

**PAGES
MISSING**

**SIMPLICITY,
DURABILITY,
RELIABILITY**

ARE CHARACTERISTIC OF THE

**Fairbanks - Morse
GASOLINE ENGINE**

They do not require a high order of mechanical skill to operate, and will work when you want them to. Thoroughly constructed, they will give satisfaction to every user, and there are now over 70,000 satisfied users. Write to-day in coupon below for catalogue and copies of testimonials.

MADE IN CANADA.

The Canadian Fairbanks Co., Ltd.

MONTREAL, TORONTO, ST. JOHN, WINNIPEG, CALGARY, VANCOUVER.

The Canadian Fairbanks Co., Ltd., 444 St. James St., Montreal, QUE.

Please send catalogue and copies of testimonials.

Name

Address

**Cheap Excursions
to the West.**

Our Special Land-seekers' Excursions
will leave Ontario and Eastern points on the following dates:

APRIL.....	14th and 28th.
MAY.....	12th and 26th.
JUNE.....	9th and 23rd.
JULY.....	7th and 21st.
AUGUST.....	4th and 18th.
SEPTEMBER.....	1, 15th and 29th.

FARE AS FOLLOWS:

\$40.50 RETURN

to Calgary, from any point on the C. P. R. east of Sudbury, in Ontario, Quebec or New Brunswick. Excursionists from the Maritime Provinces will congregate at St. John.

Intending purchasers of Western Lands are invited to join our excursions. Applications for passage must be received at least two days before date advertised—earlier if possible.

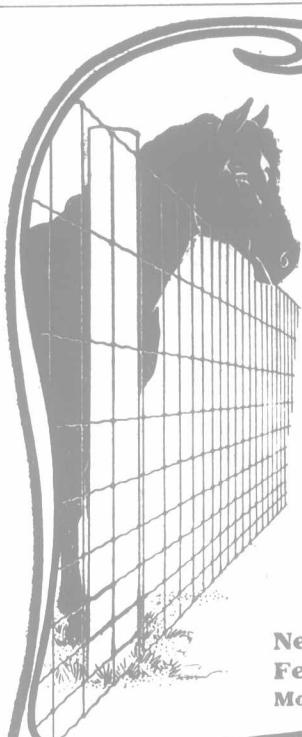
We hold the exclusive agency for large blocks of rich, specially selected lands in Saskatchewan, Alberta and Manitoba at \$8 per acre and upwards, for choice location, on easy terms by cash installments and crop payments. Write us for list of lands and terms.

These lands are all situated in the best wheat districts. Terms are liberal and should be looked into by every person contemplating going to the West.

**THE LAND DEPARTMENT,
UNION TRUST COMPANY, LIMITED,**

174 Bay Street, Toronto, Ontario.

Sturdy Elasticity



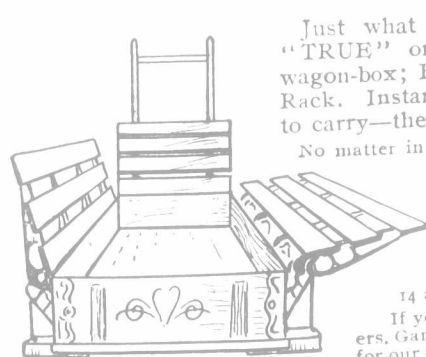
The wire for "Maritime" Wire Fence is imported direct from England. We have found that this English wire is distinctly superior. While stiff and hard it is not brittle, or as easily broken when subjected to a severe strain as the ordinary hard steel wire. It is real "live" wire, pliable and springy, capable of withstanding hardest usage and unaffected by any degree of temperature recorded in this country.

Will you let us mail you our **free catalogue** which tells more about Maritime Fence and its absolutely secure lock?

New Brunswick Wire Fence Co., Limited.
Moncton, New Brunswick



**"TRUE" COMBINATION
WAGON BOX
AND RACK**



Just what every farmer needs. With the "TRUE" on his wagon he has a first-class wagon-box; Hay, Stock, Corn, Wood or Poultry Rack. Instantly adjusted for any load you want to carry—the only tools you need are your hands.

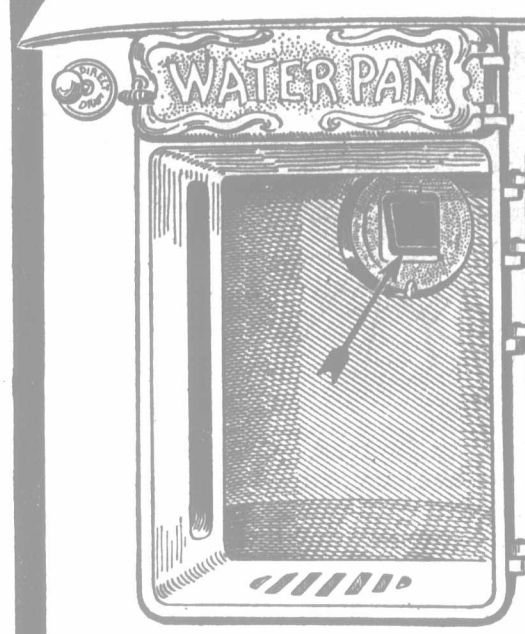
No matter in what position you put the wings, it is impossible for them to get out of that position, but it would take you but an instant to change them.

We guarantee this article to be made of nothing but the best of material—Yellow Pine, Hardwood and Malleable Iron—and to carry two tons in any position. Made in 14 and 16-ft. lengths and 38, 40 and 42-inch widths.

If you need anything in the line of Planters, Seeders, Garden Drills and Cultivators, Sprayers, etc., write for our catalogue. We have dealers in your town.

THE EUREKA PLANTER CO., Limited - Woodstock, Ont.

Heading off a Risk



Gas is liable to puff out of the front door of any furnace unprovided for gas escape.

"Sunshine" Furnace has Automatic Gas Damper directly connected with smoke-pipe. Gas pressure sways damper sufficiently for it to escape up chimney (see illustration), but heat doesn't escape.

What does "Sunshine" Gas Damper mean to "Sunshine" Furnace? Means protection to the furnace parts against evil effects of gas.

What does "Sunshine" Gas Damper mean to "Sunshine" householder? Means furnace can be operated without fear as to "puffing" gas; furnace can be left without doubt as to whereabouts of gas.

What does "Sunshine" Gas Damper mean to "Sunshine" coal account? It means, instead of owner with "ordinary furnace" fear having to keep check-draft indefinitely closed to "let off" gas—when there's two-thirds parts of heat-energy to one part of gas passing up chimney—draft can with all safety be opened, and coal saved for another day's duty.

London
Toronto
Montreal
Winnipeg

McClary's

Vancouver
St. John, N.B.
Hamilton
Calgary

GOING IT BLIND

Those who persist in using second or third-rate methods in skimming milk are groping along at heavy cost.

DE LAVAL CREAM SEPARATORS

THE EYE OPENERS

Demonstrate the Profits in the Dairy Business.

WE WILL BE GLAD TO HEAR FROM YOU

The De Laval Separator Co.

175-177 William Street

MONTREAL



This is an article that is worth your while to investigate. If you should ask why we do not make a light wire fence, our answer would be, because it does not pay the farmer to buy it, for it does not last.

Standard Woven Wire Fence

is made of No. 9 hard drawn steel wire throughout and is well galvanized. The fence is well crimped to allow for contraction and expansion. The Tie That Holds is Patented, and is a lock that will not slip, and is very smooth.

THE JAMES STEWART MFG. CO., WINNIPEG, MAN.
GENERAL AGENTS FOR THE GREAT NORTHWEST.

THE STANDARD WIRE FENCE CO.,
OF WOODSTOCK LAMBER, . . . WOODSTOCK, ONT.

THE GENUINE TOLTON



PEA HARVESTER

With New Patent Side-delivery Self-buncher at Work.

Harvesting from 10 to 12 acres per day in the most economical and complete manner. Harvesters to suit all kinds of mowers. A wrench is all that is required to attach it to any mower. Every machine warranted. Our motto: "Not how cheap, but how good." Give your orders to any of our local agents, or send them direct to

TOLTON BROS., LIMITED, GUELPH, ONTARIO.

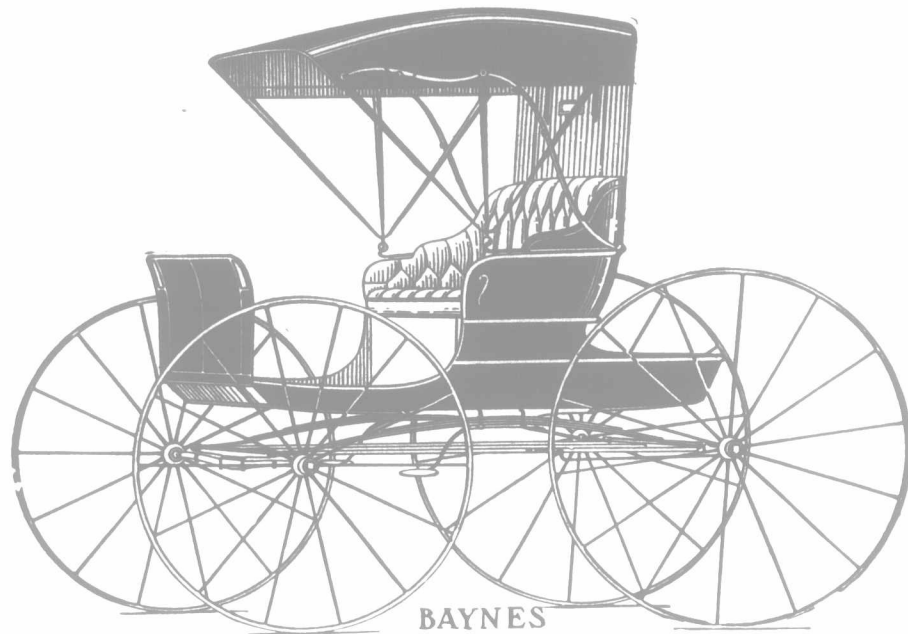
Farmers and Cattlemen Read This

When you cannot sell your export cattle at satisfactory prices at home, and wish to ship them to the Old Country markets, write or wire for steamer space, market and shipping information to Donald Munro, Live-stock Forwarding Agent and Commission Salesman, 43 St. Sacramento St., Montreal.

Load your cattle carefully, and bill them to me. I provide the necessary feed, insurance, etc., pay freight and all other expenses from shipping point and give liberal cash advances on all consignments. Cattle are loaded on steamer under my personal supervision, and placed in charge of capable attendants for the ocean voyage. I represent the most reliable salesmen at all the different British markets.

BUSINESS ESTABLISHED 1890. REFERENCES: THE MOLSONS BANK, MONTREAL.

WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.



BAYNES
No. 517

A beauty for 1908. One of the handsomest jobs we have ever turned out. That is saying a great deal for No. 517, because all Baynes Buggies have a reputation for good looks.

No. 517 is a Clipper body buggy, with Auto seat. Roomy, comfortable, carries a good load, and is a splendid rider.

There's another feature about all Baynes Buggies that you want to consider well—Baynes Long Distance Axle, that is noiseless, dustproof and runs a year with one oiling.

There is a dealer near you who can show you the line of Baynes Buggies for 1908. Write us for his name if you don't know him.

THE BAYNES CARRIAGE CO.
LIMITED
Hamilton, Ont.

"LEADER"



Fence Lock

The Double Grip
Gives Double Strength

A brand new No. 9 hard steel wire fence with a lock doubly as strong as any previously devised for a woven fence—this is the "Leader" fence.

The "Leader" lock has a double grip (usual locks have but a single grip). The double grip makes doubly as stiff and strong a fence—the wires cannot be moved up, down or sideways under the most severe strain to which a fence could be put. The "Leader" is the leading fence investment. Buy it.

Frame & Hay Fence Co., Ltd.
Stratford - Canada

Matriculation by Mail.

If you want to enter any profession, the first step necessary is to secure matriculation. We teach you at home by mail. Instruction in any subject in public, high school or commercial work. Over 100 courses. Write to-day for particulars.

Canadian Correspondence College, Ltd.,
Dept. E. Toronto, Canada.

CONSUMPTION Book Free!

If you know of any one suffering from Consumption, Croup, Bronchitis, Asthma, or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure.

Write at once to the Yonkerman Consumption Remedy Co., 132 Rose Street, Kalamazoo, Mich. Don't wait—do it now.

The Farmer's Advocate and Home Magazine

"Persevere and
Succeed."

Established
1866.

Vol. XLIII.

LONDON, ONTARIO, MAY 7, 1908.

No. 815.

EDITORIAL.

ONTARIO EDUCATIONISTS IN CONVENTION.

The proceedings of the Teachers' Parliament, as the members of the Ontario Educational Association call that body, are of general interest, not because it can carry into effect any measure that it espouses, but because many more or less important measures are there first brought into public notice, and educational legislation is there subjected to critical review, and approved or condemned from the teacher's point of view. It further serves as a kind of clearing house of educational ideals and tendencies. Through the delegates from the county associations of teachers throughout the Province, it is influenced by them, and in turn exerts much influence upon the local associations.

In recent years, several of the addresses and discussions have maintained a contest between the so-called culture and utility subjects of instruction. This year there was an absence of controversy on that issue. It attracted comment that three of the classical teachers referred in their addresses, with apparent satisfaction, to their successful experience as gardeners or farmers. The utility subjects are longer in coming to their own than they should be, owing to the fact that their advocates have not sufficiently emphasized their cultural possibilities. Nature study, geography, history, constructive art, etc., taught exclusively for useful knowledge and skill, are only half-taught.

"The Farmer's Advocate" offers no excuse for being particularly interested in such part of the proceedings of the convention as affects its campaign for an education that will make life on the farm happy and prosperous. President Falconer's warning against the dangers of specialization on one hand, and superficiality on the other, supports our contention that the present method of certifying country-school inspectors upon High-school specialists' standing and a brief experience in public-school work, is unfortunate. The public-school teachers voiced their dissatisfaction on this point through a delegation that waited upon the Minister of Education. The latter stated, according to report, that he had under consideration the extension of experience in public-school work as a condition for an inspector's certificate. It is to be hoped that it will not prove an instance of ending with consideration. To the same delegation, he favored the proposition that no certificate to teach should be granted to any person under twenty-one years of age, except as an assistant. It did not pass without remark that it was only recently that the minimum age for admission to the Normal Schools was reduced from the twentieth to the seventeenth year.

Fewer addresses than usual dealt directly with that which might be called "agricultural education." Deputy-Minister C. C. James addressed the High-school teachers on "Agriculture in the High Schools." Mr. McCready read a paper on "What the O. A. C. Can Do for the Rural-school Teacher," and Inspector Mills read a paper on "Nature Study in the Rural Schools." The last-named speaker deplored the neglect or ineffectiveness of the teaching of nature study, and charged the incompetence of the teachers to the lack of training. He said that the Normal Schools are attaching more importance to such things as paper-folding and basketry than to nature study.

As might be expected, the town and city interests are strongly represented in the convention. These made a claim for a greatly-increased grant

to urban schools. It will be remembered that, when the Provincial Government withdrew its minimum-salary law, it offered what is known as the 40-per-cent. grant in lieu thereof. The effect of the latter has been to raise the rural-school grant to about \$3.30 per unit of average attendance, while the urban grant, on the same basis, is less than a dollar. At first sight, the demand for an additional \$200,000, or thereabout, to the city and town schools seems fair, but when it is considered that the grants for kindergartens, technical schools, High Schools, public libraries, etc., go wholly or largely to urban institutions, the discrepancy complained of disappears. In 1907 the Government expended on Education Account, \$1,359,105; Toronto University, \$340,461; Normal-school Buildings, \$148,277; total, \$1,848,043. Of this total, \$358,528, being little more than was given to Toronto University alone, went directly to the rural public and separate schools as a grant. Their share of the poor-school fund, flag expenses, etc., would scarcely bring the rural schools up to \$400,000. It remains, then, that nearly three dollars were granted for education in urban municipalities for every one dollar that was given to the rural districts. In this statement, the High-school grant is counted on the urban side, but, while it is true that many farmers' children are being educated in the High Schools, the most of them are attending at a considerably greater expense than town people bear for the same privilege. The incorporated villages and some of the smaller towns would seem to be the only real sufferers.

HOME MARKET IS PAYING BEST.

The Montreal Trade Bulletin, commenting on the falling off in exports to Great Britain of several lines of Canadian agricultural products, says: "It has been stated that the increase in our home consumption has accounted for the falling off in the above exports. That may be partly true, but the main reason is we are being undersold, which should not be." The Trade Bulletin surely does not expect that Canadians will ship produce abroad when it can be sold to greater profit at home, or expect us to sell regardless of profit or loss. In this connection we note in the 1907 report of the Professor of Dairy Husbandry, at Guelph, that in both 1906 and 1907, the financial returns from butter shipped to London, Eng., were not equal to those obtained for similar butter on local markets, and Siberian and other butter has actually been imported from England for consumption in Canada. Canada, or, at least, Older Canada, is relatively less of a farming country than it once was. Manufacturing and other industries now bulk proportionately larger in the scale, and, of course, an industrial population requires to be fed. A considerable share of our agricultural produce now goes to support an artisan and laboring army at home, instead of abroad. Canadian agriculture is doing very well, though there certainly is room for vast extension yet. When the country's educational systems are remodelled, and the intelligent youth of Canada is educated for rather than from the farm, and agriculture rises to its proper plane in popular favor, our exports of agricultural products may again increase. Canada can hold her own in economy of production, but so long as home markets absorb our produce, at tempting prices, we shall have small concern about exports.

The Province of Ontario is looking for an automobile law based on the principle of the greatest good to the greatest number.

MILK STANDARDS AND INSPECTION.

Discussion in "The Farmer's Advocate," and lately in the Ontario Legislature, recalls attention to the perennial subject of milk standards. Though the metaphors are somewhat mixed, it may be conceded, as a fairly accurate statement of the situation, that "milk is the keystone to the arch of the pure-food crusade." A fixed, minimum standard per cent. of butter-fat and other solids in milk, as a basis of prosecutions, was early resorted to as a speedy means of improvement in the quality of milk. It is difficult to convict a man when it is only necessary to show that the sample of his milk falls below a certain standard, but is it justifiable, and is it the best means available at the present time of attaining the object in view, viz., supplies of pure and wholesome milk for the consumer? Against the standard, it is argued that it makes a criminal of a man who inadvertently or otherwise sells unadulterated milk that happens to be below the legal standard; that it enables dealers who are supplied under contract to "squeeze the price" on the dairy farmer; that men who produce milk over standard do not, as a rule, receive extra pay for it; that, in order to keep up the standard, unprofitable cows, as far as quantity of milk given is concerned, have to be kept; and that it discriminates against certain breeds of cattle, and favors average animals.

Though not a strictly accurate gauge of its value for cheesemaking, the fat content of milk measures its value for cream or butter production, and the general consumer in cities and towns usually estimates its value according to its richness in cream, which, however, is only approximately correct. For infants and others, a milk is preferred by many in which the percentage of solids is fairly well balanced; and, beyond any question, cleanliness and purity of milk from a healthy cow are the chief desiderata.

Massachusetts has been tinkering with its State milk laws for half a century, and the net result is two statutes, one regulating the sale of milk by imposing a penalty of not less than \$50 fine for the first offence of selling adulterated milk, and the other not more than \$50 fine for selling milk not a good standard quality, which is 13 per cent. total solids (3.7 butter-fat, and 9.3 per cent. other solids) in winter, and 12 per cent. total solids (3 per cent. fat, and 9 per cent. other solids) in summer, which latter has been asked for by farmers as a standard for the year round. At the last session of the State Legislature, the Agricultural Committee recommended a uniform standard of 12 per cent. total solids for the year, and 3.35 per cent. fat, but the question was left over till the next session. Most of the convictions against dairymen in the State have been secured under the standard law, being more easily secured than under the adulteration statute, and yet we have it upon the authority of P. M. Harwood, General Agent of the Massachusetts Dairy Bureau, that in many instances the milk is apparently just as the cow gave it. It surely is not right nor just to subject the owners in such cases to annoyance and prosecution. Then, though milk retails in Boston at 8 cents per quart, the dairy farmer who produces it gets only about 3½ cents on the average, the balance being eaten up by railways, milk contractors and peddlers, who manipulate the standard, by skimming, etc., to their own pecuniary advantage. Before the Legislative Committee it was developed that, in general, dairy farming in Massachusetts was not reasonably profitable, and that the producers were being gradually driven out of the business, foreigners filling their places, in so far as they are filled at all. Now, while not wholly due to 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.

ADDRESS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,
WINNIPEG, MAN.

LONDON (ENGLAND) OFFICE:

W. W. CHAPMAN, Agent, Mowbray House, Norfolk Street,
London, W. C., England.

THE FARMER'S ADVOCATE AND HOME MAGAZINE
is published every Thursday.

It is impartial and independent of all cliques or parties, handsomely
illustrated with original engravings, and furnishes the most
practical, reliable and profitable information for farmers, dairy-
men, gardeners, stockmen and home-makers, of any publication
in Canada.

TERMS OF SUBSCRIPTION.—In Canada, England, Ireland
and Scotland, \$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.

ADVERTISING RATES.—Single insertion, 25 cents per line.
Contract rates furnished on application.

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.

THE LAW IS, that all subscribers to newspapers are held responsible
until all arrearages are paid and their paper ordered to be
discontinued.

REMITTANCES should be made direct to us, either by
Money Order or Registered Letter, which will be at our risk.
When made otherwise we will not be responsible.

THE DATE ON YOUR LABEL shows to what time your
subscription is paid.

ANONYMOUS communications will receive no attention. In
every case the FULL NAME AND POST-OFFICE ADDRESS MUST
BE GIVEN.

WHEN A REPLY BY MAIL IS REQUIRED to Urgent
Veterinary or Legal Enquiries, \$1 must be enclosed.

LETTERS intended for publication should be written on one
side of the paper only.

CHANGE OF ADDRESS.—Subscribers when ordering a change
of address should give the old as well as the new P. O. address.

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.

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
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

milk standard, Mr. Harwood declared it to be an important factor in embarrassing the dairy farmer. Meanwhile, the consumer pays more and more for milk which comes from longer distances. It may be pasteurized, but, like corned beef, it will keep longer, but is no improvement over, nor as good as the fresh article. Fancy dairying is practiced to some extent, in a few cases, for profit, but mainly as a fad of rich men. Where milk is produced for near-by markets, the business is often run more profitably in connection with market-gardening or poultry-keeping, or both. The conclusion reached by Mr. Harwood is, in substance, that the milk standard is wrong in principle, and has outlived its usefulness, and, as a substitute for it, he proposes selling milk upon its guaranteed merits. This involves, to some extent, educating the consumers, because a lot of them are always content to buy the cheapest product offered them, and others want better milk, yet they must have it at the same old price; but this is unreasonable, for the lands have gone up in price, better sanitation is demanded, and most other items in the cost of production have increased. There may be a remedy for some of the financial ills to which the milk producers for cities and towns are subject, in a co-operative system of distribution, but to our mind, the main reliance of the consumer for supplies of fresh and honest milk of wholesome quality is not any arbitrary standard, but continuous, efficient and honest inspection of the dairies, as well as milk, and PUBLICITY through the local papers and otherwise. To make known the results of honest inspection is one of the most salutary means of protecting the innocent consumer, but he must be fair enough to pay a good price for a good article for the use of his family. It may not be quite so popular a slogan with those who are out for a crusade of tuberculin-testing and cow-killing, but we have no hesitation in declaring that the chief peril to which the town-

man's milk supply is subjected is dirt. To quote a paragraph from a manifesto of the Richmond, Virginia, Health Department: "In the home, as on the farm and in the city dairy, cleanliness and cold are the two great essentials in the securing of wholesome milk."

VAGARIES OF THE LAW.

The desire of the people in country and city for protection against the racing automobilist, unfortunately, receives little sympathy from our leading lawmakers. What about the law administration? On Thursday, April 24th, a policeman gave evidence in a Toronto police court that an accused chauffeur had been speeding on Avenue Road at a rate exceeding 20 miles an hour, timed by his stop-watch. The chauffeur said he would not swear that he was not exceeding the legal time limit, ten miles an hour. The magistrate was reported in the press as being so favorably affected by the chauffeur's unwillingness to swear a lie that he let him off without a fine. The same week, a woman who had forged a five-dollar check to buy food for her starving children, was sent down for a month, because, otherwise, there would be five or six cases up the next day. Honesty is a virtue worth rewarding by leniency, but we submit that the principle would have had a far more gracious application in the case of the destitute mother than the law-defiant driver of a dangerous machine.

THE O. A. C. AS A TRAINING PLACE FOR RURAL - SCHOOL TEACHERS.

Synopsis of an address by Prof. S. B. McCready, before the Trustees' Section of the Convention of the Ontario Educational Association, April, 1908.

Thirty-four years ago the Ontario Agricultural College began operations at Guelph. It had come into existence not as the result of a popular demand by the people whom it was intended to cater to. Rather was it, as Wm. Johnston, the Acting Principal, records in the first year, "A case of statesmen discerning a want, and endeavoring to supply it." The statesmanship behind its origin was the vision of an impoverished land and the concomitant degradation of our citizenship, unless our basic industry of agriculture was stirred out of old ruts and put into accord with modern scientific achievement! The virgin richness of our soil had been ravished. There had to be an improved agriculture. There was need for improved seeds, improved stock, improved methods of cultivation. Older European countries, notably Germany, that had passed through our experiences, had saved their agriculture by making it a matter of education in government schools and colleges. The United States had moved generously in the matter. Ontario could not dare to lag.

As in most other crises of a social or industrial nature, education saves the day. Ontario agriculture has advanced, and is advancing. Intelligence grows. The old order changeth, giving place to new. Our agriculturists, as a body, are more and more bringing their minds and farm practices into accord with science and her teachings. The future is full of hope for still better things to be. There has been a general increase in the productivity of the land and the wealth of the country. In this improvement, the Ontario Agricultural College has given, directly and indirectly, good service. Its efforts and influence permeate almost every educational measure that concerns the rural citizenship. Generally it leads; always it helps. It is not pretended that other influences have not been operative in the uplift. The Dominion Government has done its part well. The press has been of great service. The agricultural and horticultural societies and Farmers' Institutes have helped, but permeating all these has been the influence of the College. It may be acknowledged, then, that the O. A. C. has vindicated the judgment of those who brought it into existence. It seems to be generally accepted amongst farmers as deserving encouragement and support. It is accorded credit for being progressive, approachable, helpful. It is only in recent years, however, that this position has been attained. There had been almost thirty years of struggle against prejudice, misunderstanding and ignorance, before this vindication was reached.

The College has won an established place. But it has done its work with the adult population. The time has come for directing its instruction down to the children in their schools. We are at the beginning of another educational movement. History is repeating itself. Similar work modified for secondary education is on trial in six

High-school agricultural departments. Will it succeed? So far as the first year's experimenting goes, much prejudice or unconcern manifests itself from those whom it is primarily intended to benefit. The attendance in the classes is small. Yet the propaganda has to be made and the field cleared. Ontario will work out for itself, in the immediate years to come, a system of secondary agricultural education. There will have to be many new adjustments to make it fit into our present school system. But it will be done. Our Departments of Education and Agriculture are sympathetic one to the other, and co-operating. Our educational authorities aim to adjust the education of our youth along industrial lines.

* * *

Alongside the experiment in secondary education, there is a movement, already past the first stages of experiment. For the past four years the O. A. C. has been training special teachers for the common schools in the country. The special teacher for the country school! That is what elementary agriculture is to mean. It is the bringing of the accumulations of science and fitting them naturally into the instruction of children. It is educating children in terms of their environment. There have been only a few teachers so trained. But these few are here and there demonstrating successfully. There must be more such teachers. It is a question of prepared teachers. We are past that stage where it was thought that all that was needed was to put a book in the hands of teachers, and that the day would be won.

Whence is this teacher to come? In time he will come from our agricultural continuation schools and our agricultural High Schools. But until these develop into a working place in our school system, they will probably be obliged to come to Guelph for their training. A teacher trained as he may be here, if afterwards he teaches agriculture through a school-garden, will see more in it than digging, hoeing, seeding and harvesting. If he doesn't teach through a school-garden, he may still interpret country life to country dwellers in new lights and new ways. The O. A. C. can best help the rural schools by training their teachers. The solution of this part of the problem lies with the rural-school trustees and the people who put the education of their children into their trust. It is to be hoped the trustees may realize this point. They may have these teachers if they ask for them. The plans for providing such have been in operation for four years at the O. A. C., where special courses are given to rural teachers in school-gardening and elementary agriculture. As a matter of fact, only a very, very small proportion of our six thousand rural teachers have come for the work. Most of them, of course, do not know about it; many who do, cannot afford it. Few get encouragement to prosecute the study. But the onus of undertaking this should not be on the poor teacher. The trustees are at least equally concerned in the matter. They might profitably share in the expenses of such an advancement and encourage the teachers to attend.

