.—Prices firmer for Ontario, car lots, on track, Toronto, 70c. to 75c. per bag.

Poultry.—Receipts, liberal; prices for live birds were as follows: Turkeys, 18c. to 22c.; geese, 9c. to 10c.; ducks, 11c. to 13c.; chickens, 11c. to 13c.; hens, 9c. to 10c. Dressed prices were as follows: Turkeys, 25c. to 28c.; geese, 12c. to 13c.; ducks, 15c. to 17c.; chickens, 14c. to 16c.; hens, 11c. to 12c.

HIDES AND SKINS.

No. 1 inspected steers and cows, 14c.; No. 2 inspected steers and cows, 13c.; No. 3 inspected steers, cows and bulls, 12c.; country hides, cured, 13c. to 14c.; country hides, green, 11c. to 12c.; calf skins, per lb., 13c. to 17c.; lamb skins, 50c. to 75c.; horse hides, No. 1, \$3.50 each; horse hair, per lb., 35c. to 37c.; tallow, No. 1, per lb., 5c. to 6c.

WOOL.

Unwashed, coarse, 18c.; unwashed, fine, 14c.; washed, coarse, 19c.; washed, fine, 22c.; rejects, 16c.

TORONTO SEED MARKET.

Alsike No. 1, per bushel, \$11.50 to \$12; alsike No. 2, per bushel, \$10.50 to \$11; alsike No. 3, per bushel, \$9.50 to \$10; timothy No. 1, per bushel, \$2 to \$2.50; timothy No. 2, per bushel, \$1.25 to \$1.75.

FRUITS AND VEGETABLES.

Trade at the wholesale fruit market has materially declined, the season for summer fruit being past. Prices ranged as follows: Peaches, 40c. to 75c.; pears, 40c. to 75c.; grapes, small basket, 18c. to 20c.; large basket, 35c. to 50c.; cucumbers, 75c. to \$1 per basket; gherkins, 70c. to \$1; tomatoes, 30c. to 40c.; cabbage, per crate, \$1; celery, per dozen, 25c. to 35c.; quinces, 40c. to 50c.; apples, per barrel, \$1.50 to \$2.50; plums, 60c. to 75c.

Chicago.

Cattle.—Beeves, \$5.50 to \$10.95; Texas steers, \$4.50 to \$8.50; Western steers, \$3.75 to \$9; stockers and feeders, \$4.25 to \$7.50; cows and heifers, \$2.90 to \$7.80; calves, \$7 to \$9.85.

Hogs.—Light, \$8.30 to \$9.10; mixed, \$8.45 to \$9.20; heavy, \$8.45 to \$9.20; rough, \$8.45 to \$8.70; pigs, \$4.75 to \$7.75.

Sheep and Lambs.—Sheep, native, \$3.60 to \$5; Western, \$2.85 to \$4.85; yearlings, \$4.75 to \$6. Lambs, native, \$5.25 to \$7.50; Western, \$5.50 to \$7.50.

British Cattle Market.

John Rogers & Co., of Liverpool, cable quotations for Canadian steers, 12c. to 12c. per lb.; Irish steers, 11c. to 12c., and Western wethers, 11c. to 12c.

Montreal.

Live Stock.—On the Montreal market the offerings were light and the tone was firm. Choice steers sold at 6c. to 6c. per lb., while fine were around 5c. to 6c., and good sold at 5c. to 5c. per lb. Medium grades brought 4c. to 5c., and common sold down to 3c. Sheep and lambs were rather firmer, sales of sheep taking place at 8c. to 4c. per lb., while lambs sold at 6c. to 6c. per lb. Calves ranged all the way from \$5 to \$12 each, while hogs sold at 8c. to 9c. per lb., weighed off cars.

Horses.—Dealers report a moderate demand for horses from local concerns. There is now great activity in connection with moving out the fall shipments, and this occasions the purchase of horses, though auto trucks are coming into general use rapidly. Lumber camps are also purchasing supplies in a moderate way, and some sales of heavy horses have taken place. Prices were as follows: Heavy draft, weighing from 1,500 to 1,700 lbs., \$300 to \$400 each; light draft, 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 each, \$125 to \$200; broken-down, old animals, \$75 to \$125 each, and choice saddle and carriage animals, \$350 to \$500 each.

Dressed Hogs.—There was practically no change in the market for dressed hogs. Fresh-killed, abattoir-dressed, sold at 12c. to 12c. per lb. A few country-dressed hogs were forward, and sold at about 1c. per lb. below the price mentioned.

Potatoes.—Some of the stock was not worth handling, and could hardly be given away. Cobblers, in car lots, sold at 65c. to 70c. per 90 lbs., track, while jobbing lots were 25c. to 30c. higher.

Eggs.—Prices held steady. Select eggs were quoted at 30c. to 31c. per dozen, while No. 1 stock was 28c., and No. 2 stock 23c.

Syrup and Honey.—The market showed little change, being 8c. to 8c. per lb. for syrup in tins, and 6c. to 7c. in wood. Sugar, 8c. to 9c. per lb. Honey, white-clover comb, 16c. to 17c. per lb.; extracted, 12c. to 12c. per lb.; dark comb, 14c. to 14c. per lb., and extracted, 9c. to 10c. per lb.

Butter.—Prices advanced in the Townships again, and over 30c. was paid there. Supplies were evidently light, and there is fear of a shortage. Quotations were 29c. to 30c. per lb. for finest, and a cent less for fair, dairies being 24c. to 25c. per lb.

Cheese.—The tone of the market in the country was, in some instances, lower, but the market here was about steady, being 13c. to 13c. per lb. for finest Westerns, Townships being about 1c. below these prices, and Quebecs 1c. less than Townships.

Grain.—The price of oats continued fairly steady, at 54c. to 55c. per bushel for No. 2 Canadian Western; 1c. less for No. 1 extra feed; 52c. to 53c. for No. 1 feed; 51c. to 51c. for No. 2 feed, and 51c. to 52c. for sample oats.

Flour.—The market still showed no change, although there had been some talk of an easier tone. Manitoba first patents, \$6.10 per barrel; seconds, \$5.60, and strong bakers', \$5.40. Ontario patents, \$5.25 to \$5.35 in wood, and straight rollers, \$4.95 to \$5; flour in jute, 30c. per barrel less.

Millfeed.—The market for millfeed was steady, at \$23 per ton in bags, for bran; \$27 for shorts; \$28 to \$30 for middlings; \$36 to \$38 for pure grain mouille, and \$34 to \$35 for mixed.

Hay.—Prices steady, at \$14.50 to \$15 per ton for No. 1 pressed hay, carloads, track, Montreal; \$13.50 to \$14 for No. 2 hay, extra; \$11 to \$12 for No. 2 ordinary; \$10 to \$10.50 for No. 3, and \$9 to \$9.50 for clover mixed.

Hides.—The market for hides was fairly active, and prices held steady. Beef hides, 12c., 13c. and 14c. per lb. for Nos. 3, 2 and 1, respectively; calf skins, 15c. and 17c. per lb., respectively, for Nos. 2 and 1; lamb skins, 70c. each; horse hides, \$1.75 each for No. 2, and \$2.50 for No. 1. Tallow sold at 1c. to 3c. per lb. for rough, and 6c. to 6c. for rendered.

Buffalo.

Cattle.—Prime steers, \$9 to \$9.50; butchers', \$6 to \$8.40; bulls, \$4.50 to \$6.50; stock heifers, \$4.25 to \$4.65; shipping, \$7.50 to \$8.50; heifers, \$4.75 to \$7.70; cows, \$3.25 to \$6.50; stockers and feeders, \$4.50 to \$6.75; fresh cows and springers, \$35 to \$75 each.

Veals.—\$4 to \$10.50. Hogs.—Heavy, \$9.15 to \$9.25; mixed, \$9 to \$9.15; Yorkers, \$8 to \$9; pigs, \$7.25 to \$7.75; roughs, \$8.25 to \$8.40; stags, \$5 to \$7.50; dairies and grassers, \$8.50 to \$8.90.

Sheep and Lambs.—Lambs, \$4.50 to \$7.50; yearlings, \$5.25 to \$5.50; wethers, \$4.75 to \$5; ewes, \$2 to \$4; sheep, mixed, \$4 to \$4.50.

Cheese Markets.

Woodstock, Ont., 13c. to 13c.; Brockville, Ont., 13c.; Kingston, Ont., 12c. to 13c.; Vankleek Hill, Ont., 12c.; Cornwall, Ont., 12c. to 12c.; Napanee, Ont., 12c. to 12 15-16c.; Picton, Ont., 13c. to 13 1-16c.; Iroquois, Ont., 12c.; London, Ont., bidding 13c. to 13c., no sales; Belleville, Ont., 12 18-16c. to 12c.; Canton, N. Y., 17c.; butter, 81c.; St. Hyacinthe, Que., 12 9-16c.; butter, 28c.; Cowansville, Que., 12 11-16c.; butter, 81c.

Canadian Sheep for Exhibition in Chicago.

Up to December 7, 1912, Canadian sheep may be imported into the United States for exhibition purposes at the International Live-stock Exposition, to be held at Chicago, Ill., from November 30 to December 7, 1912, without being subject to the thirty-days' quarantine, provided they pass a satisfactory inspection at the port of entry, and are accompanied by an affidavit of the owner or importer, and a certificate issued by a Canadian official veterinarian, as required by Regulation 42 of B. A. I. Order 180, "Regulations for the inspection and quarantine of horses, cattle, sheep, swine, and other animals imported into the United States." And provided further, that the sheep which are not sold to remain in the United States, shall be returned immediately to Canada at the close of said Exposition.

The Department must be notified by the owner or importer, through the office of his veterinary inspector in charge at Chicago, of any Canadian sheep which are to remain in the United States for breeding purposes, and such sheep will be maintained in quarantine at the Exposition grounds under the supervision of an inspector of this Department, who shall issue a certificate before shipment to destination is allowed. The thirty days of quarantine will be counted from the date of entry into the United States. All Canadian sheep intended for this exposition must be shipped directly to the Exposition grounds, and must not be unloaded in any public stock yards.

GOSSIP.

The sanitary and odorless closet, advertised by the Earl Construction Co., Athens, Ont., would appear to be a great comfort and convenience in the country home. Free literature is mailed on application. See advertisement.

SALE DATES CLAIMED.

November—(date to be given later).—D. C. Platt & Son, Hamilton; Clydesdales, at Union Stock-yards, Toronto, January 1st, 1913.—At Tillsonburg, Ont., consignment; Holsteins, Geo. Rice, manager.

November 6th, at Limehouse, Ont., Dr. Jas. Lindsay and Alfred Stone, Guelph; Herefords.

DATES OF COMING FAIRS.

Fruit, Flower, and Honey Show, Toronto, Nov. 12-16.

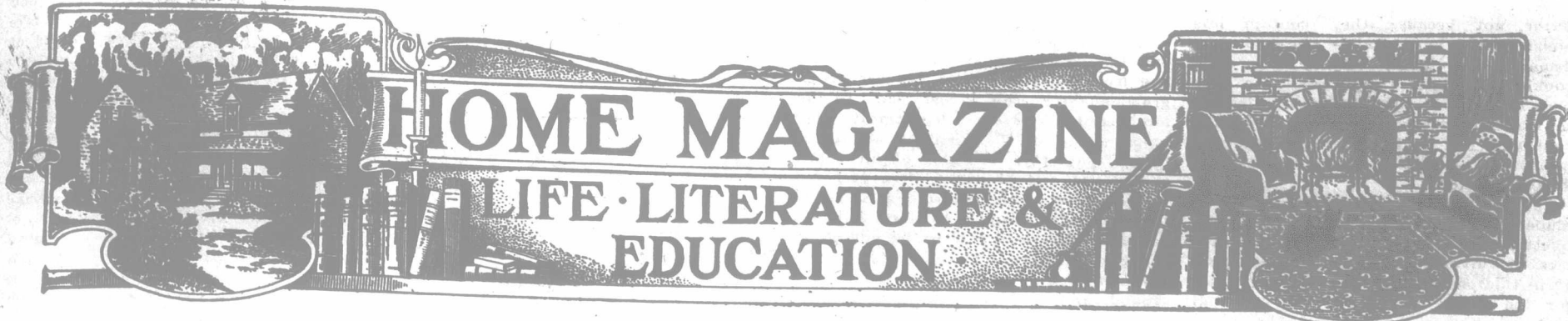
National Dairy Show, Chicago, Oct. 24 to Nov. 2.

Smithfield Club Fat-stock Show, Islington, London, England, Dec. 9-13.

Ontario Provincial Winter Fair, Guelph, Dec. 9-13.

Chicago International Exhibition, Nov. 30 to Dec. 7.

Toronto Fat-stock Show, Union Stock-yards, Dec. 10-11.



Thanksgiving.

There is no hearth so bleak and bare
But Heaven hath sent some blessing there;
No table e'er so sparsely spread
But that a grace should there be said;

No life but knows some moment blest
Of sweet contentment and of rest;
No heart so cold but Heaven above
Hath touched it with the warmth of love.

So count your blessings, one by one,
At early morn and set of sun,
And, like an incense, to the skies,
Your prayers of thankfulness shall rise.

Look for the love that Heaven sends,
The good that every soul intends;
Thus you will learn the only way
To keep a true Thanksgiving Day.

—Arthur Lewis Tubbs.

In the Amazon Jungle.

(Continued.)

In our last issue, when touching upon the "rubber countries," reference was made to Mr. Algot Lange's book, "In the Amazon Jungle" (G. P. Putnam's Sons, Pub.), which is, perhaps, the latest volume dealing with that terrible country along the mighty Amazon River.

Disembarking, on the last day of January, 1910, from R. M. S. "Manco," at a point 2,200 miles up the river, Mr. Lange found himself confronted by evil omen in the very name of the place in which he was to spend the next few months. Remate de Males, or "Culmination of Evils," it was called, and at the end of his sojourn there he was quite ready to believe the name justified. But there were experiences yet to come, and ere the second chapter of his life in South America had passed, even Remate de Males would have seemed a blessed place of respite, a taste of Paradise.

This little town, it must be explained, is a sort of supply-station for the rubber-workers, and one of the points to which they flock when the rainy winter season drives them out of the forest, its population at such times rising to the number of some 500, chiefly Brazilians and domesticated Indians.

During the dry season, Remate de Males presents the picture of a village on stilts, as all the buildings are raised on poles in preparation for the inevitable floods. To each doorway runs a ladder, and "at the bottom of every ladder appears a rudimentary pavement, probably five feet in area, and consisting of fifty or sixty whiskey and gin bottles placed with their necks downwards, as a foundation for the ladders." The roofs are of palm-leaves, the walls of rusty, corrugated sheet-iron, and the floors of rounded poles, with cracks between through which all that transpires beneath may be seen. In summer, this is a panorama of pigs, goats, and other domestic animals; in winter, when the floods are up, one of river-creatures, "alligators, water-snakes, and malignant, repulsive fish, of which persons outside South America know nothing." During this season, by the way, the animals are moved into the houses with the people, and the butchering is done in the "back room," the refuse being thrown out at the back door for the fish to eat.

All this seems unattractive enough, but add to it an air full of miasma, and the constant menace of yellow fever; add to it the incessant worry from vicious, tropical insects, and the intolerableness seems complete. The roofs swarm with wretched pests, and if there is an attic, as in the hotel in which Mr. Lange stayed, it is but a most undesirable addition. He "would not have ventured up there without a Winchester in hand," he says, for it was full of rats and in-

festated with the dangerous, poisonous vermin of the Amazon.

All sleep throughout the jungle region is taken in hammocks, a rather precarious position should one chance to tumble out or the ropes to break in season of exceptionally high flood, when the water rises above the floor. Even when there is no danger of this, sleeping in a hammock in the tropics is not without its terrors. It is necessary to put wads of cotton smeared with grease about the ropes to keep back the ants, and occasionally even this does not suffice, so that one can never be sure of escaping midnight raids.

Food, as may be imagined, is very expensive. "Even sugar and rice," says Mr. Lange, "which are among the important products of Brazil, can be had in New York for about one-tenth of what the natives pay for them in Remate de Males." Preserved butter costs \$1.20 a pound, one pound of potatoes costs 60 cents, one box of sardines \$1.20, one pound coarse sugar 60 cents, and one basket of farinha, the principal staple, costing elsewhere \$4.50, sells there at \$13.30. As a consequence, the bill-of-fare is very limited, and the food, consisting almost invariably of farinha, black beans, rice, coffee—without milk or sugar—and very occasionally jerked beef, soon becomes almost unbearably monotonous.

As a last straw, almost every house in the village contains a cheap gramophone and two or three screeching records, whose "diabolical" sounds go out over the evening air, coming, above all, from a central resort at which the rubber-workers gather to gamble off some of their terribly-earned money. "It will take me years, surrounded by the com-

with green stars was considered at one time the height of fashion, until an inventive woman discovered that yellow dots could also be worked in. In addition to these dresses, the women will squander money on elegant patent-leather slippers (with which they generally neglect to wear stockings) and use their silk handkerchiefs perfumed with the finest eau de Cologne, bought at a cost of from \$14 to \$15 a bottle."

Behind this village, picture the dense wall of the jungle, a mass of tall trees, matted together with riotously-growing vines and dense undergrowth; among them towering ferns and huge fungoid growths and vividly-colored tropical flowers; beneath all the constant danger from wild beasts and poisonous serpents—the jungle, beautiful, but terrible, into which the rubber-workers must go when the floods (covering an area equal to one-third of the United States) go down. Picture the village, the wall of forest, as the "spring" comes on and the rains cease and dry land begins to appear, the humid air heated to an almost unbearable degree by a sweltering sun, the ears deafened by a chorus of "a million frogs," and by the "horrible roars of the howling monkey," "near-by the gasping call of the alligator, and the song of myriads of mosquitoes"; then be thankful that you have no worse fate to put up with than an occasional rainy summer such as that of 1912 has been.

With the sinking of the flood and the putrescence resulting therefrom, disease often runs rampant more fiercely than before, as an instance of which, Mr. Lange tells, that in four days, in an encampment of Indians near Remate de Males, only twelve persons were left out

have come up to Remate de Males. The wages offered are good, from \$8 to \$10 per day. They hope to come through alive, and to return after a year, or two, or three, to their own settlements, rich men, for the rest of their lives. The lure of "riches" calls them, as it has called so many among the more-highly civilized, to misery and, for the most part, to death. And yet the life of these men who winter at Remate de Males is one of freedom compared with that of the less civilized Indians who, according to the stories that have leaked out from farther up the Amazon, have been compelled to serve the rubber companies, for little remuneration, even against their will. . . . The owners of the great rubber estates, it may be surmised, are enormously rich. Gold, indeed, is to be found, and that plentifully, in the creeks of this great district, but so great is the profit from the rubber traffic that it is scarcely noticed.

With the subsiding of the waters, Mr. Lange started up the Iticoahy to the heart of the rubber-gathering in that district. He had been warned of the dangers, from reptiles, from wild animals, from the terrible jungle diseases, from cannibal Indians, from possible starvation, but he was undeterred.

On a boat crowded to suffocation, amid the steaming vapors of the lowering river, in an atmosphere registering a heat of 112 degrees F. in the day-time, he set off toward the interior to meet the most terrible experiences of his life.

(To be continued.)

COOKING THE CHEAPER CUTS OF MEAT.

[A paper given by Mrs. James L. Gillies, at a meeting of the King East Branch of the Women's Institute.]

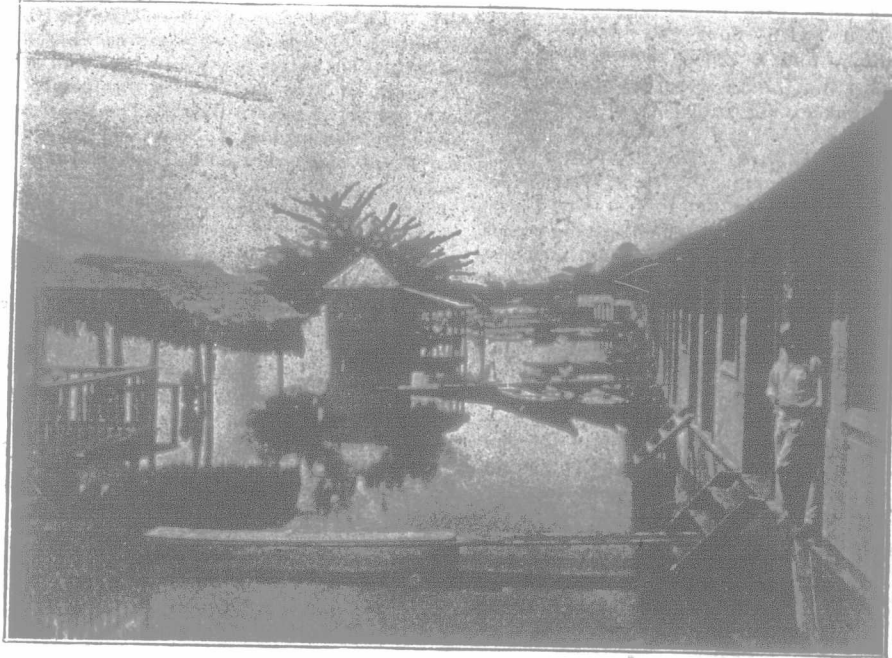
It often happens that a good deal of knowledge which we are not conscious of possessing—but which finds its way somehow into the brains of big and little people as well—comes very readily to hand when it is needed.

All salt meat should be put in cold water, that the salt may be extracted while cooking. Fresh meat, which is boiled to be served with sauces at the table, should be put to cook in boiling water. When the outer fibres contract, the inner juices are preserved.

For making soup, put the meat overnight in cold water to extract the juices for the broth. In boiling meats, if more water is needed, add that which is hot, and be careful to keep the water on the meat constantly simmering. Remove the scum when it first begins to boil. The more gently meat cooks, the more tender it will become. Allow twenty minutes for boiling each pound of fresh meat.

Roast meat requires a brisk fire. Baste often. Twenty minutes is required for roasting each pound of fresh meat. The variation in roasted meats consists simply in the method of preparing them to cook before putting them in the oven.

What to do with Cheaper Cuts of Meat.—Take a neck piece or shoulder of veal. Put a piece of butter the size of an egg into a kettle, and put it on the stove. When it begins to fry, put in the veal, season it, and let it fry brown, then add water sufficient to cook it. When done, take cream and flour, well stirred, and thicken as for fricassee chicken. You will find that you have a nice dinner, very like chicken, and much cheaper. Two pounds of veal will make a dinner for six or eight, providing it is not all bone. The loin and ribs of both beef and mutton are expensive. The so-called cheap, inferior pieces (in-



Remate de Males in Flood-Time.

From Mr. Algot Lange's book, "In the Amazon Jungle."

forts of civilization," says Mr. Lange, "to get these three frightful tunes (from the gramophone of this resort) out of my head."

The people, however, are, as a rule, kindly, and not dirty either in person or in their housekeeping. The men, it is true, go in ragged clothes, even when they have plenty of money in their pockets, but they bathe regularly, and the women are as earnest votaries of fashion as were ever their cousins of Paris, albeit their taste is somewhat different. "They are mostly Indians," says Mr. Lange, "with dark hair, bare-footed, teeth filed like a shark's teeth. Screaming colors are favored; a red skirt

of a total of fifty-two. In fact, Remate de Males has derived its name from the terrible mortality of the community, and yet, as has been said, compared with the life in the heart of the rubber forests, that spent among its uninviting huts is as in a haven of rest.

Why do people live in such a place? may be asked. Why do they engage in such work? Similarly, it may be asked, why do the natives of Labrador put up with the exigencies of their fierce northern home? . . . The rubber-workers are, for the most part, natives of the country; they are a simple and illiterate people; they know of nothing better save their own settlements, from which they

ferior, not because they contain less nourishment, but because there is less demand for them) require long, slow cooking, to make them tender, or they may be finely chopped before cooking, as in Hamburg steak. The first method consumes fuel and time, while chopped meats are as quickly cooked as expensive steaks or chops.

The cheaper cuts of mutton may be made into Scotch and Irish stew, blanquette, and hot pot-meat. When the meat is divided into small pieces, cook it in thickened sauce. Do not use water for the sauce; use bacon, fat, dripping, suet, or butter, and change the spices and flavorings and color to blend with the meat and suit the taste.

Perhaps one of the best of the cheaper dishes of meat is pot-roast. Select a nice piece of brisket, bind it in shape, and put in an iron kettle that has been heated over a good fire. Turn with a long fork until it is brown on every side. Add just enough water to keep it from burning, cover the kettle, and cook slowly fifteen minutes to each pound of beef. When the meat is half-done, dust it carefully with salt, and if the water is evaporated and there is not sufficient fat to cook the meat, add a little more water. Serve this with brown sauce made from the fat in the pot. If there is more than four table-spoonfuls of fat pour it off into the fat-pan to save for frying purposes.

Sometimes when you have just a little cold meat over from either a pot-roast, a steak, or a brown stew, try this good old-fashioned dish of "toad in a hole." Grease a pie-dish, put in the pieces of cold meat cut into one-inch squares. Beat an egg without separating, add half a pint of milk and half a teaspoon of salt; add this mixture gradually to six level tablespoons of flour. When smooth, strain it over the meat and bake in a moderate oven half an hour. Serve at once before it falls.

How to Prepare a Thanksgiving Dinner.

[A paper given by Mrs. Gertrude Thomas at a meeting of the Hartford Branch of the Women's Institute.]

It might be interesting to find out the origin of Thanksgiving, and see why it is kept as a holiday. The earliest Harvest Thanksgiving in America was kept at Plymouth, 290 years ago, by the Pilgrim Fathers. This name was given to 102 Puritans who came from England to America to seek religious liberty denied them in England.

After a stormy and dangerous passage, they made landing on Plymouth Rock, the 9th of November, where they founded a colony which became the germ of the New England States.

We find they sacrificed homes, country, and loved ones, for their religion, for many of their loved ones died on the voyage. But after all their hardships, when they landed, they fell on their knees to thank the kind Power who had preserved them, amid so many dangers. They then signed documents as the foundation of their future and needful government, solemnly combining themselves in a civil body to enact all such ordinances, and frame all such constitutions and offices, as from time to time should be most convenient for the general good.

So here we find the origin of Thanksgiving, and it has become now an annual national festival of thanksgiving for the mercies of the closing year. Nowhere is it kept with such zest as in the New England States, where it ranks as the great annual family festival, taking the place which in England is accorded to Christmas.

And so, on Thanksgiving, multitudes of people in the temples of religion, and in their homes, meet together with thanksgiving and gratitude, each in their own way, as they have been blessed. No doubt the things prized most, when it comes to the final test, are things that cannot be bought or had for the asking, such things as our peaceful, prosperous country, happy homes and families, friendships and confidence, and still we could keep adding. It is with us in life, as it is in our climate, the clear and sunny days far outnumber the cloudy and stormy; happiness is the current, and sorrow the ripple in the stream of life.

Thanksgiving dinner has always been a notable feature in celebrating the day; but the old-time housekeeper could not live from hand to mouth, as her great-granddaughter can. She had to be forehanded in every department; her preparations for Thanksgiving began long before that day. Pickles of all sorts, apple-sauce and preserves were prepared weeks ahead. Mince-meat was mixed that it might acquire a more delicious flavor. The meat had to be minced in the big chopping-bowl, and the raisins did not come seeded, nor the spices ground, and even the sugar-loaf had to be cut and rolled.

When the time came to fatten the turkey for the feast-day, they were fed with soaked barley or oats for the first week, and for the last two weeks they had, in addition, rice cooked in milk, to make their flesh white and fine-flavored.

Everything in the house was spick and span, and stores of all kinds of food were cooked, not only for the great dinner, but also that there might be abundance for the guests, and leisure to enjoy their visit, as some might be staying over. All preparations were made before the day came, so that except for the necessary cooking, the house was like Sunday. Of course, all cooking and baking was done by the fire-place and old, brick ovens. All vegetables were ready for the pot the night before, the chickens stuffed, the cranberry-sauce made, the puddings prepared, and nothing to do but cook the dinner. There had been a great pie-baking time beforehand; mince, apple, cranberry, pumpkin, and dried blueberry, enough to last for weeks. The covered ones were frozen solid, and slipped off the plates one above another in big, earthen jars; then they were thawed one at a time as needed, and were as good as if freshly-baked.

There was only one way to serve turkey, and that was stuffed and roasted; to each cup of bread crumbs, one or two ounces of fat was allowed; this might be butter, beef suet, or fat pork chopped fine. The fat was warmed and blended with the crumbs, seasoned with salt and pepper, mixed with herbs, and moistened with milk or water. At least three hours were allowed for roasting a ten-pound turkey; the oven was made very hot at first to sear the outside quickly, then the heat was reduced so that every part might cook thoroughly without danger of burning the outside. It was basted often with butter and water, and sprinkled with flour to insure even browning, and a crisp, tender skin.

Raised doughnuts were always used on the Thanksgiving table; they were often called nuts, perhaps because of their brown crust and rich substance; they were often made into fancy shapes to please both young and old.

Of late years, our Thanksgiving comes on Monday to allow travelling men to spend the day at home with their families before leaving for their week's work, and it is quite a problem to the busy housewife to prepare a special dinner for Monday, as it does not leave much time to prepare anything beforehand. But with our modern ways of living, it does not take as much time as it did our great-grandmothers. However, we can prepare our puddings and pies on Saturday, and plain cake, cranberry-sauce, salads, pickle, and bread and butter we have always ready, and our fowl can be got ready on Saturday. By rising a little earlier Monday morning, we are not hurried very much.

Country people have such an abundance of everything at hand, that it is not hard to soon make up a dinner out of the best our country affords, and we need not count the cost like our city friends, if we want to give a Thanksgiving dinner.

Announcement re Pearson Flower Garden Competition, Peel Co., Ont.

Mr. Pearson writes us that the prizes of \$30, \$20 and \$10, respectively, which he has offered in the Flower Garden Competition for Peel Co., Ont., have been awarded as follows: 1, Mrs. D. N. Potter, Mono Mills; 2, Mrs. A. McLean, Snelgrove; 3, Miss Mona Key,

Crindale. There were nine competitors in all.

An account of the flower-judging trip will appear in these pages at an early date.

Hope's Quiet Hour.

< Servant of All.

For whether is greater, he that sitteth at meat, or he that serveth? is not he that sitteth at meat? but I am among you as he that serveth.—S. Luke xxii.: 27.

Our Lord has laid down as a rule this fact, which is perfectly natural and true to common life, and yet which sounds so strange: "Whosoever will be great among you, shall be your minister: and whosoever of you will be the chiefest, shall be servant of all." It was only yesterday that I read in the paper that the sister of an English lord had sold her possessions and was living on five shillings a week in a little cottage in Ireland. She has become a trained nurse, and is devoting her life to the service of the poor Irish peasants, many miles away from any town. Is she not far greater than if she were living a life of selfish pleasure, served by the poor, instead of serving them?

In our text, a very common experience is taken by Christ to illustrate one of the grandest facts in the universe. One who is sitting at his table, with a servant to wait on him, is accustomed to think that the servant is beneath him because he serves him. Yet the greatest Man in history solemnly declared that He did not come to be served, but to serve. If He had chosen to live in a palace, with many servants to wait on Him, the world would not now acknowledge Him as its Greatest.

How delighted the "laboring men"—as they are called—are to claim the Carpenter of Nazareth as a true Comrade. He was not an amateur, but a professional, working honestly for His daily bread. Afterwards, He was ready to heal sick bodies and souls whenever the opportunity offered. For thousands of years He has been doing the same thing, often through the hands and hearts of those who are trying to follow His example, and who delight to say with St. Paul: "Ourselves your servants for Jesus' sake."

If those who serve most are the greatest, then God proves Himself to be the Greatest, because He only is the Servant of all. He is endlessly serving, and no creature of His making is so insignificant as to be passed over. The sparrow falls to the ground to die, and no one cares—no one but God! Sparrows are such "common things." It cannot be in trouble "without the Father," to hold it tenderly in His strong hand. What possibilities open before us as we think of our Lord's hint on this subject. If the Father loves the sparrow as it dies, is it likely that His love for it can be quenched by its death? and He is not the God of the dead, but of the living, for all live unto Him. Does He destroy, or allow anyone to destroy, the little bird so dear to Him? He clothes the grass of the field and the wild flower which we heedlessly trample under foot. If He does not love the flowers and the grass, how can any of His children love them? He is their Servant, dressing them in their fresh and dainty robes, washing them with the dew and the rain, supplying all their needs.

Some people, who need to have their eyes opened, tell us that "miracles don't happen." It seems to me that miracles happen everywhere, and always. Tennyson reminds us that if we were wise enough to understand one little flower, growing in the crack of a wall, we should be divine in our intellect and able to understand God.

Here we are at Thanksgiving-time again, reminded once more that we have cause to thank God for the common gifts which are so priceless, and yet which we are inclined to accept as a matter of course. Where were the vegetables, grain, and fruits (gathered in from countless fields), six months ago? They were partly earth, partly rain, and sunshine, then. The Father knew that His children would need food, therefore He got it ready for them. Men are

very clever—with the materials they find about them—but we should soon starve if we had to depend on their powers of making food. Give the wisest man the materials God uses—the seeds, earth, air, water—and see if he can make one potato, or one apple. These things are "so common"; and yet, if the Divine Servant did not make them, we should be forced to do without them. Men can make flour, but only God can make wheat. Unless He, Who is Servant of all, spread the table with the good things He had provided, none of His creatures could live. Because He is so great He waits on everyone and on every living thing.

Our Lord, in this as in all other things, was the revelation to men of the ways of God. When He was full of the thought of His glorious power, remembering "that the Father had given all things into His hands," He was impelled by the very remembrance of His greatness to stoop to the lowliest act of service within reach. He carried out the saying contained in our text, by rising from the table, where He was the recognized Master and Lord of the party, and doing the ordinary work of a slave. St. Peter was overwhelmed by the thought that His Master was offering to wash his feet—are we accepting His daily, hourly service, in the same spirit of humility? "If I wash thee not," was the convincing reply to the disciple, "thou hast no part with Me." Unless He is willing to give us our daily bread we must die, but at least we should not accept His tender service rudely and thanklessly.

It was not only when the Master walked as a Man among men that He carried out the promise of the text. After the humiliation of the earthly life was left behind, and He had risen gloriously to the new life beyond death, which is so mysterious to us because we have as yet had no experience of it, He still was delighted to take the place of a servant and do a servant's work. What a beautiful story it is, that story of the breakfast by the Lake. The weary fishermen had worked all night, and were hungry and discouraged. They had caught no fish for breakfast, and could not satisfy their healthy appetites. Their Master—Who had fed the hungry multitudes in the wilderness—was not there, or so they thought. Is He ever far away when His disciples have done their best, and need Him? They were only poor fishermen, quite unused to having servants to wait on them, but their self-appointed Servant had made a fire on the shore and had cooked for them a delicious breakfast. Not satisfied with preparing the meal, He invited them to eat and waited on them Himself. "Jesus then cometh, and taketh bread, and giveth them, and fish likewise." He is always preparing our meals, and always waiting on us while we eat, though He no longer shows Himself openly. How could we change bread and fish, or any other food, into strength and thought and love, unless He gave us the mysterious power of digestion? If the digestive power of a man is destroyed, the bread remains bread, or decays, doing harm, not good. No one is wise enough to perform the everyday miracle of digestion by his own power. We are hearing a great deal just now about the possibility of beginning life where there was no life before. "Spontaneous generation" used to be considered impossible; now it is by many declared to be within the bounds of possibility. But if, after all, there should be no infinite chasm between dead and living matter, there still remains the certainty that God only is the Lord and Giver of Life, whether it be animal or vegetable life. Scientists have done many wonderful things, have harnessed many of the mighty forces which God has placed in this world to be servants of all—such forces as electricity, gravitation, air, water, fire, etc.—but the power of giving life is still kept in the hands of Him Who is "The Life." Not a blade of grass, that is vital enough to extract necessary food from the earth, air and water, can the wisdom of men create; not an insect or a flower or a bird can be made. "The earth is the LORD'S, and the fullness thereof; the world, and they that dwell therein." God is infinitely rich with power to change the dust of the earth into fruit

and flowers, and grain and vegetables, animals and men. He is so rich, and we are His loved children; why, then, are we often worried about our necessities? Our Father knows that we have need of many things, and the fullness of the earth is His. Out of the earth He can make all the nourishing and delicious food we want. Out of the earth He can make cotton, silk, or wool, for our clothes. Out of the earth He can make wood or bricks for our houses. Hidden in His earth are gold and silver, jewels, riches of all kinds. From Him came far more precious things than these—the love of our friends, joy, hope, peace, the knowledge and love of God.

Let us really be thankful on Thanksgiving Day, thankful to Him Who is so glad to serve us all; Who gives us sunshine and rain, sweet air, dear friends, and countless other blessings. And let us prove ourselves true children of the Divine Servant; feeling ourselves highly honored when we have an opportunity of serving anyone, willing to follow our Master by preparing meals for hungry men, and waiting on them while they eat. "Going out to service!" What a glorious vocation! That is what God is always doing. Why has He made so many creatures? Why is He constantly making countless millions more? As His service is always needed by everyone—even by those tiny creatures which are so small as to be invisible to us—it must be that He wants to have more and more to serve. His love of service seems never to be satisfied. Yet we, who should be like our Father, are apt to think it hard on us if we are expected to do a little work without pay. The prophet Malachi said that in his days no one would shut the doors of the Lord's house, or kindle a fire on His altar, unless they were paid for it. Did our Leader demand pay for washing the feet of His servants, or for cooking their breakfast? The only path of greatness is the path of service—pay or no pay, receiving thanks or ingratitude. That is our Father's way. Is it ours?

DORA FARNCOMB.

Star-led to the Heights.

A Christmas story, by Dora Farncomb, author of "Hope's Quiet Hour" and "The Vision of His Face." Price 35 cents, postpaid (or three copies for a dollar). The William Weld Co., London, Canada.

The Mending Basket

REPLY TO SHERARD McLEAY.

It has been amusing to read the various opinions as to man's duty about the house, and, withal, rather aggravating to be told that "all farmers are selfish," or to be classed among the men of Sherard McLeay's acquaintance. Just here, let me say, and say it emphatically, that farmers as a class, or farmers' wives, either, are no worse or no more selfish than any other class of men or women. Of course, there are selfish farmers, but there are selfish men all through the world. I know at least one minister of the gospel who will not allow his wife to handle the money—pays for everything himself, from the milkman to the dressmaker—and I know one farmer's wife who always goes to market with her husband to look after the money. She will ride in with a load of hogs, and always be on hand when the cattle are delivered or grain-tickets cashed. Some men would be better to have their wives with them, but this woman's husband is sober and capable. It would hardly be fair to judge all ministers or women by these, would it?

As to Sherard McLeay's day's work, it is a sheer physical impossibility, and needs no further attention. I know of very few farmers in this neighborhood where the men do not help with the milking, or do it all, if there is only one woman; and I know of no woman who has charge of pigs and calves,—but I do know lots of women, and men, too, for that matter, who are working too hard and hopelessly, and not accomplishing anything.

What is a man's duty about the house? I would say it is to co-operate with a

woman to build up a home where peace and contentment abound. Neither one can take the place of the other, but each is the complement of the other, the complement of the other, as was intended by the All-Wise Creator; and in a home where two people are joined in love—there will be no question of duty, but each will be watching to help. "Too idealistic for every day," you say. Well, perhaps it is, but still there are some times where it is carried out.

The trouble is that we are too materialistic, too busy worshipping the dollar to appreciate the better things of life; too blinded by use and custom to see beyond the moment; too proud in



No. 207—Tailored waist, stamped on two yards of linen, at \$1.25.

spirit to acknowledge the Great Giver, otherwise, at least, than with the lips. What are you working for, you farmers, when you toil and slave and save, and make the woman you promised to love and cherish, slave and save, and drive your children from you?—a failure not by any means peculiar to farmers. But what is the object? Stop for five minutes and ask yourself what you are gaining. There is dignity in work, but there is the most abject degradation in slavery, and no man is as mean a slave as the man who serves money. And the woman? Mrs. B. says that the



No. 211—Stamped on lawn, two yards, at 75 cents; stamped on linen, two yards, at \$1.25.

men can't do without them. Well, they don't want to. I don't believe they appreciate themselves as truly as men appreciate them; they don't half know their own power. If they did, they would not be asking for votes. The weaker sex? In physical strength, yes, but not in endurance; in their own sphere are infinitely the strongest and able, if they but knew it, to lift the whole human race nearer to that "God Who loves us all," but it can only be by the way of the Cross. And after all it is no question of rights and wrongs, but of love and service, and common sense.

Bruce Co., Ont.



No. 8535—Stamped on two yards of linen, at \$1.35; stamped on two yards of voile, at 90 cents.



No. 216—Stamped on two yards linen at \$1.25; stamped on two yards voile, at 90 cents.



No. 215—Stamped on 1 1/2 yards, 45-inch voile, at 75 cents.

Designs for Embroidered Blouses.

There is a never-failing demand for embroidered blouses, and although every season one hears that separate waists are going out of fashion, this prediction has always proved false, and they remain as popular as ever, and as long as the coat-and-skirt costumes retain their popularity, so will the embroidered separate waist, and thus it follows that all the

newest ideas along the line of art embroidery appear first on blouse designs, and it certainly seems worth while to put forth one's best efforts on an article which will be so useful as well as decorative.

Hand-embroidered waists are very expensive when purchased ready-made, and our readers will find a consolation in the fact that the materials to produce are inexpensive, and the embroidery a fascinating occupation for leisure hours. These waists are easily made up after being embroidered, and require very little trimming to complete, as the embroidery is usually the only decoration needed. The most fashionable materials at present, are linens, sheer lawns, or marquisettes.

The first waist, No. 207, is stamped on two yards of 36-inch pure, fine linen, and is one of the fashionable tailored models which launder beautifully. It is embroidered with combination of solid and eyelet. White cotton thread is used for this. Size "E" for the eyeletting, and "D" for the solid, padded stitch.

No. 211 is a lingerie waist, and may be stamped on either lawn or linen. The beautiful design shows a combination of the fashionable Punch embroidery, with eyelet and solid. We will speak of this work more fully below.

No. 216 is one of the still fashionable kimono waists, which have had such a tremendous rage; the Punch stitch being embroidered in white, and the remainder of the design in blue. This waist is stamped on sufficient material to allow for set-in sleeves if one does not care for the kimono style.

The Punched, or Normandy embroidery, is having a tremendous vogue, which promises to continue, and become as permanent as the eyelet and solid, which is in such general use. The work is easily done, and on receipt of a stamped envelope a diagram which may be easily copied will teach you this effective embroidery. Linens of a special open weave are necessary for this work, which can also be embroidered on lawn or marquisettes. Special needles are also needed.

No. 8535 is one of the newest models, having a combination of the Venetian Relief and Punched embroidery, and it would be difficult to imagine a more beautiful waist than this.

No. 215 shows a kimono waist stamped on voile, which has been embroidered with shades of white, pink and black, using rope silk. This waist has been embroidered in the French knot stitch, which so successfully imitates beads.

Any further information regarding the working-up or materials used on any of these waists, will be supplied on receipt of a stamped envelope.

Readers will please understand that the prices quoted are for the stamped blouses only. Materials for embroidering are extra, and we do not supply made-up or embroidered articles.

A commenced sample of Punched embroidery, together with special needle, will be sent on receipt of 25 cents.

Also a commenced sample of Venetian Relief will be supplied at the same price, and special threads will be quoted.

Address all orders to Embroidery Dept., "The Farmer's Advocate," London, Ont.

To A Brown Thrush.

By Alice D. O. Greenwood.

Dear little bird on wind-tossed bough,
Singing away through the pelting rain,
Happier far than I art thou;
When storms assail you ne'er complain.
"Cheer up, cheer up, cheer up" you cry
Who taught thee thus to sing, and sing?
In notes so clear, so sweet, so high,
Dear little bird with rain-wet wing.
Brave little bird that all day-long
When the skies are bright, or skies are gray,
Dost cheer me with thy matchless song
Oh, tell me, if thou canst, I pray,
Is this fond fancy but a dream,
That thou when summer days have flown
Wilt wing thy flight o'er vale and stream
To some fair spot that I have known?
Art thou a messenger that's sent
By some dear friend now far away,
To breathe to me of sweet content,
And sing to me when skies are gray?

The Beaver Circle.

OUR SENIOR BEAVERS.

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

ALMOST UNFAITHFUL.

An old man used to tell the following story, whose incidents, he said, happened when he was a young lad just starting to follow a team on his father's farm.

"My father and mother," the old man said, "had gone away visiting in the morning, leaving my two sisters and myself to take care of the place. I had been plowing for a few days back, and I remember the pride with which I strutted to the field that morning after Polly and Nell, as 'the boss of the place.'"

"I had not gone more than three or four rounds when I heard someone calling me. Looking in the direction from whence it came, I found three of my companions, each with a gun. They wanted me to go hunting with them. Of course, I only laughed at them. The idea that I, who had the responsibility of the occasion, should shirk my duty like that, was ridiculous!"

"It was going to be an ideal day, however, for hunting, and I was just longing for a day out again, but of course I could not go with them that day. But they coaxed so hard! I forgot all they told me now, but I remember one of them advising me to tell my father next day, if he thought I had not plowed enough, that old Polly's colt took sick and I did not like to leave it. That kind of persuasion did not affect me much, however. I thought if I went that father would not notice the difference in the plowing after all. I finally consented to go, partly relieving my conscience by thinking that it was their fault for coaxing me."

"They helped me to unhitch quite gleefully, and we drove the team back to the stable again. I thought they had better be unharnessed, and the boys said they would do that while I cleaned my rifle and prepared a lunch. I ran into the house, and was just in the act of cleaning my rifle when I was aroused by a shout from the stable. When I got down I found one of the young lads lying perfectly still on the stable floor behind Polly. As he was as white as a sheet, I thought he was dead for certain. One of the fellows who thought the lad had fainted, rushed out for a pail of water, while the other fellow was feeling his pulse to see if he was alive! I, who had the least presence of mind of anyone, stood watching him for awhile, and then ran for help."

"As I went as fast as my legs would

carry me, I was not long in bringing a man to the rescue. When we got back, however, the lad was sitting on the floor smiling at us. Under the man's directions we soon had him all right again. I then was myself enough to know what had happened."

"It seems he was unharnessing Polly, whose temper I had forgotten to tell them was somewhat irritable. He had pulled the harness off, and was going up to take off her collar, when she kicked him, knocking his wind out, and leaving him in the position where I found him."

"It certainly settled my struggling conscience, for when he was all right, I went straight back to work. I have often laughed at myself since, but I assure you I never ran away from the plow-field again."

"ENOCH ARDEN."

Grey Co., Ont.

A TRIP TO PORT DOVER.

One morning in June we were awakened by our mother. She told us to get up if we wanted to go to Port Dover. Of course we wanted to go, so we got up and started to get ready. We were ready at about six o'clock. Shortly afterwards the double-seated carriage drove up. We all went and got in. It was sort of "jammy," for there were seven of us in all, but we managed it all right.

We reached the Burgessville station at about a quarter to seven and got our tickets. In a quarter of an hour the train came in. We boarded it, but we couldn't find a seat, so we had to stand up all the way, and we were prepared for a little rest after standing up so long.

We had a lunch shortly after we arrived. Then we got some popcorn and ice cream. After about an hour, we got our bathing suits on and went in bathing. We had great fun, for there were many in the water whom we knew.

There was an iron swing in the water, and a teeter. We had teeters and swings. We stayed in about a couple of hours, then we had to come out and get our dinner. I was sorry, for I love water, or being on it.

After we had our supper it was nearly time for our home-bound train.

We went down to the station, but most of the cars that were unlocked were full; so we just had a look around the pier. There were a fisherman and his wife going fishing when we went back to the train. There had been a door unlocked, so we went in and got a seat. We had to wait for the men to put another engine on the train, and to put two more coaches on. At last it started. When we got to our station it was raining to "beat the band."