It is only fair to explain some of the limitations of the scheme. It is not intended that every country school in the Province is to have an O. A. C. joined to it. It is not intended that the teachers who spend a few weeks or months with us will become trained farmers and be ready to give expert advice (asked or unasked) to the neighborhood. But it is expected—and the expectation is based on experience—that such teachers will be a part of the fitness of things in country life and its activities. It does not mean that the school will give its chief concern to technical agriculture. Far from that! There will still be the arithmetic and grammar, the reading and spelling, the geography and history. But through all these there will be sympathetic and natural adjustments with the life the child is living, and the living the child is to make after school days are passed. This is the agriculture in rural schools.

* * *

Ontario is not isolated in its endeavors. The movement is under way in the United States as well. Their schools of mechanic arts and manual training surpass ours in numbers and equipment. They do not lead in the adaptations of agricultural teaching in the schools. They are making liberal provision, however, for the movement. The Davis Bill, introduced in the last Congress, gives \$800,000 of Federal money, available July 1st, 1908, to the State and Territorial Normal Schools, for the purpose of training teachers for instructing in mechanic arts and home economics in the urban schools, and agriculture and home economics in the country schools. Our Federal Government is apt to show its practical interest in this connection. The beginning of Ontario's movement in this matter is already arranged for. Commencing April 1st, 1908, selected teachers from the Normal Schools are to take three-month courses in agriculture, and those for urban schools in mechanic arts. This is part of their Normal

training. The adoption of this plan makes operative two new principles, viz.: (1) That the public school must concern itself with the industrial concerns of the state and its industrial workers; and (2), that, for this, teachers must be specially trained.

* * *

The following summarizes the plans of the O. A. C. for helping the rural schools in Ontario:

1. By trained teachers. The College has been regularly engaged in this work for four years. But only a small beginning has been made. We want to reach a much larger proportion of the 3,000 rural teachers in Ontario. There will be a four-weeks' course this coming July, and teachers who follow up the work and undertake gardens at their schools will receive a Teacher's Certificate in Agriculture, and be entitled to the special grant of \$30. In the spring of 1909 regular three-months' courses will be instituted, and the expenses of teachers in attendance will be paid. In the course of a few years, every township or village Continuation School should have a trained teacher representing the work of the College.

2. By offering the assistance of College instructors to teachers at their local conventions, or by taking charge of their association meetings at the College. During the past four years, about twenty-five conventions, attended by over 3,000 teachers, have been held at the College. And, generally speaking, some one of the College staff is available for lectures at conventions in horticulture, improvement of school grounds, nature study, school-gardening, or agriculture.

3. By putting a picture of the College in every country school, and thus helping to divert the educational trend that has prevailed in rural schools from the clerical or professional ideals of the urban schools, to the industrial possibilities of the farmer's calling. For this, it suggests that a picture of the Ontario Farmer's University, as the College has been called, be given a place of honor on the walls of rural schools. Copies of such a picture may be had on application at the College. As pictures are said to influence character, such a picture may serve in fixing an ideal, or developing a tendency in the impressionable days of youth.

4. By taking direct charge of organized classes of the senior pupils of country schools, and helping them to a profitable day's sight-seeing at the College. During the month of June, the College is visited each year by more than 30,000 excursionists. Amongst them are many school children. If the teachers or trustees undertake to arrange for the children's being kept together as a party, arrangements will be made to instruct them after the same plan as their fathers and brothers are. This offer has been made for the past few years, but, up to the present, has not been acted upon for lack of coherence among those concerned.

5. By extending the services and the hospitality of the College to our rural trustees in conferences and conventions. It is hoped that the County Rural Trustee Associations (from which much good to the rural schools is expected) will naturally come to make the College their convention center. There is no more suitable place for getting suggestions and help. The Macdonald Consolidated School is in reality an adjunct of the College, and although it may not be generally known, it is working in its own way and demonstrating the solutions of some of the hard problems of rural education.

6. By organizing conferences and short courses of instruction for the public-school inspectors, whose work is largely in rural schools. It is important to have the rural teachers specially trained for this new work of educating children in terms of their environment which the times impose upon them, it is just as important that those who superintend this work should be properly trained, so that they may be wise leaders and overseers. There is no other place where they can so well secure an insight into the means of improving rural conditions and operations.

7. By giving short courses of instruction to the science teachers in our High Schools and Continuation Classes. This plan would soon make its influence felt in the country schools, as most of the rural teachers receive their training in these schools. The teaching of Physics, Chemistry, Biology and Geology might then adapt itself, in a measure, at least, to such practical considerations as the growing of plants, working of soils, using of fertilizers, destroying of insects, etc., and be none the less good science teaching therefore.

8. By having all the publications of the College put into the school libraries, and the pupils directed to their use as references. The College annual reports are filled with information on experimental work in field, garden, stable and dairy, that no progressive farmer can afford to be unacquainted with. The special bulletins, which are published from time to time, are prepared with the sole aim of educating the practical farmer, fruit-grower, cheesemaker, et al. Indeed, this question of training the citizen to make proper and full use of Governmental publications deserves

a place amongst the other offices of State schools. The State (The Ontario Department of Agriculture) aims to educate its citizens industrially by means of freely-distributed publications. What fraction of its effort is effective? Certainly, not so much as there should be. Let the schools help; it is a very important phase of the teaching of elementary agriculture. The inspectors might see that they were properly kept in the library, and encourage their proper use.

9. By incorporating into the school work Nature Study or Elementary Agriculture, some of the experiments conducted by the Experimental Union. During the present season, there will be over 9,000 experimenters carrying on co-operative experiments in Ontario farms and gardens, under the direction of officers of the College. These will include tests of field crops, fertilizers, vegetables, fruits, experiments in soils, legume inoculation, and poultry-raising. The rural schools of the Province are especially invited to this co-operative work. If they cannot undertake them in their own school gardens, it will not be difficult to arrange with a friendly farmer to undertake the experiment in an adjacent field. It can be used by the school as their own experiment to observe and report on. This important educational organization has been making its influence felt amongst our adult population. Its position is now assured, and its work known. The time has come for using it in the school for the training of youth.

10. By the teachers using the College as a correspondence school, and training the children to do the same. The answering of enquiries is a very extensive and regular line of College instruction. Every department is more or less extensively engaged in it. Any inquiry addressed to the College will find the proper source of information. Enumeration of some of the interests involved might make this more clear. Questions regarding crops, rotations, the best varieties of grain to sow, may be asked of the Agricultural Department; regarding injurious insects and spraying, of the Entomological Department; regarding suspicious diseases, bad water, infected milk, etc., of the Bacteriological Dept.; regarding drainage, protection against lightning, soil analysis, etc., of the Physical Department; regarding adulterations of food, flourmaking, qualities of wheat, analysis of fertilizers, spraying compounds, etc., of the Chemical Department; regarding the laying out of school grounds, the cultivation of flowers, vegetables and fruits, of the Horticultural Department; regarding plant diseases, weeds, weed seeds, etc., of the Botanical Department; regarding school-gardening and nature study, the Nature-study Department; regarding poultry, of Poultry Department; regarding live stock, of the Animal Husbandry Department; regarding milk, cheese or butter matters, of the Dairy Department; regarding farm machinery, of the Mechanical Department.

11. By having the senior pupils, at least, come into touch with the College instructors in their outside work in surveying for drainage or lecturing at Farmers' Institute meetings. The Physics Department sends out men to plot farm-drainage

schemes. Where such work is carried on near a school, have the children see it done. The agricultural representatives in the Agricultural High Schools will be found available sometimes for a lesson in the school. Their work takes them into the country schools.

This question of the introduction of agricultural education into the rural schools may be summarized thus:

1. The welfare and progress of the state has its foundations in an educated and intelligent citizenship.

2. The basic industry in Ontario is Agriculture; there is also a great New Ontario to be developed agriculturally.

3. It is necessary that Old Ontario's agriculture be still more improved; it is no less necessary that New Ontario's agriculture be along safe lines, avoiding the mistakes of the older parts.

4. The workers in this basic industry are educated in the rural schools.

5. These schools are not adequately meeting the necessity of the state in educating our youth in terms of future-life activities.

6. The failure in this respect lies in an untrained body of teachers, and a rural population more or less indifferent to progress.

7. The former must be trained; the latter must be roused to interest.

8. The Ontario Agricultural College is vitally concerned in the cause.

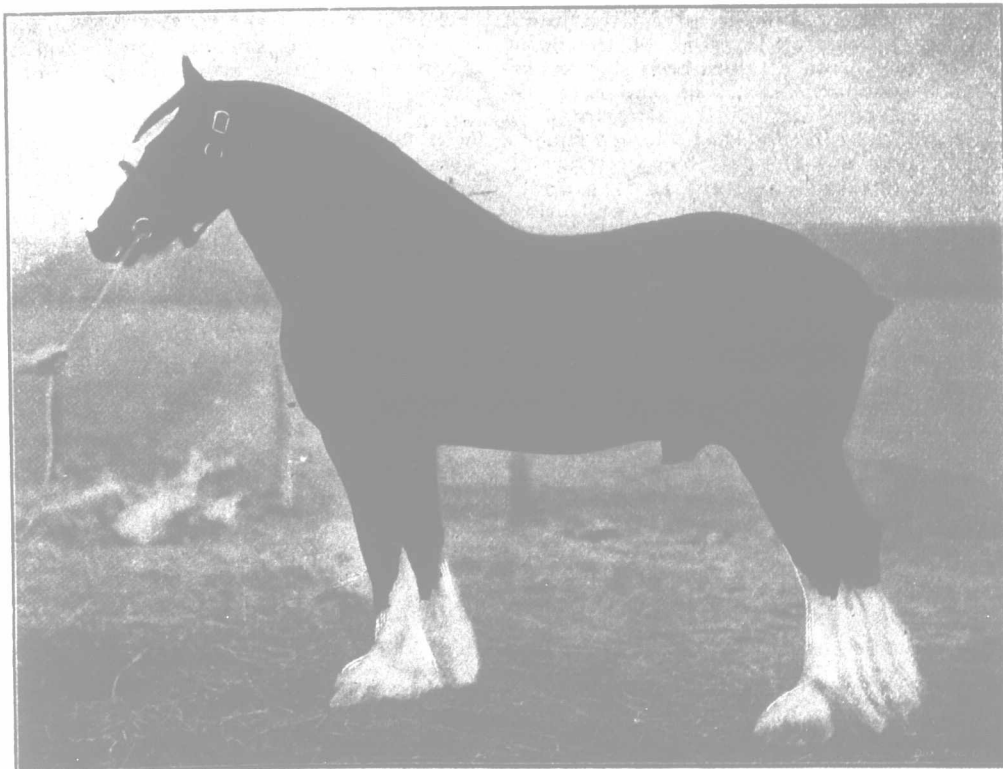
9. It offers its best offices in the matter.

10. It hopes that the people whom it serves may use it to the full extent. It feels that it will be good for the College. It knows that it will be good for the people.

BRITISH FINANCES FLOURISH.

Good evidence of the stable character of British finances may be seen in the fact that, for the financial year just closed, the Chancellor of the Exchequer was able to report some \$17,000,000 more revenue than he expected, and over \$2,000,000 less expenditure by the departments than was anticipated, leaving a balance of nearly \$25,000,000 to the good towards the national debt. And this was accomplished, we believe, without the extent of reductions for military and naval purposes that the people were entitled to expect.

It is useless to send inquiries to this office signed "Subscriber," "Old Subscriber," or "Constant Reader," unless the sender's name and address in full appears on the inquiry or the letter accompanying. We require this as a means of ascertaining whether or not the inquirer is on our subscription list. Some hundred questions or more have been discarded this past winter because unaccompanied by name and address, or in other cases because the name given was not found upon our circulation sheets under the post office mentioned.



Oyama (13118).

Clydesdale stallion; bay; foaled April, 1904; sire Baronson, by Baron's Pride. Winner of the Cawdor Cup at the Scottish Stallion Show, Glasgow, 1906, and the Brydon Challenge Shield, 1907.

HORSES.

IMPROVING THE HORSE-BREEDING INDUSTRY IN WISCONSIN.

Wisconsin is making some strenuous efforts to improve her horse-breeding industry. A stallion law was enacted three years ago, which has since been amended in various particulars, until the inspecting and licensing of stallions used for public service in this State is about as thoroughly carried out as any similar inspecting and licensing work is in any State that boasts of a stallion law. Wisconsin was driven to adopt the present stallion-licensing measures because of the predominance in the State of unregistered stallions of no breeding whatever, and unsound sires, both pure-bred and grade, that stood for public service. Farmers, so long as grade stallions could be procured for one-quarter, or less, the cost of pure-breds, or used on their mares for half or one-third the pure-bred sires' fee, purchased and used these nondescript stallions. The result was that, while Wisconsin, in climate, soil and grasses, is almost ideally situated for exploiting the horse industry, she was far behind some of her neighbors in the quality and value of the stock she was producing. It became evident to those directing the agricultural and live-stock affairs of the Badger State that something would have to be done to save horse-breeders from the effects of their own carelessness and indifference; that measures would have to be enacted rendering it difficult, if not impossible, for nondescript stallions of all kinds to travel up and down the back concessions of every country, stamping their own inferiority upon the stock they produced, and lowering the quality of the horses of the entire State. So the Stallion Law of 1905 was passed by the Legislature.

This law simply provided that all stallions standing for public service should be inspected by a qualified veterinarian, passed upon as to soundness, and a certificate granted the owner, if the horse passed the requirements of the Act. Subsequently, amendments have been made to the Act stipulating the diseases that shall be considered hereditary, contagious or transmissible, and therefore subjecting a stallion to rejection from public service; and providing a special license certificate for non-standard-bred stallions, and instructions as to what shall constitute a legal stallion poster. Veterinarians are also required to make affidavit to the soundness certificates they sign, a provision to insure greater care in the examination of the stallions.

The disqualifying diseases are: Cataract amurosis, periodic ophthalmia, laryngeal hemiplegia, pulmonary emphysema (heaves), chorea, bone spavin, ringbone, sidebone, navicular disease, bog spavin, curb, glanders, farcy, maladie du coit, urethral gleet, mange, and milanosis.

In the advertising of public-service stallions, provision is also made for insuring that the truth, largely, shall be told in describing the characteristics and breeding of the animal which the advertisement refers to. It is illegal for stallion owners to print upon posters, statements that are not strictly honest, or use a picture in a dishonest manner. Every stallion advertised must have printed on the poster in front of the name the word "grade" or "pure-bred," "cross-bred," or "non-standard-bred," as the case requires. This information shall be printed in bold-face type, not less in size than "long primer." Stallion owners have not the privilege of referring to their horse on the poster as "grand," "great," "fine," or "celebrated," and then down in a corner of the poster print an insignificant copy of a horse's license certificate testifying that the animal is a grade. It is illegal to use the picture of a pure-bred stallion to advertise a grade, and the picture of the horse on the poster must be of the breed which the stallion advertised represents. The law also provides that no judging will be possible, by means of which the public may be led to suppose that a grade stallion possesses a pedigree. It is necessary to show on the poster the truth as to the sire, and the truth as to the dam, not publishing the facts in such a way as to lead the casual reader to suppose that the sire's dam was in reality the dam of the grade advertised, a trick often resorted to.

In Wisconsin, at present, according to Dr. A. S. Alexander, there is a total of 1,286 pure-bred stallions of all breeds, and 1,974 grades. Of these, both pure and grade Percherons and trotters predominate, pure-bred Clydesdales numbering only 66, and grades 119. Prof. Alexander, in a bulletin issued for the guidance of Wisconsin horsemen, makes a powerful plea for horse-breeders and farmers to use pure-bred sires to improve the industry. It contains many illustrations of grade stallions standing for service that in conformation are descendants, and the general use of which is degrading the quality and value of the horses of the State.

RETENTION OF THE MECONIUM IN FOALS.

Many foals are lost every year from what is generally supposed to be constipation, but in reality is retention of the contents of the intestines at birth, called the meconium. During the last few months of foetal development, the liver of the foetus is active, and secretes bile, which is conveyed by the bile duct into the small intestines. The mucous or lining membrane of the intestines is also active, and secretes a quantity of mucus, which, of course, remains in the intestines and becomes mixed with the bile. This mixture becomes inspissated or thickened, and forms into lumps or balls of a dark, almost black, color, and of about the consistence of putty. This is called the meconium, and at birth the whole intestinal tract, from the commencement of the small intestines to the anus, is, to a greater or less extent, filled. Under normal conditions, the foal, shortly after birth, will be noticed evacuating a quantity of these little black lumps, and the evacuation will be repeated at intervals for about twenty-four hours, after which the color and character of the faeces change from blackish lumps to a yellowish mass of a somewhat sticky character. This change indicates that the meconium has all been passed, and that the faeces now being evacuated are those formed from the milk the foal has taken after birth. Unfortunately, this normal evacuation does not always take place, and we notice what is known as retention of the meconium. This is more frequently noticed in foals that are born during the time that mares are kept in the stable, and especially if they have been fed principally on dry food. Feeding pregnant mares on considerable soft food, as scalded bran and oat chop, with a raw root or two daily, tends to prevent the trouble, but it is not unfrequently seen in the foals of mares that have been very carefully fed and attended to during pregnancy, and is not at all unknown in the foals of mares that have been on grass for weeks, or even months.

Symptoms.—A few hours after birth the foal will be noticed to make ineffectual attempts to defecate. He seeks the corner of the stall, or, if outside, leaves his dam, elevates the tail, humps his back and strains, but nothing is evacuated. These attempts are repeated at intervals, and if relief is not given he begins to show colicky pains, lies down, rolls, looks to his side, gets up, lies down again, etc. The pulse becomes frequent and wiry, the expression anxious, mucous membranes injected, and he refuses to nurse. The symptoms increase in severity. After a while the pulse becomes imperceptible, the lips cold; in some cases the abdomen becomes bloated, inflammation of the bowels results, and this is soon followed by death.

Treatment.—The common practice of giving purgative medicines in cases of this kind cannot be too highly condemned. I might just here say that the somewhat common practice of giving purgative medicines, as castor or linseed oil, melted butter, honey, etc., to the foals as soon as born, with the idea of preventing constipation, is irrational and dangerous. The first milk of the dam, called the "colostrum," is a somewhat oily-looking material, different in appearance and also in character to milk, and has a slight laxative effect. In some cases this colostrum has escaped before parturition, and especially in these cases it is commonly considered necessary to administer purgatives to the foal. Even in these cases, laxatives or purgatives should be given in very small doses, else serious complications are liable to result.

A little careful consideration and observation will convince any thoughtful man that the attempt to cause expulsion of the meconium by the administration of purgative medicines is theoretically and practically wrong. The meconium, as stated, exists in lumps of various sizes. Owing to the action of the bowels during foetal life, these lumps have passed backwards in the bowels, and the rectum has become filled, but their escape is prevented by the sphincter muscles of the anus. Where these lumps are quite large, and somewhat hard, the foal has not sufficient expulsive power to overcome the contractive power of these muscles and allow escape of the lumps. This condition is noticed not only in weakly foals, but often in strong, vigorous ones. It is a well-known fact that medicines given by the mouth have little or no action upon the contents of the rectum; hence, when such are given in these cases, they cause a fluidity of the contents of the anterior intestines and increase peristaltic action, but have practically no action upon the seat of trouble, viz., the rectum. Such treatment must, of necessity, cause more or less serious complications, and often, when by other means the meconium is removed, the medicines given cause purgation or diarrhea, which in many cases proves fatal. But in most cases treated this way the meconium is not removed, and the colt dies, apparently from constipation. A post-mortem will reveal the contents of the anterior intestines fluid or semi-fluid, but the floating colon and rectum full of meconium. Hence, we say, do not give purgatives, at all events in the early stages. The

trouble exists in the rectum and floating colon, hence treatment should be directed to these parts. The nails of the forefinger should be cut, in order to avoid scarification; it should then be well oiled and carefully inserted into the rectum, and all the lumps that can be reached removed. It will surprise a person how much he can remove in this way, as the foal makes expulsive efforts, and as the lumps are removed from the rectum a fresh supply is forced into it, as in most cases the whole trouble is that the foal has not sufficient expulsive power to force the lumps through the anus. An injection of a few ounces of warm water and linseed oil, and warm water and soap or glycerine and warm water, should then be given. This operation should be repeated every few hours, until the faeces become yellow, when, of course, the meconium has all passed. If, during this time, it is noticed that the rectum remains empty, and that there are some lumps which probably the finger can touch, but not remove, firmly implanted in the intestine, they can generally be removed by the use of a tolerably stout piece of wire, doubled, and the blunt end inserted into the rectum, and carefully manipulated. In rare cases even this practice will not succeed, and then the prospects of recovery are slight, but we are justified then in administering a laxative of, say, one to two ounces castor oil, and keeping up the injections and our efforts to remove the meconium by finger or wire. It is good practice to mechanically remove the meconium in all foals, without waiting for symptoms of retention. This practice, if carefully done, can do no harm, and in all cases saves the foal more or less expulsive efforts and distress. "WHIP."

LIVE STOCK.

WHY DO WE KEEP COWS?

Editor "The Farmer's Advocate":

Since I have been a reader of your valuable paper, I have never seen so many letters as there have been upholding the Shorthorn cow. Mr. Editor, how is it? Are they losing ground, or are their fanciers afraid the dairy cow will put them out of existence, or do they require so much praise to keep them abreast with the times, or what can be the matter?

Mr. John Campbell and others have been writing long letters strongly upholding the Shorthorn cow. I do not know whether Mr. Campbell has had any experience in dairying or not, but I would imagine, from the tone of his letter, that he has not, and if he has, he has not made it a success, as he appears to have no use for milk, butter and cheese, but talks all beef, when he says it is a pleasant and profitable occupation to stand to one side and see the calf take it all. But the energetic, up-to-date farmer (dairyman) of to-day would think that a thing of the past, and would not stand to one side and see the calf take all the milk, butter and cheese, and punch its gentle mother in order to try to make her give it more, but would take his pail, and, if she was a good dairy cow, would in a few minutes have a pailful of the most nourishing food for man or beast, old or young, to be found on the top of the earth. He speaks of milking as being hard work, but the dairyman does not think it hard work, as he thinks it a half hour of the easiest choring he has to perform.

Well, now, I have had a little experience in beef and dairying, and not very much of either, but I feel safe in saying I was the owner and feeder of the largest calf, for its age, to my knowledge, that was raised in the County of Victoria. When it was six and a half months old it weighed 790 pounds. If any of your readers have had a larger one, I would be pleased to hear from them. I fed a bunch of cattle that averaged me \$91 each, yet I came to the conclusion it did not pay, as the calves had to be allowed to suck their dams six or seven months, and fed meal on good pasture, in order to make them bring that price at two and a half or three years old.

We will take the average of pure-breds. My whose names I could mention, sell their young bulls from nine to thirteen months old, at anywhere from \$35 to \$66, and in some cases, where they failed to get a buyer, they have sent them to the block for even less. Where is the profit, after taking all the dam's milk, keeping them in the stable, and feeding them meal? We know that Mr. John Campbell would not sell for these prices, but every Shorthorn breeder is not a John Campbell, nor every dairyman a Geo. Rice, but he must act according to his means.

Now, it is not so with dairying. When a cow freshens, she feeds the calf five or six weeks, and it is sold to the butcher for \$8 to \$12, and I have been told by a dairyman who keeps a large herd of cattle that his cows have averaged him \$70 for the year, sending the cream to the creamery, leaving the skim milk at home to feed hogs, which is the cheapest and best feed they could have. I think it would figure close to \$100 per

cow; not as in the case of the Shorthorn breeder, who has to wait for a buyer, the dairyman get his returns every month.

In conclusion, I would say, I like beef, but I could live and thrive on milk, butter, cheese, and well-cured bacon. ROBT. EAGLESON. York Co., Ont.

BETTER GO TO P. E. ISLAND FOR SWINE STOCK
Editor "The Farmer's Advocate":

In the Feb. 6th issue of our paper, I noticed an article from W. C. R., Leeds Co., Ont., entitled "A Losing Game," in which he tells of his experiment in feeding pigs. It seems that he lost money on his experiment. Well, what else could he expect? I, for one, was not the least surprised or dismayed at the result. Pigs that weighed only 75 pounds apiece at four months of age, must either have been a very small, slow-growing, unprofitable strain of pigs, or else they were half-starved and stunted before the test. In striking comparison with the weights of his pigs were the weights of some fed by a farmer in my neighborhood. This man had some grade Yorkshires (bacon type) that weighed over 180 pounds when four and one-half months old. These pigs were kept in a thriving condition from the time of their birth. I was glad to read of W. C. R. having such a nice warm piggery, which is doubtless away ahead of ours; but if Ontario breeders cannot raise pigs that will weigh more than 75 pounds at four months of age, they had better import some improved stock from Prince Edward Island. Now, Mr. W. C. R., when did you sell your pigs? How long did it take them to gain the last 75 pounds? Did they thrive as well as your pigs generally do, or were they an unusually poor-doing lot? I do not claim that all kinds and strains of pigs will pay a profit on the feed they consume, but I do claim that there are breeds and crosses that will pay a profit, and a good profit, too. E. R. Y. Queen's Co., P. E. I.

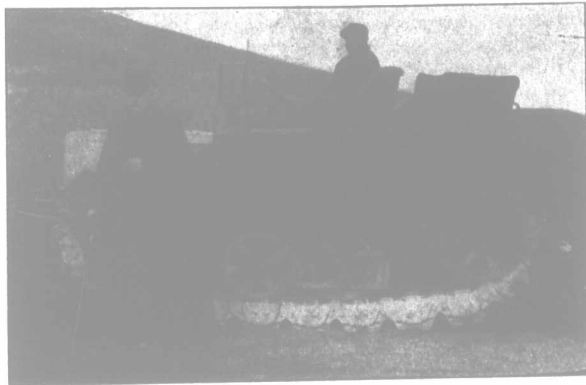
BUYING A BOAR.

In selecting a boar pig for a future herd head, it is the part of wisdom to choose one from a strong litter, the progeny of a sire and dam of the breeding, type and quality it is desired to perpetuate. While one of the less-thrifty pigs in a litter may, by good care, grow into as good an animal as one of the most forward, it is better to take no risk in that respect, but secure the best at the time of purchase, as these generally continue to be the best, the care and management being equal. The pig chosen should be of good length of body, not necessarily of extreme length, but with strong feet and legs well placed under him, and a strong back and wide, well-fleshed loin, the back being slightly arched. The head should be of moderate length, and wide between the eyes and ears, and the ears of medium size for the breed. The neck should be of moderate length, strong, and well muscled; the shoulder-blade sloping back gently. The chest should be of good width between the fore legs, and the fore ribs of good depth; the flanks thick; the hams of good thickness and well let down to the hock, and the rump or hind quarters straight and of good length, the tail being set up well, and not too strong or coarse, and the hair should be of moderate thickness, fine and silky, but not curly.

The pig should be at least eight weeks old before being weaned, and will stand shipping better at ten to twelve weeks, if the distance is considerable. It is wise, where practicable, to see and select the pig personally, seeing its sire and dam, and the general quality of the litter from which he is chosen. Where this is not convenient, correspond by letter with a reliable breeder, describing the style of pig wanted, asking the price of such a pig, and judge from the replies where you are most likely to get what you want. It is well to require a registered certificate of pedigree and to transfer, and see that these are promised in the letter quoting price, to be mailed to you within a reasonable time, say a month from date of purchase. State the station to which you wish the pig shipped, naming the railway, and if you cannot learn from your railway agent about what the probable cost of the transportation will be, ask the seller to quote the price, freight or express prepaid, then mail a postal note or order, an express money order, a bank draft or a cheque payable to the order of the seller, with instructions for shipping, and ask that a letter or telegram be sent you a few days before shipment, notifying you on what day and train the animal will be shipped, so that you may be on hand to receive it soon after arrival at its destination. The buyer will judge of the reliability and business methods of the seller largely by the promptness and clearness of the replies received, which should cover all the points in the inquiry. The breeder who advertises for business should attend to his business promptly and obligingly, otherwise he need not expect a large share of patronage, and does not deserve it. He should ship in neat,

light, strong crates, sufficiently roomy to avoid cramping the pig, and put some light food, say, oats and bran, in a low box or trough in front of the pig; and, if the distance is great, tie a small sack of feed on top of the crate, and write on the address card, "Please feed and water."

The pig, when received, should be fed lightly for the first few days with milk or kitchen swill, with a little shorts or bran, or ground oats, and his ration gradually increased till he is getting what is necessary to steady growth. Do not judge him too critically at first, especially if he has had a long journey, but wait a few days, till he gets cleaned and filled up, when he may please you much better than at first sight. Give him a fair chance, a grass plot or yard to run in for exercise, and such variety of food as will tend to build up bone and muscle, rather than fat, and watch him grow. The same instructions will suit in the purchase of a young sow, and the same description, with the exception that she should be more feminine in head and neck, and should not be close akin to the boar she is to be bred to.