We were nearly asleep when we got home, safe, and none too dry, but we were soon in bed, and dreaming of what a good time we had had at Port Dover.

IDA BUCHANAN (age 11).

Zenda, Ont.

Re Garden Competition.

All of the "garden" letters, with photos, are not in yet, so I am going to give you two weeks' grace. Kindly send in your letters so that they may reach this office not later than November 7th. This is the last notice that will appear in regard to the Garden Competition.

"Bess" — A Horse.

By Daniel W. Gallagher.

Guilty, yes, sir—that's my plea. 'Tisn't fer such as ther likes of me To evade a charge I'm willin' ter face; I don't set it down as er disgrace That I struck that man and caused him pain;

Why, if it were to happen again— I'd be sore tempted ter strike, I guess, Any feller I caught abusin' Bess. Who is she?—Jove! I thought you knew. She's just a horse—a good one, too, That I used ter drive, and so, terday, When I saw her toilin' erlong ther way With a load piled high by bunglin' fools That would tax the powers of twenty mules,

My blood just boiled, sir, nothing less; And I hated the driver and pitied Bess.

They say dumb beasts don't comprehend, But Bess, why, bless yer, she knows er friend,

And she stopped right short in glad surprise;

I could read ther joy in her honest eyes; Then neighed er welcome, which, like er dart,

Sank deep in my breast and touched my heart;

For it seemed ter say: "I don't complain, But how I long ter be back again With you, old friend, as it used ter be, When you fed and petted and cared for me."

Then the driver struck her. I saw the welt.

It seemed as though that blow I felt; So I sprang ter ther street and peeled my coat—

In er moment more I had clutched his throat,

And hurt him some, I must confess, But he ought not ter have lashed old Bess.

What's that yer say, sir? I may go. I didn't expect quite that, yer know, And after this folks can't tell me That justice ain't dealt as it aught ter be.

And so, that's all I have ter say, Exceptin', perhaps, that yesterday I bought old Bess; she's in my care. She's got an owner who'll treat her square,

Who'll see her through ter ther very end, For ter me she's just like an old-time friend;

And never again will she have ter haul Er three-ton load, but a big box stall Will she occupy and reign ther queen Of er fine big field where ther grass is green.

When I get back home I'll tell all right How yer stood fer treatin' ther horses white.

—Boston Traveller.

The Secret of the Machines.

By Rudyard Kipling.

We were taken from the ore-bed and the mine,

We were melted in the furnace and the pit—

We were cast and wrought and hammered to design,

We were cut and filed and tooled and gauged to fit.

Some water, coal, and oil is all we ask, And a thousandth of an inch to give us play,

And now if you will set us to our task, We will serve you four and twenty hours a day!

We can pull and haul and push and lift and drive,

We can print and plough and weave and heat and light,

We can run and jump and swim and fly and dive,

We can see and hear and count and read and write!

Would you call a friend from half across the world?

If you'll let us have his name and town, and state,

You shall see and hear your crackling question hurled

Across the arch of heaven while you wait.

Has he answered? Does he need you at his side?

You can start this very evening if you choose,

And take the Western Ocean in the stride Of thirty thousand horses and some screws!

Do you wish to make the mountains bare their head

And lay their new-cut forests at your feet?

Do you want to turn a river in its bed,

And plant a barren wilderness with wheat?

Shall we pipe aloft and bring you water down

From the never-failing cisterns of the snows,

To work the mills and tramways in your town,

And irrigate your orchards as it flows?

It is easy! Give us dynamite and drills!

Watch the iron-shouldered rocks lie down and quake

As the thirsty desert-level floods and fills,

And the valley we have dammed becomes a lake!

But remember, please, the law by which we live,

We are not built to comprehend a lie, We can neither love nor pity nor forgive,

If you make a slip in handling us you die!

We are greater than the Peoples or the Kings—

Be humble, as you crawl beneath our rods!

Our touch can alter all created things, We are everything on earth—except the Gods!

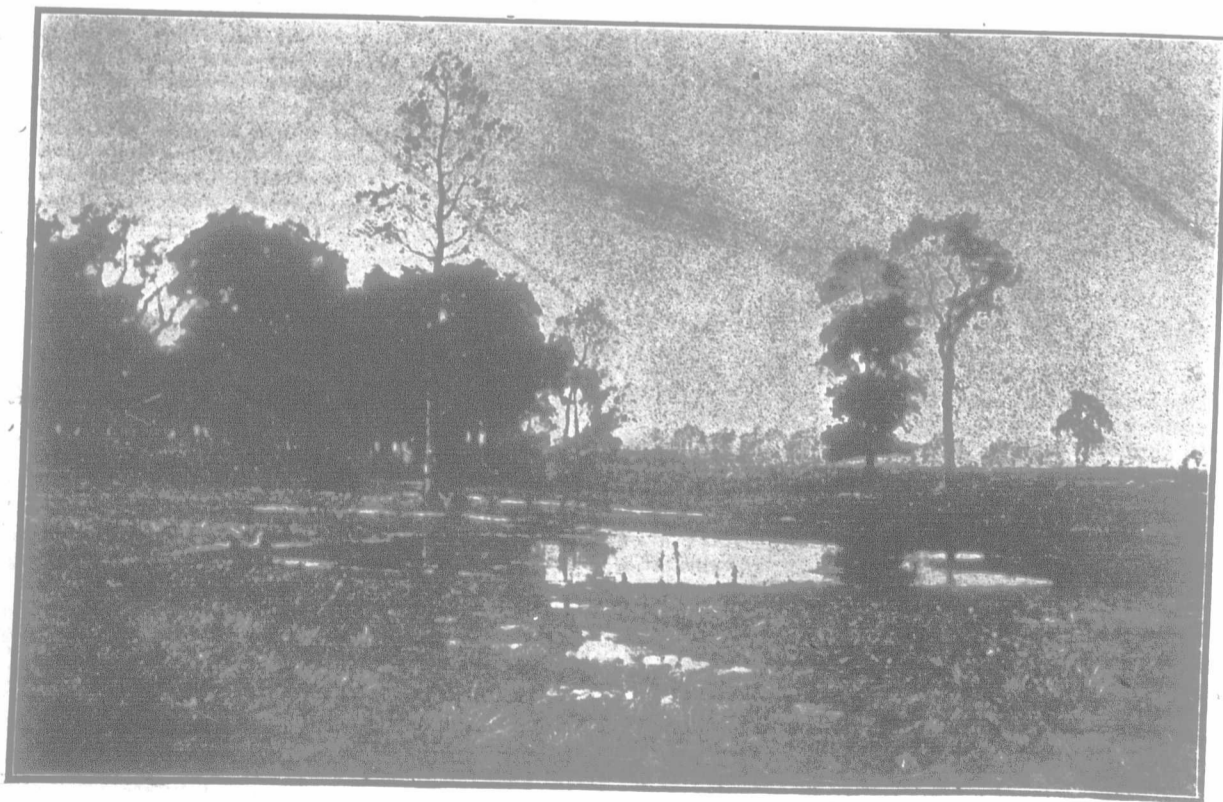
Though our smoke may hide the Heavens from your eyes,

It will vanish and the stars will shine again,

Because for all our power and weight and size,

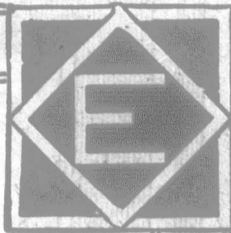
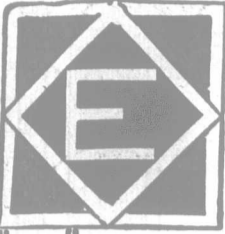
We are nothing more than children of your brain!

—From "Boys' History of England."



"October Gave a Party."

Actual in Kent Co., Ont. (From a painting by A. M. Fleming, Chatham, Ont.)



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The Ingle Nook.

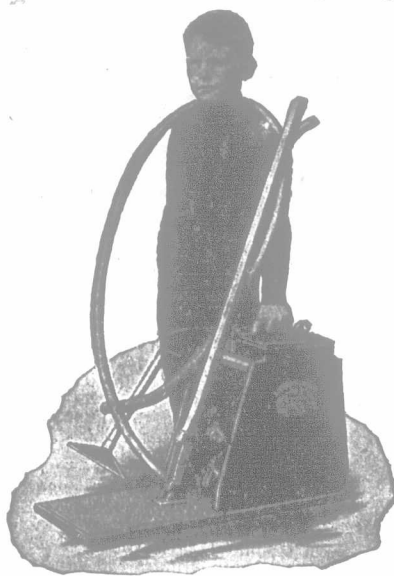
[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope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

'Dear Ingle Nook Friends,—We were speaking, I think, when we left off last time, about "Elizabeth's" book "My Solitary Summer." None of you have ever said whether you are especially fond of books about gardens or not, but if you love the gardens themselves, as every good countrywoman should, I am sure you are; and even if you do not care much about gardens, but love books at all, I am sure you would like this little story in which Elizabeth brings one so close to herself, her likes and her dislikes, and her manner of living in that German land.

As in the "German Garden" she tells again of the flowers that made her little world a Paradise, and of the little, sometimes naughty, angels who there abode,—the April, May, and June babies; for Elizabeth cannot live without children any more than without flowers. She tells you of her strolls, and thoughts, and impulses, and little daily doings, and so you ramble with her and the children through the woods, and down to the quaint old cemetery; and you see her as she rushes off to be alone for a while, hugging a "Thoreau" under her arm and finally throwing herself down to lie on her back beside the pond that lies in a "dimple" of the rye-fields,—just to look up to the blue sky, and think and think; and you creep out after her in the dark at three o'clock in the morning, following her silently as she steals on and on to the old seat in

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the garden, there to smell the sweet odors held by the damp air, to marvel at the wonders of the night, and to watch the soft and silent coming of the dawn over the woods and hills, and last of all over the flowers all about. Then, by and by, you listen to her exasperation at certain dull folk who cannot "feel" the soul of flowers, and silences and beautiful things as she feels them. . . . How interesting she is,—this interested, spirited, clever, witty, unusual yet entirely human woman!

How delightfully she understands children, and how their innocent little ways tickle her sense of humor! In one place, for instance, she tells of the coming of their tutor. . . . "The first day he came I was afraid they would be shy of such a big, strange man, and that he would exact nothing from them but tears; but the moment I left them alone together, and as I shut the door, I heard them eagerly informing him, by way of opening the friendship, that their heads were washed every Saturday night, and that their hair ribbons did not match because there had not been enough of the one sort to go around."—Was anything ever more true to the life?

Really I don't know where to stop quoting from this charming little book. . . . The boy who watered the lawn, it appears, had a troublesome habit of cutting across corners with his cart, in a way that was disastrous to the green turf. In playful talk Elizabeth suggested that, by way of punishment, he should be put in the barrel of his watering-cart, and shut down beneath the lid. "I asked the June baby," she says, "who had several times noticed with indignation the culpable indifference of this boy in regard to corners, whether she did not think this would be a good way of disposing of him. She is a great disciplinarian, and was loud in her

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praise of the plan; but the other two demurred. 'He might go dead in there,' said the May baby, apprehensively. 'And he is such a naughty boy,' said April, who had watched his reckless conduct with special disgust, 'that if he once went dead he'd go straight to the Holle and stay there all the time with the diable'. . . . That was the first French word I have heard them say: strange and sulphureous first-fruits of Seraphine's teaching!"

Like all other children, Elizabeth's were fascinated with things of the celestial order, and full of questions about the angels and the "lieber Gott." Naturally enough such conversations often took place in the old cemetery. Says Elizabeth: "If they were less rosy and hungry, or if I were less prosaic, I might have gloomy forebodings that such keen interest was prophetic of a short life; and in books, we know, the children who talk much on these topics invariably die, after having given their reverential parents a quantity of advice. Fortunately such children are confined to books, and there is nothing of the ministering child—surely a very uncomfortable form of infant—about my babies. Indeed, I notice that in their conversations together on such matters a healthy spirit of contradiction prevails, and this afternoon, after having accepted April's definition of angels with apparent reverence, the June baby electrified the other two (always more orthodox and yielding) by remarking that she hoped she would never go to heaven. I pretended to be deep in my book and not listening; April and May were sitting on the grass sewing ('needling' they call it) fearful-looking wool-work things for Seraphine's birthday, and June was leaning idly against a pine-trunk, swinging a headless doll round and round by its one remaining leg, her heels well dug into the ground, her sun-bonnet off, and all the yellow tangles of her hair falling across her sunburnt, grimy little face.

"No," she repeated firmly, with her eyes fixed on her sisters' startled faces, "I don't want to. There's nothing there for babies to play with."

"Nothing to play with?" exclaimed the other two in a breath—and throwing down their needlework they made a simultaneous rush for me.

"Mummy, did you hear? June says she doesn't want to go to the Himmel!" cried April, horror-stricken.

"Because there's nothing to play with there, she says," cried May, breathlessly, and then they added with one voice, as though the subject had long ago been threshed out and settled between them. "Why, she can play at ball there with all the Sternleins (little stars) if she likes!"

"The idea of the June baby striding across the firmament and hurling the stars about as carelessly as though they were tennis-balls, was so magnificent that it sent shivers of awe through me. "But if you break all your dolls," added April, turning severely to June, and eyeing the distorted remains in her hand, "I don't think lieber Gott will let you in at all. When you're big and have tiny Junes—I think you'll break them too, and lieber Gott doesn't love mummies what breaks their babies."

"But I must break my dolls," cried June, stung into indignation by what she evidently regarded as celestial injustice, "lieber Gott made me that way, so I can't help doing it, can I mummy?"

"On these occasions I keep my eyes fixed on my book, and put on an air of deep abstraction; and, indeed, it is the only way of keeping out of theological disputes in which I am invariably worsted."

I have quoted enough of "My Solitary Summer" to show you what a charming book it is—not profound or deeply philosophical—just a book over which you can smile, from which you will often want to quote, and which you are sure to want to read again. In my own little library I never place volumes that will bear but one reading. I find it a good plan to read books first from the Public Library, then I keep a list of those that I am sure I want to own, those that I shall be sure to want to read again and again, the books worth while for one reason or another, and these I buy as soon as convenient. As

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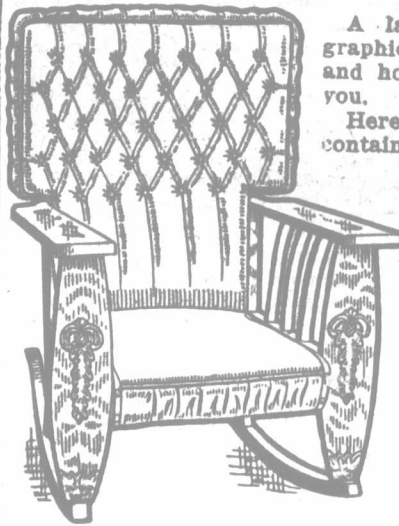
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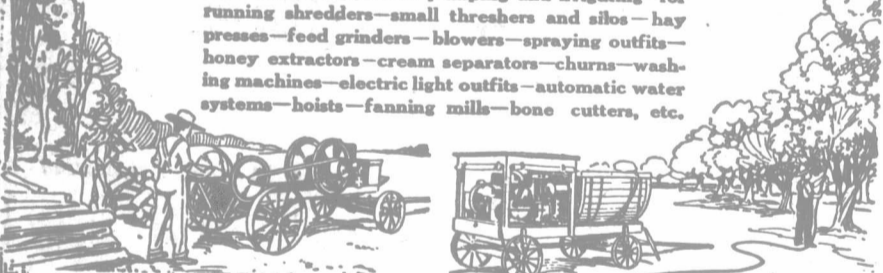
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For sawing—big jobs of pumping and irrigating—for running shredders—small threshers and silos—hay presses—feed grinders—blowers—spraying outfits—honey extractors—cream separators—churns—washing machines—electric light outfits—automatic water systems—hoists—fanning mills—bone cutters, etc.

By leaps and bounds the Gray Stationary Engines are forging ahead and taking the lead as the most reliable and economical help on the farm today. The Big Six (6 H. P.) is a wonderful engine for the heavy fall and winter work that an engine must do, and we can make immediate shipments on these big 6 H. Ps.—No delay or disappointment.

Other sizes of Gray Engines from 1½ to 36 H. P. and every engine guaranteed in every detail as to material—workmanship and power.

Gray Engines start easy—they are extremely powerful—simple in design—have no complications and are very economical. Come to you complete wired up ready to run, no extras to buy.

Big Engine Our big Stationary Engine Catalog contains much valuable information about stationary engines that will be of great help to you in making the right selection. Write for catalog today and let us help you in making the best and most economical selection for your needs.

30 Days Trial Order a big 6 H. P. or any other size in the Gray line. Try the engine 30 days at your own work—give it hard tests—if not just as represented in every detail you can ship the engine back to us and we will pay the return freight.

GRAY MOTOR COMPANY,
1025 G. M. C. Bldg. Detroit, Mich.

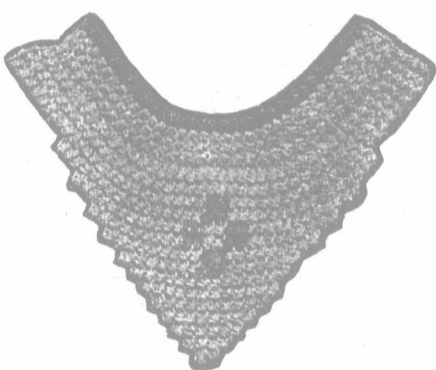
Avondale Holstein Cattle AND DORSET HORNED SHEEP.

To make room for daughters of Prince Hengerveld Pietje, we are offering a few females bred to the greatest bred bulls in Canada, and at rock-bottom prices. Also a few extra good yearling rams. Address: H. LORNE LOGAN, MANAGER. A. C. Hardy, Brockville, Ont.

I said before "My Solitary Summer" is one of those on the list of "restful" volumes which, I am planning, shall fill one whole shelf. I can truly recommend it to you. JUNIA.

CROCHET SHIELD:
Someone asked for directions for this some time ago, but we could not locate a pattern at once. Now, thanks to the Corticelli Co., we are ready to give an answer.

Chain 71, on which work 34 stars of 5 st. each of whatever color you wish for trimming, say tan.
The star stitch is made as follows: Insert hook in 1st st. of the ch., draw a loop up through each of the first 5 st. of the ch.; throw the yarn over and draw it through all the st. on the hook, closing the cluster with a slip stitch. Draw a loop up through the eye formed by the sl. st.; draw a loop up through the back part of the last upright st. of



Crocheted Shield.

the star just made; draw a loop up through each of the next 3 st. (this will leave 6 loops on the hook); draw the yarn through these and close, as in the preceding stars. Repeat to the end of the ch., and break off the yarn. . . . Now for 2nd row, draw the yarn through the outer edge of the first star made, and make a ch. of 3 st.; throw the yarn over the hook and bring a loop up through the last st. of the ch. just made (the yarn is thrown over the hook only for the first st. at the beginning of each row); take up 3 st., drawing up the last loop through the first st. beyond the first eye. Repeat to the end of the row. Break off the yarn.

Now having made the 34 stars make next 3 rows the same, only using the other color chosen, say olive green, for the last row. This makes the collar. Taking up the other st. of the first ch. first made, work 2 stars of 5 st., then 1 star of 4 st. clear across. This will give about 42 stars.

2nd row—widen after the 12th star from both ends.
3rd row—9 stars, widen 1, 6 stars; widen 1, 7 stars; just before drawing the wool through to fasten the star, drop it and pick up a strand of the green and work 2 stars; then before drawing the wool through the last green star drop it and draw the tan wool through; continue with tan stars, widening as on other side.
4th row—Drop off 9 stars at each end, work 10 stars, widen 1; 5 stars then 2 of green; then with tan repeat as before.
5th row—Drop 3, 8 stars, widen 1, 3 stars, 2 green, 2 tan, 2 green, 3 tan, widen 1, 8 stars.
6th row—Drop 3, work 9 stars of the tan, which brings you to the green; 2 green, 2 tan, 2 green; 9 tan.
7th row—Drop 2, 9 tan stars, 2 green, 9 tan.
8th row—Drop 2, 7 tan stars, 2 green, 7 tan. Work 7 rows of tan stars leaving off 1 star at each end of each row, which completes the shield.

One skein each green and tan German-town wool is required for this shield for a boy of 5 or 6 years. Red and blue or any other combination of colors may be used, white and pale blue being especially pretty for a girl. For older children or grown ups increase the length of chain at beginning keeping the number of stitches uneven.

A pattern for a sailor collar to match can be given if anyone would like it.

PARSNIP WINE.

Here comes a recipe for parsnip wine for Mrs. D. Wentworth Co., Ont.,—all the way down from Winnipeg, too, for it was sent by the editor of the Ingle Nook in the Western branch of our paper. Take 15 lbs. sliced parsnips and boil

FREE Book **Fine BOOK FREE**
Yes, absolutely free. Tells all about Taxidermy and how we teach this fascinating and lucrative profession by mail. **LEARN BY MAIL TO STUFF BIRDS** and animals, tax hides, make rugs, etc. Decorate your home with beautiful specimens. Make big profits during your spare time. Write now for our great taxidermy book. It is FREE!
Northwestern School of Taxidermy
5037 Rex Building Omaha, Nebraska

Old Things Look New
when they are dyed with **MAYPOLE SOAP**. It gives them beautiful, rich shades, fadeless in sun or rain.

MAYPOLE SOAP
is very easy to use, and will not stain hands or kettle. It will save you many dollars a year.
24 colors to choose from. Colors 10c, Black 15c at all dealers, or postpaid with free Booklet "How to Dye" from **F. L. BENEDICT & CO.** 75 Montreal.

FACIAL BLEMISHES
The successful home treatment of Skin, Scalp, Hair and Complexional troubles has been a specialty with us for over 20 years. We treat Pimples, Blisters, Blackheads, Eczema, Freckles, Mothpatches, Discolorations, Ivy Poisoning, Ringworm, Rashes, Red Nose, Wrinkles, Dandruff, Gray, Falling or Lifeless Hair, Alopecia, Goitre, Moles, Warts, Red Veins, Superfluous Hair, or any other non-contagious skin trouble. For Hairs on Face and Red Veins there is no reliable home remedy. Our method is assured satisfactory. Consultation free and confidential at office or by mail. Our booklet "F" and sample of Toilet Cream mailed free if this paper is named. **Hiscott Dermatological Institute, 61 College St., Toronto. Est. 1892**

THE SANITARY CLOSET
ODORLESS
MFD. BY
EARL CONSTRUCTION CO.
ATHENS, ONT.

Comfort and Convenience
A perfectly sanitary and odorless CLOSET without waterworks, plumbing or sewage. Write us for literature. It's free.
Earl Construction Co., Athens, Ont.

5 times more light at 1/3 the cost

200 candle power of pure white brilliant light costing less than 1/2 cent per hour. No smoke, or odor. No greasy oil lamps. No wicks to trim. So simple a child can operate it. Cannot explode—absolutely safe—fully guaranteed five years. An ornament in any home. Write to-day for circular A.

RICE-KNIGHT Ltd.
Toronto or Regina

ROYAL JEWEL

STEEL RANGE

THE RANGE OF QUALITY



The Body of Range is made of best cold rolled, blued, planished steel, with lining of heavy asbestos millboard.

Large Top Cooking Surface with wide, short centres between pot holes.

Hinged Front Key Plate over fire, can be raised or lowered by crank.

Oven is perfectly square, large and well ventilated, and is made of one piece of heavy sheet steel, hand riveted. No dust. No warping. No cracking. Steel Oven Racks.

Fire Box large and deep for coal or wood. Special wood fire box when wood is to be used steadily.

Removable Improved Duplex Grate, the best form of grate ever devised.

Ask for illustrated booklet explaining these, and many other excellent features.