A New English Road Motor.

HOW A LOAD OF PRIME EXPORTERS WERE FED

Editor "The Farmer's Advocate":

In answer to your note of some time ago, in regard to the load of cattle fed by us, to which you made reference on your market page, issue March 26th, I am now in a position to give you the whole details, as I shipped those cattle to Glasgow through the firm of Maybee, Wilson & Hall, and as it might be of some benefit to others, thought it my duty to give the particulars requested.

In the latter part of October I bought those cattle from Mr. McDonald, of Fort Ranch, Victoria Road. They were just a good lot of Shorthorn-grade steers, such as he generally has on his ranch, as he told me that he had 1,000 head, some of them better than those. They weighed 1,090 pounds when purchased. I brought them home and turned them out with about 100 more cattle on some rough grass. As I commenced taking up my mangels and turnips, the tops were distributed in the pasture field, and this was continued until all the mangels and turnips were taken up, which was on in November, we having about thirty acres of roots. Then I continued to draw out some sheaf oats and Greystone turnips, and distributed in the field, until about the first of December, when there was about six inches of snow on the ground. When those cattle were put in the stable, they were fed whole turnips, cut straw, and Manitoba frosted wheat. After doing so for two months, my turnips in the root-house were finished, and the weather being too severe to permit them being taken from the pit, I continued to feed them cut straw and frosted wheat twice a day, with a little hay at noon, putting the cut straw in the manger and throwing the frosted wheat on top, at that time feeding about 15 to 18 pounds per head each day. There was no currying nor tomfoolery with the cattle, as the help I had consisted of two of my own boys to do the feeding, with a hired man to follow a team, draw out the manure, spread it in

the field, draw home the feed, help to cut the straw, and do any necessary work with the team. They not only had the one hundred head of cattle in the stables, but also forty stock steers that ran in sheds outside, six hundred sheep and lambs, twelve horses, and forty hogs, to attend to, feeding about two tons of grain feed a day, all told. These cattle were about one month and a half in the pasture field before being put in the stable, and about three months and a half in the stable. They weighed, when I shipped them, 1,430 pounds, and netted me \$5.65 per cwt. at home, being almost as good as 6 cents per pound in Toronto. Wellington Co., Ont. DANIEL MURPHY.

THE FARM.

ROAD IMPROVEMENT BY SPLIT-LOG DRAG.

A. H. Herrick, in a letter to the Ohio Farmer, testifies to the efficiency of the split-log drag as an improver of earth roads as follows:

In every section of Ashtabula County, where the new road laws have been enforced, and the King system of doing the work has been employed, we have every reason to be pleased. We are fast getting smooth, well-rounded, solid roads over which to handle our produce. The bad roads for which Ashtabula County has been justly celebrated for years, are now confined to sections where the laws were not enforced, or where the expensive road-machine system was employed during the season of 1907. Taxpayers are getting tired of being taxed for from \$5 to \$10 per mile for smoothing (?) a road with a \$400 road machine, when a \$4 King drag will do a better job at \$1 to \$2 per mile. As a consequence, the King drag is more in evidence this spring than ever before.

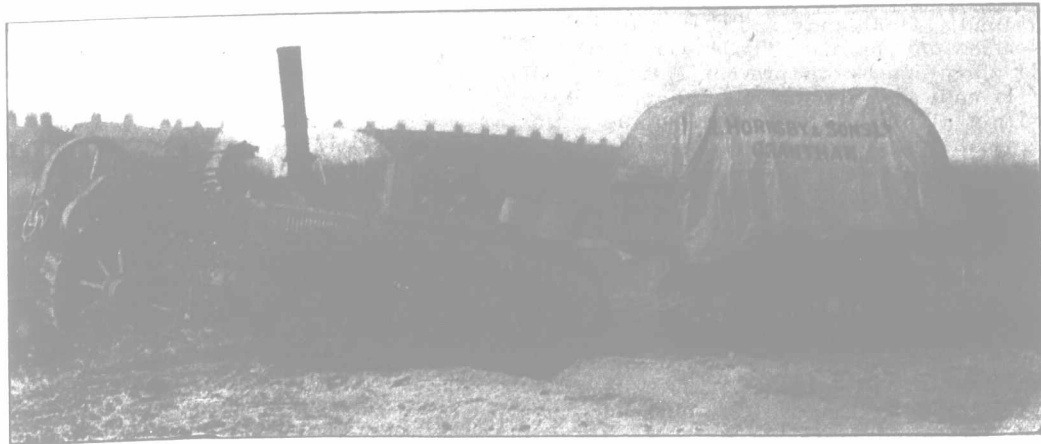
On March 31 we hauled a light load over a road which had been cared for at a big expense to the taxpayers by the \$400 road-machine method. The deep ruts, chuck holes, and soft, spongy places made the road well-nigh impassable. In point of fact, an empty wagon was a good load. Next day we hauled a far heavier load, and several miles farther, across the townships of Jefferson and Lennox, where the King system was used in 1907, and thus far this spring. We found the roads smooth and solid all the way round.

Farmers are fast getting to see that their own interests are furthered by hitching to a drag and smoothing the roads, therefore they do not wait to be called upon by the superintendent. We were over the same road a year ago, and a part of the Jefferson end of it was simply out of sight for lack of work; but, under the efficient management of the present superintendent for a year, it has vastly improved.

A NEW ROAD MOTOR.

The two engravings given herewith illustrate what is known as the Hornsby chain-track engine, a British road motor, invented by David Roberts, managing director of Messrs. Richard Hornsby & Co., a well-known English oil and gas-engine firm. It was designed, first, to overcome the difficulty of transporting heavy military stores and guns over soft and marshy roadless country, but is now being applied to the carriage of all sorts of heavy loads on bad urban or suburban roads, or where there are no roads at all. It is essentially an endless chain that travels round the weight-carrying wheels, forming on the inside a track on which those wheels run. One of the illustrations shows the facility with which it can be used in crossing a ditch hauling a heavy load.

One of the best investments a farmer can make is a dollar and a half expended for the more thorough cultivation of his mind.



35-H.P. Petrol Car Drawing Stores Across a Ditch.

RURAL TELEPHONES IN MANITOBA.

With the taking over of the Bell Telephone system in Manitoba by the Provincial Government, considerable misunderstanding with regard to the relation of the Government system to rural lines has developed. Many people are under the impression that the Government will build local lines to farmers' houses just as soon as the work can be proceeded with, but this is not, by any means, the case. The policy of the Government with regard to local telephones is to induce and encourage municipalities to build lines connecting farmers, and to connect such lines with the nearest Government exchange. The municipalities are advised to build and maintain the rural system after it is connected with the Government exchange in the nearest town, city or village, and, for the privilege of connection, \$3 to \$8 per year is charged each subscriber. Or, if the municipality desires, the Government will maintain the system at an additional cost of approximately \$6 per year. In encouraging the municipality to build such a system, the Government gives the services of its engineers, and supplies the quotations of different firms for apparatus, and suggests what it considers best. It also urges that all municipal systems that desire to connect with a Government exchange have the metallic circuit. So much for the municipal systems.

But in case a municipality does not care to erect a system, and a community of farmers in the municipality are anxious to instal phones, local companies may be formed, and a local system erected by the subscribers. Such a system will be connected at the nearest Government exchange, and the benefits of the exchange given for from \$3 to \$8 per year per subscriber, the local company to maintain its own system, or, for an additional charge, the Government will maintain the system, as in the case of the municipal phones. A company of farmers near Deloraine, for instance, have made such an arrangement, and get the benefit of the Deloraine exchange, and a considerable connection east and west. Other companies have been receiving service at Pilot Mound, Crystal City, Oak Lake, Hamiota and other points.

In other cases, where the Bell company had built a rural line and connected it with a central exchange, each subscriber is charged \$24 per year, which includes all maintenance and management.

New subscribers, located close to the lines, may now be added at \$4 per year, making application to the telephone agents, but if those desiring telephone connection are located some distance away, they may form a small company and build to meet a Government line. And the rate for the service will be an annual rental of from \$3 to \$8 per annum, a rental of \$8 per mile for a party line on Government poles, and then the balance of the line will be owned and maintained by the farmers.

Thus, there are three different bases upon which rural phones may be installed: First, the municipal system; second, connection directly with a central exchange; and, third, lines connected and maintained by companies of farmers, who pay for the service of the central and the rental of the Government connecting line.—[Farmer's Advocate and Home Journal, Winnipeg.]

ROUND SLING TRACK SIMPLER AND CHEAPER.

Editor "The Farmer's Advocate":

In a recent issue, a reader asks which pattern of slings are best; also, wooden or steel track? We have used the ordinary slings. Two stakes are provided, one on each outside of sill and center of rack; one end of sling hangs on tail-piece and front ladder, and other on center stakes. The load is built in four bundles. We prefer these for the following reasons: Cost is not nearly so much (about \$2.00 per set of four); they are handier; may be done up like plow lines and hung on tail-pieces; are by no means so clumsy; when mow is nearly full, and sheaves fall on slings, they are easily drawn out. We use hay fork for hay.

We use and prefer the round track; the cost is not nearly so much, the car is much simpler and lighter, the rod is more easily put up, the round track is easier on barn, and it is impossible for car to bind. Some may doubt that the round track is easier on barn. The end rafters are braced for three spaces, to prevent springing; all the draw is endways, letting all the barn take part of strain at once, except when bundle is going up, and these rafters are thoroughly braced. In the steel track (or angle steel, it is sometimes called), the track is fastened to each alternate rafter, and while bundle is passing under these, all the weight is thrown on the one set of rafters.

A well-known hay-carrier manufacturer once said to one of his agents, "We advise you, when the barn appears strong, to recommend our angle-steel track, because the sale of these is more profitable to you; but in an old or weak barn, you had better use the round track." We have had the steel track pull the rafters out, but have never had the round track do so. We did not know the wooden track was used at all now, except when put in some time ago. H. W.

THE USE OF UNLOADING SLINGS.

Editor "The Farmer's Advocate":

I often see questions in your journal re the use of slings for unloading sheaves. I beg to offer a few hints, having had nearly 40 years' experience. I find it a good plan to be able to change from the hay fork to the slings, and vice versa, with as little delay as possible; and also find the shorter the slings the better, as they pull out of the mow more easily, and the best way to accomplish this is to make a rack, with an adjustable post in the center of the rack, the rack

not being more than 14 or 15 feet long. I use a double rope for the fork, and for sheaves I simply remove the fork and adjust a short hook, something like the hook on the end of a whiffletree, and, in fact, this hook would answer. Into the ring post we tie or wire a small pulley, just large enough to take a half-inch rope—the trip rope used with the hay fork. This rope is passed through this small pulley, and a knot tied about 20 inches from the end so it cannot pull through the pulley, and now it answers admirably to pull the car and slings back.

Now we take the ring end of the slings and place it on the small end of this hook, which has been described as taking the place of the hay fork (a blacksmith could make one to order for 10 cents). Now, we take the short end of the trip-rope on the knot side of the little pulley, and draw it down and pass it through the other or loop ends of the slings. Now take the long end of the trip rope, and tie it over to the 20-in. end, and you are ready to pull your bundle of sheaves exactly as you would a forkful of hay. But the difficulty comes in here, how are we to trip the load after it reaches the mow, as the knot will draw very tight. To remedy this, put a loop or bow knot, so that when the long end of the trip-rope is pulled, it will loosen and drop the load. But, to make it pull easy, I place a wooden sleeve on the long post of the trip-rope and slide it into the knot, and then everything works nicely; no chains or other metals dangling about your head when pulling the slings back. By this arrangement, we can use exceptionally short slings, and the trip-rope can adjust itself for any-sized load. Figure 1 shows the parts in operation; Figure 2, the parts after being unloaded; A in Fig. 2, the wooden sleeve, which can be moved along the rope to any point to meet the knot; Figure 3 is an enlarged view of the sleeve in the bow knot, and simply pulls the long part of the trip rope to the right, and down drops the load. This knot must be tied as shown, or it will not hold.

Lambton Co., Ont.

G. A. ANNETT.

GIVE THE FARM LABORER A CHANCE.

Editor "The Farmer's Advocate":

I am writing as a farm laborer. I am proud of being one, and a Canadian at that. I have great sympathy with our brothers from the Old Land. There is room for us all here, if farmers would only think so. I have in the past had the pleasure of working with one or two very decent fellows from the Old Country. I think the farmers of this country have not used the immigrant boys as they should have done, and it is the same way with the Canadian boys. I believe this country is lacking in what I call good farm laborers.

The farm products of this great Province of ours are only half of what they should be. Now, I believe that is for lack of good farm laborers. What I call good farm laborers are boys who take such interest in the work as if they were working for themselves on their own farms. I know of boys who take more interest in the work than many farmers do themselves on their own farms, which may have been left to them through their forefathers, who worked hard for them. If the ancestors were to see how careless so many of their descendants are to-day with their farms, for lack of good farm laborers! I think a farm laborer should work for the love of the work, instead of the love for the money which he receives for his labor. Money is all right in its place, if used in the right way. I do believe farmers are not using their farm help as they should do; that is, to encourage them to take an interest in the work on the farm. What would please a young farm boy more than for his employer to lend him a horse and rig once in a while to go to the town or village to see his friends, or perhaps to his home; that is, if he could be trusted with the horse, and would not abuse it in any way? I believe this and a few other little things would pay an employer in the long run, and good help would not be so scarce as it has been in the past. I have heard many fellows say that farm life was too quiet for them, and that they would not work for a farmer who did not try to save their footsteps in any way after working hard for him all day.

Now, Mr. Editor, I am a reader of your valuable paper, and have read with interest "The Farmer's Advocate" for the last six or seven years. It is read in nearly every home in our neighborhood, and I hear everyone praising it as "the paper" of the present time. I advise every reader of this journal to read the Home Magazine. My heart has a great desire for the "Quiet Hour," and the words that are written from week to week give one great encouragement to hope for the future, and trust in God and do the right.

Brant Co., Ont.

FARM LABORER.



Fig. 1

Sling in Operation.

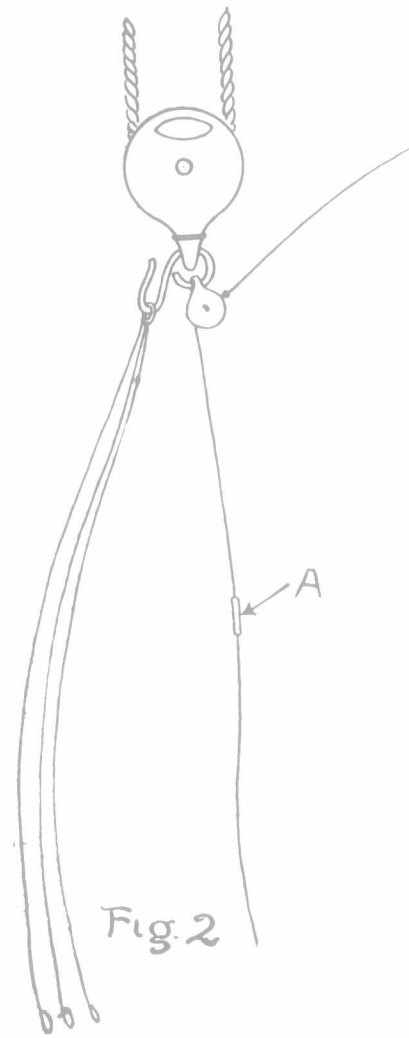


Fig. 2

Sling Unloaded.

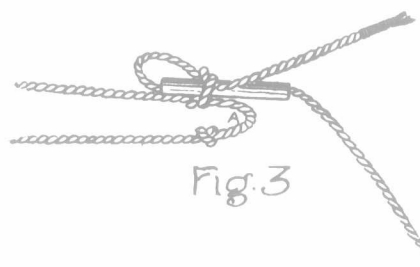


Fig. 3

Wooden Sleeve.

HANDY FARM DWELLING.

Editor "The Farmer's Advocate":

Am sending you diagrams of a handy dwelling house, knowing you are always open and willing to receive anything of value from your subscribers, and which is of interest to your many readers. The main part has a cottage roof, and rear part a ridge roof. First story has 9-foot ceiling, and second story 8½-foot ceiling. If used for a



Mr. Parnall's House Plan
(Ground floor).

farm residence, a door could be placed so as to enter cellar from rear entrance. The rear entrance could be closed for winter use, and sides removed for summer. You will notice closet in pantry for stove furniture, or it could be used for flour-box; also a closet under stairway (not shown on diagram) would be useful for hanging coats, etc., used in winter, and if a furnace were not used, this closet would be a handy place for storing coal stove during summer. This plan is reversible, so as to suit location.

S. E. PARNALL.

A FIRST-CLASS ROUND CEMENT SILO.

The accompanying illustration shows a new round cement-concrete silo, erected last year on the farm of Adam Baty, Middlesex Co., Ont. It is 32½ feet high, with an inside diameter of 14 feet. The bottom course was flared downwardly to about 20 inches, to afford a broad foundation. After the first curb was passed, the thickness was 9 inches, carried up plumb to a height of 15 feet, from which the outside was battered to a thickness of 5 inches at the top. In each 20-inch course, two bands of twisted wire were embedded, four wires in each band. An extra band was placed at the top and bottom of each door. Last fall the silo was filled to within 5 feet of the top, with the produce of eight and a half acres of corn, cut with a corn binder. Had it been cut with hoes, it would have been filled somewhat nearer the top. Commencing soon after filling, about thirty head of stock have been fed from it through the winter. During the fore part they were not fed very heavily for fear the supply would be exhausted, but in the middle and bottom the silage is packed so close, and is lowered so slowly that, by turning-out time, in the middle of May, it is anticipated that a good six feet will be left for summer feeding. The corn when ensiled, was well matured, and the silage only mildly acid, no sourness being noticeable to the tongue when a grain of corn is first placed in the mouth. No spoiled silage was found, beyond a little on the surface, and on the sides near the top. Where the cobs fell and accumulated in the center, the quality is not quite so good as about the sides, where there was more of the leafy and stalky material, and where the most of the tramping was done. This illustrates the importance of an even distribution of cobs, stalks and leaves, and solid tramping of the whole.

STEEL TRACK FOR BARN SLING.

Editor "The Farmer's Advocate":

L. W. enquires about the best slings for a barn 35 feet high. He does not say how high it is from top beam to track. From my experience with slings, I prefer the whole slings; they trip in center. But my barn is 21 feet from top beam to track; I have lots of room. Some use half slings in smaller barns. I had a wooden track in my old barn, which was burned by lightning. I put up all new, with steel track, and think the wooden track is not in it with the steel.

Haldimand Co., Ont.

J. K. L.

THE DAIRY.

CREAMERY SYSTEMS IN WESTERN ONTARIO, PAST AND PRESENT.

Address by Fred Dean, before the Western Dairymen's Convention, January, 1908.

About the year 1878 there were a number of creameries started in the northern district of Ontario, at St. Jacob's, New Dundee, Ayton and Kirkton. The method adopted at these creameries for paying the patrons, consisted of the drawer calling each day at the different patrons' farms and skimming two milkings in one day, and the patron skimming the next day, the cream being measured in shotgun or Coolley cans. There being no test, each patron was paid alike, according to the measurement and pounds of butter manufactured, after deducting 5c. per pound for making. The cream was all gathered in wooden tanks, and delivered sweet and clean-flavored, owing to the cans holding the milk and cream being entirely under water and kept cold.

Old makers say that cream has never been delivered at the creameries in as good condition as when they first started to make butter, which does not speak very well for the present generation. In the year 1888 the first test was used for paying the patron according to the quality of the cream, called the Chery test, which consisted of a tin can the size of a quart sealer, and a wooden shaker. A sample of each patron's cream was put in these tins and churned. When finished the butter was weighed and the patrons paid accordingly. About the same time the Oil test was first used, which consisted of small glass tubes, holding a sample of each

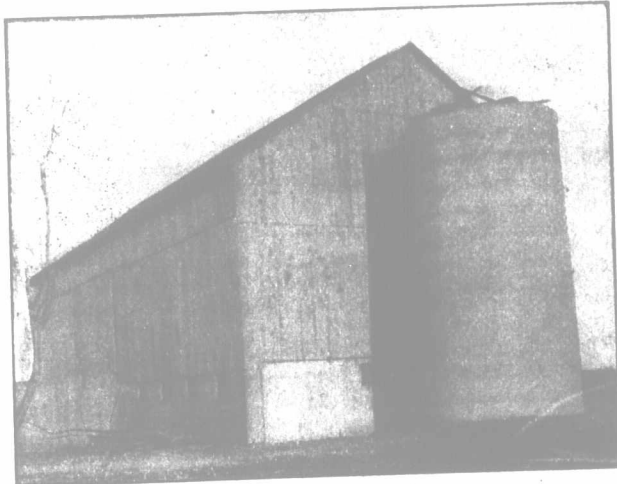
groups—north and south—with about 73 creameries, two of these being the only ones left where the whole milk is separated and no gathered cream taken; five creameries separate whole milk and take in gathered cream; four make cheese and butter, both in the summer; the remaining creameries being strictly cream-gathered or creameries where cream is collected from the patrons who do their own skimming, some using the hand separator, others setting the milk in cans, crocks, pails and pans, allowing the milk to sour, then skim the cream off by hand.

In the southern group there are 41 creameries; 27 of these, or 65%, are in first-class condition, having good buildings, cement floors, drainage, and water supply good, with walls and ceilings painted or white-washed every year. The equipment and utensils are kept clean and up-to-date; the majority have good refrigerators kept at a low temperature. The sanitary conditions are good, with surroundings kept neat and clean. Most of them are well managed; having a good buttermaker, and managers who know their business, they produce a good quality of butter, and, as a general rule, give good satisfaction to patrons and buyers of the butter. A large improvement has been made to some of these during the past season. The one thing lacking is improvement in the poor grade of cream delivered, but as long as wagons from two or more different creameries are run over the same routes, and one drawer taking what the other refuses, or the same price paid for sour and overripe cream as that paid for good, clean, wholesome cream, little will be accomplished in improving the quality, as it is not through ignorance that this injustice occurs.

Of the remaining 14 creameries, 7 of them, or 17%, are in a fair condition. Some of them have good buildings, but poorly equipped, and poorer utensils to work with; drainage and water supply not good; while a good many of them have old wooden floors, none of them kept any too clean.

The refrigerators are in poor condition, and the temperature varies up and down, depending upon the humor of the maker, whether he feels like filling it with ice often or once a week. The quality of the butter is never even, and a good deal of dissatisfaction is felt between maker and proprietor, also between them and the patrons. These creameries could be greatly improved, either by a change of proprietors or managers, and a little expense and manual labor, with good, willing, thrifty and energetic makers.

The other seven should not be allowed to have butter made in them another year without improvements being made. The buildings are old and unsanitary; they have poor drainage and a bad water supply; most of the equipment is unfit for use, being old and never kept clean; the utensils are in the same condition, and not enough of them to do good work if the makers were inclined that way. Some of them are in barnyards and mud holes of the worst description. Some are old cheese factories that have outlived their usefulness in that line, and have been made into creameries, while the stench of old whey-soaked floors, tanks and surroundings, can be detected long before they are reached. Some are in cellars where the sun never gets a chance to show up their uncleanness, and have a mouldy and close smell, that makes it impossible to produce a good quality of butter, even if the cream were delivered in good condition. Lower prices are paid for butter at some of these creameries, and the



Mr. Baty's Round Cement Silo.

patron's cream taken by the drawer, then churned, after which the amount of butter oil was read upon a chart especially prepared. There are a few creameries using this test yet, but most of them have been superseded by the Babcock test.

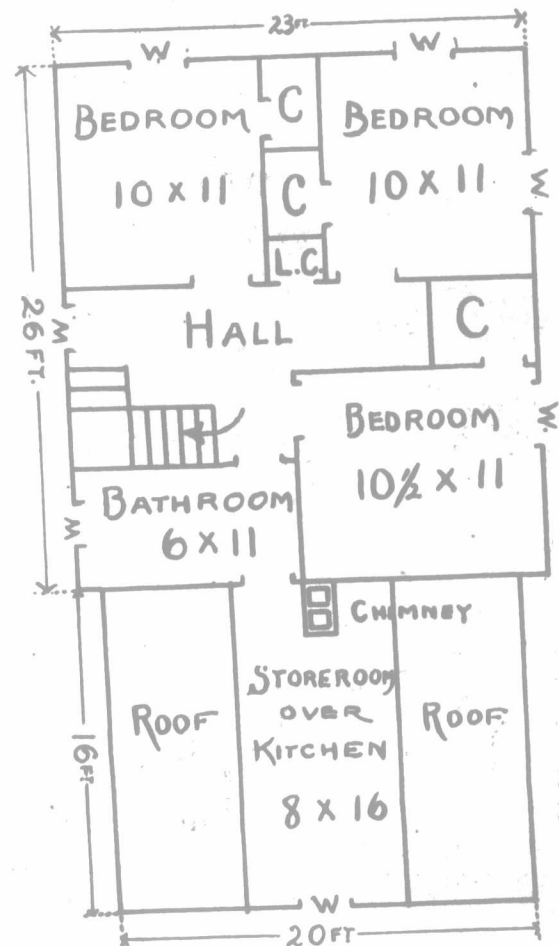
The first churns were barrel-shaped, with an upright dasher, holding about 25 gallons of cream. These were used till 1884, when the box churn came into use. About 1898 the combined churns gradually took the place of the box, till now few creameries are without them. The workers used in conjunction with the dasher churns were large wooden bowls for washing the butter; it was then salted on a triangular worker, partly worked and left over night before finishing working. For the box churn, the Mason, Fargo and National worker were used.

About 1890 a few of the cheese factories began what is called the separator system, in the fall and winter months, taking in whole milk and running it through power separators—this being the commencement of the separator system in buttermaking.

In 1893 Winchelsea started a whole-milk or separator creamery; then in 1897 the St. Mary's Creamery Co. established one of the largest separator creameries in Canada, running as such till 1904, when the hand separator became the craze, compelling nearly all the separator creameries to change back to the cream-gathered system, much to the detriment of the quality of the butter, on account of the poor care given to the separator and cream, and the length of time kept before delivering at the creameries. The creameries have been steadily increasing in number under this system, until now only an odd cheese factory is found among the group of creameries in the creamery districts.

CREAMERY CONDITIONS.

In Western Ontario the district is divided into two



Mr. Parnall's House Plan
(Second floor).

quantity in some cases is greater than from the better ones.

We are all aware of the fact that there are a great many things to be learned about buttermaking and creamery management to make a success of them; therefore, to have a successful and well-managed creamery we must have at the head a buttermaker who has a thorough knowledge and who is interested in his work, ready and willing to learn and try anything new that will lead to the advancement and progress of the business, and to realize that the interests of his employer, patrons and creamery are bound together, and he needs to have tact and good judgment enough to know how to keep everything running smoothly and in harmony, one with the other. The art of knowing how to get on well with the patrons is an accomplishment which every maker will find to be a valuable asset. Few makers pay any attention to this part of the work, consequently they and the patron drift apart, each one trying to get all he can out of the other, instead of doing all they can to build up the central interest that they both belong to. "Knowledge gives confidence, ignorance breeds suspicion," is truer in the dairy business than in any other line of business.

INCOMPLETE STATEMENTS FROM CREAMERIES.

Monthly statements are sent to the patrons from some of our creameries that should not be tolerated. All that is given is the pounds of cream sent, pounds of fat, and cheque. No test given, nor pounds of butter from the cream sent; no price for which butter is sold, etc. No annual or patrons' meetings are held to show the amount of business done, or any other transactions.

It is along these lines that a maker can make or break a creamery business. He should know each day what he is doing, by keeping a careful record of the weights, tests, and condition of each patron's cream; also a record of his work as to the total amount of cream, condition of cream at churning, the temperature and acidity of it from its arrival at the creamery until churned. If a poor grade of cream is received, which could be improved by a little personal effort, that effort should be made. If there is some point about buttermaking that is not clear, study it. We never get so near perfection that there is nothing more for us to learn, and after once getting a reputation it will be just as hard a fight to keep that reputation. It makes no difference how good a name a factory or maker has made, if the trade receives a few bad lots of butter from that factory the name is gone, and the only way to be sure of getting the best price at all times is to have it always of the best quality.

BUTTERMAKERS: GOOD, POOR AND INDIFFERENT.

It is generally conceded that a man who works in a position where intelligence and industry is needed will gradually fit himself to that position, but while at work at a trade where neither thought nor intelligence is needed a man will gradually grow slow and dull; the less he does, the less he wants to do, until he finds himself incapable of performing any work right.

Thus, we find men in the creamery business of both types; one clean, honest, skillful, painstaking and obliging, who commands a good salary, and is always sought after. Of these, we have 23 men out of 41, or 57%, who understand their business; have had a good training and experience before starting to manage a factory. Their personal appearance in most cases corresponds with the appearance of their creamery; they are neat and tidy, keep everything about the creamery in sanitary condition; they take pride in their work, and are ever ready to learn and try anything that will improve the quality of the butter.