JEWEL STOVES AND RANGES ARE MANUFACTURED BY
THE BURROW, STEWART & MILNE CO., LIMITED.
 AT HAMILTON, ONT., AND ARE FOR SALE BY
 the leading Stove and Hardware Dealers everywhere.
 New thirty-two page book of selected cooking receipts mailed to any address free. Write for yours to-day.

until soft in 5 gals. water. Squeeze the liquor well out of them, run it through a sieve and add 3 lbs. sugar to every gallon of liquor. Boil all for 1/2 hour. When it is nearly cold add a little yeast on toast, let it remain in a tub for 10 days, stirring it from the bottom every day, then put it in a cask for a year. As it works over fill it up each day.

Another that will be ready in 6 or 7 months is made as follows: Take 18 lbs. parsnips and 10 gals. water. Boil the parsnips until soft, then strain and squeeze, and to every gallon of liquor add 3 lbs. lump sugar. Boil 1/2 hour, and when cool ferment with a little yeast on toast. Let stand 10 days in a tub, stirring every day, then put in a cask.

SEASONABLE RECIPES.

Grape Catsup.—Wash, cook and strain 3 qts. grapes; add 2 lbs. sugar, 1 pint vinegar, 2 tablespoons each of cloves, allspice and cinnamon, 1/2 teaspoon Cayenne pepper and 1 teaspoon salt. Boil twenty minutes then bottle.

Griddle Shortcake.—Sift two cups flour and 1/2 teaspoon salt. Blend 1 scant level teaspoon soda in 1 cup rich sour cream, beating well, add to the flour and mix quickly with a knife. Knead just a little on a floured board and roll out into a cake big enough to fit the frying-pan. Have the pan heated and greased, put in the dough, cover with a lid, and set half-way back on the range where the cake will bake without burning. When well browned on the bottom turn the cake and brown the other side. Serve for tea with butter and jam, syrup, or honey and cream.

Brown Nut Bread.—Sift 2 cups Graham flour and 1 cup white flour together. Add 1 teaspoon sugar, 1/2 teaspoon salt, and 1 cup molasses. Dissolve 1 teaspoon soda in a little warm water, mix with 2 cups buttermilk and add to the flour with 1 cup raisins and 12 walnut meats broken in bits. Stir well, turn into a well-buttered bread tin and bake in a rather hot oven 50 minutes.

Beans for Supper.—Wash the beans, soak overnight, then cook until tender. Pour off the water, then add enough sour cream to moisten. Simmer half an hour and serve with bits of toast.

Apple Cream.—Boil 2 cups sugar with 1 qt. water for five minutes, then cool and add one cup apple puree (stewed apples rubbed through a sieve) 1 cup white grape juice and 2 cups cream. Freeze and serve topped with whipped cream sprinkled with chopped nuts.

English Apple Pie.—Butter a shallow granite dish, deeper than a pie plate. Fill with sliced apples. Sprinkle on about a cup of sugar, 1/2 teaspoon salt, and a grating of nutmeg or lemon rind. Put on 2 tablespoons butter in bits, add 2 or 3 tablespoons cold water, cover with pastry and bake about 40 minutes. The oven must not be too hot. Serve with or without cream.

"CHINESE LILIES."

Start "Chinese lilies," really a species of narcissi, at any time now as follows: Remove the brown outer coats, make three or four vertical cuts in the outer scales, then bury the bulbs in pebbles. Pour on luke-warm water to cover, and place the dish in a light window in a room in which the temperature will be uniform and not too hot. Paper-white narcissi may be grown in the same way, but should be kept in a dark place until the leaves start. If preferred they, also daffodils and Dutch hyacinths, may be grown in earth; many think they make stronger growth in that way.

The chief element of success with either of the latter,—daffodils and hyacinths, as well as tulips, is to keep them in the dark until root-growth is thoroughly developed, then bring gradually to the light and to greater warmth. If hurried they will make spindly growth and choke in the bud. Six to eight weeks are usually required to perfect the root-growth.

She—"And how is your bachelor friend?"
 He—"When I saw him last he was mending very slowly."
 She—"Indeed! I didn't know he'd been ill."
 He—"He hasn't been—he was sewing fresh buttons on his underwear!"



*"If you have cash at full command,
 Seek the best gunsmith in the land,
 Let such a man your weapon make,
 Remember that his fame's at stake."*

The fame of the Greener guns is world-wide strength, i.e., resistance against heavy charges and lasting wearing qualities are its predominating features; every Greener gun carries the triple guarantee of the British Government proof test equivalent to nine ordinary charges of powder and four charges of shot. The trade-mark of the firm—an elephant—and its reputation are based upon an aggregate experience of nearly 150 years practical gunmaking. Look for the sign of the gun in next week's ad. Free catalogue C3 gives the reason.

W. W. GREENER,
 63 and 65 Beaver Hall Hill,
 MONTREAL, P. Q.

CANADIAN PACIFIC RY

GOING AWAY THANKSGIVING?

RETURN TICKETS
 Between all stations in Canada, Port Arthur and East, at

SINGLE FARE
 Going Friday, Saturday, Sunday, Monday,
 Oct. 25, 26, 27, 28
 Return limit Wednesday, Oct. 30.
 Minimum Rate 25c.
 Full particulars from any C.P.R. Agent.

GRAND TRUNK RAILWAY SYSTEM

THANKSGIVING DAY

Single Fare for Round Trip
 BETWEEN
 ALL STATIONS IN CANADA

GOOD GOING
 October 25, 26, 27, 28
 Return Limit October 30th
 Minimum charge 25c.

Full particulars, tickets, etc., from any Grand Trunk Agent.

HUNTERS & TRAPPERS

We are the largest buyers of raw furs in Canada, and we pay the highest cash prices. WRITE AT ONCE FOR PRICE LIST AND OTHER PARTICULARS.

A. & E. PIERCE & CO.
 500 St. Paul St., cor. St. Peter, Montreal, P. Q.

Columbia Double Disc Record

MUSIC on both sides; fits any machine. New catalogue ready—free from your dealer, or

MUSIC SUPPLY COMPANY,
 88 WELLINGTON ST., WEST, TORONTO

HARAB DIGESTIVE TANKAGE

THE PROTEIN HOG FOOD

MAKES HOG RAISING PAY

Fed along with your other hog foods, it supplies what is lacking—protein, the flesh and strength developer.

Endorsed by experimental farms, and used by the largest hog feeders. Made in Canada by

THE HARRIS ABATTOIR CO., LIMITED
 Toronto, Ontario

Ask your dealer, or write us for prices, etc.

Imp. Clydesdales and Percherons

I have 65 head of Clydesdales and Percherons in my barns to choose from, a great many of them are prizewinners in Canada, Scotland and France, and other extra show horses that have not yet been shown. I have never had so many good horses at one time before. Intending purchasers would do well to see through my barns before buying. My horses are all for sale and at right prices.

MARKHAM P.O., G. T. R., and LOCUST HILL, C. P. R., three miles.
 LONG-DISTANCE TELEPHONE

T. H. HASSARD



Ferrets, \$3 Each.
 Also ornamental Pheasants for sale. Peafowl, red-patched; silver and blue foxes, mink, marten, fisher, etc., bought and sold.

SHORTHORNS and OXFORDS
 For sale, at Greenock farm, Elgin Co., Shorthorn bull 15 months old, Oxford-Down ram and ewe lambs. Reasonable. N. A. McFARLANE, Dutton, Ont.

JOHN DOWNHAM, STRATHROY, ONTARIO When Writing Advertisers Mention this Paper

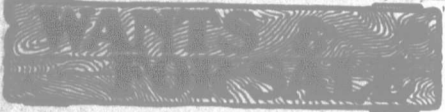
POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

FOR SALE—Single-comb White Leghorn cockerels and pullets. Good birds, \$2 a pair and up. Eggs for hatching. R. Hughes, Ideal Poultry Yards, Collingwood, Ont.

FIRST and second prize Light Brahma and Golden Poland cockerels, two and three dollars each. Harry Wilson, Collingwood.

MONEY in Poultry—Our bred-to-lay strains are putting poultry keeping on a paying basis for hundreds of farmers. Write for illustrated catalogue and Summer Sales List. They are free. L. R. Guild, box 16, Rockwood, Ont.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

ALL kinds of Farms—Fruit Farms a specialty. W. B. Calder, Grimsby.

BRITISH Columbia Ranches, Vancouver Island. Ideal climate, no cold weather; no hail, frost or bad storms; abundant crops assured; richest of soil, unsurpassed for growing grain, fruit and vegetables. The poultryman's paradise. Best market in the world. Improved and partly improved ranches, 5 acres and upwards. Easy terms of purchase. Come to the Pacific where life is worth living. Abundant sport, finest of hunting, fishing and boating. For further information and full particulars write Dept. F., Stuart, Campbell, Craddock & Co., 521 Fort Street, Victoria, or 425 Pender Street West, Vancouver, B.C.

CREAM WANTED—We guarantee highest prices, correct weights, accurate tests, prompt returns. Write for free cans and try a few shipments. Toronto Creamery Co., Limited, Toronto.

FARM for sale—160 acres rich clay loam, 17 under cultivation, 8 slashed, good timber; 4 1/2 miles from Earlton Junction. Rural telephone installed next spring; good roads. Box 6, Earlton, Ont.

FARMS FOR SALE—Improved Wellington County farms. Now is the time to inspect. No obligation or expense. Jones & Johnston, Guelph.

FARM TO RENT—275 acres, more or less, first-class stock and dairy farm; mile from Craiton, Northumberland County. Just built bank barn and stables, with all modern improvements. Good water. Miss McTavish, or G. E. R. Wilson, Colborne, Ontario.

FARM FOR SALE—212 acres rich clay loam, 200 acres under good cultivation, balance bush and pasture, no waste land, no stone or stumps, straight fences; barn, 60x90, hip roof, cement foundation and floors; cement pigery and henery; stabling for 50 head cattle, 14 horses; root houses; lighting rods on barn, orchard; plenty hard and soft water; 11-room brick house, furnace; situated alongside the corporation of Bradford; High and Public Schools and churches; one mile from G.T.R. station. Apply: Drawer 276, Bradford, Ontario.

HELP WANTED—Woman to do housework and assist in milking on dairy farm. Apply, stating wages and experience. Wm. Moody, Box 107, Elora, Ont.

MAN or family wanted to join fruit farming colony—Person with small capital wishing to take up fruit and general farming in British Columbia valley, where fertile soil, excellent transportation facilities and healthful surroundings are guaranteed, is invited to call on or write to G. W. Gorman, 842 Somerset Building, Winnipeg, Man.

MARRIED man wanted—Small or no family; good milker and plowman, abstainer and non-smoker preferred. Permanent position with good wages; labor-saving conveniences, house, garden, milk, apples and summer firewood. Send references. Open Nov. fifteenth. W. T. Davidson, Meadowvale Peel Co.

WANTED—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

WANTED—Reliable woman to assist in general housework. Plain cook; good home, all modern conveniences, healthy locality; good wages. Apply to Mrs. MacBeth, the Mansie, Paris, Ont.

WANTED—Good, careful and experienced married man to manage and work stock farm; must be strictly temperate. Address inquiries, Box 70, Farmer's Advocate, London.

WAPPELLA, SASK.—An ideal district for grain growing and mixed farming. Soil rich loam on clay subsoil. Improved and unimproved farm lands selling from \$15.00 to \$30.00 per acre. Write for full description and lists to D. P. Miller, Sect. Wapella Board of Trade, Wapella, Sask.

MEN require situation on large dairy farm. One married and one single. Ages 31 and 21. Good milkers. Good references. G. Martin, Kinlough, Ont.

Holsteins and Tamworths

I am over-stocked and will sell a lot of young cows and heifers, winners and bred from winners; officially backed and right good ones. Also Tamworths of all ages.

R. O. Morrow & Son, Hilton P.O., Ont. Brighton Station. Phone.

News of the Week.

CANADIAN.

Hon. F. D. Monk has resigned as Minister of Public Works.

.....

Two hundred and fifty Greeks left Toronto on October 19th to engage in the war against the Turks.

.....

FOREIGN.

Colonel Roosevelt left the hospital for his home at Oyster Bay on October 21st. He is recovering rapidly from the effect of the shot fired at him last week.

.....

Turkey and the Balkan States formally declared war on each other on October 17th, and the Bulgarians followed up the declaration by moving upon Adrianople. Turkey has appealed to Great Britain to prevent the war from becoming a "holy war," the Cross against the Crescent, as desired by King Ferdinand.

.....

A revolt against President Madero, led by General Felix Diaz, a nephew of the last President, is under way in Mexico. Vera Cruz last week surrendered to the rebels.

.....

Marconi's right eye, which was injured in an automobile accident in Italy on September 25th, has been removed.

.....

A Government bill has been brought up in Germany to bar Standard oil from the wholesale business in oil in Germany, this to be entrusted to a National Stock Co., operating under Government supervision.

.....

Peace between Italy and Turkey has been concluded by a treaty signed at Ouchy, Switzerland.

Tuberculin Test Waived on Canadian Cattle for the U. S. Exhibition.

Under authority conferred upon the Chief of the Bureau of Animal Industry, by Regulation 89 of the Bureau of Animal Industry, Order 180, "Regulations for the inspection and quarantine of horses, cattle, sheep, swine, and other animals imported into the United States," the requirements of Regulation 88, of Order 180, are hereby waived for cattle to be imported from Canada temporarily for exhibition purposes at the International Live-stock Exposition, to be held at Chicago, Ill., from November 30 to December 7, 1912.

The provisions of said Regulation 89 shall be strictly applied to the cattle covered by this order. Regulation 89 reads as follows:

Regulation 89.—The Chief of the Bureau of Animal Industry may, however, by written order, waive the foregoing tuberculin-test requirement for cattle which are to be imported temporarily for exhibition purposes, provided such cattle are accompanied by a satisfactory certificate of tuberculin-test by a veterinarian in the employ of and receiving a salary from the Canadian Government, made not more than six months previously, and an affidavit by the owner or importer stating that the said certificate of tuberculin-test refers to the cattle in question. Any such cattle which are not sold to remain in the United States shall be returned immediately to Canada at the close of the exhibition. The Department must be notified of any Canadian cattle which will remain in the United States, not tested as required by Regulation 88, and the tuberculin-test will be applied to them by an inspector of this Department before shipment to destination. All cattle, sheep, and swine, intended for exhibition purposes must be shipped directly to the exhibition grounds, and must not be unloaded in any public stock yards.

A. D. MELVIN,
Chief of the Bureau of Animal Industry.

A fellow can keep up his own batting average and make the world a little more cheerful by laying down an occasional sacrifice hit.

To Prevent Chapped Skin

—use warm water and Baby's Own Soap.



The warm water opens the pores of the skin and the minute particles of pure refined vegetable oils which form the creamy, fragrant lather of Baby's Own Soap are absorbed into the skin, keeping it soft, healthy, and preventing cracks and chaps.

A perfect rinsing, then smart rubbing when drying guarantees a fine smooth skin in any weather.

BABY'S OWN SOAP

Best for Baby
Best for You

Canada's Standard toilet and nursery soap for over 30 years.

ALBERT SOAPS, LIMITED, - MONTREAL.

Good Schools!

The best business colleges in Ontario are

Central Business College,

STRATFORD,

AND

Elliott Business College,

TORONTO.

All our instructors are experienced. The courses are up-to-date, and we do more for our graduates than do other similar schools. You may enter at any time. Write either college for a free catalogue.

GOSSIP.

At the tender age of three, masculine conceit had gripped that small boy with a relentless clutch. He had kissed a little girl of three, and she was rubbing her lips vigorously. "You musn't do that again," said the boy's mother. "She doesn't like it. Just see how hard she is trying to rub your kiss off." "Oh, no she ain't," said the boy. "She's rubbin' it in."

A certain man who had been invited to speak at a political meeting was placed last on the list of speakers. Moreover, the Chairman introduced several speakers whose names were not on the program, and the audience was tired out when he eventually introduced the last speaker: "Mr. Bones will now give us his address." "My address," said Mr. Bones, rising, "is 551 Park Villa, and I wish you all good-night."

In a change of advertisement recently received from the Avondale Farm of A. C. Hardy, of Brockville, Ont., an attractive offering is made of a limited number of females, bred to the great Prince Hengerveld Pietje and King Pontiac Artis Canada, two of the most illustrious-bred bulls of the breed. A very reasonable price will be quoted for these heifers in order to make room for new arrivals, a fact that should be kept in mind by parties looking for breeding and production in Holsteins. A few choice Dorset Horned rams are also offered at attractive prices.

CORRECTION.

In the report of the swine exhibit at the Canadian National Exhibition, Toronto, in the class for other distinct breeds, championship for best sow, any age, was credited to the Duroc Jersey entry of Mac Campbell & Sons, of Norwood, Ont. This was an error, as the sow championship went to the Poland China sow, Dorothy 2108, owned and exhibited by Geo. G. Gould, of Edgar's Mills, Ont.

THE SPICE OF LIFE.

"Here I am," said the returned wanderer, "back with the fortune I said I would make, and ready to pay the mortgage off the farm!"

"Ef that ain't hard luck!" exclaimed the father. "As times are goin' now, that mortgage ain't botherin' nobody. I'd a heap ruther have seen you broke an' ready to do regular work for wages."

Her hat was a gorgeous creation. It was the very latest—the golden pheasant trim, twin brother to the Chanticleer nightmare. She sat in the second row of the stalls. "Pardon me, madam," said the man behind her, "I cannot see the stage." She answered not. "Excuse me," continued the miserable worm, "will you kindly remove your hat?" The twenty-guineas-worth stuck to its perch. "Madam," declared the persistent creature sternly, "if you do not take off your hat at once I'll—I'll shoot it!"

A witness in a railroad case at Fort Worth, asked to tell in his own way how the accident happened, said:

"Well, Ole and I was walking down the track, and I heard a whistle, and I got off the track, and the train went by, and I got back on the track, and I didn't see Ole; but I walked along, and pretty soon I seen Ole's hat, and I walked on, and seen one of Ole's legs, and then I seen one of Ole's arms, and then another leg, and then over one side Ole's head, and I says, 'My God! something muster happen to Ole!'"

Uncle Daniel Dewberry wandered around the big department store, idly watching the scintillating colors of the electric fountain.

"Well, sir," said the clerk suavely, "what can I do for you?"

"I want a toothbrush," began Uncle Daniel, and then, before he could say any more, the clerk was tumbling down boxes like circus tents at a one-night stand.

"Yes, sir; you want the latest Parisian importation with the removable handle?"

"No, bub; I—"

"Ah, I see! You want the Japanese special-antiseptic bristles—"

"No; I—"

"Ah, how stupid of me! You want a toothbrush for the madam—"

"Will you please—"

"Oh, for the baby, eh? Well, here's a peach, the 'baby grand.' We—"

Uncle Daniel brought his horny fist down on the counter.

"Young man," he thundered, "let me say a word! I want a toothbrush for our old cow. These pasteurized, hygienic, antiseptic dairies are using them, and we want to be up-to-date, too, be gosh!"

And then the clerk collapsed.

COMFORT SOAP

"IT'S ALL RIGHT"

MAKES MONDAY SHORTER, EASIER, COOLER




POSITIVELY the LARGEST SALE in CANADA



Try it—test it—see for yourself—that "St. Lawrence Granulated" is as choice a sugar as money can buy. Get a 100 pound bag—or even a 20 pound bag—and compare "St. Lawrence" with any other high-grade granulated sugar.

Note the pure white color of "St. Lawrence"—its uniform grain—its diamond-like sparkle—its matchless sweetness. These are the signs of quality.

And Prof. Hersey's analysis is the proof of purity—"99.99/100 to 100% of pure cane sugar with no impurities whatever". Insist on having "ST. LAWRENCE GRANULATED" at your grocer's.



ST. LAWRENCE SUGAR REFINERIES LIMITED, MONTREAL. 66A

The DOMINION PIANO.



Wonderful Tonal Resource

Is the birthright of every DOMINION Piano—built into it at the very foundation. Selected and perfectly seasoned timber, a wonderfully responsive action, a metal arched plate frame that keeps the strings ever taut and in tune—and the loyal and willing labor of experts who have spent 25 to 40 years building "DOMINIONS" make it Canada's "old reliable" and a world-wide favorite.

Choose the PIANO you want in your own home from our catalogue.

\$100 or more saved when you buy a "DOMINION," because we cut off every useless selling expense, deal direct from factory and grant easy terms. This is a remarkable offer. Don't overlook it.

Over 80,000 DOMINIONS are in use the world over

We send our big illustrated catalogue and full information on request.

The DOMINION ORGAN & PIANO CO., Ltd.
Makers of Pianos, Organs and Player-Pianos
BOWMANVILLE, CANADA

REBECCA OF SUNNYBROOK FARM.

By Kate Douglas Wiggin.
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CHAPTER II.

Rebecca's Relations.

They had been called the Sawyer girls when Miranda at eighteen, Jane at twelve and Aurelia at eight participated in the various activities of village life; and when Riverboro fell into a habit of thought or speech, it saw no reason for falling out of it, at any rate in the same century. So although Miranda and Jane were between fifty and sixty at the time this story opens, Riverboro still called them the Sawyer girls. They were spinners; but Aurelia, the youngest, had made what she called a romantic marriage, and what her sisters termed a mighty poor speculation. "There's worse things than bein' old maids," they said; whether they thought so is quite another matter.

The element of romance in Aurelia's marriage existed chiefly in the fact that Mr. L. D. M. Randall had a soul above farming or trading and was a votary of the Muses. He taught the weekly singing-school (then a feature of village life) in half a dozen neighboring towns; he played the violin and "called off" at dances, or evoked rich harmonies from church melodeons on Sundays. He taught certain uncouth lads, when they were of an age to enter society, the intricacies of contra dances, or the steps of the schottische and mazurka, and he was a marked figure in all social assemblies, though conspicuously absent from town-meetings and the purely masculine gatherings at the store or tavern or bridge.

His hair was a little longer, his hands a little whiter, his shoes a little thinner, his manner a trifle more polished, than that of his soberer mates; indeed, the only department of life in which he failed to shine was the making of sufficient money to live upon. Luckily, he had no responsibilities; his father and his twin brother had died when he was yet a boy, and his mother, whose only noteworthy achievement had been the naming of her twin sons Marquis de Lafayette and Lorenzo de Medici Randall, had supported herself and educated her child by making coats up to the very day of her death. She was wont to say plaintively, "I'm afraid the faculties was too much divided up between my twins. L. D. M. is awful talented, but I guess M. D. L. would 'a' ben the practical one if he'd 'a' lived."

"L. D. M. was practical enough to get the richest girl in the village," replied Mrs. Robinson.

"Yes," sighed his mother, "there it is again; if the twins could 'a' married Aurelia Sawyer, 't would 'a' been all right. L. D. M. was talented 'nough to get Reely's money, but M. D. L. would 'a' ben practical 'nough to have kep' it."

Aurelia's share of the modest Sawyer property had been put into one thing after another by the handsome and luckless Lorenzo de Medici. He had a graceful and poetic way of making an investment for each new son and daughter that blessed their union. "A birthday present for our child, Aurelia," he would say,—"a little nest-egg for the future"; but Aurelia once remarked in a moment of bitterness that the hen never lived that could sit on those eggs and hatch anything out of them.

Miranda and Jane had virtually washed their hands of Aurelia when she married Lorenzo de Medici Randall. Having exhausted the resources of Riverboro and its immediate vicinity, the unfortunate couple had moved on and on in a steadily decreasing scale of prosperity until they had reached Temperance, where they had settled down and invited fate to do

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Mix two cups of granulated sugar with 1 cup of warm water, and stir for 2 minutes. Put 2 1/2 ounces of Pinex (fifty cents' worth) in a 16-ounce bottle; then add the Sugar Syrup. Take a teaspoonful every one, two or three hours.

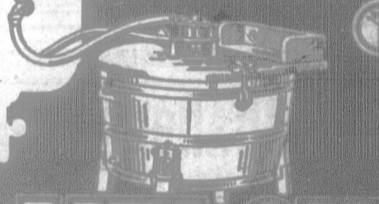
You will find that this simple remedy takes hold of a cough more quickly than anything else ever used. Usually ends a deep-seated cough inside of 24 hours. Splendid, too, for whooping cough, croup, chest pains, bronchitis, and other throat troubles. It stimulates the appetite and is slightly laxative, which helps end a cough.

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its worst, an invitation which was promptly accepted. The maiden sisters at home wrote to Aurelia two or three times a year, and sent modest but serviceable presents to the children at Christmas, but refused to assist L.D.M. with the regular expenses of his rapidly-growing family. His last investment, made shortly before the birth of Miranda (named in a lively hope of favors which never came), was a small farm two miles from Temperance. Aurelia managed this herself, and so it proved a home at least, and a place for the unsuccessful Lorenzo to die and to be buried from, a duty somewhat too long deferred, many thought, which he performed on the day of Mira's birth.

It was in this happy-go-lucky household that Rebecca had grown up. It was just an ordinary family; two or three of the children were handsome and the rest plain, three of them rather clever, two industrious, and two commonplace and dull. Rebecca had her father's facility, and had been his aptest pupil. She "carried" the alto by ear, danced without being taught, played the melodeon without knowing the notes. Her love of books she inherited chiefly from her mother, who found it hard to sweep or cook or sew when there was a novel in the house. Fortunately, books were scarce, or the children might sometimes have gone ragged and hungry.

But other forces had been at work in Rebecca, and the traits of unknown forbears had been wrought into her fibre. Lorenzo de Medici was flabby and boneless; Rebecca was a thing of fire and spirit; he lacked energy and courage; Rebecca was plucky at two and dauntless at five. Mrs. Randall and Hannah had no sense of humor; Rebecca possessed and showed it as soon as she could walk and talk.

She had not been able, however, to borrow her parents' virtues and those of other generous ancestors and escape all the weaknesses in the calendar. She had not her sister Hannah's patience or her brother John's sturdy staying power. Her will was sometimes wilfulness, and the ease with which she did most things led her to be impatient of hard tasks or long ones. But whatever else there was or was not, there was freedom at Randall's farm. The children grew, worked, fought, ate what and slept where they could; loved one another and their parents pretty well, but with no tropical passion; and educated themselves for nine months of the year, each one in his own way.

As a result of this method Hannah, who could only have been developed by forces applied from without, was painstaking, humdrum, and limited; while Rebecca, who apparently needed nothing but space to develop in, and a knowledge of terms in which to express herself, grew and grew and grew, always from within outward. Her forces of one sort and another had seemingly been set in motion when she was born; they needed no daily spur, but moved of their own accord—towards what no one knew, least of all Rebecca herself. The field for the exhibition of her creative instinct was painfully small, and the only use she had made of it as yet was to leave eggs out of the corn bread one day and milk another, to see how it would turn out; to part Fanny's hair sometimes in the middle, sometimes on the right, and sometimes on the left side; and to play all sorts of fantastic pranks with the children, occasionally bringing them to the table as fictitious or historical characters found in her favorite books. Rebecca amused her mother and her family generally, but she never was counted of serious importance, and though considered "smart" and old for her age, she was never thought superior in any way. Aurelia's experience of genius, as exemplified in the deceased Lorenzo de Medici, led her into a greater admiration of plain, every-day common sense, a quality in which Rebecca, it must be confessed, seemed sometimes painfully deficient.

Hannah was her mother's favorite, so far as Aurelia could indulge herself in such recreations as partially. The parent who is obliged to feed and clothe seven children on an income of fifteen dollars a month seldom has time to discriminate carefully between the various members of her brood, but Hannah at fourteen was at once companion and partner in all her mother's problems. She it was who kept the house, while Aurelia busied herself in barn and field. Rebecca was capable of certain set tasks,

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such as keeping the small children from killing themselves and one another, feeding the poultry, picking up chips, hulling strawberries, wiping dishes; but she was thought irresponsible, and Aurelia, needing somebody to lean on (having never enjoyed that luxury with the gifted Lorenzo), leaned on Hannah. Hannah showed the result of this attitude somewhat, being a trifle careworn in face and sharp in manner; but she was a self-contained, well-behaved, dependable child, and that is the reason her aunts had invited her to Riverboro to be a member of their family and participate in all the advantages of their loftier position in the world. It was several years since Miranda and Jane had seen the children, but they remembered with pleasure that Hannah had not spoken a word during the interview, and it was for this reason that they had asked for the pleasure of her company. Rebecca, on the other hand, had dressed up the dog in John's clothes, and being requested to get the three younger children ready for dinner, she had held them under the pump and then proceeded to "smack" their hair flat to their heads by vigorous brushing, bringing them to the table in such a moist and hideous state of shininess that their mother was ashamed of their appearance. Rebecca's own black locks were commonly pushed smoothly off her forehead, but on this occasion she formed what I must perforce call by its own name, a spit-curl, directly on the center of her brow, an ornament which she was allowed to wear a very short time, only, in fact, till Hannah was able to call her mother's attention to it, when she was sent into the next room to remove it and to come back looking like a Christian. This command she interpreted somewhat too literally perhaps, because she contrived in a space of two minutes an extremely pious style of hair-dressing, fully as effective if not as startling as the first. The antics were solely the result of nervous irritation, a mood born of Miss Miranda Sawyer's stiff, grim, and martial attitude. The remembrance of Rebecca was so vivid that their sister Aurelia's letter was something of a shock to the quiet, elderly spinsters of the brick house; for it said that Hannah could not possibly be spared for a few years yet, but that Rebecca would come as soon as she could be made ready; that the offer was most thankfully appreciated, and that the regular schooling and church privileges, as well as the influence of the Sawyer home, would doubtless be "the making of Rebecca."

(To be continued.)

GOSSIP.

HEREFORDS AT AUCTION.

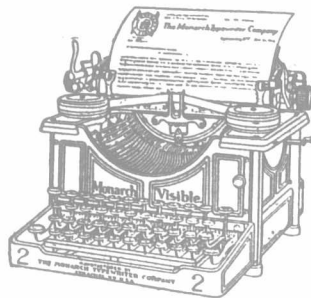
As advertised in this issue, there will be sold by auction, November 6th, at Limehouse Station, G.T.R., near Georgetown, Ont., thirty-seven Hereford cattle, including nine young bulls and ten polled heifers and heifer calves, fifteen of the females having been bred. Herefords are A1 beef cattle, easily kept, and a desirable class for profit in these times of high prices for beef. Those interested may do well to look up the advertisement and attend the sale.

TRADE TOPICS.

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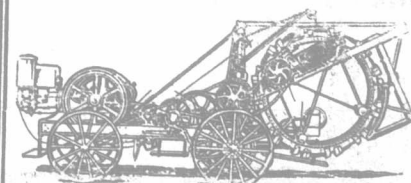
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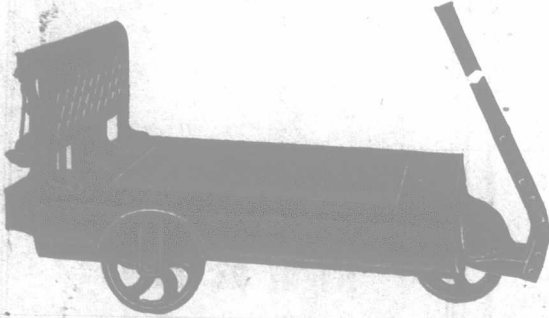
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That sounds pretty good to men who have to work outside in winter. LUMBERSOLES make it possible. At the price, from \$1.35 (children's) up to \$4.00 (men's), every man, woman and child in Canada should have a pair of these great winter boots.

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All these things are important. But the most important for you to consider is:—What will the range you buy do for you?

What return in actual service will you get from the range itself and from every ounce of fuel you put into it?

Behind "Happy Thought" Ranges, you must remember, there is the experience of over twenty-five years—a quarter of a century of sustained effort to produce the best.

The aim of the makers has been from the first to produce a stove that will give the largest possible return in perfect service.

So you find to-day that the "Happy Thought" is not only the best for baking, but also for roasting, frying,

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A sane design proportions this range so that you have the heat at the holes or in the oven just where and when you want it, and in the volume you require.

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THE WILLIAM BUCK STOVE CO., LIMITED, BRANTFORD, ONT.

QUESTIONS AND ANSWERS. Miscellaneous.

PROTECTION OF CROSSING.

Where should one apply re protection of very dangerous level crossing on railway.

G. M.

Ans.—Board of Railway Commissioners, Ottawa, Ont.

TWO ROWS OF TEETH—FEEDING MARE AND COLT.

I have a heavy draft mare that has a double row of front teeth on the upper side. The mare has a colt, and has been on very good pasture all summer, but she is very thin. I have been advised to have one row of teeth pulled out.

1. Is it advisable to have one row of teeth pulled?
2. What should I feed the mare when I wean the colt?
3. What should I feed the colt when weaning?

R. N. C.

Ans.—1. If the teeth are troubling the mare, it might be advisable to have one row extracted, but if she experiences no difficulty in eating her food, it is not necessary.

2. There is nothing better than good hay and oats. A little bran and a few roots might be added.

3. Give the colt good clean hay and rolled oats.

PUMPING AND POWER QUERIES

1. Am sinking a well, and would like to have your or your subscribers' opinion on the best pumping power. Is a two-horse-power engine able to pump water from a 100-ft. well into a supply tank 8 feet above the ground level?
2. What work can a two-horse engine do in the way of cream separating, cutting straw with a small cutter, pulping roots, etc.?
3. Will a gasoline engine of that power run satisfactorily in cold winter weather?
4. Is the up-keep of a gasoline engine very great?
5. Is a windmill good pumping power?

INQUISITIVE BILL.

Ans.—1. A two-horse engine would pump the water all right.

2. It would also run a separator or a straw-cutter, would pulp the roots, and could be used for sawing wood, and such work on the farm as operating the fanning mill, emery, or grindstone.

3. It should, if properly taken care of.

4. Not when good care is given. Of course, the cost of operation depends upon the work done.

5. Windmills, on account of there being very little cost in their operation, are considered very satisfactory for pumping purposes.

TILE IN SAND—STORING CORN.

In reading your valuable paper, on page 1758, of issue of October 10, 1912, your explanation of methods followed on the London Asylum Farm, you speak of two fifty-acre fields having been reclaimed, one especially, being light sand and of having underdrained it. Now, what I want to know is: Can light, sandy land, be drained in a profitable manner? Will the sand eventually lodge in the tile, thereby filling them? We have sixteen acres which needs draining badly, and ditches will not do the work right—it will not warm it up properly.

2. I have standing in stooks one acre of sweet and field corn, which was hit pretty hard with the frost before cutting. The kernel seems to be in the milk stage yet. Will it harden, and what is best method of keeping it from spoiling during coming winter? My barn is pretty warm. It is slated, papered, and clapboarded. I want corn for cow feed.

C. M. W.

Ans.—1. In the field referred to in the article, the sandy portions were high and dry, and did not need underdrainage. It was the lower portions, which were black muck, which were underdrained. Sandy land which is cold and wet can certainly be benefited by underdrainage, and provided the drains are properly put in and the fall is good, they will work all right.

2. We cannot say whether or not it will ripen up. It is not likely that it will get sufficiently matured for seed. Place it on end in a bin in the barn, or on the barn floor.

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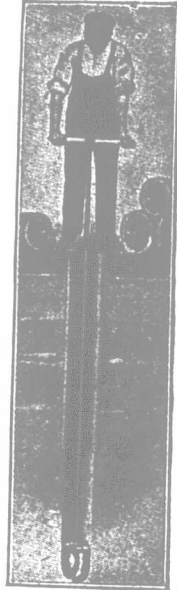
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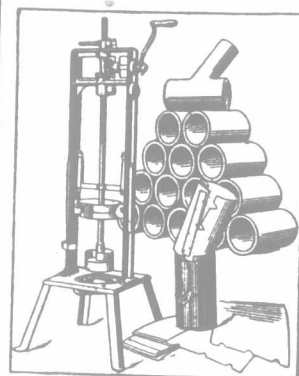
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QUESTIONS AND ANSWERS. Miscellaneous.

OVERWORKED TELEPHONE LINE.

Are fifteen telephones not all that are allowed on one line? We have twenty-one here, and it is too many on one line.

SUBSCRIBER, Ontario.

Ans.—We are not aware of any such general restriction.

SOWING ONION SEED.

Would you advise sowing black onion seed in the fall? If so, please state the time to sow, and the way to fit up the ground for the seed. Also, do onions require much hoeing?

W. A. M.

Ans.—Many growers do not believe in planting onion seed in the fall, as the seed can only be sown on light soils, such as retain no moisture during the winter season. Light soils can always be worked early in the spring, and wet soils are late, so little is gained even when it is sown on the light land. There is more risk in sowing in the fall, and it would be advisable to work the land well this fall, and get it all ready to put in the seed the first thing in the spring. The onion crop requires a large amount of labor, including hoeing.

STIFLE JOINTS SWELL.

When my sucking foal was about two months of age, there appeared on its stifle joint two very large puffs. They do not hinder it, but they look bad, and do not seem to be disappearing any. Would you advise sweating them out, or will they disappear if left alone?

H. J. P.

Ans.—It is altogether likely that the swellings are the result of partial dislocation of the patella. Get a blister made of 1 1/2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces of vaseline. Clip the hair off the parts. Tie so he cannot bite them. Rub well with the blister on the front and inside of the joint once daily for two days. On the third day wash off and apply sweet oil. Let loose now in a box stall, and oil daily. Keep the colt quiet, and blister every four weeks for a few months.

A Million Dollars Saved by Creosoting Cross-Ties.

(Press Bulletin of the Dominion Forestry Branch.)

The annual replacement of cross-ties in Canadian railway lines is about 10,000,000, according to statistics compiled by the Forestry Branch of the Department of the Interior. The average life of a tie, i. e., seven years, could be prolonged to seventeen years, if proper preservative treatment were adopted, and an annual saving of 350 million feet, board measure, of timber, could be effected. This is equivalent to three years' cut of one of the very largest mills in the country.

While the initial expense of creosoting would bring the cost per tie from 58 to 93 cents, it would save \$1,400,000 annually.

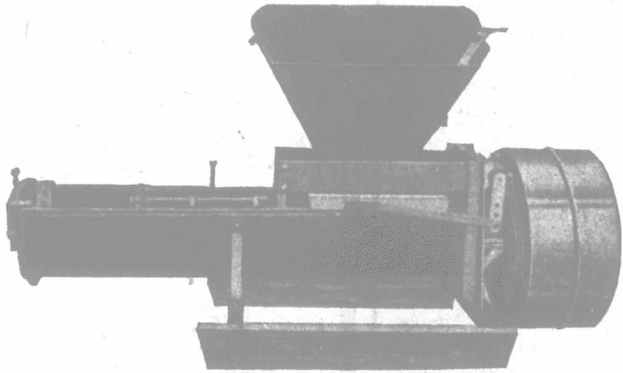
Since 1910, two timber-treating plants have been established, treating, in 1911, 206,209 ties, or 1.5 per cent. of the total cut.

The number of ties purchased in the Dominion in 1911 was 13,683,770, an increase of 4,469,808, or 48.5 per cent. over 1910.

The rapid development of railways in the Western Provinces is largely responsible for this increase.

Eighteen kinds of wood were used. Jack-pine, with 40 per cent.; tamarack, with 19 per cent.; Douglas fir (used to a very great extent in new electric lines in British Columbia), with 14 per cent., and hemlock, with 12 per cent., were the leaders. A remarkable change is that of cedar, in decreasing from 40 per cent. to 5.4 per cent. of the total.

Bacon—"They say that much of a man's interest in woman is due to his inability to understand her. Egbert—"If that is so, I can't understand why he should ever lose interest."



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We manufacture: Power Cement Drain and Sewer Tile Machines; Hand Cement Drain and Sewer Tile Moulds; Power Cement Brick Machines; Hand Cement Block Machines; Cars and Track for Concrete Plants; Power Tamp Machines for Blocks and Tiles; also Windmills, Towers and Tanks. Write for catalogues.

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One Thousand Farmers Wanted To Reply to This Advertisement

SOME people declare that farmers will not answer advertisements—that both stock-raisers and farmers are indifferent to their own interests. We think otherwise. As a matter of fact, we know that farmers and stockmen, alike, are always ready to investigate any proposition which is worth their serious consideration. Here's proof:

A year ago we made the statement that the systematic use of

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would increase the value and the earning capacity of any farmer's stock. Both farmers and stockmen promptly asked to be shown. We gave reasons for the statement, and hundreds proved it true, every word of it.

Now we want one thousand farmers to write direct to us and ask for reasonable proofs of the claims we make throughout our advertising for

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Here are some of these claims worded as definitely as we know how. Consider them fairly and squarely, as they affect your business as farmer and stockman:

Caldwell's Molasses Meal contains 84% of Pure Cane Molasses and 16% of a special variety of edible moss known to have digestive and antiseptic action on the intestines—the process of manufacture makes the Meal absolutely uniform in quality.

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Caldwell's Molasses Meal costs nothing to use, as it takes the place of an equal quantity of cereal.



It will effect a saving of 25% in your forage account.

Caldwell's Molasses Meal will increase the earning capacity of horses and cows, while adding to their value.

Its use keeps horses free from worms and in splendid fettle, they work better, live longer and are worth more at any stage. It keeps cows fit, fat and contented, hence they give more milk. It is a prompt "conditioner" of steers, sheep and hogs.

Caldwell's Molasses Meal will positively increase the cash value and earning capacity of your stock, and at the same time reduce your general forage charges.

These claims are absolutely true. We want to mail you the proofs. It will pay you to consider them well. Write to-day—now! Clip out coupon—mail to us, and we will send you full particulars.

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Please send me full particulars and booklet as to cost, etc., of Molasses Meal,

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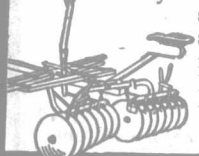
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will do a better day's work for you tested in the field alongside any other. We know the Bissell will outclass the others, but we want you to see the Bissell at work. But first ask Dept. R to mail you our Disc Harrow Catalog.



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Draft horses of all breeds a specialty. Intending buyers should write us for particulars, as we can place before them the most attractive proposition they have yet experienced. We can send highest references from satisfied buyers of nearly all breeds.

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QUESTIONS AND ANSWERS.
Miscellaneous.

HORSE JUDGING.

1. I was at a fall fair, and saw a pacer awarded first prize in the carriage class. Is that allowable, or is it good judging?

2. Also, is it good form to allow a pure-bred Clydesdale in the general-purpose class?

L. H. P.

Ans.—1. According to the classification arrived at by the United States Department of Agriculture, and the American Trotting-horse Breeders, a horse of mixed gait, a padder, or a pacer, should be severely discounted by the judge. Action is very important in placing carriage horses, and if there is a horse in the ring which shows good action, and is a reasonably good type of horse, he should win over a pacer or mixed-gaited horse.

2. This depends upon the type of the horse. There is no rule governing the breeding of what constitutes a general-purpose horse, but a pure-bred Clydesdale usually has too much weight of bone and body, and too much feathering on the legs to win in a good class of general-purpose horses. A freak Clydesdale might conform very well to the requirements of a general-purpose animal.

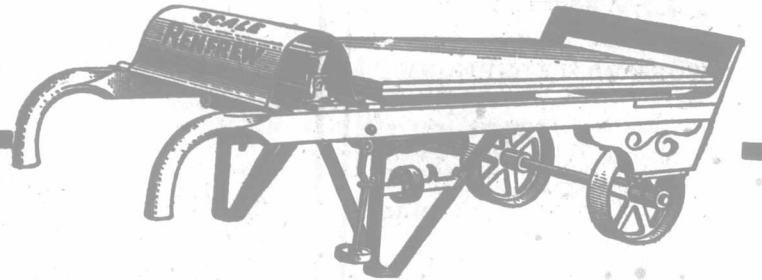
TO KEEP SILAGE FROM FREEZING.

Weather permitting, a proviso to be attached to nearly every farm undertaking this season, we hope to see our silos filled in a few days from the time I write. The corn crop has far surpassed our expectation, and it has been difficult to harvest. Since other crops were depreciated in value by the wet, we shall have no silage to spare. Last year, and in other seasons, in the case of both concrete and wood silos in this district, there has been much trouble experienced and no little waste through freezing to the walls and spoiling. Some practical suggestions through "The Farmer's Advocate" on this point in an early issue would be timely, and worth a good deal, particularly to those using silos for the first time, of whom there must be thousands the country over. W. S.

Ans.—Without going into the questions of location of the silo and insulation of the walls—questions which would not be especially practical to discuss now that the 1912 silo-building season is over, we may say that with any given silo, avoidance of trouble from freezing will be very largely due to the care with which the silage is fed. The important point is to keep the silage dug down a few inches lower around the walls than in the center, being at the same time careful to keep the surface even. Some who observed these precautions had scarcely any frozen silage adhering to the walls during the exceptionally long period of severe weather experienced last winter. Others who let a ring form, and gradually accumulate, soon found the area of the feeding surface reduced two or three feet in diameter, and thickening as they went down. We had such an experience for a time at Weldwood, owing to the herdsman failing to act fully upon our instructions to keep the edges low. Consequently, a ring a foot thick was left adhering to the walls for a depth of six or eight feet. When a new feeder came in February, he took advantage of a few bright days to commence using this frozen silage, prying it off the south portion of the wall at noon each day and leaving it in the stable until feeding-time, when it would usually be pretty well thawed out. In this way he utilized every pound without waste, and afterwards, during March, had no trouble in keeping the wall clear as he went down.

There is difference of opinion as to the advantage of a roof in guarding against frost. It keeps out snow, and, to a certain extent, excludes cold air, but it also excludes sunshine. On the whole, it is probably of some advantage in this regard. Certainly it is of decided benefit in other ways. It keeps out, not only snow and rain, but also sparrows, which, if they have the chance, eat a great deal of corn, and, by picking over the silage, expose the surface layer to deterioration from day to day. A roof also adds to the capacity of the silo at filling-time, and is a convenience in raising the blower-pipe, as well as the inside distributing-pipe.

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I am offering several choice and particularly well-bred Clydesdale fillies from foals of 1911 up to 3 years of age, imp. sires and dams. Also one stallion colt of 1911, imp. sire and dam. These are the kind that make the money.

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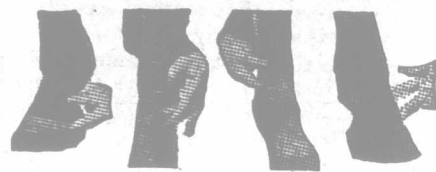
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"I would not take \$5.00 for your book alone," writes Mr. Larson Decker, of New Paltz, N. Y., April 25, 1912.

A retail druggist in a "live horse town" within 30 minutes ride from New York City, writes: "I am selling three times more Save-the-Horse than any other one Veterinary remedy; when they want the GOODS that cures they come back for Save-the-Horse."

GIVES GOOD REASON WHY HE HAS FAITH City Weigher and Gauger, D. CAMERON Montreal, June 10, 1912.

Troy Chemical Co., Toronto, Ont.—I have a road horse that has shown signs of heaves, and I thought I would write and ask you if you thought he could be cured. I have used your Spavin remedy on three different occasions with great results. Awaiting your reply, ROBT. A. CAMERON.

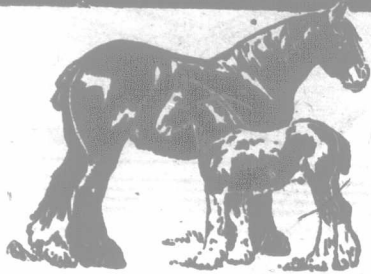
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A small premium will secure a policy in our Company by which you will be fully insured against any loss resulting from the death of your mare or its foal, or both. All kinds of insurance on Live Stock. Transit Insurance covering horses on board cars for 5, 10, 15, 20 or 30 days.

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from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered. Horse Book 92 free.

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PLEASE MENTION THIS PAPER.

QUESTIONS AND ANSWERS. Miscellaneous.

KILLING WEEDS.

Is salt and lime the best remedy to use on a garden infested with weeds? What proportion would you make it? When, and how applied? If you know of any other remedy, kindly state same. J. D. M.

Ans.—The best remedy for weeds is cultivation. Plow or spade the garden, and during the growing season use the hoe frequently. Salt applied to the roots of weeds in sufficient quantity will kill them, but if applied to the entire garden in sufficient quantity to keep down the weeds, it would likely kill all vegetation. Weeds are usually the hardest of our growing plants.