They experiment with the different suggestions given them, to find out for themselves the best methods of

getting the cream cooled in a small space of time; the best temperature at which to churn and wash, to get quality and quantity.

Then we have 10 men, or 24%, who have had sufficient experience and education along the line of creamery management and buttermaking, who can make good butter and keep everything clean if they would try to do so, but become careless and indifferent, thinking anything is good enough as long as they get their time in, and get through with the work in some kind of a way; this is especially the case if working in a poorly-equipped creamery. They cannot get the necessary supplies, or do not go the right way about it. No encouragement is given them from the owner or company to keep things in repair. They thus become careless and neglect doing their duty, overlook part of their work as to keeping pipes, floors and utensils clean. The churn has a little warm water thrown in, and a couple of revolutions given it; it is then called clean, until fault is found with the quality of the butter. The churn is examined, and yellow matter has been found from 1-16 to 1-8 of an inch thick all over the interior. Vats are found nearly as bad; strong odors come from every direction.

The refrigerator is at a high temperature, and things generally are kept in a bad condition. It is a safe assertion to make with this class of buttermakers, that they injure more butter and do more injury to the creamery business by "a lack of disposition than from a lack of knowledge."

The remaining eight makers, or 19% (along with the poor creameries), should not be allowed in the business. They are a stumbling block and detriment to the advancement of the buttermakers, and to the progress of the industry. They are often the cause of the better maker quitting the work, by offering to work more cheaply, and giving guarantees that no man knowing his business would think of doing, because he has no control over the conditions.

These makers have not had enough experience before starting out for themselves, or have worked under a man who has not been careful enough in giving them training along clean or methodical lines. Some of them have no liking for nor take any interest in their work, but do it until some job turns up that they think they will like better, or earn enough money to give them a good time, clothes, and three meals per day. Some of them have never attended a dairy school, and those who have did not take enough interest while there to put into practice the scientific or practical things taught them. They seldom read dairy papers or attend dairy meetings, and lack a thorough understanding of the principles necessary in making a good, uniform grade of butter.

THE NEED FOR IMPROVEMENT.

To improve the quality and standard of our butter, the first thing to recognize is the real need for improvement. So many makers never see any butter but their own make that it is impossible to convince them of the need for improvement. One of the best methods used for improvement of the butter in the cream-gathered creameries, was carried on at some of the creameries during the past season, where the pasteurizer was not used. The cream was cooled down to 50 or 52 degrees as quickly as possible, either by running it over a cooler or icing the vats thoroughly containing the cream, and churning within three or four hours after being delivered. This prevents the development of further acid and bad flavors, which is sure to take place if left over night, especially at a temperature of 54 to 60 degrees, as is the custom of a good many buttermakers.

POINTS FOR MAKERS.

The oily flavor that is found in so much of the

cream-gathered butter is due to keeping the cream too long at and churning at a high temperature. When cream is cooled and churned at once this flavor is never noticed. It also helps to overcome the sour and rancid flavors due to old and overripe cream, by getting the cream into butter as soon as possible. By using the pasteurizer, the best all-round satisfaction is given, especially if the cream is not too sour or overripe, and testing over 25% fat. Where cream can be obtained under these conditions a pasteurizer certainly should be installed and used. A good culture is also essential, but owing to the difficulty of getting skim or whole milk, and the extra care that a cream culture takes, few of the makers use one continually. The cream in the vat should be stirred often enough to get an even temperature and acidity. If left without being stirred, the cream around and next to the cold water and it will be colder, and thus develop less acid than the cream in the center of the vat, which will be of a higher temperature, thus not giving an exhaustive churning.

IMPROVEMENT IN CREAM IN 1907.

The quality of the cream the past season has been quite an improvement over other years, showing better care as to cleanliness and being kept cool, but progress has been greatly impeded by a number of the factory owners having the cream hauled but twice a week, and in a few instances, where extra care was taken of the cream, only once a week. This should not be, and where the patrons are doing their part in taking good care of the cream, the owner should not be so avaricious, taking advantage of this extra care by cutting down expenses and spoiling the quality of the butter.

MOISTURE IN THE BUTTER.

In determining the amount of moisture in butter made by the different creameries the past season, the beaker method was used, and duplicate samples were taken in nearly every case. I made 187 tests, which averaged 13.92% of moisture; 11 of these were over 16%; highest, 20.90%; lowest, 8.85%. The churning temperature of those over 16% was from 52 to 54 degrees, and washing temperature, 56 to 58 degrees. Some of them were over-churned in the buttermilk, and others allowed the granules to increase in size in the washing of the butter.

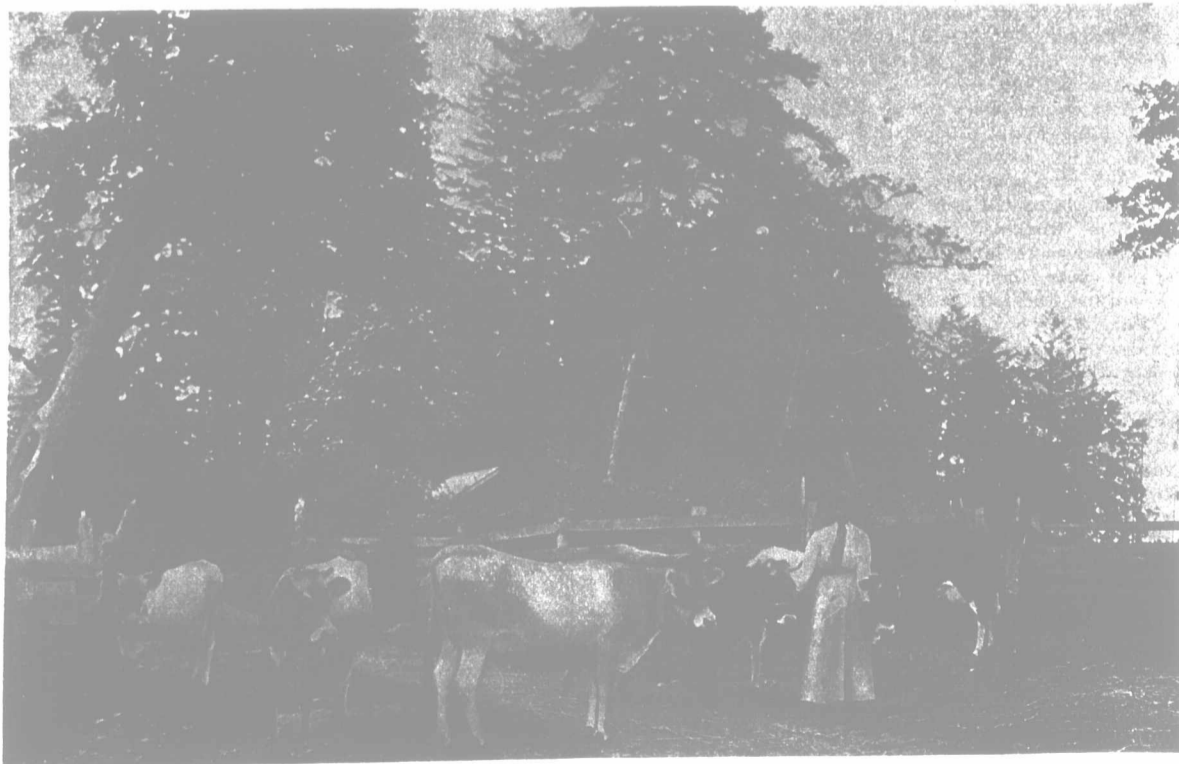
The butter that contained the high per cent. of moisture was of a dull color, and had poor body and very open, though not as slushy as one would expect. The temperature churned at by the majority of makers who had about the average test was from 50 to 52 degrees to the size of wheat, spraying with cold water until the buttermilk was all expelled, and then washing once or twice, according to the conditions of the butter, at a temperature of 52 to 56 degrees, until the granules were the size of corn. As soon as the butter was sufficiently drained, and not too dry, one-half of the salt was sifted on as evenly as possible; the churn was then revolved without rollers a couple of revolutions, and the remainder of the salt added, with one or two more revolutions without rollers. The butter then should be worked four or six revolutions, and allowed to stand and drain off surplus moisture for 10 to 15 minutes, finishing working with six to ten revolutions more, depending upon the general conditions. No definite rule can be given for working butter, it being part of a buttermaker's trade, which is very important, yet a good many give it very little attention, doing it more by guesswork, causing mottles, streaks, greasy and open butter.

DAIRY PRODUCTS DEFINED.

The Association (United States) of State and National Food and Dairy Departments, at its last annual meeting, held during the Jamestown Exposition, adopted the following definitions:

MILK.

1. Milk is the fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and ten days after calving, and contains not less than eight and one-half (8.5) per cent. of solids not fat, and not less than three and one-quarter (3.25) per cent. of milk fat.
2. Blended milk is milk modified in its composition so as to have a definite and stated percentage of one or more of its constituents.
3. Skim milk is milk from which a part or all of the cream has been removed, and contains not less than nine and one-quarter (9.25) per cent. of milk solids.
4. Pasteurized milk is milk that has been heated below boiling, but sufficiently to kill most of the active organisms present, and immediately cooled to 50 degrees Fahr., or lower.
5. Sterilized milk is milk that has been heated at the temperature of boiling water, or higher, for a length of time sufficient to kill all organisms present.
6. Condensed milk, evaporated milk, is milk from which a considerable portion of water has been evaporated, and contains not less than twenty-eight (28) per cent. of milk solids, of which not less than twenty-seven and five-tenths (27.5) per cent. is milk fat.
7. Sweetened condensed milk is milk from which a considerable portion of water has been evaporated, and to which sugar (sucrose) has been added, and contains not less than twenty-



Herd of Jerseys.

Property of Katharine Bradley-Dyne, Saturna, Vancouver Island, British Columbia.

MAY 7, 1908

THE FARMER'S ADVOCATE.

eight (28) per cent. of milk solids, of which not less than twenty-seven and five-tenths (27.5) per cent. is milk fat.

8. Condensed skim milk is skim milk from which a considerable portion of water has been evaporated.

9. Buttermilk is the product that remains when butter is removed from milk or cream in the process of churning.

10. Goat's milk, ewe's milk, et cetera, are the fresh, clean, lacteal secretions, free from colostrum, obtained by the complete milking of healthy animals other than cows, properly fed and kept, and conform in name to the species of animals from which they are obtained.

CREAM.

1. Cream is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force, is fresh and clean, and contains not less than eighteen (18) per cent. of milk fat.

2. Evaporated cream, clotted cream, is cream from which a considerable portion of water has been evaporated.

MILK FAT OR BUTTER FAT.

1. Milk fat, butter fat, is the fat of milk, and has a Reichert-Meissl number of not less than twenty-four (24), and a specific gravity not less than 0.905

40° C.

40° C.

BUTTER.

1. Butter is the clean, non-rancid product made by gathering in any manner the fat of fresh or ripened milk or cream into a mass, which also contains a small portion of the other milk constituents, with or without salt, and contains not less than eighty-two and five-tenths (82.5) per cent. of milk fat. By acts of Congress, approved August 2, 1886, and May 9, 1902, butter may also contain added coloring matter.

2. Renovated butter, process butter, is the product made by melting butter and reworking, without the addition or use of chemicals or any substances except milk, cream, or salt, and contains not more than sixteen (16) per cent. of water, and at least eighty-two and five-tenths (82.5) per cent. of milk fat.

CHEESE.

1. Cheese is the sound, solid and ripened product made from milk or cream by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments and seasoning, and contains, in the water-free substance, not less than fifty (50) per cent. of milk fat. By act of Congress, approved June 6th, 1896, cheese may also contain added coloring matter.

2. Skim-milk cheese is the sound, solid and ripened product, made from skim milk by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments and seasoning.

3. Goat's-milk cheese, ewe's-milk cheese, et cetera, are the sound, ripened products made from the milk of the animals specified, by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments or seasoning.

ICE CREAMS.

1. Ice cream is a frozen product, made from cream and sugar, with or without a natural flavoring, and contains not less than fourteen (14) per cent. of milk fat.

2. Fruit ice cream is a frozen product, made from cream, sugar, and sound, clean, mature fruits, and contains not less than twelve (12) per cent. of milk fat.

3. Nut ice cream is a frozen product, made from cream, sugar, and sound, non-rancid nuts, and contains not less than twelve (12) per cent. of milk fat.

MISCELLANEOUS MILK PRODUCTS.

1. Whey is the product remaining after the removal of fat and casein from milk in the process of cheesemaking.

2. Kumiss is the product made by the alcoholic fermentation of mare's or cow's milk.

CONTROL OF MILK SUPPLY.

Since milk is so extremely variable in quality, and is so easily adulterated; since often considerable variations are not readily detected; above all, because the amount of milk used by any given person or family is comparatively small, the consumer of milk is almost wholly at the mercy of the producer and dealer, and must rely for a good product very largely upon their honor. The State has recognized this, and to prevent imposition by unscrupulous people, has in various ways sought to regulate the sale of milk and like products. The chief means used has been to establish arbitrary standards of quality, and to subject to fine those dealers whose goods should be found to be below the required standard. The standards established by various States and municipalities have varied widely. From 2.5 to 3.7 per cent.

of fat, and from 11.5 to 13 per cent. of total solids, have been the minimum requirements. These standards, while efficient in securing honest dealing where they are rigidly enforced, nevertheless may work injustice, so far as honesty of the dealer is concerned, under various circumstances, and may prevent the production and sale of a comparatively low-quality product at a reasonable price. It would seem, therefore, that the best means of regulating the traffic in milk would be, not to set up an artificial standard to which all must come, but to require each individual dealer to guarantee his own standard, and hold him responsible if his milk were found below. In this way, it would be possible to sell milk of various qualities, from strictly skimmed to heavy cream, upon a graduated scale of prices, with exact justice to everyone.—[Prof. H. H. Wing, Cornell University.]

POULTRY.

THE WOODEN MOTHER.

Something About Artificial Brooding—Disagreeable Experiences—Desirable Points in a Brooder—What is Desirable on the Part of the Operator—The Coming Wizard.

By A. G. Gilbert, Manager Poultry Dept., Exp. Farm, Ottawa.

The brooder is intended to brood the newly-hatched chickens, and in the great majority of cases it is successful in so doing. But there is also much in the ordinary pattern brooder for the operator to brood over. It is really an ugly quantity to look at and operate. For instance, after heavy showers of rain or days of wet weather, which frequently occur during the chicken season, there may be one or two inches of water on the grass. The brooders I refer to lie

get, Mr Gilbert." The brooder was of the flat-on-the-ground type. However, I squeezed through by saying it was the incubator (which had given splendid results) I had advised her to get, and not the brooder. It was a narrow escape, and I mentally tallied one more against that pattern of brooder. So we are up against one of the great drawbacks to brooders of a certain pattern, viz., inconvenience in operation.

DESIRABLE FEATURES IN A BROODER.

What should be desirable points in a brooder? I mention a few as follows:

1. Convenience of design, so that the lamp may be easily reached.
2. Accessibility to all parts, so that it can be thoroughly cleaned.
3. Lamp so arranged that it can readily be lighted, even in a high wind; not easily blown out.
4. Well ventilated. So arranged that, while there is abundance of fresh air and light, there is no chilling of the chicks.
5. On the roomy side, rather than the opposite. Chicks do best which have plenty of room.
6. Of such design as to be thoroughly rain-proof.

Of course, I refer to outside brooders. Inside brooders of the present-day type are in some cases improvements on previous patterns. Old-style inside brooders have caused more fires and roasted more chicks than their originators would care to have put on record. It is a matter of congratulation that the colony-house method of keeping poultry also promises us a better system of rearing chicks, and that improved method cannot come too soon.

WHAT IS DESIRABLE ON THE PART OF THE OPERATOR.

I have noted some desirable points in an up-to-date brooder. Now, it is desirable that the owner should have correct appreciation of what his duties are, in order that his brooder should be

operated to the best possible advantage. Directions usually accompany the brooders, and it is all-important that they should be closely observed. These instructions, as a rule, refer more particularly to the setting up and working of the wooden mother than they do to what is expected of the individual who is behind the gun. And his, or her, responsibilities are such as cannot be neglected without risk of disaster. What are some of them?

1. It is necessary that the brooder be regularly cleaned and thoroughly disinfected. The latter before the chicks are put into it, and at certain times afterwards.

2. That the earth or sand, usually put into the brooder (and the former is preferable), should be dry, kept dry, and regularly renewed.

3. That the brooder be placed on dry ground,

or on the grass. The chicks should be allowed to run on the grass as soon as they possibly can, but not when it is wet with rain or dew.

4. That the lamp be filled and the wick trimmed regularly. This is important, if a regular temperature is to be kept up and a smoky lamp prevented.

5. That a brooder which is the cheapest is not always like a cheap incubator—the best. Appreciation of this fact on the part of the purchaser will be to his advantage.

6. If your incubator is a good hatcher, you should certainly have the best brooder wherein to rear the chicks. You should keenly realize the folly of hatching chickens to die in the brooder.

A GOOD HEAD, AS WELL AS A GOOD BROODER, NECESSARY.

Much more could be said as to brooders, but the above features, which are requisite on part of both brooder and operator, may be helpful. As in the case of artificial hatching, so it is in artificial rearing, the strong germ will make the robust youngster, which will make satisfactory growth in brooder designed and operated as outlined. The weakling chick, the legacy of the weak germ, will peep itself to death—it may be in a few hours, perhaps days—from, well, no matter whether green or blue diarrhoea, non-absorption of yolk, or pneumonia. It dies, and it is well that it should do so; for he, or she, who rears weakling stock is an enemy to the best poultry interests of the country. To be successful in the artificial rearing of chicks, requires, as



The House of the Pioneer.

(By courtesy London, Ont., Concrete Machinery Co.)

flat on the ground, and to reach the lamp, which must be regularly attended to, the operator has to lie on his side. Some few years ago I had a lively experience of what I am writing about. It was on a Dominion Day afternoon, when a violent thunderstorm began, and was followed by others in quick succession, until nine o'clock in the evening. The rainfall was phenomenal. It was as dark as only a dark night in July can be. I had four or five brooders full of chicks on a grass lawn adjoining the poultry buildings. The chicks were in peril, and it was imperative that they should be looked after. When I came to the grass field—on which the brooders lay—there was fully two inches of water on the ground. Down I went, first on my knees, but I could not reach the lamp that way. So over I had to go on my side, and then I was able to reach the lamp, which the rain-water would certainly have reached had the brooders not been very slightly raised on blocks. brooders were all right. After that I had the brooders placed on legs. Just fancy a woman—and many are poultry-keepers—having such a comfortable experience!

And Yet Another Experience.—It was at a meeting in Winnipeg, when a lady from Moosomin told us that, during the previous spring, her outside brooder, full of early chicks, had, by an untimely blizzard, been literally covered with sleet and the lamp put out, and the chickens smothered or frozen to death. And then she turned to me and said, "It was one you advised me to

in artificial hatching, a thorough knowledge of how to mate and manage the parent stock so as to insure to the young chick constitutional stamina. And this means that the poultry-keeper should have a good head, as well as a good brooder.

A RADICAL CHANGE COMING.

But a panacea for all the doleful conditions and experiences enumerated is at hand. Electricity is doubtless the coming factor in artificial hatching and rearing. Already the apparatus is perfected. It is only a matter of a few days when the wizard agency will be attached to one of our incubators and several brooders. No more kneeling or lying prone in two inches of water or mud. No more nervous dread as to the lamp going out, or being blown out. No more smoky lamps; no more unwholesome fumes. You touch or turn a button, and the requisite temperature is quickly secured and kept. Welcome panacea!

I can do no better than conclude in the words of the president of a leading incubator and brooder manufacturing company, who says: "It is our belief that electricity will be quite generally adopted as the heating element for the artificial hatching and brooding of chicks." And beyond all question he is correct.

THE EARLY EGGS INFERTILE.

Editor "The Farmer's Advocate":

One of the best departments of your paper is the poultry section, where a person can get valuable pointers in the raising and management of poultry. I keep about fifty hens during the winter months, and they have been laying from the first of December up till the present time. In the morning I feed a warm mash, and about ten o'clock throw a quart of oats in their litter of straw and chaff, so as to keep them busy, and about one o'clock or so they get a good feed of oats, and the third meal comes a short time before they go to roost, consisting of oats also. A mixed ration of grain would be better, but having a quantity of oats on hand, I didn't buy any other feed. My hens are kept well supplied with green food, such as cabbages, turnips, etc., and fresh water is kept before them, and grit, in the shape of coarse gravel, while sifted ashes serve as a dust bath, situated in one corner, boarded off. My henhouse has a large window on the south, which I open every warm, sunny day; the nests are raised about four feet, and only one hen can enter at a time. The breed I keep is Rhode Island Red. In the matter of hatching, the last year I used an incubator for early hatching, but did not have very good luck, the eggs being very poorly fertilized, but by hen hatching I was very successful, the season being later.

This season I tried moisture in the incubator up to the time of hatching, and washed the machine before setting the eggs in with a 10-per-cent. solution of Jay's fluid; but did not have a good hatch at all, the fault being with the eggs, they being very poorly fertilized, due to my hens being shut in, and a very cold, late spring. I keep about twenty hens with each male. Do you think this is rather too many?

Antigonish Co., N. S.

H. H. MACPHEE.

[Note.—A cock in hearty condition, with plenty of exercise on a large range, will usually take care of 25 to 30 hens, but in confinement during winter and early spring, half this number may be insufficiently attended to. In the case above related it is likely that two males, or else the reduction of the number of females, would have given better results. No matter how many male birds there are, however, results in fertility are not likely to be so good in the early hatches.—Editor.]

EARLY-HATCHED PULLETS BEST.

Editor "The Farmer's Advocate":

With your permission, I wish to say a few words in reply to an article entitled, "A setting coop for twelve hens," which appeared in the issue of April 18th.

I presume that the writer of the article does not have very early hatched chicks, as the coop shown and described by him would not be warm enough to set hens in very early, and I think that early-hatched chicks are a great advantage to the poultry-yard the coming winter, as the pullets begin to lay earlier. Last season (1907) we had a brood of nine chicks hatched out on March 13th, of which seven proved to be pullets, two of the pullets each laying a setting of eggs in October-November, and the others started laying at New Year's.

On account of having nothing but pullets this season, a broody hen was not so easily obtained, and our first brood hatched out on April 1st, and up to date of writing, April 22nd, we have 31 chicks out, and five more hens sitting, but I would not like to set hens in the orchard, as there are frosts at night yet.

Our broody hens are all confined to the nests, by trap doors, each morning and afternoon; feed and fresh water are placed in the room and the trap doors opened and every hen put off the nest and left off for 15 or 20 minutes, and then they are all shut on again. Each hen is dusted with insect powder when she is set, and once or twice during her period of confinement. As for results, our first brood this season hatched 12 chicks from 12 fertile eggs.

GEO. S. HAMMOND.

Perth Co., Ont.

PREPARING FOR NEXT WINTER'S EGGS.—I.

The strength of a chain is only as the strength of its weakest link. So it is with chickens. To get winter eggs is a matter of having all the factors right; not merely one or two of them. Some say winter laying depends on the way birds are fed; some say it is simply a question of comfortable housing; others claim that everything depends upon the strain. My experience tends to show that all these details have to be attended to, in order to obtain success, and that the omission of any one of them, even if the others be attended to, is likely to spoil the result. The best feeding in the world, in a house where the fowl are waging ceaseless protest against drafts, or (what is even worse) an overheated, damp atmosphere, will be of little avail; while even the two things combined, viz., comfortable quarters and good feeding, may give poor results if the other link in the chain—good breeding, from the standpoint of a hardy constitution, calculated to give its possessor sufficient surplus vigor to lay eggs in the cold of a Canadian winter—is not as pronounced as it should be. I would not say, however, that there is any one royal road to success in winter-egg production. There are many right roads, and probably several dozen wrong roads.

With no intention, therefore, of laying down the law, but merely to recapitulate the steps which brought one person success in obtaining plenty of winter eggs, I will relate my experience of the past year. Bearing in mind the first link in the chain—that is, that the eggs to be hatched should come from a strain of birds with good, hardy constitution, bred for winter-egg production—early last April I selected an incubator lot of eggs, laid by birds which had been producing particularly well all through the winter of 1906-'07. These birds, I may say here, were pullets, though it is probably better to breed only from yearling or older hens, a plan which I am myself adopting this season. The rooster which I had purchased and put in the pen about a month previously, was the best-looking bird I could obtain—pure-bred, of course—and, so far as I could learn, came from a good winter-egg-laying strain. The 116 eggs were selected from the laying of about twelve days—that is to say, those which did not come up to a fair standard in size, texture and general conformation, were thrown out.

In selecting eggs for the incubator, great care should be taken to ensure vigorous fertility. Not only should they be fertile eggs, but they should possess strong germs. I find that good results may be obtained by having one rooster to each pen of 15 to 20 hens, provided they have a good run. The chief trouble with getting hatches very early is that the ground being frozen or covered with snow, it does not allow the birds to recuperate and to return to natural conditions after their long confinement, and under these conditions strong germs are hard to get. By delaying beginning the incubation until the first week in April—which for winter-egg purposes I believe is best—one can generally reap the benefit of the hens having had a few days of outdoor exercise, picking up worms, blades of new grass, etc. To make sure of them getting enough meat, however, at the earliest part of the season, I usually give them a few rations of some form of meat. Another point worth mentioning, is that before putting eggs in incubator, I test them through the ordinary tester to see that the shells are of good material. Looking through them towards a strong light, many will be found to have thin, mottled shells. My idea is that these eggs dry out too much during the course of the hatch, and thus either fail to come out, or do not produce good strong chicks. It is best to discard them, therefore.

The hatch above referred to, which was completed about May 1st, was not a particularly good one in point of numbers, but, what is of greater importance, every chick lived and thrived. I was careful not to give them any food for the first 48 hours—the only thing set before them being small grit. After this, the first meal or two consisted of dry bread crumbs, or bread mixed with yolk of hard-boiled egg. Occasionally they were given a little moist food—such as shorts or bread and milk squeezed dry—but mainly they subsisted on dry grains, as I find small chicks, especially those which are brooder-raised, are not so liable to derangement of the digestive organs and bowels, as when brought up on wet mash. This applies also to larger chickens as well, according to my experience, though when rapid flesh-forming, rather than egg-laying, is the objective point, the latter has its advantages.

Always get the flock into contact with mother earth as soon as possible, providing the weather conditions are not too unfavorable. For the first few days, I adopt a plan whereby the chicks can easily gain shelter; or, in the event of squally days, such as we often have in May, can be shut in and yet enjoy the benefit of fresh air. It is simply a small run, about three feet wide and the length of the brooder, into which it opens. This is edged and roofed with wire screen, and can be covered with a piece of carpet or other material in an instant, if necessary. From this protected exercise ground, which practically doubles the floor area of an ordinary brooder, there is a runway down to a small piece of grass ground, surrounded by one-inch-mesh netting. Be very careful to change to fresh soil every day, as it soon becomes contaminated, and nothing is worse for a growing flock than a befouled range. Once or twice, I have forgotten, or not had time, to move the brooder and its inmates to fresh quarters, with the result that several of the chicks have soon become droopy, which would have ended fatally if not immediately rectified.

As soon as the birds have grown so that they cannot get through one-inch wire, I let them have the run of the orchard, where they can obtain plenty of grass, weed seeds and worms; and sunshine or shade, just as they desire. It is important to let a growing flock have as much free range as can possibly be managed. In fact, if it could be so arranged, without danger of the chicks getting out of bounds, or destroying flower and vegetable gardens, it would be better to let them have free run almost from the first, remembering, however, that as incubator chicks have no mother to keep them out of danger and to call them home, they have to be partially confined for a few days to teach them where they live, and how to take care of themselves in case of sudden storm.

My plan is to feed them at first five times a day, giving as much variety in their feed as possible, and not forgetting to give them (when confined) meat and grit, and lettuce or other green stuff. Don't overfeed at any time; give them enough to keep them growing, but not enough to stop them having a good appetite at all times. Gradually reduce meals to three a day, and bring them to grain as rapidly as possible. For the meat part of the ration, beef scraps is good; or milk to drink. There are several good points about dry-hopper feeding, and I adopt it as an auxiliary, though, so far, I have never had the courage to use that method without compromise, as the man down in Rhode Island who only feeds his hens once every week or so. About the time they are getting their feathers, six or eight weeks old, give extra meat, and take extra care they do not become exposed to wet or cold. But if they have a good run, and have done well up to this point, they will probably be able to look after themselves pretty well.

W. P. F.
York Co., Ont.

GARDEN & ORCHARD.

THE POTATO AND ITS CULTURE.

Address by T. G. Raynor, before the Ontario Provincial Winter Fair, Guelph, 1907.

They are planning, in one of the States of the Union, to have a five-day course in discussing the potato alone, so that we have abundant material to supply us for at least a half-hour discussion. I did not know that there was so much in the potato question until I began to read it and discuss it. The potato crop is bringing a large amount of revenue to the country. The question I am to discuss with you is the production of potatoes for the purpose of food.

Sometimes our potatoes are left in the cellar, and not brought out into the light, and allowed to sprout a little. It is then they make a strong, thick sprout, and there is a supply to select from when we get ready to plant. Some people save only the small potatoes for seed, and that is not a good practice, unless the tubers are small from abnormal climatic conditions. Of course, some seasons the potatoes do not get a chance to develop. There are some thirteen points with regard to the potato that are worthy of consideration. Mr. Zavitz is the authority for the statement that the largest yield comes from planting the seed from large potatoes. He does not say that it is the most economical kind to plant; he rather favors the medium-sized potatoes, and cutting to one or two eyes. Whatever our selection of seed may be, we ought to have some definite plan. When potatoes are a high price, it might not pay to use large potatoes for seed.

In the season when potatoes are low in price, it would certainly be a great advantage to take the larger-sized tubers for seed purposes. The system we have in the Canadian Seed-growers' Association, is to make the selection as uniform as possible. When going into the field, you see a strong, rank-growing hill, with strong stocks, and it in every way shows vigor and vitality, plant a stake beside that hill. I would plant about 150 stakes in order to make my selection. When you come to dig these potatoes, take out these 150 or 200 hills you have staked, and select the best hills, those that have got the largest number of tubers, and of uniform size for seed. Those that have a lot of smaller tubers should be discarded. Uniformity is what we are aiming at, not only in the quantity in the hill, but also uniformity in the size of the potatoes, so long as they are of a marketable size. Select 25 of the best hills out of the 150, and keep the product of each hill in a sack by itself. Next spring, when you get your ground ready to plant, we ask you to take eight potatoes out of each hill; therefore, you would not select any hills for your purpose that had less than eight potatoes in it; it would be better to have 10, so as to have one or two potatoes to play on. We ask you to plant the product of each hill in a row, so that you can follow up the history of each individual hill, if you choose. If one potato in that hill seems to give perfection, you can take that individual potato and follow it up.

It is the law in nature "that like breeds like," and the same laws are in operation in connection with our crops as obtain in stock improvement, and we can expect to continue to im-

prove right along and hold it there after we get it to a state of perfection.

Professor Hays says that the potato, properly selected in some such way as outlined, will retain its vitality for about thirty years, and that is long enough for the ordinary man; and it is worth while, because there is a large amount of money comes from the potato crop.

You can see from this chart that the lowest row of eight hills produced 62 potatoes, and the highest 127. We also want to try and get a variety that is free from disease, and that is well up in productivity. There is a great difference in the varieties of potatoes in that respect. When you undertake to select potatoes from the breeding plot, be careful to select only the very best.

I have here before me a number of potatoes, and in the first place I want to show you a good-sized potato. You will notice that this one is an irregular potato; evidently, it has received crowding in the hill; very likely the ground was too hard at a certain stage when this potato was developing. The best soil for potatoes is sandy soil, with some loam and plenty of humus in it. We can do much to improve potatoes by putting the soil in proper condition.

If you wish to see whether the potato is of good quality for eating purposes, cut it in two, and you will notice some spaces of a sort of watery color, medullary rays, larger in the center, and ramifying out from the center of the potato, and the potato that has these medullary rays large and open is usually of poor quality; they are not so good for cooking. We want a potato to be as solid as possible, with the starchy particles lying closely together, obliterating the medullary rays. There is a popular notion that the potato that is a sort of a russet color, and a little rough on the surface, is the best; and I believe that is the case. It is said that there are certain varieties which, if stored for a while, will develop this roughness on the skin in maturing. Certain markets discriminate against potatoes on account of their color, and the potato-grower should find out what they want in the market he is going to cater to, and make his selection accordingly.

You will notice there is a great difference in the depth of the eye in these potatoes. You will see that this one has a very deep eye, and, in order to obliterate this eye, a very heavy peeling will have to be taken off. We should select the potato that is shallow in the eye. There are two or three different desirable shapes in potatoes; there is a long shape, the kidney shape, and the oval shape.

Mr. Newman was good enough to bring up some samples of potatoes grown in the Maritime Provinces, and in Toronto they will pay 10 cents a bag more for the New Brunswick potatoes than they will for Ontario potatoes.

The Ontario grower used to have all this Toronto market of three or four thousand bags a day; now, 80 per cent. of it is supplied with potatoes from the Maritime Provinces. Potatoes they send up from New Brunswick are uniform, and well selected. They do not put in half a car of one size, and half a car of another, because it would destroy their value in the Toronto market. They grow potatoes of the same kind in the same community, and have them, as near as possible, all the same size and shape and color; and when the Toronto dealer gets the carload it is uniform, and he has no trouble in disposing of them.

I have here a few potatoes that were grown in the Ottawa Valley. There is a potato called the Maggie Murphy; it looks nice, but it is not very good in quality.

Q. Suppose in one of the hills you have only four or five good-sized potatoes?

A. That would indicate to me that if I planted these potatoes another year, they would have a tendency to produce hills with four or five potatoes, and that would not be enough to suit me, and I would prefer to make my selection from potatoes that were not too large in size, and were uniform, and that would give a better yield.

Q. Would you plant in hills?

A. As far as this potato-improvement work of the Canadian Seed-growers' Association is concerned, we certainly want it in hills; we want to give each hill plenty of room, so that the roots can ramify in the soil. To get the best results,

it is not necessary to plant in hills, but it is necessary to give plenty of room for the roots. The best practice is to plant in rows three feet apart, and fifteen inches in a row.

Q. Do you cut potatoes in two for planting?

A. These potatoes cut in two, I would consider would give two good pieces. Large potatoes may be cut in good-sized pieces, from 2 to 4 ounces, with one or two eyes in a piece.

Q. Do you leave all the eyes in?

A. It does not matter about that at all; experiments have been conducted in attempt to determine what effect that has, and it has been found that all eyes do not produce stalks. When the potato is planted whole or in pieces, it appears to have power to send out individual shoots.

Q. Are there any blight-proof varieties?

A. None that I know of, but there are some that are more blight-resisting than others.

Q. There is a blight-proof variety advertised at a high figure.

A. There are a great many things advertised at high figures that do not always pan out.

Q. Is it better to have the potato mature in a short time or in a longer time?

A. It is a good thing to have them mature and ripen just as early in the season as possible.

That is true of the early varieties, and perhaps even the later ones. I would favor selecting from the variety that would mature a little earlier.

Q. In countries where they take longer to mature, they are coarser, and have not as much starch.

Professor Zavitz.—Some of our best varieties mature late.

Mr. Raynor.—You must have a potato that matures before the frost comes. It is just as necessary that the potato should mature before the frost as any other crop.

Professor Zavitz.—In our own experiments, Empire State has been found to be the best. Burpee's Extra Early, Rose of the North, and Early Fortune, are some of the best early; and Early Eureka is also a good potato.

Insects that Trouble Vegetables, and How to Combat Them.

By Dr. James Fletcher, Ottawa.

Gardeners are not subject to as many difficulties as farmers are in the cultivation of their fields. One of the best methods of avoiding loss from insect, fungous and weed enemies of the farm is the adoption of a short rotation of crops, and where that is done, very few of even the worst enemies of the farmer can make much headway. In gardening it is otherwise. The gardener has to make the greatest use possible of every inch of his land, and he has to decide, according to his market, which are the crops that will give him the largest returns. In that way he has to restrict himself to a few crops. Those who experiment with crops have often to wait for their profits; consequently, and very wisely, few gardeners take up new experiments, particularly in these days, when the Government is doing that work for them. The practical gardener wants to know the crops that can be grown in his district which will give him the biggest return. Consequently, his choice soon comes down to a small number of the suitable crops, according to the locality. In the case of nearly all the staple crops, the insect enemies have already been studied to a large extent. Every year, however, we find one or two new pests, and a gardener may be at a loss at first to know how to deal with such enemies.

PROMPT ACTION NECESSARY.

Vegetable growers, as a rule, have comparatively small areas under cultivation, but upon these they produce, by intensive horticulture, crops of great value, and this value is very much affected by the early date at which they are able to get their produce on the market. When a new pest appears suddenly, it is of very great importance, therefore, that they should be able to check its injuries at once.

The vegetable-growers and fruit-growers of Canada are to-day so well posted on the general features of their business that it would not be advisable to take up any time explaining the nature of insects, and how they pass through four stages—the egg, the larva, the pupa form, and then the perfect insect—nor even to point out that different kinds of injurious insects may be classified according to the way they attack crops. They either suck sap from them, or bite the leaves and consume the substance, and from these facts we know which remedy to use. Sucking insects must be driven away from the crop or the natural odor of the plant must be disguised by some stronger odor to keep the insects from being attracted to them at all. Insects which chew the substance of their food may be killed by placing upon the plant some poisonous material which will be eaten with the plant. These things are all known to most prac-

tical vegetable-growers, and it is not necessary, therefore, for us to waste time on them now.

The first observation that any gardener should make when he finds his crop is being attacked or in an unhealthy condition, is to ascertain what is the nature of the attack. He should examine the plant to see whether the substance of the leaves is being destroyed by a biting insect, or whether the plants are fading from the sap having been taken from them by a sucking insect.

Having ascertained the nature of the attack, the next thing is to find out how it should be met. The first consideration is how can the attack be stopped, and the next, how can that be done in the most practical way.

CUTWORMS.

Insects which every year do much harm to gardeners are the various kinds of cutworms. These are the caterpillars of a large class of moths which fly at night and lay their eggs on various plants. These eggs hatch, and become the cutworms which attack our crops. Now, the habits of this class of insects—of which there are about three hundred kinds in Canada—are so nearly alike that we may treat them all under the name of cutworms. The eggs of some of these moths are laid in the autumn, and they either hatch in the autumn, make part of their growth, and then lie dormant through the winter in the soil or in rubbish, and come out at the opening of the spring, or the eggs may not hatch till spring. The cutworms of all are, as a rule, full-grown by midsummer, when they burrow into the ground and turn to the chrysalis or pupa condition, and the moths emerge soon afterwards. The losses from cutworms are very great in all parts of Canada every year, but it has been found that nearly all kinds can be controlled by one or two simple methods. When we sow a crop of beets, carrots or onions, and find that it disappears suddenly, some think that the crop has been destroyed by frost, or that some blight had struck their crop. They do not look for the true reason, which they might find themselves by removing the soil around the crop and seeing in what condition the plants were. If you find plants have been cut off, and there is nothing but a root in the ground, you may be pretty sure that something has eaten it off, and it is not the effect of the frost or blight, because that would have left the killed plant upon the ground; but where the whole plant is removed, you may know that something has been there and eaten it, and you can generally find the cutworms by scraping the soil away a short distance from the plants. These caterpillars hide in the soil by day, and work only at night. The remedy for nearly all of these cut-

worms is simply to distribute over the surface of the land, where a crop is seen to be injured, some poisonous material which they will eat instead of the crop, and at the same time kill themselves. Such a remedy we have in the

POISONED BRAN MASH,

which is merely ordinary wheat bran or shorts mixed with some virulent poison; for this purpose, some form of arsenic is best. Paris green is probably the form most generally used. It is a compound of copper, acetic acid and arsenic, and about fifty per cent. of the material is arsenic, which is deadly poison to every animal that eats it, although I have sometimes heard the very foolish statement made that some insects will get fat on Paris green and live. It is a rather slow-acting poison; it may take one or two days, and you do not see the insects being killed. They will go off and hide in the soil, but do not eat any more, and soon die, and I do not think that it is worth the gardener's while to bother his head, as some do, in finding out how they die, as long as he gets rid of them. One pound of Paris green to one hundred pounds of bran makes a good mixture; one-half pound of Paris green to fifty pounds of bran, or one ounce to six pounds of bran. In making this mixture, put some bran in a large pan, and dampen it slightly with water containing a little sugar or salt. Stir and mix thoroughly until the bran seems to be almost dry to the touch. Then dust the Paris green lightly over the surface and mix thoroughly. If the bran is not moistened, the Paris green will sift through it to the bottom almost as quickly as it will when mixed with water. Although I generally advise that a little salt or sugar be put in the water used to dampen the bran, this is not actually necessary, as there is, as a rule, enough flour in the bran to make the Paris green adhere to it, and sometimes people needlessly put off making the mixture because they have not the salt or sugar at hand. Be careful not to put more than one pound of Paris green to one hundred pounds of bran. If you put in too much Paris green the insects will not eat it. If one pound to one hundred is used, the mixture will have a faint but perceptible greenish tinge. This will not injure a crop, which a stronger mixture may do, and, if mixed properly, it will be eaten by the caterpillars in preference to the crop. This remedy is also applicable for field practice, as well as for use in gardens, and a year or two ago, when there was an extensive outbreak of cutworms in the Northwest Territories, it was used to excellent effect in the sugar-beet fields, as well as in grain fields. They extended right through the Mormon country to the boundary, and were sweep-

ing the fields clean. The farmers at once set to work and made this mixture of bran and Paris green, and the outbreak was stopped, and the men who applied the remedy saved their crops, but men who thought they knew better, and said the insects would not eat that stuff, lost their crops. I find this remedy invariably successful with all cutworms that work above the soil.

There are some cutworms that work beneath the soil, and feed on the roots of plants. These are the only cutworms you cannot reach by this method.

CLIMBING CUTWORMS.

There are also some cutworms that take on a habit of climbing. The cutworm that was so abundant in Essex last summer was a climbing kind, called the Variegated Cutworm, and the farmers tried all the well-known remedies, poisoning the plants attacked, or they plowed deep furrows, into which the caterpillars crawled when they were going farther to seek food, and they made deeper holes in these furrows, into which the insects fell as they crawled along the furrows, and where later they were destroyed. Every year there is more or less loss in gardens from cutworms cutting off young cabbages or tomatoes when first set out. These may, to a large extent, be protected by simply wrapping round the stem of each plant a piece of paper when the plant is put into the ground. We have these slips all cut ready beforehand, about 3 inches long by 2½ wide, and about 50 are strung together by one corner and tied to the box or basket in which the plants are taken to the field. When planting the man snips one off, lays it flat in his left hand, places the stem of the plant across it, closes his hand and then puts the plant in, leaving about 1½ inches of the paper above the soil. Some years ago Mr. John Craig and I tried this plan on two plots of 2,000 cabbages each. Two thousand plants we planted without paper were nearly all cut off, while of those that had paper around them, hardly any were destroyed, and I think that paid to take that little extra time and trouble. It is like a man who shaves every morning, it is nothing to him; but the man who shaves every other morning finds it an awful nuisance, while the man who shaves only every Sunday looks forward to it as if he were going to have a tooth pulled. A little extra time and labor is nothing compared to having to replace a crop. The paper will protect a very large number, and it is worth doing.

The Variegated Cutworm is sometimes a climbing cutworm, and it will climb fruit trees and eat out the buds in the spring. As a rule, the fruit-grower who has not studied insects does not know what enemy has done this injury; but if he were to go out in the evening and put a sack or a sheet under the tree and give the tree a sharp jar, he would see these troublesome fellows fall down out of the tree. They can be prevented from injuring trees by tying bands of cotton batting around the trunks, because the caterpillars will climb up to these, but they cannot climb over them, and they will remain soft a week or ten days, and that will generally protect them enough, because the existence of the climbing cutworm as such is very short. But this Variegated Cutworm will last in the fields until July, and it is necessary to keep on with the remedies a little longer. If you know the cutworms are in the ground, you can easily poison them with bran and Paris green, but the more practical way is to prevent the moths as much as possible from laying their eggs where the cutworms can do you harm, and to do that you must keep your garden clean from weeds in the autumn, so that there will be nothing to attract the moths to lay their eggs there. The eggs of the cutworm are laid in the autumn by the mother moth only where there is food for the young, where there is vegetation on the ground, and gardens kept clean are, therefore, less liable to injury the following year by cutworms. Late crops, also, will attract them.

POISONED BAITS.

Another remedy is poisoned baits. Bunches of grass, weeds or other vegetation tied loosely in small bunches, and dipped in a mixture of one ounce of Paris green in a pailful of water, and then spread them through the garden, ten or fifteen feet apart. If this is done before the crop comes up, the cutworm will eat the poisoned bunches and be destroyed.

CABBAGE WORMS.

Another insect which gives a great deal of trouble is the cabbage butterfly. This insect was introduced into Canada about 1860. It was not found in America before that. It was brought over to Quebec, probably on some steamship, and since that time it has spread over the United States and Canada. It reached British Columbia four years ago.

In Manitoba, gardeners have had fewer insects to fight against, because their gardens were surrounded by large areas of prairie, but for two years there has been great destruction of cabbages of all kinds by the caterpillars of this imported white butterfly. In all parts of Canada there is a practice among vegetable-growers to

destroy cabbage worms by spraying the plants with Paris green and water, and also dust Paris green on the cabbages. I do not approve of this practice, because it is unnecessary, and undoubtedly dangerous. A remedy which is perfectly effective is to use a mixture of flour and Pyrethum Insect Powder, which can be bought from druggists or hardware men. One pound of insect powder with four pounds of flour, kept in a close canister or jar for twenty hours, will give five pounds of powder which is death to every caterpillar it falls upon. It not only kills by coming in contact with the insect, but if rains and the dews fall upon the plants, the powder makes a liquid which is quickly fatal to all caterpillars it comes in contact with. This powder is sometimes used in houses for killing house flies. By dusting a little of it in the windows, it will kill all the flies in a closed room in a short time.

Cabbages can be kept clear of cabbage worms by the use of insect powder and flour. Insect powder is injurious to insects, but not to animals or men. It is argued that Paris green cannot do any harm to cabbages because the head forms from the center. That is perfectly true, but one of the habits of the cabbage worm is that it eats its way right into the cabbage, thus leaving openings by means of which the poison could find its way into the cabbage, when it would become dangerous to anyone who ate the vegetable.

For the larger growers of cabbages, I think it would pay to get one of the bellows that are sold by seedsmen for applying dry insecticides. For those who do not grow many cabbages, a simpler plan is to take about half a pound of the material and put it in a small muslin bag, and then tie that with a piece of string to a stick, and let it hang from the end of the stick; with another light stick give the bag a tap, and just enough of the powder will drop on each cabbage to kill all the caterpillars on it. We have found this is the easiest way to apply the remedy on small areas; but for large areas, the ordinary bellows, by which the powder is blown out by one or two pressures of the handle, is the quickest way. It is more wasteful than the bag method, but time is of importance.

ROOT MAGGOTS.

Among the insects which the market gardener must consider every year are the root maggots, that attack the roots of onions, turnips, cabbages and cauliflowers. Root maggots are enormously abundant in some years. In those years it is almost impossible to control them. There is as yet no practical remedy which will always give us perfect immunity from attacks of these insects. The eggs are laid by small flies, very much like the house fly, but not half as large, close to the ground, on the stem, or near the roots of the plants they attack. The eggs hatch in two or three days, and at once bore into the stem of the onion, radish, or cabbage; and if they once get inside, you cannot reach them with any remedy.

The preventive remedy which has given the best results is known as the tar-paper disk. This is a piece of ordinary tarred building paper, about three inches square, split from the center to one side, so that it can be put around the stem of the plant at the time it is planted. The tarred-paper disk is pressed close to the ground, and the creosote in the tarred paper prevents the insects from laying their eggs upon the stem of the cabbage, consequently its roots are not attacked. With fresh-tarred paper, we can protect a very large proportion of the cabbages in a plot; but even with that protection, in years of great abundance, we have seen clusters of eggs laid even on the tarred paper. Last year there were many root maggots at Ottawa, but we did not find a single egg laid on any of the plants where the tarred-paper disks were used. These are made very easily with a punch, and the time required to put them on is unimportant.

INSECT POWDER OR HELLEBORE.

Another method which has given good results at Ottawa, is applied about July 1st, when the effects of the presence of the maggots become apparent. You can generally detect cabbage plants that are attacked, by the bluish appearance of the leaves. I do not advise you to treat only those plants which show they are injured, but you should treat them all, as a regular method of culture. When doing this, draw away the earth from around the stem of the cabbage, and see whether or not it is injured. If there is any sign of injury, the maggots may be killed with a decoction made of two ounces of insect powder or two ounces of hellebore in an ordinary pail of water. Mix with hot water first, and then fill up with cold water. Draw the earth away from the roots of the cabbage or cauliflower, and then take a cupful of the decoction and pour it in. The poison from the insect powder kills any of the maggots that are lying in the soil around the roots of the cabbage, and the moisture of the mixture applied at that time is very beneficial, and gives the plant a push forward, so that it will, as a rule, outgrow the injury done by the maggot. With us in Ottawa, about July 1st is

the time to do this, and the results have been very satisfactory.

CARBOLIC WASH.

With onions, the attack occurs very early in the season, and we have found, both for onions and radishes, a good remedy in the carbolic wash, known as the Cook wash. This consists of one pound of ordinary soap, or one quart of soft soap dissolved thoroughly in a gallon of hot water, and, when it is dissolved, turn into it half a pint of crude carbolic acid. Boil for five minutes, and then you have your stock emulsion. When you want to use it, mix one quart with 50 parts of water, and apply as a spraying mixture directly on the plants, or pour it along the rows, either with a sprayer or with a watering pot. You can go along rows of onions at an ordinary walking pace.

When young radishes first appear above the ground, give them the first spraying, and repeat once a week for about four times in the spring. By that time, the first crop should be ready for market, and it is not, as a rule, necessary to put on any more. This will keep the flies off sufficiently long for you to get the crop of early radishes quite clean.

In the case of onions, you must watch them longer. If they are in light, sandy soil, I have found a good remedy is to take a broom, as soon as the bulbs begin to form, and walk along the rows of onions and brush away the sand from the tops of the bulbs. The broom will take the sand away from nearly three-quarters the way down the onions, and unless the sand is well up to the top, the maggots will not work there. In heavy soil this is not practical, but in light, sandy soil I have found it a good protection. If anyone is growing onions in light, sandy soil, it will be well to try this, but the chief stand-by is the carbolic wash. As I have said, however, we have not as yet any practical remedy by which maggots can be entirely prevented; but, in Ottawa, I have grown crops of onions and radishes when other people close to me had none. The smell of the carbolic wash keeps away the egg-laying flies.

FRESH GAS LIME.

An experiment which gave good results in a large field of onions, where the land had been planted to onions for several seasons, and was strongly fertilized and well kept up, and had grown remarkably good onions for years, was based on the same principle. The onion maggot appeared suddenly, and the whole crop would have been lost. After they had been cleaned thoroughly, the cultivator was run between the rows, and then a light dressing of fresh gas lime was broadcast over the field. Gas-lime is not always a practical remedy to recommend, because a supply is not always available, but if you happen to be near gas works, and can get it, it is a very good thing to use. Gas lime is useful because the strong odor it gives off drives away the flies, and the ammonia in the lime makes it a strong fertilizer. It must be used with caution, for if a lump lies up against the plant it will burn it. About twenty bushels to the acre was used in this instance, and care was taken to sprinkle it between the rows. On clean land, 200 bushels to an acre might be put on in the autumn and plowed under in the spring. If fresh gas lime comes up against roots, it will destroy them.

CHEESE-CLOTH TENTS.

A method of growing radishes and cauliflowers which has been used with success lately is that of covering the plants over with a cheese-cloth tent or enclosure. Where it is done on a small area, it has given very good results, but the lack of light is the chief objection. With cauliflowers, it gives excellent results, but with onions it is not so successful. In amateur gardens, I have seen beautiful cauliflowers grown under covers small enough to be moved by hand, where none at all could be grown in the open. The covers were six feet long, three feet wide, and two feet high. They were removed after sundown to hoe the plants, and then replaced. The flies which lay the eggs from which the maggots come, for the most part, work in hot sunshine.

SULPHATE OF IRON.

A sulphate-of-iron solution, one pound to the gallon of water, poured around the roots of cauliflowers and cabbages, also gave good results.

BEST THING EVER PUT ON A ROAD.

Editor "The Farmer's Advocate":

I am busy seeding. The ground is dry, and is working up in grand shape. I do not keep any hired help, and my two boys are only ten and five years old, so it keeps me busy to keep up to "The Farmer's Advocate," especially since you insist so strongly on us dragging the split-log drag. One of our neighbors had a large sale, and moved away on March 31st, just as the frost was nearly out. And such a road as we had! A few days after another neighbor and I made a drag. And talk about puddling! The water just flowed off the road. It is a grand success—the best thing that was ever put on the road.

W. F. EDMISTON.

Oxford Co., Ont.

THE FARM BULLETIN.

HOW I FOUND PROSPERITY IN CANADA.

Editor "The Farmer's Advocate".

It was spring, a lovely day in May, I was walking in Hyde Park, London, England. Despite the fine weather, I was weary of life, and hopeless of ever becoming a prosperous man; in fact, even of making a livelihood. I had just got the sack; very politely, but very final. I had been apprenticed to the tea trade, and I had gone commercial travelling, but it had been a hopeless failure, although I had honestly tried my very best. At last I turned my steps homewards, miserable, and hating to tell my mother what had happened. It was dinner-time, and despite my inward feeling of woe, I tried to crack jokes, etc. After dinner, the ladies retired to the drawing-room, and we sat down to smoke. At last my father turned to me, and said, "What! in the dumps again? How many new customers did you get to-day?" Then I had to tell him the same old story, "Another failure."

"Goodness, gracious! What am I to do with you!" my father exclaimed. "I cannot keep you forever. You are twenty-one, now."

To my relief, a knock came at the door, and my uncle was announced. Of course, in due time, he heard of my repeated failures. Suddenly, to my astonishment, he slapped me on the back. "Buck up, my boy, you are only just beginning life. Try Canada; a new country, full of life, and lots of opportunities for a young man, if he has any grit in him at all."

I gasped, "What should I do in Canada?" I knew nothing really except the tea trade. Well, to make my tale short, I went. My father paid my expenses, and, to my horror, he said, "I will give you £3, and if you starve, I cannot help it."

I arrived in Toronto, a superb day, and went to the Dominion Agent.

"Well, my lad, what can I do for you?"

"Kindly get me a position."

"On a farm?"

"Yes."

I went down with a farmer that day. Next morning (Sunday), I looked at the country. It was so beautiful, and the Canadian farmers are A1. Poor fellows who hang about the Canadian cities; go with a farmer!

They say, "I will starve first."

I said to two or three, "Have you ever tried farming?"

They laughed at me, and replied, "Why, no, I have heard enough for me."

To return to myself, I am now twenty-nine, and I have farmed and succeeded in Canada. Poor old father is dead. I can help my mother now, and I do feel proud to say I am just a "hayseed."

A VAN PRAAGH.
Halton Co., Ont.

NOTES FOR FARMERS FOR MAY.

By John Fixter, Farm Superintendent, Macdonald College.

1. Do not be in a hurry to let the animals on the pastures.
2. Get carrots, mangels, sugar mangels, sugar beets, and vegetables sown early this month. Sow plenty of seed. It is easier to thin out than to transplant.
3. Corn land: If it was not prepared last autumn, plow shallow just before planting, especially if there be couch or quack grass in the land. Work the surface thoroughly before planting.
4. Sowing corn: Watch for a warm condition of soil. Quick germination is desirable. Sow fairly thick, then thin out in June.
5. Harrow the corn land lightly and thoroughly just before the corn comes up; also after it is well up, and thus save hoeing, and hasten the growth. Use a slanting-tooth harrow.
6. Plant some pumpkins in the corn, or roots after they are up.
7. If clover has not been sown with wheat, oats, barley or peas, harrow all with a slanting-tooth harrow, when the crops are 6 to 8 inches high.
8. If any part of the meadow has been winter-killed, plow up and re-sow with spring rye or barley.
9. Bees.—Examine all colonies. See that they have a good laying queen and plenty of stores.
10. Between fruit and clover bloom, uncap one side of a frame of honey each alternate evening; keep up of a rearing. Strong colonies in May give best re-brood-rearing. Strong colonies in May give best re-brood-rearing.
11. Open all windows of the cellar and root-house. If in use, put on screens.
12. A coating of whitewash will do the cellar good.

CANADA'S CHIEF MEAT INSPECTOR.

Dr. R. Barnes, V. S., formerly a member of the London, Ont., veterinary firm, Tennent & Barnes, for some months past Chief Travelling Inspector in the new Dominion Meat Inspection Department, has been promoted to take charge of inspectorial work for the whole Dominion, under the meat and canned-foods law. He succeeds Dr. S. H. Ward, who resigned to undertake the chief meat inspectorship of Minnesota. Dr. Bruce, of the inspectorial staff, takes the travelling inspectorship left vacant by Dr. Barnes.

OXFORD COUNTY FARM NOTES.