BOTS—BOILING FEED—FLAX-SEED FOR HORSES.

- 1. What will cure a horse of bots? He is greatly troubled with them. 2. Is boiled grain, a mixture of oats and barley, good for a horse once a day, especially if the horse is troubled with constipation? 3. Is boiled flaxseed good for horses? How much, and how often?

F. W. B.

Ans.—1. There is no drug known that will remove bots, and it is not necessary to remove them, as they do no harm, and will pass off in due time without treatment.

2. The practice of boiling grain for horses is not so common now as it was at one time. A little boiled feed is sometimes beneficial for colts, brood mares, or stallions, and one feed a day is sometimes fed to horses being fattened for sale or exhibition purposes. Feed a little bran for the constipation, and a few roots.

3. Flaxseed is a good food for horses in the winter. It may be fed ground or boiled. A good handful fed with oats twice a day, would be sufficient.

TELEGONY—RICE MEAL.

1. If a pure-bred Holstein cow be bred to a pure-bred Shorthorn bull, to which she drops a calf, and is again bred to a pure-bred Holstein bull, can her calf to the Holstein be legally registered as a pure-bred Holstein?

2. If a pure-bred bull of any breed is bred to a cow of another breed, does it have any influence afterwards on the calves of his get, and are they eligible for registry?

3. What is your opinion of feeding rice meal to dairy cattle? Is it of any value as a milk-producer, or is it a fat-producer? L. H. B.

Ans.—1 and 2. Telegony, or the influence of a former service upon future offspring, is now discredited, and calves, provided they conform to other requirements of the registry association, are not rejected because their dams were once served by a bull of another breed.

3. Rice by-products, especially meal and bran, are said to be frequently distasteful to animals, because the oil which they contain soon becomes rancid.

CHICORY—PULLETS.

We have in this section a blue-blossomed weed we call chicory. It has got onto my farm now, and I find it is spreading very fast. We have cut it, and it seems to stool out thicker and stronger than ever, and it is impossible to pull it out by the roots. Have you any method we could go by to get rid of it?

Could you inform me where I could get pure-bred R.C. R. I. Red pullets? C. L. B.

Ans.—1. Chicory is a perennial weed, with a deep, long, thick root. It spreads from seeds, and from shoots, which develop at the crown of the roots. It is a very common roadside weed in some districts, and occasionally is found growing in sod and cultivated fields. It often becomes very troublesome in pastures. Where it has spread into the fields, follow a short rotation of crops, plow deeply, and cultivate well. Where there are only a few isolated plants present, cut them very closely (below the crown, if possible), and apply salt to the root. Clean farming will check it, and rid the land of it.

2. Only through our advertising columns.

One man less to run this Dain Press

Pull Power and Self-Feed

COMBINE more features that will lessen labor, increase capacity and make hay baling more profitable than any other press on the market.

Pull Power enables you to set the press at middle of stack—the easiest point to pitch to. This does away with at least one man on the stack and also with the necessity of having to move press.

There is no pitman shaft on Dain Pull Power Press, so there is no high, dangerous obstruction for horses to step over and slow up speed. This also makes light draft and helps to make a larger day's work.

Self-Feed lessens hand work and so makes capacity larger. Power of team is used for feeding hay into press chamber. It is automatic and positive in action.

No chains, springs or complicated parts are found on the Dain self-feed. It is composed of few parts, so it is simple and practical.

tically impossible for it to get out of order. All hay is carried well down into hopper and is not strung out on withdrawal of feeder arm. This is essential to evenly packed bales.

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No feature has been overlooked in making this the most profitable and satisfactory hay press to operate.

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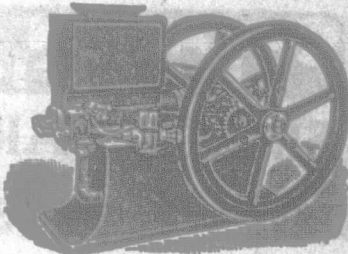
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Three Sizes: 14x18, 16x18 and 18x22

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R. HAMILTON & SON, Simcoe, Ontario

Just Arrived—Clydesdale Stallions and Fillies

Bigger and better than ever before is our 1912 importation just arrived. Stallions with size, character, quality and breeding. Fillies of high-class breeding and quality for show or breeding purposes. Come and see them. Terms and prices right. JOHN A. BOAG & SON, Queensville P.O. and Sta., on Toronto to Sutton Electric Line L.D. Phone.

PERCHERON STALLIONS—Our 1912 importation of Percheron stallions supply the trade for ideal draft character flashy quality of underpinning, stylish tops and faultless moving. Let us know your wants. Any terms arranged.

EAID & PORTER, Simcoe, Ontario

IMPORTED CLYDESDALES

A few choice young stallions always on hand and for sale. Frequent importations maintain a high standard. Prices and terms to suit.

BARBER BROS. Gattineau Pt. Que., near Ottawa.

ORMSBY GRANGE STOCK FARM, ORMSTOWN, P. QUE.

My fall importation (20 head) arrived, ex. S.S. Gramplan, on Oct. 6, all in the very pink of condition. They were personally selected and well bought, and are offered along with five good ones on hand, home-bred and imported, and at very reasonable prices. Don't forget that they are becoming scarce and dear, besides, expenses and freight are increasing. If you want good breeding mares, don't miss this lot.

D. McEACHRAN.

QUALITY AND SIZE IN CLYDESDALES

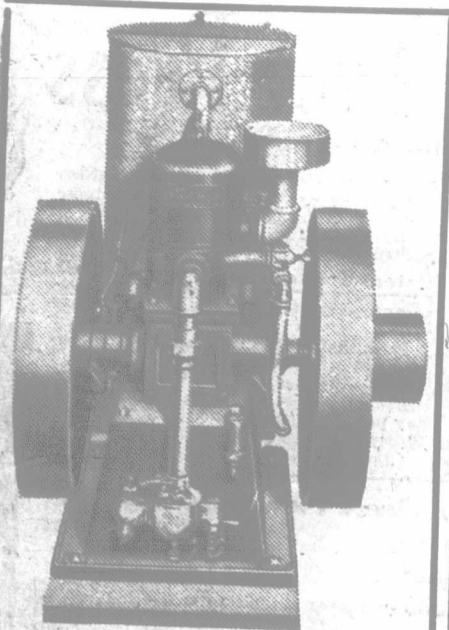
For the best the breed produces in the combination of size, character, quality, breeding and action, see my 1912 importation of Clyde Stallions and Fillies. Prices and terms unequalled.

JAMES TORRANCE, MARKHAM, Locust Hill, C. P. R. P. O. and Sta., G. T. R. L. D. Phone

MT. VICTORIA STOCK FARM, Hudson Heights, P. Q.

We have some very choice young stock for sale, both sexes. Clydesdales and Hackneys from champion sires and well bred dams, at reasonable prices.

T. B. MACAULAY, Prop. E. WATSON, Mgr



High-class Gasoline Engines
FOR FARM USE
Strong, Reliable and Easy to Operate.
Send for Circular.
McKeough & Trotter, Limited
CHATHAM, ONTARIO

CANADIAN PACIFIC
SINGLE FARE
For Hunters

Oct. 7th to Nov. 9th
to all stations Chalk River to Schreiber inclusive, and to best hunting points in Quebec and New Brunswick.
Oct. 17th to Nov. 9th
to all stations Sudbury to the Soo, Hawlock to Sharbot Lake, Coldwater to Sudbury, and on the Lindsay & Bobcaygeon Branch.
Return Limit December 12th, 1912
Ask for free copies of "Sportsman's Map" and "Open Seasons for Game and Fish."

STUMP EXTRACTOR

If you are troubled with stumps, give our "Patent Samson Stump Extractor" a trial. It has now been in use in Europe for the past three years with the greatest success. By its assistance, two men will do the work of three men and a horse. It can also be used for felling trees.

WRITE US FOR DETAILS.

The Canadian Boving Co., Ltd.
164 Bay Street, TORONTO

Aberdeen-Angus—A few bulls to sell yet; also females. Come and see them before buying. Drumbo Station.

Walter Hall, Washington, Ont.

Aberdeen-Angus of Show Form and Quality. For this season my offering in young bulls and heifers are toppers every one. Showing form and quality, and bred from show winners. T. B. BROADFOOT, Fergus, Ont., G. T. R. and C. P. R.

Aberdeen-Angus Cattle Mature early. Best of beef. Several young bulls for sale. Apply **MANAGER "GRAPE GRANGE" FARM** Clarksburg, Ont.

Spruce Lodge Shorthorns and Leicesters Will price cheap young bull from 6 to 14 months; also 1 and 2-year-old heifers, some from imp. sires and dams. Leicesters at all times of both sexes for sale. Phone. W. A. Douglas, Tuscarora, Ont.

Shorthorns—Nine bulls and a number of heifers for sale at very reasonable prices.
Robert Nichol & Sons, Hagersville Ont

Clover Dell Shorthorns Choice young stock of both sexes. Dual purpose a specialty. L. A. WAKELY, BOLTON, ONT. Bolton Station, C. P. R.

MENTION "FARMER'S ADVOCATE."

GOSSIP.

Registered Shropshire Down shearing rams, ram lambs, and ewe lambs, bred from imported and home-bred ewes, also ewes from one to six years old, are advertised for sale at moderate prices by John Hayward, Eastwood, Oxford Co., Ont.

Geo. G. Gould, of Edgar's Mills, Ont., writes under the date of October 10th, to correct a statement in our report of Toronto Exhibition: "In your report of Toronto Exhibition, in class 248—other distinct breeds—you gave credit for female sweepstakes to Mac Campbell, Northwood, while this prize was won by me, on an aged sow, "Dorothy =2108="

Gerald Powell, commission agent and interpreter, Nogent-le-Rotrou, France, who makes selections and ships to order, Percheron, Belgian, and French Coach stallions, mares and fillies, expects to attend the Ontario Winter Fair at Guelph, December 9th to 13th, and hopes to meet old and new customers. Mr. Powell has made many large shipments to Canada, and has greatly helped many of our importers in making their selections. Among his recent shipments to Canada were choice consignments to W. W. Hunter, Olds, Alta., and T. J. Berry, Hensall, Ont.

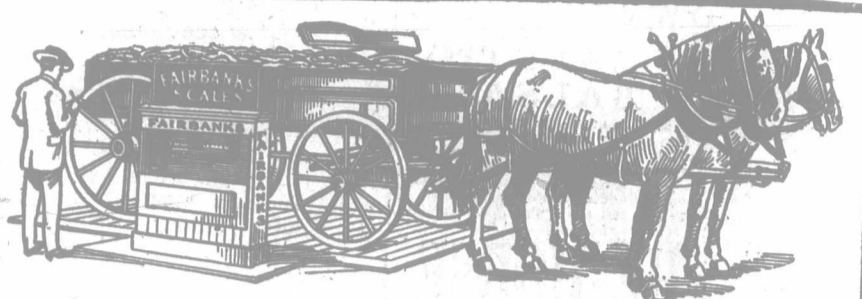
Dr. Duncan McEachran, Ormstown, Que., writes: I arrived at Montreal October 6th, after a most enjoyable visit to Scotland, where I attended the great sale of Clydesdales at Perth, and out of over a hundred and fifty pure-bred fillies, I selected seventeen of the ideal sort for Canadian breeders, as to color, size, form and action. They arrived in the pink of condition. Eleven of them are supposed to be in foal to choice sires; most of them are undoubtedly in foal. This lot were selected for quality, and considering the scarcity of those of good colors, on which I lay considerable stress, having no use for piebalds outside of a circus, or an Indian reserve, I obtained my selection at reasonable prices, which will enable me to offer them at figures well within the means of Canadian breeders. Besides these, I bought a few in Lanarkshire, one of them, Royal Bloom, a ten-year-old mare, the best pattern of a Clyde I have ever seen. She is by Montrave Ronald, out of a Flashwood dam. Her filly foal is by Hiawatha, and she is safe in foal to the same celebrated sire. She is not for sale. Another high-class mare, Begg Darling (30110), by Marmion, out of Bonnie Bessie Lee, by Lord Northesk. She is a 17-hand mare, weighing 1,700 lbs., perfect in form and action, and of a brown color. She also will be retained as a brood mare. Anyone wanting real good brood mares can suit their tastes in this lot, which, with others on hand, number 25, two- and three-year-old fillies to select from.

TRADE TOPIC.

A good cream separator is one of the best-paying investments on any farm where three or more cows are kept. Separators skim closer than any other method, and this is something to be considered when cream and butter are so high in price. The value of having fresh, warm, sweet skim milk for the calves, can scarcely be estimated. Of course, there is a difference in separators. Some skim closer, wash easier, last longer, and run easier than others. These are points which the Sharples Tubular Separator manufacturers claim to be outstanding features of their separators. If in need of a separator, see their advertisement in another column, and write them for free catalogue.

"Doesn't your choir sing at the prison any more?"

"No; several of the prisoners objected on the ground that it wasn't included in their sentences."



Fairbanks Scales for Accurate Weighing

WHEN you weigh on a Fairbanks Scale you have that sense of security which comes from knowing that the weight is absolutely correct. Perfect material and simple construction make them last a lifetime. We can cite many instances where Fairbanks Scales installed sixty years ago are still weighing with accuracy.

Our Catalog No. ZX 2524 fully describing these scales is yours for the asking.

The Canadian Fairbanks-Morse Co., Limited.
444 ST. JAMES STREET :: MONTREAL

Reliable help for the farmer

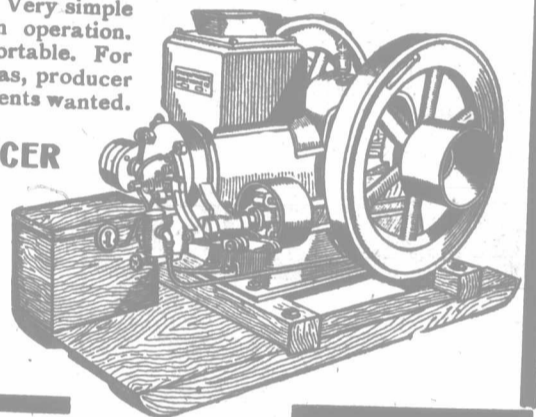
Farm labor is scarce. Wages are high. All the more need for a **BARRIE ENGINE**. Soon pays for itself in time and labor saved. Grinds grain, shells seed corn, pumps water, cuts straw, threshes beans, saws wood, drives churns, separators and washing machines. Does many other things, too.

BARRIE ENGINES WORK LONG

hours without getting tired. Very simple in construction. Reliable in operation. 3 to 100 h.-p. Stationary or portable. For gasoline, distillate, natural gas, producer gas. Write for catalogue. Agents wanted.

The CANADA PRODUCER & GAS ENGINE CO., Ltd.
Barrie, Ontario, Canada

Distributors:
James Rae, Medicine Hat; Canada Machinery Agency, Montreal; Mc Cusker Imp. Co., Regina; The Tudhope-Anderson Co., Ltd., Winnipeg; Calgary, Edmonton, Lethbridge, Saskatoon and Regina.



DO YOU FEED

OIL CAKE ?

The best food known for live stock.

Fine ground, coarse ground, pea size, natted.

If your dealer cannot supply you, WRITE US.

The DOMINION LINSEED OIL COMPANY, Limited
BADEN, MANUFACTURERS ONTARIO

AUCTION SALE WEDNESDAY, NOVEMBER 6th, 1912
AT LIMEHOUSE, ONTARIO

37 Registered Herefords

Polled (naturally) 9 bulls and bull calves (1st and 3rd prize 2-year-olds at Toronto, 1912); 10 Polled heifers and heifer calves, horned; 16 cows, heifers and heifer calves, 1 yearling bull, 1 bull calf; 15 females have been bred; 50% of the offspring from polled bulls and horned cows are polled. Sale in at Limehouse. Train from east arrives 10 a.m.; from west at 11:30 a.m. Sale at 1 o'clock. Address: JAS. McDONALD, Auctioneer. DR. JAS. LINDSAY or ALFRED STONE, Guelph, Ont.

Orchard-Grove Herefords I have lately made a big importation of the leading herds of Illinois. In my herd you now have 25 Bulls to select from; a big range of Heifers and Cows. High-class show and breeding stock a specialty.
L. O. CLIFFORD, Oshawa, Ontario, G.T.R. and C.N.R.

Shorthorns

of breeding and quality—Our offering this year in young bulls and heifers, out of Scotch cow, and sired by our great Mildreds Royal, are put up on show lines, and strictly first-class.

GEO. GIER & SON, Grand Valley, Ont., P.O. and Sta.

Willow Bank Stock Farm—Shorthorns and Leicesters

Herd established 1855, flock 1848, have a special good lot of Shorthorns of either sex to offer of various accents—grand lot of Leicester sheep of either sex—a few imported ones to offer.
JAMES DOUGLAS, Caledonia, Ont.

PANDORA RANGE

PANDORA
—that's the name of the range you will finally buy— why experiment with inferior ranges when the Pandora is guaranteed to give utter satisfaction. 105

McClary's

FLORIDA Book Free

We want every General and Mixed Farmer, Dairyman, Stock Raiser, Trucker and Fruit Grower to know all about the excellent opportunities open at Santa Rosa, Florida. The soil is a deep, black, sandy loam—the best in the State. You can raise two and three crops on the same land in the same year. There is plenty of rainfall twelve months in the year. Irrigation or crop failures are unheard of. You can raise the finest and highest priced oranges in Florida. You can raise and fatten hogs at 1 cent per pound. You can pasture stock the year 'round. Dairying will pay bigger profits than in the North. One of the finest and healthiest climates in the United States. Sunstrokes and frostbites are unknown. Lumber at wholesale prices. All kinds of forage and hay crops. You can raise all semi-tropical crops and almost all Northern crops. It's the ideal place to live, and farm where you can make three dollars where you make one up North.



Send today for our large illustrated book, a free sample of soil, and make us prove these statements. This book is written after 8 years' actual experience on the ground and will prove a revelation to you. It's all mailed free, postage prepaid.

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SANTA ROSA PLANTATION CO.
511-208 N. 5th Ave.
CHICAGO, ILL.

Shorthorns, Cotswolds, Berkshires

For sale: 5 yearling bulls, 12 bull calves, cows, heifers and heifer calves. In Cotswolds: Lambs and shearing ewes. Will book a few orders for Berkshires, fall-litters.

Chas. E. Bonnycastle,
P. O. AND STA., CAMPBELLFORD, ONT.

1864 Maple Lodge Stock Farm 1912

Have some SHORTHORN HEIFERS two years old from cows giving 50 pounds milk per day, and in calf to my stock bull, Senator Lavender.

Grand young LEICESTERS from imp. Wooler of Sandy Knowe, champion at Toronto, and imp. Royal Connaught.

A. W. SMITH, MAPLE LODGE, ONTARIO
Lucan Crossing, G. T. Ry., one mile.

GEDARDALE SHORTHORNS
Shorthorns of all ages, pure Scotch and Scotch topped, imp. and Canadian-bred, choice heifers, choice young bulls, also the stock bull Lord Fyvie (Imp); anything for sale.

Dr. T. S. Sproule. M. P. Markdale, Ontario.

OAKLAND 50 SHORTHORNS

Herd header for sale, Scotch Grey = 72892-, still in his prime, a beautiful roan and a grand handler, straight lined, quiet, active and allright, and one of the choice bulls in Ontario; also five other good bulls, one year and over.

JOHN ELDER & SON, HENSALL, ONTARIO

SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newton Ringleader, = 73783-, and Scottish Pride, = 36106-. The females are of the best Scottish families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - Ayr, Ontario

Fletcher's Shorthorns Our herd of Shorthorns (Imp.) or direct from imported stock, is headed by the grandly-bred Bruce Mayflower bull, Royal Bruce (Imp.) = 55038 = (89909) 273853. Choice young stock for sale.

GEO. D. FLETCHER, R.R. No. 2, Erin, Ont.

Shorthorns for Sale—Threestrong-boned large cows with calves by side; choicest breeding and heavy milking strain.

STEWART M. GRAHAM, Port Perry, Ont.

QUESTIONS AND ANSWERS.
Miscellaneous.

BOARD AND WAGES DURING ILLNESS.

Being sick for two weeks, am I entitled to any wages or board?

FARM LABORER.

Ans.—It depends upon the terms and nature of your engagement, if any. If working by the year, or for a term of months, having board regularly provided for you as part of the remuneration, you are entitled to both board and wages, providing, of course, that your illness was not attributable to culpable neglect on your own part.

BLOODY MILK.

I have a three-year-old cow started to give bloody milk in two quarters. What can be done for her?

J. H. W. A.

Ans.—Bloody milk is generally due to rupture of some of the small blood vessels of the udder, usually induced by congenital or inherited weakness. Treatment consists in bathing the affected parts, long and often, with cold water, and giving one ounce of tincture of iron in a pint of cold water as a drench three times daily until blood flow ceases. If she becomes constipated, give a pint of raw linseed oil. If this does not effect a cure, try giving three drams of nitrate of potash three times daily in a pint of water.

PASTURING RAPE.

I sowed a field of rape this summer, the first I ever sowed, but find that it has provided more pasture than my sheep will eat. Would it do to pasture cattle or pigs on it?

SUBSCRIBER.

Ans.—It is all right for pigs, and also for cattle, providing you take precautions to guard against bloating, such as turning on at first for only an hour at a time in the middle of the day when the rape is dry, and gradually lengthening the time, also allowing the cattle the run of a grass field, or access to some dry fodder. Swine will not bloat on it, but the precautions mentioned apply to sheep as well as to cattle.

LOSS OF CUD.

What shall I do with a cow that has lost her cud? Is there any way of replacing it?

H. B.

Ans.—Loss of cud is not a disease, nor the cause of disease. It is merely a symptom due to some primary disorder. There is no use trying to cure the symptom. Treat the cause of it, and when this is attended to the cud will come back all right. It is a peculiar idea, many people seem to have, that a cow has a permanent cud in her mouth. She has nothing of the kind. The cud comes up each time when she commences rumination. At other times there is no cud in the mouth. Giving a cow an artificial cud is utterly mistaken and futile. Periodical rumination is a normal process, which proceeds when the animal is in health. Its prolonged absence is a positive sign of sickness or disorder. If you cannot diagnose the cause yourself, employ a veterinarian. We cannot even attempt diagnosis without observation or further description of symptoms.

Veterinary.

MALIGNANT TUMOR.

For more than a year my colt has had a growth in its mouth. My veterinarian has removed it three times, and left dressings for it, but it always grows again. Lately I have been applying sulphuric acid to it, and this keeps it from getting larger, but does not remove it.

A. F. O'N.

Ans.—This is a malignant or cancerous growth, and a cure is very doubtful. All that can be done is to dissect it out again. If all diseased tissue can be removed, it may not reappear, but as it is situated in such close proximity to the bones of the jaw, it will probably be impossible to remove all. No doubt your veterinarian has done all that can be done. You may be able to keep it in check by the use of strong acids, but such treatment is not considered advisable, and as there is danger of infection, the advisability of destroying him should be considered.

MOLASSINE MEAL



has raised more first prize livestock than any other food in Great Britain.

Also forty first prizes at the Canadian National Exhibition were won by livestock fed on MOLASSINE MEAL.

Now that you are feeding new oats it is very essential to use MOLASSINE MEAL with each feeding.

There is only one Genuine MOLASSINE MEAL, and that is made in England. Don't be confused by imitations with similar sounding names.

Try it this winter. It is as good as pasture. If your dealer does not handle it, write us direct.

THE MOLASSINE CO., LTD., London, Eng.

Distributors for Canada
L. C. PRIME CO., LIMITED

St. John, N.B., 402 Board of Trade Bldg., Montreal
Pacific Bldg., Toronto

The National Stock Food Company

GENTLEMEN:—I am so pleased to write you, with reference to a very bad colic case I had. Although the horse was almost dead and hopeless I drenched him with two bottles of your "ANTI-COLIC"; he made a fine and quick recovery. I obtained as good results as this one with any of your other preparations I used. Yours truly, O. Yelle.