We have commenced seeding (date of writing, April 27th), and the ground is working up pretty well. We put three horses on the cultivator, and then put the spring teeth on the drill, and broadcasted the seed, going the opposite way of the cultivating. The ground was a little lumpy. We used to buy our grass seed in our own village, but this year, having some business in the city, we took the train in, and bought our seeds in the city, and after paying railway fare and freight of seed save just \$2 on the lot. Perhaps this could not be done every year, but this is a fact. Clover seed is very high. I never remember of it being so high in price. We have had some warm weather, and the grass is looking quite green. Most of the clover seems to have come through the winter pretty well, especially where it was not pastured last fall. Our fall wheat is looking splendid; never had it looking better. It was sown on sod, plowed early, rolled, and then disked and harrowed, and well worked up. Our cheese factory started on the first of April, and has made four times a week, but have commenced every day this past week. Not all of the patrons have commenced to send milk yet, but there is a very good flow coming in. Our whey is to be pasteurized, and the cheesemaker has got a little raise in the price for making. The canned-chicken business is not so good this year, and about 75c. is the highest price that has been paid for calves. We have a pure-bred Holstein bull, and are raising all the heifers. The few beef cattle that are fed here have mostly been sold at from 4½c. to 5½c., according to quality. Hay has dropped to \$13 per ton, but bran and shorts are still away up in price. We have bought about \$200 worth of feed this year. Oats for feed are about 55c., and for seed, 60c.; potatoes, from 75c. to 90c. per bag, with the tendency downward. Seed corn is a scarce article this year, as it did not ripen well last year. Live hogs are now 6½c. per lb. We think they will be a scarce crop this summer. Generally speaking, cattle are not to go out to grass in good condition this spring, except where farmers had plenty of ensilage. We have some white cattle that have been had with lice this winter, and although we have applied sheep dip quite a number of times, we have not been able to eradicate them altogether. There will likely be quite a number of mares bred this spring, but stallion owners are very slow in arranging their routes.

There have been quite a number of manure spreaders sold around here this spring. We haul out the greater part of our manure in the winter, as it is made, so scarcely think that it would pay us to get one, although I believe the spreader is a good thing.

D. L.

P. E. I. STOCKMEN AND POULTRYMEN ORGANIZED.

The Stock-breeders' and Poultry Associations, lately organized here, are both provincial in their scope, and are for the improvement of all kinds of farm stock. The Stock-breeders' organization is represented on its directorate by horse, cattle, sheep and swine breeders, and the Poultry Association will include breeders of all the various kinds of poultry.

The officers of the Poultry Association are: Patron, His Honor Governor McKinnon; President, R. V. Longworth, Charlottetown; Vice-President, Samuel Foster; Secretary, Louis A. Hazard, Charlottetown.

The officers of the Stock-breeders' Association were enumerated in "The Farmer's Advocate" of April 30th.

The directorate of each society fairly represents the stock and poultry interests of the Province, and we look for good results from their efforts.

A bill prohibiting the use of all motor vehicles was also passed at the recent session of the Legislature. So, if you come down to see us next summer, you will have to travel in the good old way, or else bring along your Aeroplane, which means of travel is not yet under the law. We lead the world in prohibitory legislation: first the liquor, then the automobile, and the flying machine as soon as it makes its appearance will likely share the same fate. Who says we are not a progressive people?

Spring is late. At this date, April 24th, it is mud, mud, mud everywhere. It does not look as though we would get to work on the land before the 10th of May.

"The Farmer's Advocate" is better than ever. We are now getting as much reading matter in a week as we got in a number when it was a monthly, and it is all right up-to-date, good, solid information.

WALTER SIMPSON.

NEW PRINCIPAL FOR ROYAL AGRICULTURAL COLLEGE.

The Principalship of the Royal Agricultural College, at Cirencester, England, having become vacant by the resignation of the Rev. J. B. McClellan, M.A., the Governor has appointed as his successor Professor J. R. Ainsworth Davis, M.A. (Trin. Coll., Camb.), F.R.C.P., Professor and Examiner in the University of Wales, Life Professor and Examiner in the Science Faculty, and Professor of Zoology and Geology in the University College, Aberystwyth. Professor Ainsworth Davis, who was formerly Examiner in Zoology in the Universities of Edinburgh and Aberdeen, Examiner in Zoology to the Royal College of Veterinary Surgeons, and in Natural History to the College of Preceptors, is author and

translator of several textbooks and other works dealing with biology, zoology, botany, etc., his translations including Professor Ritzema Bos' "Agricultural Zoology," and Professor von Freudenrich's "Dairy Bacteriology."

ONTARIO PROVINCIAL WINTER FAIR.

The annual meeting of the Board of Directors of the Ontario Provincial Winter Fair was held in the Secretary's office, Toronto, on Thursday, April 30th. The financial statement for 1907, which was submitted, showed that the receipts for the year had amounted to \$15,027.27, and the expenditures to \$14,959.63; \$8,467 was paid out in prize money to exhibitors, and \$3,073.27 was received from exhibitors in fees. Officers for the ensuing year were elected as follows: Honorary President, Arthur Johnston, Greenwood; President, Lt.-Col. R. McEwen, Byron; Vice-President, John Bright, Myrtle; Secretary-Treasurer, A. P. Westervelt, Toronto. Executive Committee—Lt.-Col. R. McEwen, Byron; John Bright, Myrtle; Wm. McNeil, London; W. W. Ballantyne, Stratford; Wm. Jones, Zenda; A. P. Westervelt, Toronto.

It was decided to hold the next Winter Fair at Guelph, on December 7th to 11th, 1908. This will be the week following the International Show at Chicago.

It was decided that each exhibitor entering a female over two years old in any of the classes for the beef breeds will be required to make a statutory declaration that such animal is intended and will be sold for slaughter, and will not be kept for breeding purposes. The Secretary stated that the citizens of the City of Guelph had kindly undertaken to provide \$150 to be offered in cash prizes to new exhibitors in the beef-cattle department. The Executive will meet shortly to complete arrangements for the prize list, and in the meantime endeavors will be made to secure a still larger sum for amateur exhibitors of beef cattle.

The dairy test in connection with the next fair will last for three days, instead of two, as in previous years. The test will begin at 5 a. m. on Saturday, December 5th, and will be finished at 5 a. m. on Tuesday, December 8th.

The recommendations from the Dominion Sheep-breeders' Association, regarding length of time that sheep should be owned by the exhibitor before the Show, and regarding the time for giving information about sheep exhibited, were laid over for a year.

It was decided that in the sections of the Swine Department, where prizes are given for three pigs, the offspring of one sow, the three pigs making each exhibit must be all of one litter.

The following changes and additions were made in the poultry department: The class for Chinese geese is changed to Brown Chinese geese, other varieties of Chinese geese to show in the A. O. V. geese class. The class for Games, A. O. S. V., is changed to read Games, A. O. V. Classes are added for Indian Game Bantams and Japanese Bantams, A. O. V. Sections are added in the sale class for Rhode Island Reds and Asiaties. The section for French, any variety, is struck out of the sale class. The prizes for cavies were increased to \$1.50 for first prize, and \$1 for second prize. The increase of prize money asked for the pigeon department was left with the Executive for consideration.

THE AUTOMOBILE IN COURT.

Judgment was recently given by Mr. Justice Riddell in the case of Smith vs. Brener, tried at London, Ont. It was an action for damages for personal injuries sustained by one of the plaintiffs, a married woman, by the negligent operation of defendant's motor car by the driver thereof, as alleged. On 25th September, 1907, the plaintiff referred to and her son, a young lad, were proceeding along a highway in the village of Dorchester, at a reasonable speed, in a buggy, drawn by a quiet horse, well under control, toward and across a bridge. Approaching the other side of the bridge came an automobile at great speed, much more than seven miles an hour. The horse upon sight of it became frightened and restless. The speed was not reduced until the vehicles had nearly, if not quite, met. The occupants of the buggy signalled with the hand and called to those in charge of the other vehicle without effect. The horse swerved from the road, and brought the buggy into contact with a tree, breaking buggy and harness, throwing out mother and son, breaking the arm of the former, and causing trifling injuries to the latter. Held, that there was a clear violation of the Act to regulate the speed and operation of motor vehicles on highways, 6 Edw. VII., ch. 46, sec. 10. The defendant contended that he was not liable because the chauffeur was not at the time upon the defendant's business. Held, that the meaning of the statute is that every owner of a motor vehicle, having obtained a permit, must see to it that his motor shall be kept and managed as the statute provides, that he, the owner, shall either manage it himself, and keep within the Act, or see to it that those who get possession of it any way shall obey the rules laid down by the Act. Damages assessed at \$614 to the husband of the injured plaintiff, and \$350 to that plaintiff herself. Judgment for payment of these sums by defendant with costs, without prejudice to any action the son may bring. Stay for thirty days. J. M. McEvoy (London) and E. W. Scatcherd (London) for plaintiffs; E. W. Flock (London) for defendant.

CANADIAN NATIONAL HORSE SHOW.

The "fourteenth annual renewal" of the Canadian National Horse Show was held in St. Lawrence Arena, Toronto, Wednesday, April 29th, to Saturday, May 2nd. In point of quality the exhibits in the several classes fully sustained, if, indeed, they did not outclass, those seen on previous occasions, and considering the close financial situation, numbers were very satisfactory, albeit a slight diminution was noticed in the harness classes. Owing to a combination of circumstances, attendance fell off somewhat from the splendid record of recent years. The financial stringency probably curtailed expenditure on millinery and dressmakers' account, thus lessening the ambition of society belles to display their attire in the front boxes, and have them daily described by the society editors of the city papers. The weather, too, was rather unseasonable, while the environment of the St. Lawrence Arena is not so inviting as that of the Armories, where the Show used to be held up till a year ago. The interior of the Arena itself was most artistically decorated, and the appointments of the Show first-class in every respect.

The roster of judicial talent numbered the following names: Harness horses—Col. C. A. Pratt, Little Rock, Ark.; Orson Moulton, Batavia, N. Y.; Geo. B. Hulme, New York, N. Y.; Saddle Horses and Hunters—Julian C. Keith, M. F. H., Warrenton, Va.; Lieut.-Col. Victor Williams, Stanley Barracks, Toronto, and W. Staley Spark, London, Eng.; Commercial Classes—Senator Robt. Beith, Bowmanville; Polo Ponies and Ponies—Col. C. A. Pratt, and Geo. B. Hulme.

Harness horses in single, pairs, tandems and fours-in-hand were represented by the usual high standard of equine conformation and behavior. The King Edward Hotel Cup, for champion high-stepper, was won by Langdon Wilks, of Galt, with a splendid seven-year-old brown gelding, The President. In the class for heavy-harness-getting stallions in harness, T. H. Hassard, of Millbrook, Ont., secured the red ribbon with the imported Hackney stallion, Marion Cassius, by Cassius, dam Brocade, by Wildfire; the blue going to A. Yeager, of Simcoe, on Bold Elsenham; while third and fourth were awarded, respectively, to Crow & Murray's Arley A. and Senator Robt. Beith's Cedar Gobang.

Hackney mares in harness were shown by Senator Beith, of Bowmanville, Ont., who secured first with Tessington Glitter, and second with Yapham Lily. Dr. W. A. Young, of Toronto, won first place in fours-in-hand. The first-prize team of high-steppers were Crow & Murray's spanking pair of brown mares, Fairheart and Trueheart.

In combination saddle and harness mares or geldings under 15 hands, Yeager's Gay Lady had the call, while in the corresponding class, over 15.2, the Ennis-claire Stables, Toronto, captured the honors with Punchinello. The champion saddle horse was Jasmine, owned by Mrs. Herbert Cox.

The Province of Ontario has abundant reason to be proud of the hunters she breeds, and the section for hunters and jumpers was probably the strongest at the Show. The celebrated stables of Hon. Adam Beck, London, figured prominently in the disposition of awards, while entries from such other well-known exhibitors as Crow & Murray, of Toronto; E. H. Weatherbee, of New York; Geo. Pepper, Toronto; Ennis-claire Stables, and others, furnished competition of a smart order. In qualified heavyweight hunters, the London entries, Kennebec and Kakabeka, captured first and second. In heavyweight green hunters, again the "Minister of Power" laid claim to first place with his four-year-old bay gelding, Kamouraska; while in amateur heavyweight hunters, Kakabeka headed the field, with Kamouraska in second place.

To the same stable belong Keewatin, first in the middle-weight green hunters, and My Fellow, entered by Mrs. Beck, for first on ladies' hunters. Kennebec landed the Toronto Hunt Plate, while Mr. Beck's team also captured first place for the London Hunt Club.

In light-weight hunters, Ennis-claire Stables' Lady Sarah had the call; while in the open class, Weatherbee's Chancellor was awarded the ribbon. This horse won much favor by the magnificent form with which he negotiated the hurdles. In two classes of jumpers, however, including the open class, Pepper's Lord Minto attained top place by his performance.

The high jump was pulled off on Saturday evening. The performance was stopped at seven feet, first and second money being divided between Pepper's Myopia and Crow & Murray's The Wasp, third going to Ironsides.

The Governor-General's Cup for best four-year-old Canadian-bred gelding or mare, suitable for riding or cavalry purposes, not over 15.3, to be sired by a Thoroughbred stallion, went to Hon. Adam Beck's Seneca.

Trotting roadsters, mare or gelding, not over 15.2, were headed by a five-year-old brown mare called Belle, exhibited by O. B. Sheppard, of Toronto, subsequently awarded championship roadster (trotter or pacer) any age. In trotters over 15.2, Crow & Murray's noted black mare, La Belle Buckner, bore off the red. In pacers, over 15.2, the crack horseman, P. Maher, of Toronto, scored with Bertha W., while in the corresponding class, over 15.2, A. W. Holman, of Toronto, secured the coveted ribbon.

Ponies were featured on Saturday forenoon. Bashful Kate, a bay mare, owned by Miss Elsie Ross, of Toronto, took first in harness, in saddle, in combination class, and then in the championship.

A very slim entry responded to the Clydesdale Horse Association's 40-dollar gold medal for best Clydesdale, mare or gelding, in harness, bred in Canada. The Dominion Transport Company won it with

a bay gelding, Sir William, reserve being the well-known show-ring candidate, Sir Thomas.

The 60-dollar medal for pair of Canadian-bred Clydesdales, mares or geldings, went for a similarly small entry. The Dominion Transport Co. showing Charlie and Sir Thomas for first place, and King Edward and Sir William for second.

REGULATIONS RE FREE IMPORTATION OF STOCK AGAIN DISCUSSED.

On Thursday forenoon, April 30th, there was held in Toronto, Ont., the annual meeting of the National Record Board, representing the various breed organizations, whose pedigree registers are kept in the National Live-stock Records at Ottawa. Most of the societies and associations interested were represented by their accredited delegates. The minutes of the last meeting, also the report of the Record Committee, were taken as read. The gist of the Record Committee's report was published in "The Farmer's Advocate" of Feb. 20th, pages 288 and 289. The principal topic of discussion was certain considerations involved in the proposed change in the Dominion customs regulations, relating to the free importation of pure-bred stock. This subject has been much debated for years, and was one of the main questions dealt with at the National Live-stock convention, in February, where a couple of resolutions concerning it were passed.

On Wednesday, April 22nd, the Record Committee met the Minister of Agriculture, Hon. Sydney Fisher, at Ottawa, and after discussing the question with him, at his request, they were pleased to learn that he was prepared to make a recommendation to the Department of Customs quite well in line with the position of the Committee. The main point to settle was what stud, herd and flock books should be recognized as entitling a pure-bred animal recorded therein to admission duty-free. At the request of the Minister, the Committee formulated a resolution to be submitted to the Record Board. The Committee's resolution recommended that free customs entry should be granted only to animals owned and imported by British subjects, and on the production of certificates of registration in one of the books or record of "the following associations or societies," enumerating first the books kept under the National Records system at Ottawa, and then the authentic books of record for each respective breed in the country in which it originated. It is noteworthy, although no mention of the fact was made at the meeting last week, that the Holstein-Friesian Association of Canada was omitted from the list. This Association, though incorporated under a Dominion charter, is not in the National Records, hence its pedigrees cannot bear the official seal of the Department which it is desired, for sake of convenience to railroads and customs officers, to make a recognized passport of validity. However, even if the Canadian Association were not recognized, the Dutch book should be, Holland being regarded as the present home of the breed. It seems rather absurd to recognize the British Goat Society, Spanish Studbook of Jacks and Jennets, and the French society for the registration of asses, while this important dairy breed should have no record, either home or abroad, rendering its cattle eligible to enter the Dominion free of duty. Another notable fact was that of the list of foreign associations, although including several German Coach associations, in Germany, and a French Coach, French Draft and Percheron Association in France, did not include either the Shorthorn or the Clydesdale Association of Great Britain and Ireland. The reason advanced was that the Canadian standard of registration for these two breeds is higher than in the Old Country, whereas in the German and French Coach, French Draft and Percheron breeds, the Canadian Record accepts unequivocally pedigrees recorded in these German and French registers. It should be remembered that the list did not include all the German and French books.

At the meeting of the Board on Thursday, last, some of the members were disposed to go farther than the Record Committee's resolution. In fact, there were three distinct propositions informally advanced, though only one was regularly moved, seconded and put to vote. One was that no animal of any breed be entitled to enter Canada free of duty, unless recorded in the recognized Canadian book for its breed. The second was that the list above referred to be placed in the hands of the customs officers as signifying what breeds were entitled to free entry. The third proposition was to require Canadian registration certificates in the case of all breeds for which we have record books, but in the case of other breeds to recognize the authentic books in the country of origin. This latter was the principle finally crystallized into the form of a resolution, and carried. It enunciated by way of preamble the advisability of having, as far as possible, all pure-bred animals in the Dominion registered in the National Records, and recommended that free customs entry should be granted only to animals owned and imported by British subjects, and on production of the certificates of registration of such animals in the Canadian books, where we have such, otherwise in certain recognized and specified books in the country of origin, the foreign certificate in each case to be approved by the Accountant of the National Records. The original list of foreign record associations was then shortened by cancelling all those for whose breeds we have Canadian records. The object of requiring the foreign certificates to be approved by the Accountant is to relieve the customs officials from such an unfamiliar and responsible duty.

Officers of the Record Board were elected as fol-

lows: Chairman of the Record Board and Ex-officio of the Record Committee, Robt. Miller; Record Committee—Representative for heavy horses, Wm. Smith; for light horses, Robt. Graham; for beef cattle, Hon. John Dryden; for dairy cattle, Robt. Ness; for sheep, J. M. Gardhouse; for swine, J. E. Brethour. The Secretary-Treasurer and member Ex-officio is J. W. Brant, Accountant National Records.

A PROTEST AGAINST PESSIMISM.

Editor "The Farmer's Advocate":

It is with great interest that I read the columns of your valuable paper, and having read the article "Rural Conditions Should be the First Care," which appeared in April 9th issue of your paper, I wish to make a few comments thereon.

I agree with Mr. Burns, as to the farmers being as industrious, conscientious and self-reliant a class as can be found, and that the rural districts should have first care, as the heading of the article reads, but I do not agree with Mr. Burns in his dark picturing of the farm and the farmer. I admit that about all he gets is a living—what else is worth having beside an honest living, and a good hope for the future beyond the grave?—and I think that according to statistics the farmer is as long-lived a person as can be found. He speaks of the degrading kind of labor performed by the farmer. I admit that there is a certain amount of dirty work to do on the farm, but none of a degrading kind, so far as a person's character is concerned. And, take it the year round, you will not find more pleasant work than farming. He says, "without even the luxury of a bath." I wonder where the farmer is who does not bathe? All modern houses now being built are furnished with bath-room and fittings, and, besides, what is more refreshing, after a hard day's labor in harvest, than to plunge into a cool spring creek and have a good bath?

The winters are certainly becoming harder to stand, but I think the modern houses and barns are well ventilated, and are far more healthful than the stuffy, dingy factories of the cities. I think the mail system has become a very satisfactory way of doing business, and the telephone will soon be universal.

Mr. Burns states that the profits of winter labor are very meagre, but I think that he is entirely wrong in that respect (speaking of Ontario), as it is in the winter that the farmer makes his money, feeding his export cattle, bacon hogs, and fitting his selling horses, on the products of the previous harvest, as coarse grain is very seldom sold, but fed to the surplus stock in extra quantities to fit them for market. He says that the manure pile is about all that he has left—a very necessary thing, because it is needed to fertilize the fields, and the more of it the better. I agree with him, that winter eggs yield as much profit as anything else, considering the capital needed and the necessary labor. "Would it not be a good thing if urban factories worked full time in the winter?" he asks. I think it would be a good thing, but not for the reason he gives, but to give the city working class employment, instead of going to live with their country cousins, as was the case in many places last winter.

Perth Co., Ont. GEO. S. HAMMOND.

NEW PRINCIPAL ONTARIO VETERINARY COLLEGE.

Dr. E. A. A. Grange has been appointed Principal of the Ontario Veterinary College, which is being taken over by the Ontario Government, to be run as a Provincial institution by the Ontario Department of Agriculture on lines similar to the Ontario Agricultural College. Dr. Grange is a son of the late Sheriff Grange, of Guelph. He graduated as a veterinary surgeon from the Ontario Veterinary College in 1873. For a time he was lecturer at the College. From 1873 to 1882, he was Professor of Veterinary Science at the Ontario Agricultural College. In 1882 he was appointed Professor of Veterinary Science at the Michigan Agricultural College, and for some years was State Veterinarian for Michigan. During the past six years, Dr. Grange has been in practice in the City of New York and vicinity. The Department is leasing the present Ontario Veterinary College buildings in Toronto. Dr. Grange took office May 1st, and will at once plan a new three-years' course of instruction, and get things in shape to begin work in October. The lease of the present buildings is terminable on a year's notice. This practically means that the College will remain where it is for at least two years. Whether or not it will be eventually moved to Guelph is a matter not yet decided.

CHANGE IN HORTICULTURAL DEPARTMENT AT GUELPH.

In view of the large and increasing scope of the Horticultural Department in the Ontario Agricultural College, at Guelph, a readjustment has been made, which will have the effect of subdividing this field of work. Prof. H. L. Hutt, who has heretofore had charge of the whole department, is now made Professor of Landscape Gardening, in which connection he will be attached to the College, while still being free to engage in other phases of work on behalf of the Provincial Department of Agriculture, such as lecturing at horticultural society meetings, and also, giving considerable attention to rural-school grounds. Mr. J. W. Crow, as Lecturer in Horticulture, will have virtual direction of that phase of the work, while Mr. Wm. Hunt continues as Instructor in Floriculture.

THE TRADERS BANK OF CANADA

Incorporated 1885

75 BRANCHES IN CANADA—CORRESPONDENTS ALL OVER THE WORLD.

Make This Your Bank

Let us collect and discount your Sale Notes.

Let us advance the money to buy Feeding Cattle and Hogs, Seed Grains, etc.

Let us issue Drafts and Money Orders to settle your foreign obligations.

Let us safeguard your Savings, on which we will pay 3% interest.

Come to us for advice on any financial matter. Make this your bank.

One of the 75 branches of this bank is convenient to you. Your account is invited.

MARKETS.

TORONTO. LIVE STOCK.

The total receipts of live stock at the City and Junction markets last week were as follows: 117 carloads, composed of 3,337 cattle, 2,794 hogs, 208 sheep and lambs, 322 calves, and 127 horses. The quality, generally speaking, of cattle was not nearly as good as for the two previous markets, although there were a few choice picked lots amongst them. During the week, trade was easier, and prices for common to medium grades were from 15c. to 25c. per cwt. lower, and even the best finished cattle were easier.

Cattle receipts at the Junction, on Monday, May 4th, numbered 1,028; finished cattle scarce; trade fair. Exporters, \$5.50 to \$6 for steers; bulls, \$4 to \$5; picked butchers', \$5.80 to \$5.85; loads of good, \$5.50 to \$5.75; medium, \$5 to \$5.30; common, \$4.50 to \$4.80; cows, \$3.75 to \$4.75; canners, \$3.25 to \$3.50; calves, \$3 to \$6 per cwt. Sheep, \$4.75 to \$5.25; yearling lambs, \$6.50 to \$7.50 per cwt.; spring lambs, \$3 to \$6 each. Hogs, lower, at \$6.15 for selects, red and watered, and \$5.90, at country points, f. o. b. cars. Milk cows, \$30 to \$60.

Exporters.—Export steers last week sold at \$5.50 to \$6 per cwt., the latter price only being paid for a few select cattle. The bulk of the best loads sold around \$5.75. Export bulls sold at \$4.25 to \$5.25.

Butchers'.—Choice picked lots sold from \$5.50 to \$5.75; loads of good, \$5.15 to \$5.40; medium, \$4.80 to \$5.10; common, \$3.75 to \$4.25; good cows, \$4 to \$4.75; common cows, \$3.50 to \$3.75; canners, \$2 to \$3.25 per cwt.

Stockers and Feeders.—Receipts of stockers and feeders have increased, but not to exceed the demand. Good steers, 1,000 to 1,100 lbs. each, sold at \$4.75 to \$5; good steers, 900 to 1,000 lbs., at \$4.25 to \$4.75; good steers, 800 to 900 lbs. each, \$3.90 to \$4.25; stockers, 400 to 700 lbs., at \$3 to \$3.60 per cwt.

Milkers and Springers.—The market for milkers and forward springers was stronger. Prices ranged from \$30 to

\$60, with a couple of extra quality at \$70 each. The bulk of the medium to good selling at \$40 to \$55 each.

Veals Calves.—Receipts were not as large as in the previous week, but about equal to the demand. Prices ranged from \$3.50 to \$5.50 per cwt., with a few choice at \$6 to \$6.50 per cwt.

Sheep and Lambs.—Receipts light. Export ewes, \$4.75 to \$5.25; rams, \$3.75 to \$4.50 per cwt.; yearling lambs of good to choice quality, \$7 to \$8 per cwt.; common yearlings, \$6.50 to \$6.75 per cwt.

Hogs.—Receipts moderate. Prices unchanged at \$6.40 for selects, and \$6.15 to drovers, f. o. b. cars at country points.

Horses.—About 100 horses changed hands at the Union Horse Exchange, at West Toronto. Trade in horses has not developed much activity for the past two markets, although prices have not changed materially, and are about the same. The principal trade was with dealers from Toronto and farmers from the surrounding country, who are becoming more and more enamoured with the Junction Horse Exchange and its management. The horses offered were composed of drafters, wagon horses, expressers, and drivers. There was also a number of lumber-woods horses, the bulk of which were bought by farmers. Drafters, sound, ranged from \$190 to \$220; general-purpose, \$165 to \$200; expressers, \$150 to \$190; drivers, \$125 to \$175; serviceably sound at \$35 to \$85 each.

BREADSTUFFS.

Wheat.—No. 2 white, 92½c.; No. 2 red, 92c.; No. 2, mixed, 90c.; Goose, 89c. to 90c.; Manitoba No. 1 Northern, \$1.18; No. 2 Northern, \$1.14; No. 3 Northern, \$1.09; feed wheat, 64c.; No. 2 feed wheat, 58½c., at Georgian Bay ports.

Rye.—No. 2, buyers, at 87c. to 88c., outside.

Barley.—No. 2, 52c. to 53½c.

Oats.—No. 2 white, buyers, 46c.; sellers, 47c.

Peas.—No. 2, buyers, at 89½c.

Buckwheat.—Sellers, 65c.

Corn.—No. 3 yellow, 72c. to 73c.

Shorts.—Car lots, in sacks, \$26.

Bran.—Car lots, in sacks, \$25.

Oil-cake Meal.—\$1.70 to \$1.75 per cwt.

Flour.—Ontario, 90 per cent. patent, \$3.25 bid for export. Manitoba patent, special brands, \$6; second patents, \$5.40; strong bakers', \$5.30.

COUNTRY PRODUCE.

Butter.—Receipts are becoming larger. Prices, 1c. per lb. lower. Creamery, pound rolls, 31c. to 32c.; separator dairy, 29c. to 30c.; store lots, 25c. to 26c.

Cheese.—Offerings light. Market firm at 14c. per lb. for large, and 14½c. for twins.

Eggs.—Market about steady at 17c. per doz., with prospects of another decline.

Honey.—Market quiet. Prices unchanged at 11c. to 13c. for extracted; combs, \$2.75 to \$3 per dozen for No. 1 clover.

Potatoes.—Deliveries moderate. Car lots, on track at Toronto, 90c. to 95c. per bag for New Brunswick Delawares, and 85c. to 90c. for Ontarios.

Beans.—Market steady, \$1.70 to \$1.75 for primes, and \$1.80 to \$1.85 for hand-picked.

Hay.—Baled, in car lots, on track at Toronto, \$15 to \$15.50.

Straw.—Baled, in car lots, on track at Toronto, \$8 to \$9.

Poultry.—Deliveries light; prices firm. Turkeys.—Dressed, 18c. to 23c.; chickens, dressed, 16c. to 18c.; old fowl, 12c. to 14c.; squabs, \$2 to \$3 per doz.

HIDES AND SKINS.