The National Stock Food Co., whose products are famed all over the Dominion, always carry a stock of pure Veterinaries' medicines. Our expert Veterinarians are at your disposal for free consultation. Just write and give all details possible on the disease your animal is affected with, when you will receive the answer strictly free of charge. Write at once.

The National Stock Food Company, Ottawa, Ont.

NOTE.—For shanty horses, special medicines. Write before you go.

Present Special Offering

20 High-Class Scotch Shorthorn Heifers
10 High-Class Young Shorthorn Cows
5 High-Class Scotch Shorthorn Bulls

At moderate prices, including Marr Missies, Emmas, Cruickshank Nonpareils, Duchess of Glosters, Village Girls, Bridesmaids, Butterflies, Kinellar Claretts, Miss Ramsons, Crimson Flowers; also a number of the grand old milking tribe, which have been famous in the showing.

ARTHUR J. HOWDEN & CO.
Columbus, Ontario



THE AULD HERD

A. F. & G. AULD, Proprietors, Eden Mills, Ontario
SHORTHORN BREEDERS

We have ten high-class senior and junior bull calves for sale, Toronto and London winners. Out of imported and Canadian-bred cows and by Scottish Signet, Bud's Emblem and others. Prospective buyers met at either Guelph or Rockwood.

Correspondence invited. A. F. & G. AULD, Eden Mills, Ont.

SHORTHORNS

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.

H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.
JOHN CLANCY, Manager



I Have SHORTHORN Bulls and Heifers, SHROPSHIRE and COTSWOLD Rams and Ewes, CLYDESDALE Fillies and Colts

that are as good as I have ever had, and that I will sell for prices within the reach of all. We have been in the business 75 years, always in the front rank, and propose to keep that position. You cannot afford to buy without writing us for prices. ROBERT MILLER, STOUFFVILLE, ONTARIO

Scotch Shorthorns

Present offering: Three young bulls of serviceable age, from imp. sires and dams. A few very good bull calves. Cows and heifers bred or with calves at foot.

Burlington Jct. Sta., G. T. R. W. G. PETTIT & SONS, Freeman, Ont.

1861 Irvine-Side Shorthorns 1912

Offering for sale young bulls and heifers that are the result of over 50 years successful breeding. Pure Scotch, and carrying the best blood of the breed. Few good Oxford Down rams.

John Watt & Son, Salem P. O., Ont. Flora Station, G. T. and C. P. R.

SALEM SHORTHORNS

Headed by Gainford Marquis, undefeated bull of three countries. See our show herd at the leading fairs, starting at Winnipeg. J. A. WATT, SALEM, FLORA STA., G. T. and C. P. R.

Scotch Shorthorns

FOR SALE. One promising 12 months imported Bull Calf, a Marr. Flora, recently imported; 12 bull calves from 6 to 11 months old, all by Imported Sire—some good ones among these; also 30 choice cows and heifers in calf, at reasonable prices. Farm 1/2-mile from Burlington Jct. Station. MITCHELL BROS., Burlington, Ont.

LITTLE BOY WAS SUDDENLY TAKEN WITH DIARRHCEA and VOMITING

If you are suddenly taken with Diarrhoea, Dysentery, Colic, Cramps, or Pains in the Stomach, Cholera Morbus, Summer Complaint, or any Looseness of the Bowels, do not waste any time, but immediately procure a bottle of Dr. Fowler's Extract of Wild Strawberry, and it will cure you in no time. Mrs. H. L. Steadman, Pleasant River, N.S., writes: "A year ago this fall, my little boy was suddenly taken ill with diarrhoea and vomiting, and as our doctor is ten miles distant, it seemed as if I could not get help soon enough, but on going to the country store I purchased a bottle of Dr. Fowler's Extract of Wild Strawberry, and after the first dose could notice an improvement, and the next day the child was better and regained health. Since that time I always keep it on hand."

Insist on being given "Dr. Fowler's" when you ask for it. Price 35 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Ayrshires of production, type and quality. I can supply Ayrshires that will please the most exacting critic. Young bulls or females of any age, the kind that swell the bank account.

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

"What's new in the news?" "Terrible scandal at Oldport. It has leaked out that Mrs. Wallaby-Wombat, the society leader, exacts a percentage of her servants' tips."

"By the Sea" is a very pretty title for your picture," said the interested on-looker. "But the sea is too green, and the waves are too fluffy." "That's so," replied the artist. "I'll paint some branches and twigs into it and call it 'The Woodland Way.'"

"Yes," said Mr. Dustin Stax, "there are \$100,000 jobs waiting for young men who are competent to fill them."

"What requirements would you expect?" "Well, he'd have to show that he was competent to establish and run as big a business as mine on his own account. And then, of course, he wouldn't need the job."

She Had Such Beautiful Hands

that it was perfectly evident that she used SNAP, the original hand cleaner, to remove the grime of housework.

Hand cleaners by any other name do not smell as sweet. Avoid rank imitations, and remember the name SNAP



SNAP

Order from your dealer to-day. Save coupons.

QUESTIONS AND ANSWERS. Miscellaneous.

FRONTAGE TAX.

Can a township levy a frontage tax on my property for a road that the township is building, which is a mile from my property, and also a road I never travel, and also never had any notice of the proposed tax?

Ontario. RATEPAYER.
Ans.—Going upon the foregoing statement of facts alone, we think that your question should be answered in the negative.

MUSTY OATS.

The oats in this locality are sprouted, matted together, and musty. Some horses have been lost as a result of feeding them. What treatment would render them safe to feed?

A. N.
Ans.—Dusty or musty food (especially the latter) is very unsafe for horse food. It may cause serious digestive troubles, or cause a nervous disease known as cerebro-spinal meningitis, which, in most cases, is fatal. The safer way is, of course, by some means, to secure food that at least is not musty. If this cannot be done, boiling the oats thoroughly will destroy the germs and make the grain reasonably safe for food. It should be fed in small quantities at first, and the ration gradually increased as the animals become accustomed to it. V.

OVER-RUN SKIM-MILK TEST.

1. Will you tell me, through your paper, whether 248 lbs. cream testing 4.2 will not make more than 167 lbs. butter?

E. R. L.
2. What should skim milk test?
Ans.—1. There is not much wrong with the yield of butter. In fact, we would not say there was anything wrong. It is a trifle below the average, but there is always a reasonable margin of variation to be allowed for.

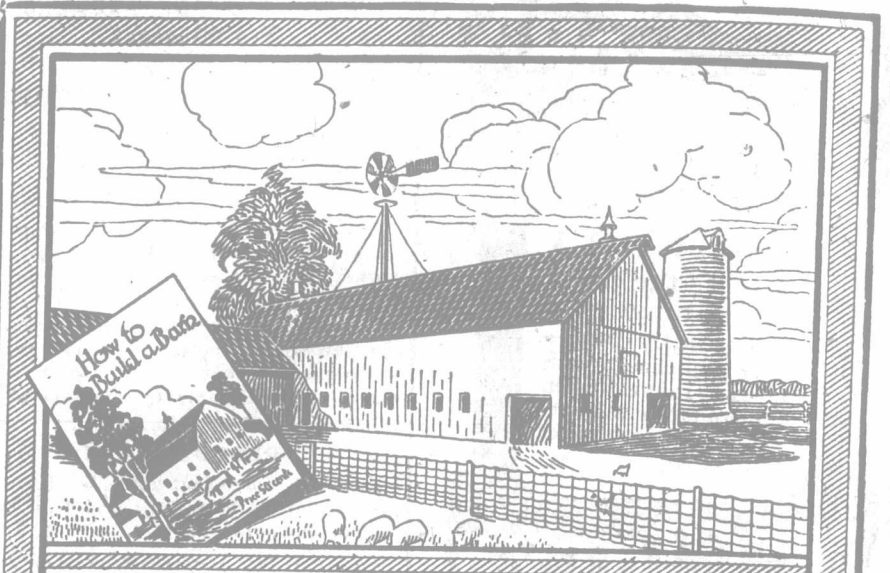
2. About .03 to .05 per cent; i. e., from three to five one-hundredths of one per cent. Of course, any good separator is supposed to be capable of skimming down to .02, or even lower, but for everyday work the figures quoted are representative.

TURKEYS DYING.

I had a flock of 25 nice, healthy turkeys, until a few weeks ago, when they commenced to get sick and die. I have lost 11 of them. Some of them seem well in the morning, and come home sick and die in a few days. They have been feeding on green corn, so I thought perhaps this might be the cause of their sickness. They appear to have slight diarrhoea, and are weak. What is the trouble; also treatment? I have given them small doses of castor oil, also a few drops of coal oil when the sickness begins, but it does not effect a cure.

T. H. T.
Ans.—With reference to this query, would say I have had no experience with turkeys having access to green corn, as we do not grow or feed any corn. I think, however, it would affect the turkeys, and possibly is the cause of the trouble, although if fed old grain in the form of wheat or oats twice per day, I don't think they would eat enough of the green corn to produce such disastrous results. If it were my case, I would make sure the birds had plenty of grit or gravel, and feed boiled rice to cure the diarrhoea; also give a few drops of tincture of iron in the drinking water. However, if the droppings were fluid and a greenish-yellow in color, I would suspect the trouble was "black-head," and would then make an examination of the liver of a dead bird to see if same was enlarged and covered with yellowish-white spots of diseased matter. If I found them, I would sell every turkey at once. The birds might have "cholera," which is easily told by the birds' excessive thirst and usually dying in a couple of days after being noticed. I also think that at this time of the year that it would be advisable to sell off a flock in which "cholera" had appeared. I have discovered the past few seasons that it pays in the health and growth of my flock to carry over all grain they eat, and give no new grain until January or February.

W. J. BELL.



Here is a Book of Facts About Barns. It is FREE

THERE never was a book like this before. There never was such a book published to which you could turn for all the information you require about the planning, building or equipment of a barn.

This book shows complete and practical plans of several splendid barns, drawn from experience by practical men. It also contains many pages devoted to barn equipment—to numerous handy features which can be installed at small cost in your spare time, to make your present barn more valuable, convenient and healthy.

Send for "How to Build a Barn"

Even though you do not intend to build a new barn right away, you should have this book.

It will enable you to eventually plan a new barn that will be many times more valuable than your old barn, and which will cost you less than if you had some one else to do the planning for you.

It shows you how to arrange your barn to get the utmost value from every inch of space.

It gives many suggestions as to

to install labor saving devices and important conveniences that will make the work around the barn easier.

It shows you how to select the right materials—those that will serve your purpose best and cost you the least.

All this information is yours merely for the asking. Write today. Don't delay. Just send us your name and address and we will send the book—FREE of all charge and without obligation.

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12
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F. A.

SPECIAL PRICES

to clear, before going into winter quarters, on three fine spring bull calves, sons of Auchenbrain Good Gift, first-prize aged bull at Dominion Fair, TROUT RIVER, QUE. Bell Telephone, Huntingdon 81-21. Carr's Crossing, G. T. R.; Huntingdon, N. Y. C. R.

Ayrshires and Yorkshires—We now offer at bargain bull calves dropped in July, 1912. All bred from (imp.) sire and from either dams with good records, or their daughters either imported or home-bred. Some choice February pigs; also young pigs.

Alex. Hume & Co., Menie, Ont.

City View Ayrshires—Bonnie M seen, or both dam and gr. dam R. O. P. cows. O yearling bull and calves of either sex. Will sell a few cows. JAMES BEGG, R. R. No. 1 St. Thomas One and a half miles from all stations.

Hillcrest Ayrshires—At head of herd is Ivanhoe of Tanglewild, a son of the champion Ayrshire cow, Primrose of Tanglewild, R. O. P. test 16,195 lbs. milk and 625.63 lbs. fat; 60 head to select from. Inspection invited. F. H. HARRIS Mt. Elgin, Ont.

STONEHOUSE AYRSHIRES

Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers

HECTOR GORDON, Howick, Quebec.

Burnside Ayrshires
R. R. NESS, Howick, Quebec.

Champions in the show ring and dairy tests. Animals all ages and both sexes for sale. Long distance phone in house

GAVE UP ALL HOPES OF EVER GETTING WELL

Mr. Jacob E. Herr, 111 Grange St., Stratford, Ont., writes:—"Ten years ago I suffered with a very peculiar disease. I would go to bed feeling as well as could be, and after sleeping for five hours I would wake with a severe pain in my back, then moving into my side and breast. The pain was so terrible I could not lie in my bed, and usually had to sit until morning with a pillow propped up behind my back. With all my pain I would go to work, and after working up to about 10 o'clock the pain would leave me entirely. The same thing would happen the next night, and every night for two years. I tried four different doctors, but none of them did me any good. I tried a great many patent medicines, but all of no avail. I gave up all hopes of ever getting well. A friend persuaded me to try Milburn's Heart and Nerve Pills. I bought four boxes, and after using the first one I felt a change for the better, and after using three boxes I could sleep all night. The pains were gone, and I was completely cured.

Milburn's Heart and Nerve Pills are 50 cents per box, or 3 boxes for \$1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Don Jersey Herd

Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.

D. Duncan, Don, Ont., Duncan Stn., C.N.R. Phone Long-distance Agincourt.

BALAPHORENE A. J. C. C. JERSEYS

Present offering: Cows from three to seven years old; calves from two to ten months old; either sex. JOSEPH S. ABROOK, HAVELOCK, ONT.

HOLSTEINS

We are now offering some young bulls from 4 to 10 months old, got by the great sire, Ida's Paul Veeman, which has daughters with 20 lbs. of butter in 7 days as 2-year-olds; also some cows and heifers freshening in Oct., served by Veeman. Write or come and visit the herd for particulars. H. C. HOLTEY, Belmont, Ont.

SPRING BROOK HOLSTEINS and TAMWORTH SWINE

Two rich-bred bulls for sale, 15 months old; popular strains; "Record of Merit" ancestry, good individuals; bargain to quick buyers. Thirty Tamworth pigs ready to wean, bred from imported stock. Price, \$8 apiece. Express paid to Ontario points. Order early if you want any. Choice stock. A. C. HALLMAN, Breslau, Ont., Waterloo Co.

PURE-BRED REGISTERED Holstein Cattle

The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets. HOLSTEIN-FRIESIAN ASSOCIATION, F. L. Houghton, Sec., Box 127, Battleboro, Vt.

Holsteins of Quality

Write us to-day for our proposition, telling you how any good dairyman may own a registered Holstein bull from a Record-of-Performance cow without investing a cent for him.

MONRO & LAWLESS, "Elmdale Farm" Thorold, Ontario

The Maples Holstein Herd

offers a splendid lot of bull calves, all sired by Prince Aggie Mechthilde and all from record of merit dams. For pedigrees and prices write

WALBURN RIVERS, Falden, Ontario

Maple Grove Holsteins

Herd headed by King Lyons Hengerveld, whose 17 near female ancestors have butter records from 30.50 to 34.75 lbs. in 7 days, including world's records for 7 and 30 days. H. BOLLERT, R. R. No. 5, Tavistock, Ont.

Ridgedale Farm Holsteins—We have four bull calves left for sale, from high-testing dams; sired by Imperial Pauline De Kol, whose 15 nearest dams average 26.20 lbs. butter in 7 days. Shipping stations: Port Perry, G. T. R., and Myrtle, C. P. R., Ontario County. R. W. WALKER Utica, Ont.

Glenwood Stock Farm 5 BULL CALVES, fit for service, out of big milking strains, at low figure for quick sale. THOS. B. CARLAW & SON, WARKWORTH, ONT. Campbellford Sta.

MENTION "FARMER'S ADVOCATE."

QUESTIONS AND ANSWERS. Miscellaneous.

A LIEN NOTE.

Mr. A, who is now dead, sold and built some wire fence and two iron gates to Mr. B, and took a lien note against the same. Mr. B paid part of the note, I think about half. Mr. B's farm, is heavily mortgaged, and is up for sale. He claims he is worth nothing, and can't pay anything on the note. He has moved to Toronto, and we can get no answer to letters from him lately. There are already four judgments placed against him in one of our lawyers' hands in Barrie.

- 1. Can Mr. A's executors lift the fence and gates from the posts?
2. Can they get someone else to cash the note, and let that party lift the fence and gates?
3. If they cannot take the fence and gates, what proceedings will they take in order to get their pay?
4. If someone buys the farm, can they make him pay for the fence?
5. Please state what best to do. Ontario. J. A. B.

Ans.—1. The note does not appear to have been registered against B's farm. Assuming that it is not so registered, or at all events that it was not until after the mortgage mentioned, the executors could not legally remove the fence and gates without permission from the mortgagee, and possibly, also, from the execution creditors.

- 2. He would be in no better position than they.
3 and 5. They can only sue B upon the note, and having obtained judgment and execution thereon, endeavor to realize the amount by court process in the usual way; and such should be their course, especially in view of the fact that they are trustees.
4. Probably not.

SKUNK-SKINS—BARBED-WIRE SCHOOL-FENCE.

1. Has a tenant who pays money rent the right to dig out and kill for their skins, skunks that are back in a slashing three-quarters of a mile from the house, and that do not molest the chickens or fowl?

2. Can I claim half or any of the proceeds from same, skins being worth \$2 apiece.

3. Has a school board the right to maintain a barbed wire around a school-yard if I object, my daughter having been wounded by wire eighteen months ago?

4. Is it too late to enter action for damages, she having a permanent scar over her eye? The woven-wire fence was broken down by a runaway horse, but the barbed wire remained unbroken. She was running to escape being caught by a playmate, and made for the opening in the fence, not knowing the barbed wire was there.

5. I have asked the trustees to remove the wire, but the majority of them refuse to do so, saying it is necessary to keep the woven-wire fence intact. What steps can be taken to have wire removed? I inclose copy of by-laws relating to line fences, which the Township Clerk says would govern the case. According to the school law, the section is compelled to build and maintain the fence around the school premises. Ontario. A. D. F.

There is no mention of barbed wire in the by-laws as being a legal fence, or being legal when stretched along over a woven-wire fence.

- Ans.—1. Yes.
2. No.
3. It is decidedly objectionable; but we doubt your being legally in a position to restrain them, especially if, as would seem to be the case, there is no local municipal by-law against the use of barbed wire in fencing. It is possible, however, that there may be some provision respecting the matter in the "Regulations" respecting Public Schools; and we would suggest your seeing the Inspector about it.

- 4. Probably not, but we doubt very much your succeeding in such an action.
5. It would seem to be a case calling for persuasion of the trustees, and if you could enlist the services of the Inspector in your behalf it might be very helpful.



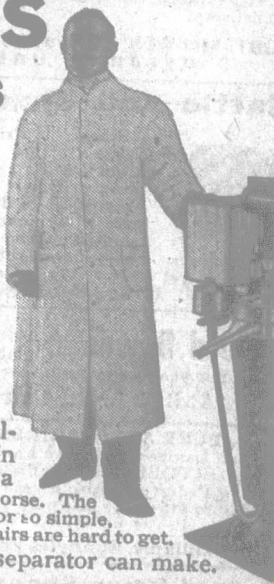
GETTING THE PROFIT ONLY SHARPLES Tubular Cream Separators Can Pay

Mr. John B. Cosing, whose prosperous farm home at Snelgrove, Ont., is shown above, recently discarded his disk-filled cream separator and bought the simple Sharples Dairy Tubular. He prefers a separator with double skimming force and without inside contrivances.

Mr. Smale, expert buttermaker on the great Canadian Pacific Railway Demonstration Farm, covering thousands of acres at Strathmore, Alberta, is the gentleman in the lower picture. The complicated cream separator formerly used on this great farm has been discarded for the remarkably simple, marvelously durable Sharples Dairy Tubular.

The Holy Angels Convent, at Athabasca Landing, Alberta, recently purchased a Sharples Dairy Tubular, in Edmonton. The Convent is one hundred miles from a railroad and the Tubular was carried to the Convent on a pack-horse. The Tubular was chosen by the Convent because it is the only separator so simple, durable and perfect that it can be relied upon in places where repairs are hard to get.

Those Using Tubulars get an extra profit no other separator can make. No wonder Tubulars are replacing others everywhere. Write directly to us, being sure to ask for Catalog 193. You will receive prompt and courteous attention.



THE SHARPLES SEPARATOR CO. Toronto, Ont. Winnipeg, Man.

HIGHEST PRICES PAID FOR RAW FURS

Write for our PRICE LISTS. Your Shipments Solicited. Prompt Returns.

E. T. CARTER & CO., 84 FRONT ST., E., TORONTO, CAN.

Brampton Jerseys

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good cows and some calves for sale. Production and quality.

B. H. BULL & SON, Brampton, Ont.

Lakeview Holsteins

Offer bull born February, 1912, sired by our son, Colantha Johanna Lad, and out of a heifer that made over 13 lbs. butter at two years old. She is a daughter of Count Hengerveld Jayne De Kol, and out of a 23.51-lb. cow with a 23-lb. dam. The seven nearest dams of this young bull average 23.32 lbs. of butter in seven days. Write at once for extended pedigree and price. E. F. Osler, Bronte, Ont.

FAIRVIEW FARM'S HERD

OFFERS sons of Pontiac Korndyke 25983, the greatest sire that ever lived, and the only bull that ever sired 12 daughters that have made 7-day records above 30 pounds each.

Do you want your next bull to be a brother to such cows as Pontiac Lady Korndyke (38.02), Pontiac Pet (37.87), Pontiac Clothilde De Kol 2nd (37.21), Sadie Vale Korndyke (36.20), and eight others above 30 pounds? If you do, write me for price on a son of Pontiac Korndyke. I also have sons of Rag Apple Korndyke and Sir Johanna Colantha Gladi. E. H. DOLLAR, HEUVELTON, NEW YORK. Near Pottsville.

SUMMER HILL HOLSTEIN CATTLE and YORKSHIRE HOGS

Our senior herd bull, Sir Admiral Ormsby, is the sire of the world's record 2-year-old for yearly butter production. Also sire of the highest record four-year-olds in Canada. The dam of our junior herd bull made 34.6 lbs. butter in 7 days, and gave 111 lbs. milk per d.v. Come and make your selection from over 70 head. In Improved English Yorkshires we have won 95 per cent of first prizes at Toronto Exhibition for ten years. We are still breeding them bigger and better than ever. Buy Summer Hill Yorkshires the quick-maturing kind, and do double your profits.

D. C. FLATT & SONS, R. F. D. No. 2, Hamilton, Ontario. Bell phone: 2471, Hamilton.

Holsteins, Yorkshires Hackneys

Our herd of over 30 Holstein females, from calves up, are for sale. Come and make your own selection. In Yorkshires we have a large number of young sows, bred and ready to breed, of the Winnie and Bloom strains. No fancy prices asked.

A. WATSON & SONS, R. R. No. 1, St. Thomas, Ont. L.-D. phone from Fingal.

EVERGREEN STOCK FARM HIGH-CLASS HOLSTEINS

Present offering: Two young bull calves good individuals; nicely marked and well bred; the dam of one of them being Uniclay Abbe-kerk, the cow that topped the consignment sale of the Oxford District Holstein Breeders' Club. Priced right for immediate sale.

A. E. Hulet, Norwich, Ont.

HOLSTEINS OF HIGHEST QUALITY

Our Holsteins have won wherever shown. Our herd is away up in the official records. They are bred from the world's best producing blood; there are none better. Let us know your wants in either males or females.

M. L. & M. H. HALEY, Springford P.O. and Sta., G. T. R. L.-D. Phone.

Maple Hill Holstein-Friesians

Special offering: Bulls from one to fifteen months old. The growthy kind that will give good service. One from a son of Evergreen March, and all from Record of Merit dams. Write for particulars.

Bell Telephone. G. W. CLEMENS, St. George, Ont.

Woodbine Holsteins

Herd headed by King Segis Pontiac Lad, whose sire's dam is the champion cow of the world. Sire's sire is the only bull that has sired five four-year-olds that average 30 lbs. each. Dam's sire is the bull that has sired two 30-lb. three-year-olds. His two great grand sires are the only bulls in the world that have sired two 37-lb. cows. Bulls and bull calves for sale.