E. T. Carter & Co., 85 Front St., East, Toronto, were paying the following prices: Inspected hides, No. 1 cows and steers, 6½c.; inspected hides, No. 2 cows and steers, 5½c.; country hides, green, 4c.; country hides, cured, 5c.; calf skins, city, 10c.; calf skins, country, 9c.; horse hides, No. 1, \$2.50; horse hair, per lb., 23c.; tallow, per lb., 4½c. to 5½c.; sheep skins, 70c. to 80c.

TORONTO SEED MARKET.

The Wm. Rennie Seed Co. quote the following as their selling prices for seeds: Red clover, No. 1, per bushel, \$14.40; No. 2 red, per bushel, \$14.10; alsike clover, No. 1, per bushel, \$12.30; No. 2 alsike, \$11.10; alfalfa, per bushel, \$13.80; timothy, No. 1, per cwt., \$7.75; timothy, No. 2, per cwt., \$7.25.

MONTREAL.

Live Stock.—Receipts on the local market during the past week have shown a considerable increase, the result being a somewhat easier feeling. A feature of last week was the arrival of 200 head of Northwest ranch stock. Owing to the fact that high prices were paid in the country, the prices did not give way as much as expected. There was a fair attendance of butchers and exporters, the latter taking quite a few cattle at 5½c. to 5¾c. a lb. Butchers paid as high as 6c. for some fancy animals, choice being 5½c. to 5¾c.; fine, 5¼c. to 5½c.; good, 4¼c. to 5¼c.; medium, 4c. to 4¼c., and common, 3¼c. to 4c. per lb., inferior being 2¼c. to 3c. The offerings of sheep and lambs continue small, and the market holds firm at recent quotations. There is a good demand for yearling lambs, and from 7c. to 7½c. is being paid for choice stock, older sheep being 5½c. per lb. Spring lambs also continue very scarce, and are selling at \$4 to \$7 each. Calves are arriving in liberal quantities, and are selling at 5c. to 7c. a lb. for fine stock, down to \$2 to \$4 each for common. Owing mainly to the stronger cables on Canadian bacon, the price of live hogs advanced about ¼c. a lb. on the local market last week. Supply and demand were both good, and selected lots sold at 6½c. to 7c. a lb., weighed off cars.

Horses.—Dealers report a very dull trade. A few animals are selling to the city, but outside this there is very little going on. Prices are as follows: Heavy-draft, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$225 to \$275 each; good blocks, 1,300 to 1,400 lbs., \$200 to \$225; express, \$150 to \$225; common plugs, \$50 to \$75, and choice saddle and carriage animals, \$300 to \$350 each.

Dressed Hogs and Provisions.—The market for dressed hogs is holding about steady, notwithstanding the firmness of the live. Demand continues moderate at around 9½c. for fresh-killed, abattoir-dressed. Provisions of all kinds are moving pretty freely, but there is no particular activity. Prices hold steady all round. Hams weighing 25 lbs. and upwards are selling at 12½c. per lb., those weighing 18 to 25 lbs. being 13c. per lb.; 12 to 18 lbs., 13½c.; 8 to 12 lbs., 14c.; rolled, 14½c. to 15½c. per lb. Bacon is 12c. to 14c. per lb. for smoked, and 11c. for green flanks and long clear, heavy; while light is 11½c., and boneless, 12c. Pure lard sells at 12½c. to 13½c., and compound, 8½c. to 9½c. Barrelled pork is \$20 to \$23.50.

Potatoes.—Receipts of potatoes have been fairly liberal of late, and demand has been good. The quality of the stock is showing considerable deterioration, the percentage of choice stock being smaller than previously. Prices continue much the same, however, dealers paying 85c. to 95c. per 90 lbs., on track, and selling in similar quantities in the same position at an advance of 5c. When bagged and delivered into store in small quantities, from \$1 to \$1.10 per bag is charged. Red stock is selling about 5c. less than white.

Eggs.—The market has taken a somewhat unexpected turn. Owing to competition between packers and smaller merchants, the price in the country has been advanced. Purchases were made at nearby points early last week at 16½c., and it has been stated that 18c. was paid later on. Sales were made until the middle of the week, at 17½c. to 18c., wholesale. The price has since strengthened to 20c., although some are still quoting a fraction over 19c.

Butter.—Dealers began competing for butter in the country markets April 25th, and ran prices up to 28½c. This figure has since been paid in the country, although purchases have also been made at less, and it seems to be the belief that lower prices will prevail from this forward. Sales of choice stock were made at 29½c. early last week, which was rather higher than the week before. Receipts are still increasing rapidly, although they continue light, and are rather less than sufficient for consumption. Market on Monday was reported firm, at 29c. to 29½c.

Cheese.—On the country boards, prices ruled from 11c. to 11½c. for fodder goods. This means that sales can be made here

at about 11½c. for good stock, and, as a matter of fact, this price is quoted. The quality is nothing extra, and demand is still light.

Maple Products.—The make of syrup and sugar is almost unprecedented, and the market is fairly glutted with stock arriving from all quarters. It is doubtful if ever before so much sugar and syrup has been offered. The quality has shown some deterioration of late, this being the tail-end of the season. Prices have again declined, and purchases of syrup in wood are being made at 4½c. a lb., and in tins at 5c. a lb. Small tins weigh 9 to 10 lbs., and large, 12 to 13 lbs. Sugar is also lower, at 6c. to 6½c. a lb.

Grain.—The tone of the market for oats is firm, in sympathy with outside markets, but the local demand continues quite light. Prices, however, are steady. Eastern Canada No. 2 white oats are quoted at 49c., store, Montreal; No. 3 at 46c. to 46½c.; No. 4 at 45c. to 45½c., and rejected at 43c. to 43½c.; Manitoba rejected being 44½c. to 45c., track, North Bay.

Flour.—Although one of the large millers of Manitoba wheat has advanced prices 10c. to 20c. a bbl., the other is offering at former prices, and we consequently still quote \$6.10 per bbl. for Manitoba spring-wheat patents, in bags, and \$5.50 for seconds. Ontario winter-wheat patents are still \$5.10, and straight rollers, \$4.50 to \$4.75.

Feed.—Millfeed is exceedingly scarce, and the demand for it is active. Millers are quoting Manitoba bran, in bags, at \$23 to \$24.50 per ton, shorts being \$25. Ontario bran is \$24.50 to \$25, and shorts, \$25.50 to \$26. There is a fair demand for ground oil cake at \$33 to \$34 per ton, nutted cake being the same price, and gluten meal being \$1.50 per 100 lbs.

Hay.—The market is firm, owing to a somewhat limited supply, and prices are \$16 to \$17, f. o. b. Montreal, for No. 1 timothy, \$18 to \$14 for No. 2, \$12 to \$13 for clover mixture, and \$11 to \$11.50 for clover.

CHICAGO.

Cattle.—Steers, \$5 to \$5.25; cows, \$3.75 to \$6.25; heifers, \$3.50 to \$6.55; bulls, \$3.50 to \$5.30; calves, \$2.50 to \$5.75; stockers and feeders, \$3.65 to \$5.75.

Hogs.—Choice heavy shipping, \$5.70 to \$5.80; butchers', \$5.75 to \$5.85; light mixed, \$5.60 to \$5.80; choice light, \$5.70 to \$5.80; packing, \$5.10 to \$5.75; pigs, \$4.25 to \$5.35; bulk of sales at \$5.65 to \$5.80.

Sheep and Lambs.—Sheep, \$5 to \$5.25; lambs, \$6 to \$7.40; yearlings, \$5.50 to \$6.25.

BUFFALO.

Cattle.—Prime steers, \$6.75 to \$7.10. Veals.—At \$5 to \$7. Hogs.—Heavy, \$6.10 to \$6.15; pigs, \$5 to \$6.10; dairies, \$6 to \$6.25. Sheep and Lambs.—Lambs, \$5 to \$7.65.

BRITISH CATTLE MARKET.

London.—London cables, 11½c. to 13½c. per pound, dressed weight; refrigerator beef, 10½c. to 10¾c. per pound.

GOSSIP.

NEW IMPORTATIONS OF CLYDESDALES.

The Donaldson liner, Athenia, sailing from Glasgow the last week in April, had on board 22 Clydesdale stallions, consigned to six purchasers, 14 of the horses being for Quebec and Ontario and 8 for Assiniboia.

Readers interested should bear in mind the dispersion sale of the noted herd of prizewinning Hereford cattle, belonging to Mr. J. A. Govenlock, of Forest, Ont., to take place at his Forest View Farm, there, on Wednesday, May 13th, where 40 head of high-class Herefords and 10 useful Shorthorns will be disposed of to the highest bidder. Now that stable feeding is over, and prices for beef cattle are going up, and likely to keep up, is a good time to found a herd, or improve an existing herd. See the advertisement, and note the date of sale.



Life, Literature and Education.

[Contributions on all subjects of popular interest are always welcome in this Department.]



Winston Churchill (British).

Recently appointed President of the Board of Trade in the British Cabinet.

PEOPLE, BOOKS, AND DOINGS.

Lord Cromer has written a two-volume account, entitled "Modern Egypt," of his stewardship in the Country of the Nile. The books cover the history of Egypt and the Soudan since 1876, an especially interesting portion dealing with the career of General "Chinese" Gordon.

Prof. Geo. M. Stratton, of Johns Hopkins University pleads in the Popular Science Monthly for the use of a new system of signalling for railways; e. g., luminous lines and moving arms, set with rows of incandescent lights. He argues that the red lights signifying danger, and the green ones signifying caution, are often deceptive, especially if obscured by fog or smoke, and that stationary white lights may readily be confused with the light from houses, lanterns, etc. Were his suggestions carried out, many accidents on railways might probably be averted.

It has been found that the Acousticon, the new development of telephony, by which sounds may be heard from any part of a room without making use of the receiver, not only magnifies the sound, as carried by the ordinary telephone, 400 per cent., but also clarifies and accentuates the articulation in such a way that the words are quite audible to all ears, except those which are actually stone-deaf. It is necessary, however, for the deaf person to make use of a small receiver, which is held against the ear by a small headpiece. The success achieved by the Acousticon, in making the deaf hear messages sent over a telephone wire, inspired

the inventor to extend the idea, and apply it in a more general way. He succeeded, and now has a portable Acousticon, one which can be worn without inconvenience, and so arranged as to be much less noticeable than any of the usual ear-trumpets, speaking-tubes, etc., yet far more effectual. There is the transmitter, or "gatherer of sound"—a small, circular instrument, which can be made of any color to suit the costume; a neat receiver, or "ear-piece," and a tiny battery. The latter is easily carried in the pocket, and is, therefore, quite out of sight. By means of this portable Acousticon, those who have not lost entirely the sensitiveness of the auditory nerve are not only able to hear, but, by its constant use, the stimulated action of the working parts of the ear, in some instances, restores the natural hearing.

Sir Frederick Bridge, the famous organist of Westminster Abbey, who is in Canada conducting a series of church-music festivals through the Dominion to the Pacific Coast, is himself a composer of great eminence. His compositions include the following works: "Mount Moriah," "Bodicea," "Hymn to the Creator," "Motet for Soprano and Chorus," "Rock of Ages," "Mort d' Arthur," "Callirrhoe," "Repentance of Nineveh," "The Lord's Prayer," "The Cradle of Christ," "The Flag of England," "The Battle of the Camperdown," "The Forging of the Anchor," "The Incheape Rock," as well as numberless hymns and anthems. The plan of the church festivals is to teach the younger generation of church-singers in Canada some of the beauties of the standard works which are heard day by day and week by week in the abbeys and cathedrals of the motherland.

The remains of the great Swedish teacher, Swedenborg, which have rested for 136 years at the Swedish Church, Prince's Square, London, Eng., are shortly to be transferred to Sweden. A few years ago, application for this removal was refused by the English Government, but now that the Swedish Government itself has taken the matter in hand, the request has been granted.

BIOGRAPHICAL SKETCHES.

The Two Winston Churchills.

It is a rather peculiar coincidence that two men, living on opposite sides of the Atlantic, with but three years difference in their ages, and with no family relationship whatever existent between them, should bear the name, "Winston Churchill." But there are also other coincidences in the lives of these men. Both are brilliant, energetic, indefatigable workers, and both early in life entered upon a somewhat similar course of training, the Englishman choosing the military course, at Sandhurst, while the American was trained for the navy; both finally turned to writing as their life-work; both entered politics; and both reached positions of eminence before they were thirty years of age. Here, however the similarity ends.

The English Churchill entered upon life with all the prestige which money and position could give him, his father being Lord Randolph Church-

ill, a descendant of the famous Duke of Marlborough, and his mother a rich American, who, after Lord Randolph's death, became Mrs. Cornwallis-West. He was sent to school first at Harrow, and, after finishing his military course at Sandhurst, immediately joined the Hussars, a step which was but the prelude to a considerable military career, for he has since served with credit, part of the time as war correspondent in Cuba; in India during the Malakand campaign; in Egypt, where he was present at the Battle of Khartoum; and in South Africa, where he was held as a prisoner of war for six weeks, but finally made his escape, supplied with abundant material for the series of brilliant letters which before long appeared in the London papers, and were of no little service in calling the attention of Great Britain to this extraordinarily bright young personality.

Although he began his political life as a Conservative, Churchill soon went over to the Liberal party, in whose ranks he entered Parliament at the age of twenty-six, and by whom he was appointed, ere long, to the position of Under-Secretary of State for the Colonies. Notwithstanding the onerousness of this position, however, he still found time to prosecute his literary work, and followed the novel he had previously published by a "Life" of his father, which netted him \$40,000 in cash.

Recently, on the general readjustment resulting upon the resignation of Sir Henry Campbell-Bannerman from the Premiership, Mr. Churchill has been appointed to Mr. Asquith's Cabinet as President of the Board of Trade.

Mr. Churchill has evidently, if he lives, a long and brilliant Parliamentary career before him. An indefatigable worker, a logical if somewhat impulsive thinker, and a brilliant orator; endowed, moreover, with an astonishing faculty for making friends, he would seem to be well equipped with the essentials for political life; while his ambition and his confidence are unquestioned. Even as long ago as during the South African war, when a general, a friend of his father's, said, "We all know you are Lord Randolph's son," he responded, "The time will come when I shall not be known as Lord Randolph Churchill's son, but he will be known as my father." And even to-day, while he has as yet scarcely reached the age of thirty-four years, the prophecy has become largely true.

The American Churchill, on the other hand, has had to work his way, almost entirely without influence. Born in St. Louis, Nov. 10, 1871, he was adopted by an aunt, with whom he lived during the early part of his life. At sixteen he went to the Naval Academy, but immediately after his graduation, and much to the disgust of his friends, he left the navy to set up as a literary man. Inspired by his first idea of writing historical novels, he threw himself into the study of history, and before long began to embody his ideas in writing, but with such painstaking zeal that, often, after writing for days, he would tear the entire result of his work up as unsatisfactory. In this way, his

first book, "The Celebrity," was written five times.

After a time, Mr. Churchill was appointed to the editorial staff of the Cosmopolitan, and in 1895 he married a wealthy young woman of St. Louis, shortly afterwards leaving the Cosmopolitan, that he might devote



Winston Churchill (American).

One of the most successful novelists in the United States.

himself more exclusively to book-writing. "The Celebrity" was published in 1898, and since then three notable novels have come from his pen, "Richard Carvel," "The Crisis," and "Coniston."

In 1903 Mr. Churchill went into the Lower House of the New Hampshire Legislature, and in 1906 he ran for Governor of the State, but was ruled out by a small majority.

It is, no doubt, in literature, rather than in politics, that this Winston Churchill will, in the future, as in the past, win his best laurels. Since he is still young, much important work may still be expected from him.

SCHOOL GARDENS.

"Gardening for Schools" is the title of Bulletin 152, the fourth of a series on Nature Study, which has recently been issued by the Ontario Department of Agriculture for the teachers of that Province. In the opening chapter, on "The Place of Gardening in Education," the writer, Professor McCready, distinguishes between its economic and its educational significance, and, after making a strong plea for the latter, suggests that in future more attention be given to the former, as the readier means of bringing gardening to the attention of the ratepayers, and of securing adequate financial support. He tells us that, in Europe, where for the last twenty years gardens have been regarded as a part of the necessary equipment of almost all schools receiving state aid, "their purpose has been to increase the productivity of the land and enhance the wealth of the state. In France, for example, their system of agricultural education, of which the

school-garden is a chief part, is credited with having doubled the resources of that country in recent years."

But the school-gardening that it is sought to incorporate into Canadian schools is something different. Its most important side is not economic. It cares less about the welfare of the state, and more about developing the powers of the individual child. The garden and the products are secondary; the results to the child's character are of prime importance. The child may not learn to prune, graft, cross-fertilize, spray, or prepare soil scientifically, but he should come out from the work observant, careful, considerate, and equipped with general tendencies good for him in his life's work, or in his life's leisure. It is a general culture and not a technical training. It makes for love of home and love of nature. To all who practice in this garden work there comes the uplift that arises from directing and controlling Nature's processes in the production of a wholesome vegetable or a beautiful flower. It is disciplinary and cultural education, not technical.

Some of the claims for school-gardens set forth by the U. S. Department of Agriculture, in Bulletin 218, are: Quick discrimination; skill with the hands, developed by handling small seeds and various tools; systematic methods which follow from the order in which the operations conducted in the garden must be taken up; industry; the idea of ownership and the rights of ownership; business experience, which is an important result of harvesting and accounting for the products which are grown. And President Roosevelt, in his last message to Congress, when touching on education, says: "In all education we should widen our aims. It is a good thing to produce a certain number of trained scholars and students, but the education superintended by the state must seek rather to produce a hundred good citizens than merely one scholar, and it must be turned now and then from the classroom to the study of the great book of Nature itself."

School-gardens are now established in connection with all the best Normal Schools in the United States, and the Oshkosh State Normal School Bulletin, of May, 1906, sets forth their special purposes as, first, to provide discipline, especially to the perceptive faculties, leading to the cultivation of close and accurate observation; second, to develop the right moral spirit leading to sympathy, kind treatment, and right feeling toward life, especially animal life; third, to cultivate the aesthetic sense leading to an appreciation of Nature's beauty, including recognition of the beautiful, training in the securing of beautiful effects, and appreciation of the adaptation of beauty to use; fourth, to arouse love of nature and desire for her acquaintance and companionship; fifth, to help to maintain interest in all school work, and to aid in the work of other studies, especially language, reading and drawing.

The report of the Commissioner of Education for 1898 contains an article on School Gardens, translated from Rein's Pedagogical Cyclopedia. In the concluding chapter the writer says: "As that instruction is best which is based on or derived from actual observation, it necessarily follows that school-gardens are a valuable adjunct of the modern school. Garden work, properly directed and managed, with pleasure and understanding, promotes industry, attention, judgment, skill and self-reliance; it develops the sense of order, neatness, punctuality, beauty, responsibility and duty, and consequently forms the foundation for a firm will and self-reliant action, or, in other words, for a moral character. The work in common arouses public spirit in children, the sense of fellowship and mutual dependence. It awakens an esteem for all manual labor, and a proper judgment and

valuation of the work of others. Children learn, above all things, that, 'in work there is no shame,' and that 'idleness is the mother of evil.'"

The school-garden, even in Europe, is a modern institution. It was first established in Australia by the Imperial School Law of March 14th, 1869, which prescribes that, "Where practicable, a garden and a place for agricultural experiments shall be established at every rural school." But already it receives much attention in pedagogical literature. "No public school," says Sprenger, "should be without a garden; every community that resolves to connect a garden with its school is laying up capital whose interest it enjoys in the prosperity of its future members. The question of school gardens in the development of public schools is gaining in importance every day. Not trees, shrubs, herbs and grasses alone are what we offer the children in the school-garden, but love of nature, labor and home! The advantages of even the smallest garden are so many and so great that no school should be without one."

In our own Province, some progress is being made. Little by little our people are beginning to realize that state-supported educational opportunities should be regulated by industrial requirements, and that a system of rural schools should plan its course of instruction with reference to the 95 per cent. of the pupils who attend them and attend no other school, rather than with reference to the small remaining percentage who go on to a more advanced school. Teachers are being prepared, and a garden for their special instruction will soon be established. There are, however, difficulties, frequent changing of teachers, crowded programmes of study, a two-months' midsummer vacation, and indifference on the part of parents. But when once the garden is understood, and its real significance appreciated, their solution will quickly follow, and before many years will have passed it will seem so necessary and so natural a part of the educational equipment that one will wonder how public schools, supported by an agricultural community, could have existed without them.

THEODORE ROSS.

Department of Agriculture, Charlottetown, P. E. I.

With the Flowers.

To conceal the rather delapidated appearance which the perennial border often presents as the plants cease flowering, set out among them fast-growing annuals, such as asters, candytuft, etc. These will soon present a good show of foliage, and will be in bloom before the border has had time to be long flowerless.

When planting seeds, remember that fine seeds merely need pressing into the soil. Larger ones should have fine soil sprinkled over them to a depth of from one to four times the diameter of the seeds. The larger the seeds, the deeper they should be planted.

Sow lettuce seeds along with slowly-germinating seeds, such as parsnips or parsley. It will come up and mark the rows so that you will know where to cultivate. The lettuce will be fit for use before it greatly interferes with the growth of the other plants.

Sow seeds of summer-flowering annuals at two or three different times, with intervals of a week or two between, in order to have a succession of bloom.

Do not let weeds get a start. Keep them down by constant cultivation.

A WARNING.

Of 403 accidents on street-railway lines of an American city, 217 were the result of getting off moving cars backward, and 216 thus injured were women. Remember this when you go to the city on a shopping tour.

The Quiet Hour.

THE VALUE OF THE SPOKEN OR THE WRITTEN WORD.

I saw her come into the train and take a seat across the aisle—a young girl of twenty, with dark lines, as of weeping, under her lowered lids. She placed her bags and bundles beside her, her umbrella in the corner, then drawing her veil over her head and face, she clasped her hands tightly in her lap, a picture of mute despair. My heart went out to her. Grief is poignant at twenty, and horizons "mere ugly heights and heaps" to shut hope in.

The train had begun to move when the face of the station-master appeared at the window beside her, then his hand, and a telegram was thrust into hers. She threw back her veil and read the despatch. All at once, as I watched her, I saw her face change. It was as though heavy fogs had been suddenly lifted, revealing opaline seas, while she sat there and smiled.

"A lover, of course," I said to myself, and rather envied the girl, as who would not; who of us, at least among the old and so-called wise? Before the day was done, however, I had read the telegram myself. By that time, the girl and I were friends. No lover had sent the message, but a man much older than she, one of the rare men of this world, the men to praise God for—a man who understood the value of the spoken or the written word.

"Not good-bye," the telegram ran. "Good time, good luck and happiness." Nothing else. And all on a slip of yellow paper. Eight words and no more. The cost of it twenty-five cents, yet, oh, the difference to her! For courage, as she told me, had flown. All her acquaintances were left behind. Want and privation had closed the doors of her father's house, and there had been no hands to wave farewell from its windows as she went out into the world alone to make the fight allotted to the women of these modern days, who must find their protectors in themselves.

People had been sorry for her—that she knew. Her friends—and she had dozens of them with whom she had grown up and gone to school—her friends had offered to help her whenever she would turn to them, but only one of all her acquaintances had taken the trouble to go to the telegraph office and send her a word of encouragement.

Yes! I repeat, one of the men to praise God for, one of the rare men who add to the joy of living. And how few there are, how few who understand the value of saying that which other men and women leave unsaid, or who possess the art of expressing it.

It was once my good fortune to be able to tell a woman that her husband had admired her in a certain dress, and that he had added: "No woman in a room ever looks better than Julie." "Did he really say that?" the wife asked me, her face wreathed in smiles. "It is the first time since we were married that he has ever said that he admired me, or anything that I wore." And they had been married for just thirty-three years.

I have never ceased to believe that it proved her an exceptional woman, this being able to smile at all after so many years of being defrauded of that which was her due—of that, certainly, which would have made life to her just so much the more delightful. Most women, after thirty-three years, would have grown to be indifferent to that which had never once come to them. This dear creature was so overjoyed with her husband's tardy tribute, even though it had reached her in roundabout fashion, that she moved around the room with beaming face, her eyes shining with such pleasure that she appeared as though blinded to everything in her neighborhood. She never seemed to see me again, though I was near her all the time; yet, when her husband came in, she saw him and rushed to meet him before I dreamed that he was anywhere about. As I turned away, I heard him exclaim: "Why, I declare, Julie, you look like a girl again. What have you been doing to yourself?" "Doing!" I wanted to go back, and say: "Doing! Julie has been growing young again, and over that one tiny morsel of praise from you, which only found its way to her because I took the trouble to carry it. Think of

what she might have been in all these thirty-three years, if you had chosen to rejuvenate her now and then with other spoken words." I wonder, indeed, even now, why he never thought of what the spoken word might mean to her, why he went on for so long believing good things about her without uttering so much as one of them to her.

Why should those who are near and dear to each other be so niggardly in praise? I often ask myself the question. Praise is not flattery. Flattery is a poison. It hurts those who give it, and it ruins those who receive it. Praise encourages, quickens the steps, opens the eyes to truth. Praise is like a bugle note, calling even the laggards into step.

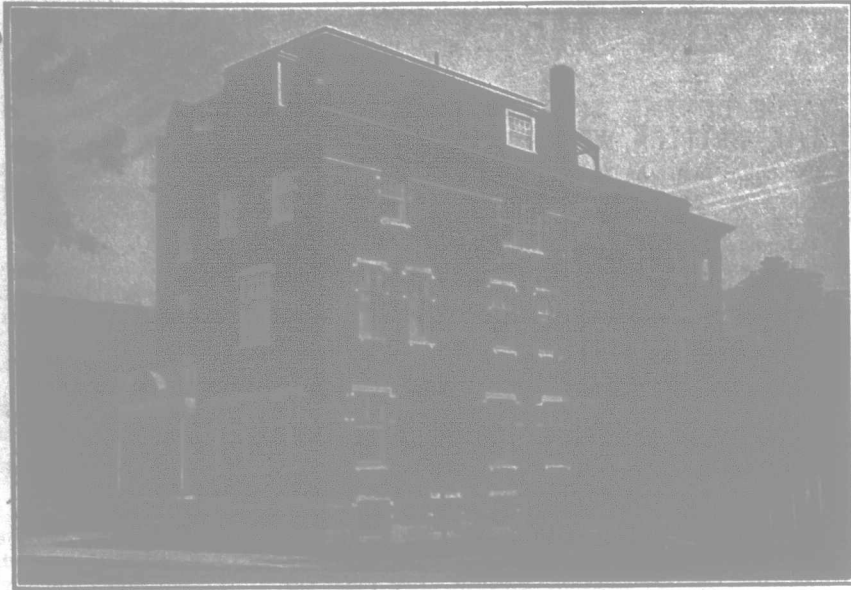
I once knew an old lady of seventy-eight, with a daughter of forty-two. One day, as we talked together of this daughter, the old lady burst into tears. I had never but once before seen such an old lady cry. At that age, when emotions come, the eyelids will reddens. Sometimes a moisture will gather in the eyes, but tears seldom flow. The fountains seem dry. The tears of this old lady frightened me, the quick sob that accompanied her words, and the sudden, sharp contraction of the features, as she said: "My daughter is the noblest woman I know. Everybody loves her, everybody turns to her for help. I wish that I were half as good."

Here was sweet praise, indeed, and I determined that some day I should repeat it to the daughter, for this daughter was noble, too. She had borne with courage and fortitude sorrows that would have overwhelmed most of us. She never went under, although clap after clap struck her, and like Niobe, she was bereaved. Her devotion to her mother, who, I must confess, was rather a nervous and "difficult" old lady, had a beauty in it which long since had won my admiration. But when at last I did repeat the mother's praise, the daughter's eyes grew wide with astonishment. "Why has my mother never said so to me?" she asked with some bitterness. "She finds fault with everything that I do, nags me from morning until night, discourages every one of my undertakings, and never once in all my life, that I can remember, has she ever said a single kind or encouraging thing to me, even when it would have helped me so." Then the daughter cried.

We leave too much to be taken for granted by those who love us, and whose lives are interwoven with our own; although the more closely and intimately our lives are interwoven with theirs, the greater the needs for the spoken word. To be too busy to say the kind thing, or too hurried to express the courteous wish to those about us, is to leave waste places in our lives where, by and bye, tares will grow and underbrush too thick to penetrate. At the same time, we who miss the outward and visible token from those whom we love, from the husband, the wife, the mother or the child, must prove our love by being big enough to understand that the kind thought, though unspoken, lies there in the other's heart; the courteous wish, though it lack expression. But to be big enough to understand others in spite of their failures (and each of us should be big enough for that when we love), to be big enough to understand others who fall, by no means justifies us in being guilty of like failures ourselves.

"He ought to know me by this time," exclaims the self-contained wife. "Love has nothing to do with the things on which he lays such stress. My husband ought to understand, and not be so exacting." But her husband cannot understand. It hurts him to have her hand withdrawn when his is extended, her lips silent when his are still vibrating with an outburst of enthusiasm over her. Already there is coming a time to her (and how many have escaped it?) when she will suddenly wake and discover those same hands held out to others, not to her.