A. KENNEDY, Ayr, Ontario.

Farnham Oxfords and Hampshires

FLOCK ESTABLISHED IN 1881.
Present offering: A lot of first-class ram lambs of both breeds, by imported champion rams. Also a number of yearling and older ewes and ewe lambs of both breeds. Prices reasonable.

Henry Arkell & Son, Arkell, Ontario.
Long-distance phone in house.

Southdown Sheep

The market-to-day demands quality. It pays to breed what the market wants. Can you do this more cheaply or quickly than by heading your flock with a right good ram of this most perfect of mutton breeds?
Orders taken for a few sturdy young rams for all delivery.

ROBT. McEWEN, Alloway Lodge Stock Farm
Byron, Ontario

Cattle and Sheep Labels

Size	Price	50c.	Fifty tags
Cattle	75c.	\$2.00
Light Cattle	60c.	1.50
Sheep or Hog	40c.	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample. Mailed free. F. G. JAMES, Bowmanville, Ont.

Oxford Downs

Choice reg. ram and ewe lambs, \$10 and \$12 each; also a few yearling rams and ewes at close prices.

W. A. BRYANT, Cairngorm, Ont.

PURE SHROPSHIRE FOR SALE

20 Ram Lambs and 20 Ewe Lambs, born April, sired by a DRYDELL Ram. Price \$10 to \$12 each, including Pedigree. Also Ewes from one to six years old \$10 to \$15 each; also pure St. Lambert Jerseys, all ages. Prices moderate. For particulars write, H. E. Williams, Sunnyside Farm, Knowlton, P.Q.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs

Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Bussu Vista Farm, Harriston, Ont.

Quality Oxford Downs

Winners, bred from imp. and prize-winning stock. 1 and 2 shear rams and ewes, ram and ewe lambs; many winners among them, the highest types of the breed.

E. BARBOUR, Erin P.O. & Sta. L.D. Phone.

SHROPSHIRE

Aged ewes, yearling ewes and rams; also ewe lambs. Feed scarce, so will sell at reasonable prices.

L. G. CLARK, ALTON, ONTARIO.

DORSET SHEEP

Choice stock of either sex. Write me before you buy. HERBERT THEAL, FULTON, ONT.
Grassie's Station, T. H. & B.

Maplewood Oxfords

Shearings and ram lambs from Hamptonian 96 (imp.). All good typical Oxfords, and prices reasonable. A. STEVENSON, ATWOOD, ONT.

Large White Yorkshires

Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported stock, from the best British herds. Write or call on:

H. J. Davis, Woodstock, Ont.
C. P. R. and G. T. R. Long-distance phone

SPRINGBANK OXFORD DOWNS

Present offering: 20 two-shear ewes, 20 ewe lambs and 20 ram lambs from imported sires. WM. BARNETT & SONS, LIVING SPRINGS P. O., ONT. Fergus, C. P. R. and G. T. R.

For Sale: Poland China Swine

of all ages. Pairs not akin. Imp. and home bred. See them at Toronto Exhibition. Prices easy.

Geo. G. Gould, Edgar's Mills, Ontario

SWINE OF ALL BREEDS FOR SALE.

Yorkshires, Tamworths, Berkshires, Hampshires, Chester Whites, Poland-Chinas, and Duroc-Jerseys. I have constantly on hand both sexes of all ages. Show stock a specialty. John Harvey, Freilighsburg, Que.

Large English Berkshires

Present offering: Sows bred and ready to breed. Two choice year-old boars; also young stock of both sexes. All from imported stock. Prices reasonable.

C. J. LANG, Hampton, Ont.

Registered Tamworths.

We are offering boars ready for service, sows bred and ready to breed. Young pigs all ages, from six weeks up.

W. W. GEORGE, Crampton, Ont.

FAIRVIEW BERKSHIRES

Ontario's banner herd. Prizewinners galore. For sale are: Young sows bred and others ready to breed, and younger ones. A number of young boars coming on. JOHN S. COWAN, Donegal, Ont.

Duroc Jersey Swine AND JERSEY CATTLE.

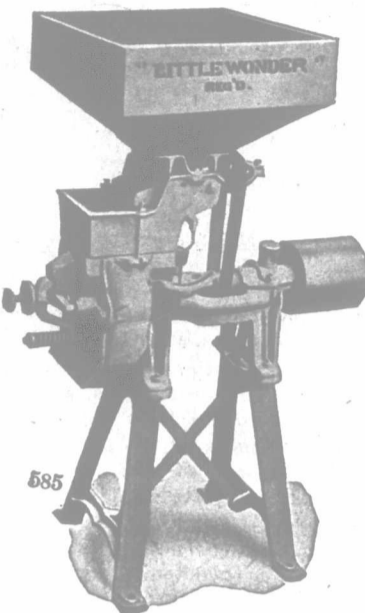
Grand stock, either sex, constantly for sale. Price reasonable. M. A. CAMPBELL & SONS, Northwood, Ontario.

GOSSIP.

CANADA'S OLDEST HERDS AND FLOCKS.

It is considerably past the half-century mark since the famed Caledonia herds of Shorthorn cattle and flocks of Leicester sheep were founded by the father of the present owners, James and W. A. Douglas, the former of Caledonia, Haldimand county, the latter of Tuscarora, Brant county, Ont. The original foundation of these noted herds was practically all of imported Bates breeding, cows that were up to eighteen and nineteen hundred pounds weight, and capable of giving more milk than their calves would take, even when up to six months of age. The complexion of the herds to-day is strongly infused with the blood of those great and profitable ancestors, which they show by their large and well-balanced udders. Of late years a considerable quantity of new blood has been added to the herd, of Scotch breeding, but in the selection of new blood, only those tribes or strains noted for heavy milk yield have been added, notably the Nonpareils, Orange Blossoms, Boyne Ladys, Jilts, and Diamonds. Coupled with the splendid milking qualities of the herds as they are at present is a massive thickness of flesh seldom seen in an entire herd, which, just now, combined, is over one hundred and twenty strong. Going back a number of years, the stock bulls that have been in use on the herds were: The Rosebery-bred bull, Imp. Rosicrusian of Dalmeny, whose big, well-balanced body and strongly-infused breeding along milk-producing lines, was manifest in his daughters, both in size and udder development, a number of which are now doing duty as breeding matrons. Following was the renowned Joy of Morning (imp.), a Toronto first-prize winner, whose wonderful success as a sire is too well known to need comment. Very many of his daughters are now in the herds, their big, thick-fleshed form and superior quality bearing testimony to the truism of the greatness of their sire. As his successor came the grandly-bred Missie bull, Royal Star, a remarkably well-balanced bull of heavy flesh, whose success as a sire is well proven in the younger end of the herds. Now in use is the roan Cruickshank Butterfly bull, Roan Chief (imp.), a son of Villager. This is one of the great bulls of the country, beef from the heels up, has an immense depth of body, beautiful lines, strong masculinity, and handles like a glove. He is a proven sire of a high order, else he would never have been at the head of the Douglas herds. In young bulls there are a big and choice selection of pure Scotch and Scotch-topped, ranging along about ten and eleven months of age, nearly all sired by the Missie bull, Royal Star. Several of them are out of cows that can more than make good at the pail, and not one but has a dam that raises her own calf and has a bit left. These are the kind of bulls the country is wanting to-day, and their individuality is also up to a high standard, for among them are show bulls that would take a heap of beating. In females, for sale, are a big lot of heifers of any desired age, bred from the good-milking and good-fleshed dams mentioned above. The Leicesters are also one of, if not the oldest-established flocks in Canada. Very many importations have added fresh blood, the latest being the importation of this summer, when a number of both rams and ewes were landed that greatly strengthened the existing flocks. Since the foundation there has scarcely ever been used any but the best procurable imported rams. All breeding ewes are the get of imported rams, and many out of imported ewes. A large number of the most successful show Leicesters of recent years, both in this country and in the United States, were bred in these flocks, and this year's lambs, of both sexes, are certainly among the best ever bred in these renowned flocks. All are for sale, as well as one imported ram lamb brought over this year. For Shorthorns or Leicesters, write James Douglas, Caledonia P. O., or W. A. Douglas, Tuscarora P. O., Ont.

If you have only 1½ to 3½ h.-p., use a
"Little Wonder" Grinder



It is the IDEAL GRINDER for the man with a small engine, as it does more work with little power than any other grinder.

"I put the 'LITTLE WONDER' Grinder at work to-day, and was much surprised with its work. With a 3 h.-p. engine we ground TEN BUSHELS PER HOUR of last year's barley, and MADE A FINE JOB OF IT. I have never bought any article in my life that I liked better."

(Signed) Joseph W. Spragg.

Write now for any further information.

J. FLEURY'S SONS, Aurora, Ontario

Medals and Diplomas: World's Fairs, Chicago and Paris
JOHN DEERE PLOW CO., LIMITED, Western Agents
Winnipeg, Regina, Calgary, Edmonton, Saskatoon, Lethbridge

MAPLE VILLA OXFORD DOWNS AND YORKSHIRES

This fall I have the best lot of lambs I ever bred. I have plenty of show material, bred from the best stock procurable in England. Order early if you want the best. Ram lambs, shearings and ewe lambs. Yorkshires of all ages.

J. A. Cerswell, Bond Head P. O., Ontario
Bradford or Beeton stations. Long-distance phone.

Shropshires and Cotswolds!

In SHROPSHIRE I have for sale 35 imp. shearing rams and ewes from some of England's best flocks, a lot of fine home-bred rams and ewes bred from Minton and Buttar ewes. In COTSWOLDS a lot of rams and ewes, and an extra good lot of lambs. A few of each breed fitted for showing. Order early and get a good choice. Prices very reasonable.

Claremont Station, C. P. R., three miles.
Pickering Station, G. T. R., seven miles.
John Miller, Brougham, Ont.

Belmont Shropshires and Southdowns

I have a grand lot of rams and ewes for sale, both breeds. Anyone wanting a good ram, or a few good breeding ewes, should write me at once and get the first choice.

C. Hodgson, Brantford, Ont.

COTSWOLDS AND SHROPSHIRE At Toronto I won 1st on flock, champion on both ewe lambs of both breeds; strictly high-class.
J. MILLER, JR., "BLAIRGOWRIE FARM," ASHBURN P. O., ONTARIO

SPRING VALLEY SHROPSHIRE
I am offering for sale shearing and ram lambs, shearing and ewe lambs, of highest quality and breed type. Prizewinners among them. Bred from imported stock. Order early.
THOS. HALL, BRADFORD, ONT., P. O. & STA.

Hampshire Pigs PRESENT OFFERING—7 Sows in pig from imported stock. Write for prices. Long-distance phone.
J. H. RUTHERFORD, Box 62, Caledonia, Ont.

ELMHURST LARGE ENGLISH BERKSHIRES
Present offering: Select sows. Choice boars ready for service also younger stock, the get of Duke of Somerset imp., and out of imported dams. Satisfaction and safe delivery guaranteed. H. M. VANDERLIP, Breeder and Importer, CAINSVILLE P. O. Langford station, Brantford and Hamilton Radial.

Pine Grove Yorkshires Bred from prizewinning stock of England and Canada. Have a choice lot of young pigs of guaranteed satisfaction.
both sexes, pairs not akin, to offer at reasonable prices. Guaranteed satisfaction.
Joseph Featherston & Son, Streetsville, Ont.

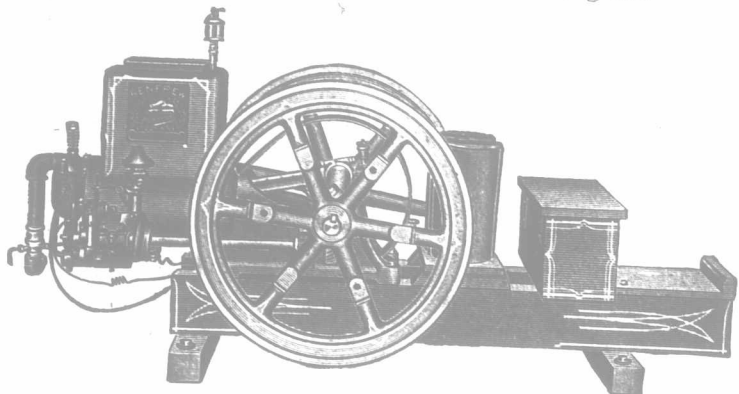
Newcastle Tamworths and Shorthorns
Present offering: Seven boars from 6 to 10 months old; boars and sow pigs 6 weeks to 4 months; sows bred and others ready to breed, from such noted stock as Colwill's Choice, Canada's champion boar, 1901, '02, '03 and '05, and Imp. Cholderton Golden Secret. Also a few choice Shorthorn heifers in calf; beef and milk combined. Show stock a specialty. Prices right L.-D. Phone. A. A. Colwill, Newcastle, Ont.

Morrison Tamworths and SHORTHORNS
Present offering: Four dandy bull calves that will make show winners, from six to ten months old. Choice Tamworths, both sexes.
CHAS. CURRIE, Morrison, Ontario

Woodburn Berkshires—We are offering for sale 100 head of young Berkshires of both sexes and any sizes required. We can supply pairs or trios not akin; our Berks are noted for strength of bone, length, depth and quality, conforming to bacon type. Show and breeding stock a specialty.
E. BRIEN & SON, Ridgetown, Ont.

The Tireless Worker

Will work 24 hours a day when necessary, and be fresh and eager for more. There's no tiring the



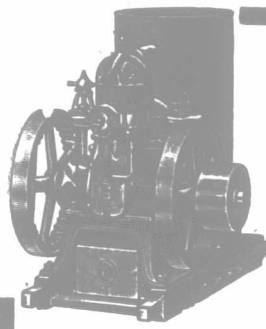
Renfrew-Standard

gasoline engine. It never stops for a meal, or quits working when you are not looking. Do you wonder it is taking the place of man-power on the farm? Pumps water, saws wood, runs the separator, the churn, the washing machine, the electric light machine, the feed grinder, the ensilage cutter. Does a hundred and one other things that lessen drudgery and cut down expenses. Simple in construction, simple in operation. Starts easily. No cranking with the Renfrew-Standard. It's the latest and best type of gasoline engine for sale in Canada. Write for Bulletin describing the various styles and sizes. 2½ h. p. to 60 h. p. Semi-Portable, as illustrated; Stationary and Portable. Fully guaranteed. Has the same organization behind it that has made such a success of the famous "Standard" cream separator.

The Renfrew Machinery Co., Ltd.

HEAD OFFICE AND WORKS, RENFREW, ONT.

Sales Branches at WINNIPEG, Manitoba, and SUSSEX, New Brunswick



This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. They give as more power from coal oil than other engines do from gasoline. They are safe, as well as cheap; no danger of explosion or fire.

The strongest and simplest farm engine made; only three moving parts: nothing to get out of repair. Anyone can run it without experience. Thousands of satisfied customers use these engines to grind feed, fill silos, saw wood, pump, thresh, run cream separators, and do dozens of other jobs. Cheaper than horses or hired men. Fill up the tanks and start it running, and no further attention is necessary; it will run till you stop it.

FREE TRIAL FOR 30 DAYS. You don't have to take our word for it. We'll send an engine anywhere in Canada on Thirty Days' Free Trial. We furnish full instructions for testing on your work. If it does not suit you send it back at our expense. We pay freight and duty to get it to you and we'll pay to get it back if you don't want it.

Absolutely guaranteed for 10 years. Write for free catalog and opinions of satisfied users. Special offer in new territory.

3 to 15 horse-power
We Pay Duty and Freight

Ellis Engine Co., 94 Mullett Street
DETROIT MICH.

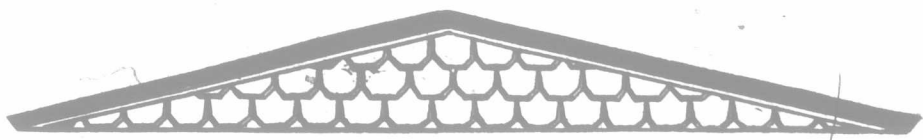
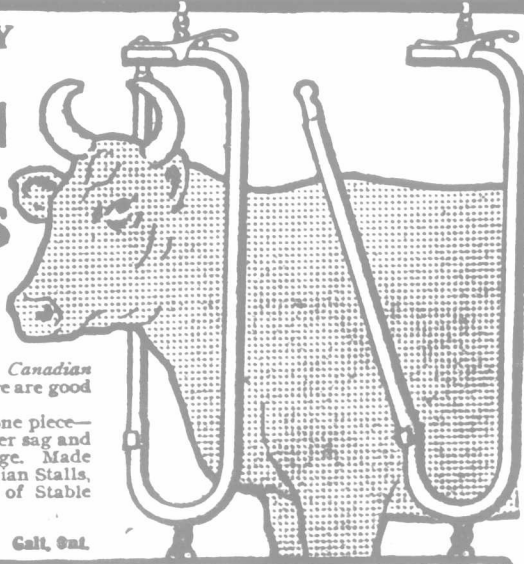
FACTS—NOT THEORY
—ABOUT

O.K. CANADIAN U-BAR STEEL STANCHIONS

When big stables like the Central Experimental Farm at Ottawa—the new barn at Silver Spring Dairy Farm, Ottawa—the Erindale Farm at Toronto—are equipped with O.K. Canadian U-Bar Patented Steel Stanchions—there are good reasons for it.

O.K. U-Bar Steel Stanchions are of one piece—have no rivets or joints—therefore never sag and stand up against the most severe usage. Made in 5 sizes. We also make O.K. Canadian Stalls, Water Basins and a complete line of Stable Equipment. Write for catalogue.

Canadian Potato Machinery Co., Limited, Calt, Ont.



"Eastlake" Steel Shingles will save you money



Just ask yourself this question Mr. Farmer, "Is my barn roof lightning proof—is it fireproof?"

It's not a cheerful sight to see your barn—full of overflowing with the season's crop—wiped out by lightning or a spark from the threshing engine.

All because of faulty roofing.

A fireproof roof is the only sure protection for your crops, your livestock and implements.

"Eastlake" Steel Shingles are absolutely lightning-proof, fire-proof, storm-proof and vermin-proof—the best and safest roofing for all buildings.

"Eastlake" Metallic Shingles are made of the finest galvanized steel—are easiest and quickest to lay—save labor and expense.

"Eastlake" Shingles cost less than a wooden roof equipped with lightning rods.

"Eastlake" Shingles make the best roofing for you, Mr. Farmer.

Roofs covered with "Eastlakes" a quarter of a century ago are in perfect condition to-day. This is the best guarantee for you.

Send for our illustrated booklet, "Eastlake Metallic Shingles." Write to-day—just your name and address.

We also manufacture Corrugated Iron, House and Barn Siding, Metallic Ceilings, Cornices, Eavestrough, Conductor Pipe, Ventilators, etc.

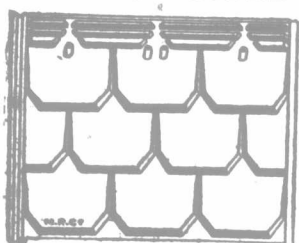
SAFETY

By

The Philosopher
of Metallic
Town

THE

"EASTLAKE"
STEEL SHINGLE



THE **METALLIC** ROOFING CO. Limited

MANUFACTURERS

1189 King Street, West
Toronto

Branch Factory: WINNIPEG.
Agents in principal cities.

\$ **15** ⁹⁵
AND UPWARD
SENT ON TRIAL
FULLY
GUARANTEED.

—AMERICAN— SEPARATOR

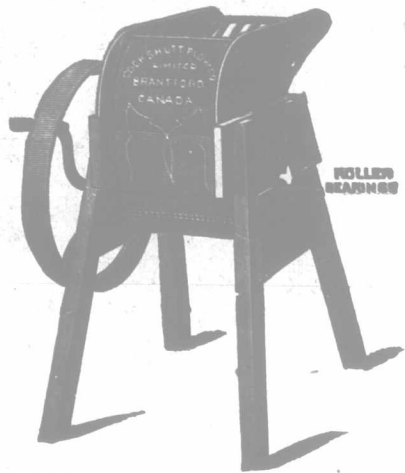
A brand new, well made, easy running, easily cleaned, perfect skimming separator for \$15.95. Skims one quart of milk a minute, warm or cold. Makes thick or thin cream. Thousands in use giving splendid satisfaction. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements. Our richly illustrated catalog tells all about it. Our wonderfully low prices on all sizes and generous terms of trial will astonish you. Our twenty-year guarantee protects you on every American Separator. Shipments made promptly from WINNIPEG, MAN., ST. JOHN, N. B. and TORONTO, ONT. Whether your dairy is large or small get our great offer and handsome free catalog. ADDRESS,



AMERICAN SEPARATOR CO., BOX 1200,
BAINBRIDGE, N. Y.

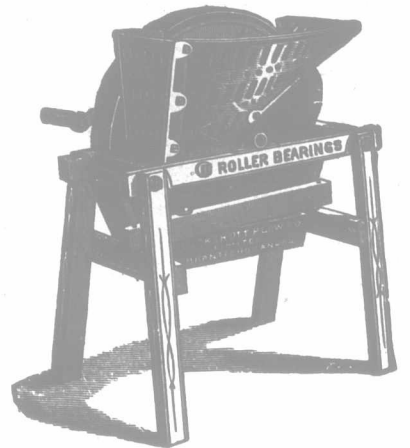
COCKSHUTT

Lighten the Feeding in a Big Winter Job



Cylinder Pulper with Roller Bearings

WITH these pulpers or slicer-and-pulpers, you can handle your roots for beef-feeding easier than ever before. Our COCKSHUTT Cylinder Pulper at the left has easy-running roller bearings. The machine at the right will either slice or pulp roots, as desired and will not bruise them. It is one of the swiftest cutters on the market.



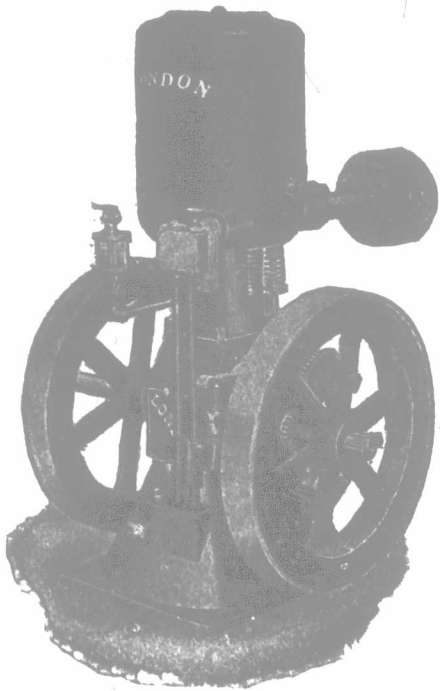
Combined Pulper and Slicer

You can profitably use either of these COCKSHUTT machines, even if you have only a small number of cattle. Now is one of the best

opportunities to buy a root cutter. Send us a post card, asking about root cutters. We will send you full information.

These machines are well made and of the best COCKSHUTT construction. They are made to last a lifetime. You will find the knives retain their keen, sharp edge longer than ordinary knives, and thus mean easy work for the operator. Write us for full information.

Lighten Work with This Gasoline Engine



WE examined many styles of farm engines very carefully, and finally decided that this was one of the safest, easiest operated and best engines on the market. We recommend it to you as a great time- and labor-saver.

Farmers have their work cut down wonderfully with an engine like this, in 1½ to 12 h.-p. sizes. The smallest engine will outdo a strong man in wood sawing, pumping water, cutting roots and silage, etc. Ask us for our catalogue on Gasoline Engines.

Why shouldn't you buy a Gas Engine? Your wife or young son can start and run it all day. It is perfectly safe and simple. It will do hours of work at a cost of a few cents for fuel, and if the work is light, the fuel will cost less correspondingly. Thousands of farmers are enjoying life. They adopted the farm engine as a "chance," and now they wouldn't part with their machines. You will feel the same way about it once you give our engine a trial.

See our agent regarding any farm implement you need, or We are always ready to give information and will be glad to hear from you. A post card will do. **Write us.**

Sold in Western Ontario and Western Canada by

COCKSHUTT PLOW CO., LTD.
Brantford, Ontario

Sold in Eastern Ontario, Quebec and the Maritime Provinces by

The FROST & WOOD CO., Ltd.
Smith's Falls, Ontario