The very busy and important man, making money as fast as he can, and lavishing it all on his family at home, thinks his devotion to his wife proved by his untiring industry at his office. At the end of his life he is surprised to discover that his wife is not happy. He has worked patiently for her, he says to himself, and so he has. He has worked all day, and every day come home at



The Hiscott Dermatological Institute

The New Home of Canada's Foremost
Complexion Specialists.

This large, imposing and commodious building is on the corner of College Street and Laplante Avenue, next the Sick Children's Hospital, Toronto. The rooms therein are very charming, the reception hall being finished in cathedral oak, and luxuriously furnished. The several consultation and treatment rooms opening from the handsome hall are fitted with artistic cleanliness and simplicity, and reflect great credit on the originator. The principals of the Institute (formerly the Graham Dermatological Institute) have been engaged in the treatment of skin, scalp, hair and complexional troubles for sixteen years in Toronto, and have been most successful in their work. Several operators trained in the Institute assist them in the different treatments. A specialty is made of the permanent removal of Superfluous Hairs, Moles, etc., the treatment of pimples, blotches, blackheads, and other skin eruptions; the giving of facial massage for inactive, wrinkled skins, and rejuvenating the complexion. Smallpox pittings are entirely removed by one or two electro-plastic treatments. The hair and scalp are also treated in a most satisfactory manner. Chiropodists and Manicurists attend to the hands and feet. The Princess Toilet Preparations for the face, hair, hands, etc., so popular with Canadian ladies, are put up in the laboratory of the Institute. An interesting and well-written brochure, "A Study of Your Face and Figure," will be mailed to any address.

A Beautiful Rose Bush FREE

We will give, absolutely free, one big Crimson Rambler Rose Bush, worth fifty cents, to every purchaser of our "Surprise" Plant Collection who asks for one when ordering. The collection costs only one dollar, and is well worth four times that amount. Every surplus plant on our extensive nurseries and trial grounds must go to make room for seeding new varieties; that's why we are giving these big collections away.

The collections are made up of CARNATIONS, FUCHSIAS, HYDRANGEAS, ROSES, CLIMBING VINES, DAHLIAS, GLADIOLUS, etc., etc., a **\$1.00** good four dollars' worth for

**ORDER
TO-DAY.**

All collections sent by express unless otherwise ordered. Only smaller plants can be sent by mail. Ask for the "SURPRISE PLANT COLLECTION" when ordering.

Wm. Rennie Co., Ltd.,
Toronto, Ont.

Paris Walking Plows Give Satisfaction

Are you the man who wants a walking plow that will give utmost satisfaction? If you are, you'll find the very plow to best suit your requirements in our line of Paris Plows.



No. 21.—This is a general-purpose plow. Will turn a furrow 8 to 12 inches. Fitted with adjustable handles, combination clevis, best soft-centre moldboard.

Paris Plow Co.
LIMITED
PARIS, ONTARIO.

night too tired to speak; slept half the evening in his easy-chair, gone to bed and out again next morning, repeating to-day the programme of yesterday. He has done this all his life, done all the hard things there were to be done, but never one of the gentle things, the considerate, the loving, though she tried so hard at first to win from him some one word or expression for herself.

There are some people who would much rather give you money than praise. The old gentleman who neglected his wife in order to grow rich for her sake was one of these. You will find others everywhere, men and women, generous enough in their way, but who think that a kind word will spoil those to whom it is given. Once I committed the indiscretion of praising the cleanliness of a kitchen into which my hostess led me, turning to the cook—as to one in authority—when I spoke. "Don't," the lady exclaimed, shutting the door hurriedly and dragging me away from the smiling maid, "I have just managed to get a good woman, and she will want her wages raised if you praise her." I believe that the cook did leave a week or so later, and that the lady has ever since laid the responsibility of her departure upon me—forgetting, what I knew to be a fact, that the cook had heard her and preferred to go. My sympathies were with the cook.

When one thinks of it, indeed, it is astonishing how against the grain it goes with many persons to utter the kindly or appreciative word. These are the people so little certain of themselves that they are afraid to be gracious, imagining that graciousness will lay them open to all kinds of imposition; that in some way it will rob them of their importance, impair their dignity or cause their authority to suffer. They are niggards in praise, throwing only crumbs of it to you, and spoiling everything by their parsimony, as charity is spoiled by self-consciousness in the giver. Not being big enough to give praise freely, they think that you will misunderstand the little that they do bestow, accuse them of fawning or of having some axe to grind. As they begrudge even the necessary expressions demanded by the world in which they live, they regard your simplest words as fulsome. To be fulsome in praise, too lavish with the spoken word, is, without doubt, to be vulgar. Sometimes it savors of impertinence, as being too familiar. True praise, however, can never be vulgar. It is too intelligent, too appreciative of the ideal, for that. It is recognition of a principle and has nothing to do with personality, as when one praises some beauty in a picture because it is true to nature, and not because a special artist has covered his canvas with paint. Moreover, when one is kindly in intention, when one's praise springs straight from the heart, it is a tribute to some quality in another that Providence has bestowed. Praise, then, becomes too big in its character, too impersonal, to be impertinent.

I suppose that, were the opportunity for their performance presented to us suddenly, we should all find ourselves capable of great deeds. The spectacular appeals to us all. Even in quiet and sober moments few of us would decline to make imposing and well-proportioned sacrifices for someone whom we loved. It is the little things that we find difficult of performance, the little words that we are too preoccupied to utter. We would journey miles to comfort a friend suddenly stricken with sorrow, give half our fortune away in crises of a national disaster, or all of it, but to write a cheery word on lesser occasions bothers us too much. We forget its value, its power to soothe, to strengthen and sustain.

"Only this morning to say 'Boo!' was all that one letter contained, which, carried in on a breakfast tray, made the struggling woman who received it happy for the day, and every task easy. Its writer was another woman who understood not only the difficulty of the struggle, but the value of the written word. Through all of one winter she wrote daily to the woman who was out in the arena—splendid, helpful letters, full of counsel and encouragement, and of the wisdom that perceived both the meaning of the fight and the direction in which victory was sure to follow. When for the woman at home a day came too full of other addi-

gations for a letter of any length, there was no question in her mind of letting the written word go entirely over. And this is just what the majority of us would have done. We should have argued to ourselves that this one day did not count, that to-morrow a letter would follow, the waiting would not be long. But the waiting is sometimes long, and wearisome, too, and the absence of the written word robs this waiting of its only gleam of light.

We who find the spoken word a bother, and the written word a tax, must remember that the spoken and the written word help us when we express them, as they help those to whom they are addressed. They keep our currents of goodwill flowing, the springs of sympathy ever fresh and unencumbered in our souls. They help us, too, when we have dropped out of the race; when, for one reason or another, we have found ourselves no longer in the procession where the gay and the successful move. The spoken word marks the meeting-ground where assurance is had that nothing parts those whose hearts are bound together. The written word is the hand touch, stretched across great silences.

For the young, a training in the spoken and the written word is a training in good manners, and that training should go on until the power of expression becomes a conscious power capable of an unconscious exercise. A well-trained child should have no more self-consciousness about writing a note than a gentleman feels who, in the street, takes off his hat to the lady he passes.—Selected.

About the House.

THINGS PERTAINING TO THE TABLE.

In nothing, perhaps, more than in the methods of eating is the advancement of refinement and civilization in a country more obviously marked.

The rude aborigine, for instance, sits down on a log and tears at his piece of roasted flesh with his teeth, as a dog might, had he hands. The man of a later day who has come to the stage of having a house to live in, a table and chair, a knife and a fork, does somewhat better, but despatch is all that he thinks about, and hence his eating is little but a periodical filling up in any way that it can be accomplished.

At a still later period, when the mere matter of wresting a living from rude nature does not suffice for the growing aspirations of man, and there comes a wish for more gentleness of character, there comes also a wish for its expression in gentle manners. To be a lady

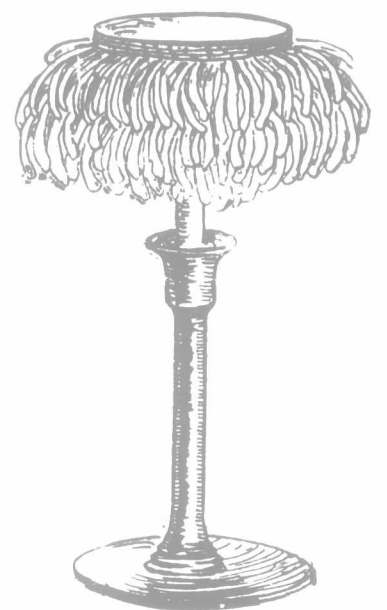


Fig. 1.

or a "gentleman" begins to mean something, and so we find some anxiety as to deportment, and some admiration of the dainty graces, as in the case of the gentle "prieuses" whom Chaucer so admired because, forsooth:

"At mete wel y-taught was she with-alle;
She let no morsel from hir lippes falle,
Ne wette hir fingres in hir sauce depe,
Wel coude she carie a morsel, and wel-kepe,
That no drop ne fel upon hir brest."

This same prioress, he goes on to tell us, never failed to wipe her "over lippe" so clean that when through drinking there was not a particle of grease left in her cup.

In reading the description of the dainty "nonne" one can but wonder if she were compelled to sit at a coverless table graced with huge trenchers, in a dining hall bestrewn with rushes, which were not renewed more than once in a six-month, and upon which the bones from



Fig. 2.

the table were unceremoniously thrown. Such was the fashion of the time, and of a much later time; but, no doubt, the refectory of the priory was swept clean and sweet.

And so the time goes on until, as courteous manners, quiet dress and voice, and the speaking of choice language, find their place as tributes of the lady and the gentleman, methods of eating must also be looked to. Instead of a mere cooling-up process, got through with anyhow, rudely, muzzily, eating now becomes a fine art; the table must be as beautiful as may be, the manner of taking the food dainty, the conversation general and pleasant, conferring upon the whole operation the appearance of a pretty incident in the day's routine rather than a mere bodily necessity or an exhibition of greed. . . . And, hence, it also comes that, talk you ever so well, dress you ever so tastefully, the very moment you eat clumsily, pour your tea out, or blow it, make a noise when chewing your food, shovel it in with a knife, etc., you proclaim your training and the sort of home from which you have come.

A daintily-set table, equipped with a white cloth, glistening dishes, and a centerpiece of flowers, will do much to induce pretty manners, especially where there is a "tableful" of children. The daintiness of the service sets them on their best behavior, as it were, as though "company" were present. On a farm, just this daintiness of napery is sometimes hard to accomplish; there is so much work to be done, and laundering is such a burdensome task that there is surely an excuse for having the cloth on even after it has become sadly begrimed. By all means have it on for the full week, but try the following expedient for keeping it clean: Cut a piece of white oilcloth the exact shape of the top of your table, only about two inches larger each way. Now, put on your linen cloth, which should hang down well about the sides, then fit the oilcloth over it.

The effect is much prettier than that of a large oilcloth without a linen one under it, while the worry of washing tablecloths, which by this plan are never much soiled, becomes reduced to a minimum. . . . For the centerpiece have a simple, clear-glass vase, or rose-bowl, with a few cut flowers in it, and keep on hand a tiny fern in a pretty jardiniere, which may be used when cut flowers are not available. You will, of course, have a small linen or crocheted mat upon which to rest the flower holder.

There will, however, be times upon which you will want the table to present a better appearance. Then the oilcloth must come off, and the tablecloth and napkins must be of the finest you can afford, for nothing shows the laundering like good linen. For the center decoration, now, you may have as elaborate an arrangement as you choose; but nothing can be prettier than a handsome linen centerpiece surmounted by a rose-bowl of choice flowers, a few sprays of greenery, such as smilax, coiling about the base of the bowl. Some use a round mirror bought for the purpose instead of the linen, and curve the smilax about its outer edge.

For evening decorations, on very state occasions, should such occur, wax candles will be found very useful, although much of their effect will depend upon your own originality and ingenuity in arranging or decorating them. A pretty method is to make a large pink rose of tissue paper for each place. Put each on the table and curve the inner petals

about a small silk spool in which a tiny pink candle has been fixed. The candles in this arrangement will, of course, be unshaded.

If you have candlesticks, you may use larger candles surmounted by a wire frame, which you may trim as pleases your fancy. For instance, you may droop a fluffly rose or chrysanthemum (made of tissue paper) about it, as in fig. 1., or you may trim it a la Japanese, as at fig. 2. To make this shade, first make a foundation of Bristol board by curling the board into a cone, and then cutting off the upper section; then cut out the little windows neatly, and paste on the inside of each a bit of a printed Japanese paper napkin. The same idea may be carried out on a larger scale to make a lamp-shade. If you choose, you may use hand-painted butter-paper, bolting-cloth, etc., instead of the Japanese paper.

Just a word before closing in regard to dishes: Don't choose gaudily-colored, large-patterned china. Remember that, by buying good china of the right kind, you need not get a whole set at once; there are stock patterns in Haviland chinas which you can always get, and so build up your set according as you can afford to add to it. You will be better satisfied in the end if you get only half a set, even a third of a set, that pleases you, than if you get a whole one, which is cheaper and looks ugly to the end of its days.

There are three exceptionally pretty designs in Haviland stock china, and one of violets, one of scattered roses, and one of tinier roses in a closer pattern. There is also a very handsome green-banded pattern, but this kind is quite expensive. Just a word of warning, see that "Haviland," or "Haviland, Limoge," is stamped on the back of the pieces, and if any imperfect or poorly-colored articles are packed up for you, return them, and insist on having good ones. You have paid for a good article, and are entitled to it.

If I could not afford a fine china, I should not have any at all, but would choose instead a pretty semi-porcelain, which is almost as dainty, and may be had in very pretty designs—rose, blue-banded, etc., and in the never-fading blue willow pattern. It is well to get a stock pattern in these also, so that pieces which may happen to meet with an accident may be replaced.

RHUBARB RECIPES.

Rhubarb Wine.—Cut in bits and crush 5 lbs. rhubarb; add the thin yellow rind of a lemon, and one gallon water, and let stand, covered, two days. Strain off the liquid, and add 4 lbs. sugar. Put this into a small cask, with the bung-hole covered with muslin, and let work two or three days, then put in the bung, and let stand four months, when it is ready to bottle off.

Rhubarb Marmalade.—Chop fine 3½ lbs. rhubarb. Add 3 lbs. sugar and the grated rind and juice of two lemons, and set to cook. When the mixture is boiling add ¼ lb. candied orange peel chopped very fine, and let cook until in marmalade. Serve for breakfast, with toast. A very little of this, as, indeed, of any marmalade, is enough for a meal. For this reason, marmalades are as economical as they are wholesome.

Rhubarb and Fig Preserves.—Cut rhubarb into inch lengths, and measure 3 lbs. Take ½ lb. ordinary dried figs, and cut into quarters, and ½ lb. candied orange peel, with 2½ lbs. sugar, the juice of a large lemon and its grated yellow rind. Put this into a kettle in layers with the sugar, and let it stand, covered, all night. In the morning, boil it down slowly till it is thick; about an hour will do.

Rhubarb Pie, with Two Crusts.—Filling: Mix 1 cup sugar and enough chopped rhubarb for the pie. Add 1 beaten egg, and 1 large cracker (rolled). Rhubarb and Orange Pudding.—Cut up the rhubarb, put it in a shallow, round, pudding dish, sweeten, and mix with pieces of orange and a little grated orange peel. Pour in a spoonful or two of water. Cover with a crust, and bake. Serve hot or cold, with whipped cream.

Rhubarb Jam.—Wash the young rhubarb, and cut into inch lengths. Do not peel it. To each pound allow ½ lb. sugar. Put all in a porcelain-lined kettle, bring slowly to a boil, and stir continually for three-quarters of an hour.

Baby's Own Soap is made expressly for the delicate skin of infants.

That is why thousands of gentlewomen find "Baby's Own" is all they need to preserve their complexions. Its daily use keeps the skin soft, cool and fragrant—and renders the use of expensive skin creams unnecessary.

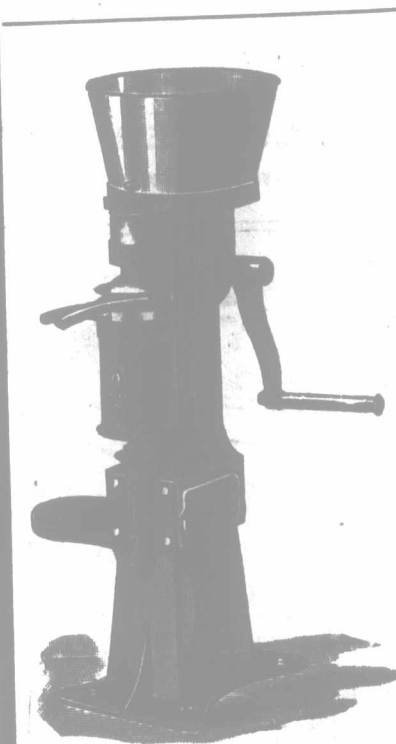
Try "Albert Talc" Violet Scented and Antiseptic.

Do not accept substitutes. Ask your dealer for "Baby's Own Soap"—best for Baby and best for You.

ALBERT SOAPS, LIMITED, MFRS., MONTREAL.

DO YOU KNOW

That the MAGNET Cream Separator, with its one-piece skimmer, has made centrifugal power separation of butter-fat from milk a complete success? When centrifugal power was first applied to the separating of butter-fat from milk it was in a hollow bowl. This method was only partially successful, and practical men agreed that the hollow bowl required something more to make the separation as operation satisfactory to the owner of the dairy. Many makers rushed to the other extreme by absurdly jumbling together a number of pieces which they called skimmers. These parts were difficult to fit together, and almost impossible to keep clean. The inventors of the MAGNET have overcome all the objectionable features of the hollow bowl, and also the complicated skimmers, in the following way:—



1. They made the steel bowl considerably longer than the old separator bowl, and of less diameter.
2. They applied the spur or square gear drive to the bowl, because that gear is heavy and strong, thus giving the steadiness of motion required in order to skim clean and produce smooth cream.
3. In constructing the skimmer, perfect separation of the butter-fat from the milk was the first consideration.
4. With the long bowl and square gear drive set in a solid frame, it was found possible to construct a skimmer in one piece, which would do all that was required by the dairyman, in so far as separation of butter-fat from the milk, but it did more, it separated disease germs and foreign matter from both, thus giving an absolutely pure product.
5. Ten years' every-day use has shown that the MAGNET does not wear out. That the separation is as complete today as when the machines were sold, and that the butter-fat continues to be pure and the cream uniformly smooth.
6. The skimmer being only one piece makes it easy to clean, requiring about one-quarter of the time that is usually taken to clean a cream separator.
7. The MAGNET Brake circles the bowl and stops it in eight seconds without injury to any part of the machine.
8. The MAGNET has been awarded first prize wherever shown.

If we knew where you lived we would come to you with a MAGNET to enable you to test its working for yourself, which test would show you that every statement we have made is absolutely true, and also that the spur or square gear is the only gear that should be applied to a fast-running machine like a cream separator.

THE PETRIE MFG. CO., LTD.

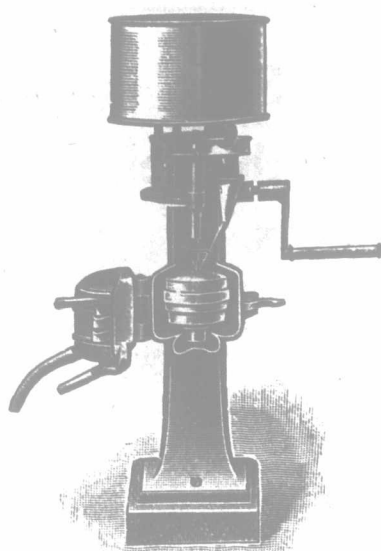
Hamilton, Ont. Winnipeg, Man. St. John, N. B.
Other Western Distributing Points:
Regina, Sask.; Calgary, Alta.; Vancouver, B. C.; Victoria, B. C.



Women Cured at Home!

Women's disorders always yield, from the very beginning of the treatment, to the mild but effective action of Orange Lily. Within two or three days after commencing its use the improvement becomes noticeable, and this improvement continues until the patient is completely cured. Orange Lily is an applied or local treatment, and acts directly on the womanly organs, removing the congestion, toning and strengthening the nerves, and restoring perfect circulation in the diseased parts. In order to convince all suffering women of the value of this remedy, I will send a 35-cent box, enough for ten days' treatment, absolutely FREE to each lady sending me her address.

MRS. F. V. CURRAH, Windsor, Ont.



Frictionless
Self-balancing
and Self-emptying
Bowl.

Why the Melotte will last longer than any other Cream Separator.

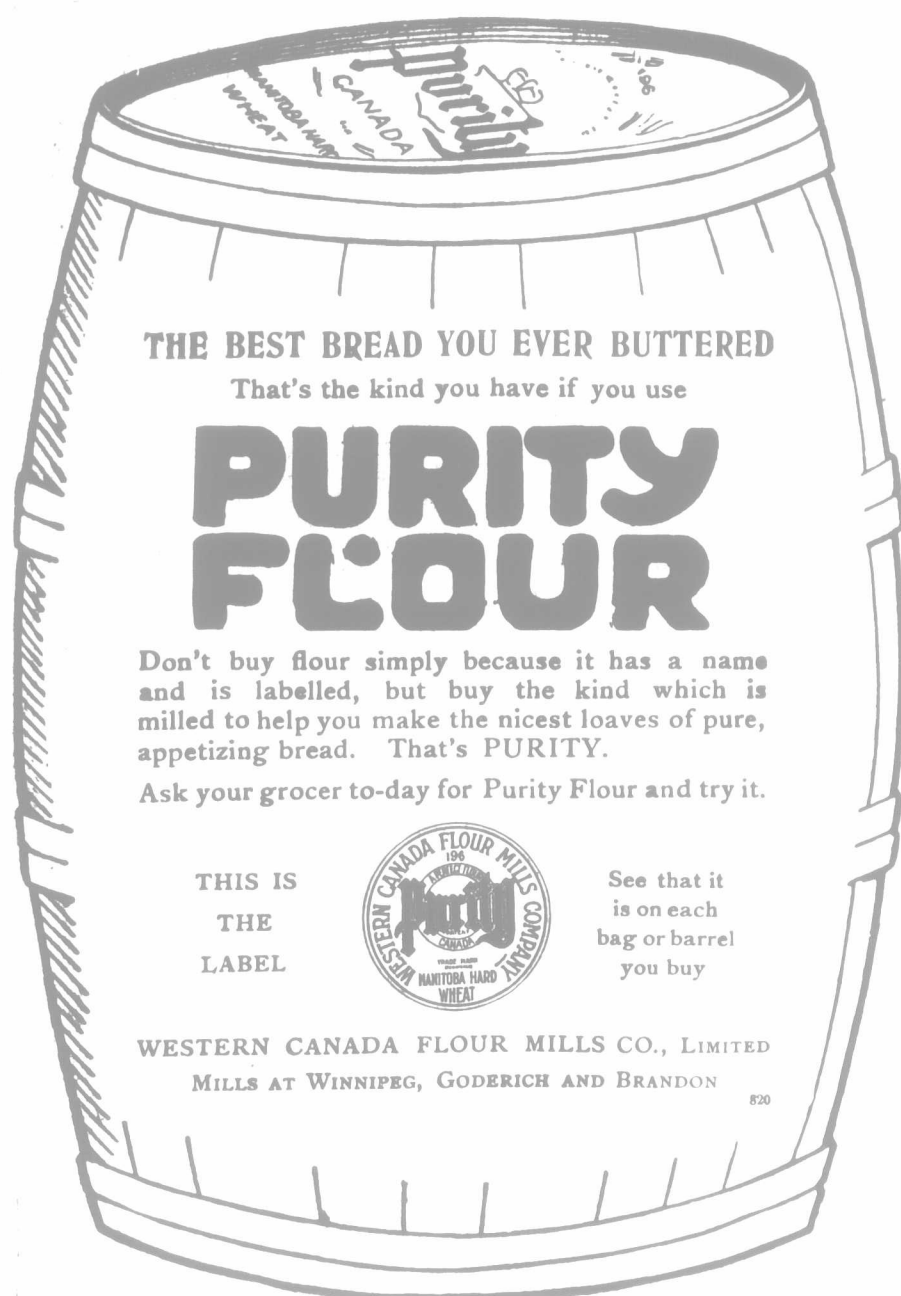
It is the only cream separator with a free hanging bowl which is suspended from a ball-bearing socket. In other machines the bowl is set on top of the spindle, and requires a number of bushings and bearings to support it. The Melotte, therefore, has less surface exposed to friction, and must wear longer.

The Melotte's suspended bowl entirely does away with vibration. Vibration is caused by the bowl getting out of balance, and every machine which has a supported instead of a hanging bowl will easily get out of balance. Vibration means strain, and where there is strain there is wear.

Another important point: The Melotte bowl being very wide requires but 7,000 revolutions per minute to separate perfectly. Other machines, because of their narrower bowls, require from 15,000 to 20,000 revolutions per minute to do proper work. Now, which should naturally last longest, the low-speed Melotte or the high-speed separators?

Write for catalogue and information about free trial offer.

R. A. LISTER & CO., LIMITED
66 Stewart Street, Toronto, Ont.



Put into tumblers, and, when cool, tie tightly with tissue paper brushed over the top with white of an egg.

Rhubarb and Orange Preserve.—Peel six oranges, scrape off all the white part, and slice, taking out the seeds and core. Take off the yellow part of the rind, and add to the slices after cutting it fine. Mix with a pound of cut-up rhubarb and 1½ lbs. sugar, or, if the oranges are sour, 1½ lbs. sugar. Simmer till thick. Pineapple mixed with the rhubarb instead of the oranges is also delicious.

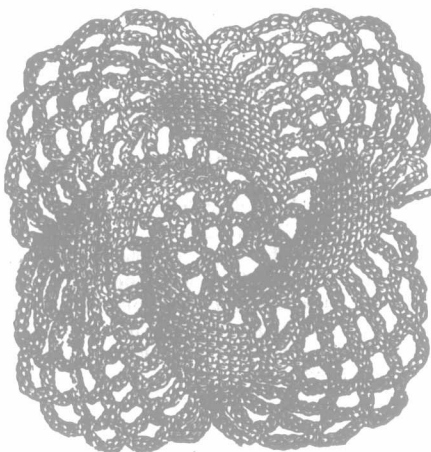
The Ingle Nook.

QUILT PATTERN.

The following pattern for a crocheted quilt has been kindly contributed by Miss Grace Mitchell, Cardwell Co., Ont.:

"Horn of Plenty" Wheel.

- Chain 8, join in a ring.
- Chain 6, make 1 double in ring, repeat 4 times.
- Chain 6 and 4 doubles in each loop formed by 6 chain of previous round.
- Chain 6, 3 doubles in 6 chain of last round, 1 double in each of next 3 stitches, taking up both veins of stitch, repeat from beginning of round 3 times.



"Horn of Plenty" Wheel.

- Chain 6, 3 doubles in 6 chain of last round, and 1 double in each of next 5 stitches, repeat from beginning of round.
- Like 4th, only putting 1 double in each of 7 instead of 5 stitches.
- Like 5th, 1 double in each of 9 instead of 7 stitches.
- Like 6th, with 11 stitches instead of 9 in the "horn."
- Chain 6, 1 double in 6 chain of last round, chain 6, miss 1 stitch, 12 doubles in next 12 stitches, repeat 3 times, to finish the round.
- Chain 6, 1 double in 6 chain of last round, chain 6, 1 double in next 6 chain, chain 6, miss 1, 1 double in each of 10 stitches, and repeat.
- *Chain 6, 1 double in 6 chain of last round, *repeat from * to * twice, chain 6, miss 1, 1 double in each of 8 stitches, and repeat from beginning 3 times to finish the round.
- Like 10th, repeating from * to * 3 times, and putting 1 double in each of 6 stitches.
- Like 11th, repeating from * to * 4 times more (working 5 times in all), and making 1 double in each of 4 stitches.
- Like 12th round, working from * to * 6 times in all, and making 1 double in each of 2 stitches.

This completes the wheel, which may be used for many purposes. It is very pretty for scarf-ends. I have a scarf of ecru linen scrim, trimmed with wheels of Barbour's linen, No. 50, in balls, this having a very rich ecru tint. The wheels may be arranged as liked, and are easily joined, as they are in reality small squares.

Renovating a Hat.

Dear Dame Durden,—All ye who have troubles go to Dame Durden, seems to be the motto of "The Farmer's Advocate" readers. As I am a reader, and also have a trouble, here I am.

I had a white "chip" straw hat last summer, and the sun made it so brown that it cannot be used as it is. I thought, perhaps, you knew some way of staining it black. If you do, will you please tell me how to do it?

I do enjoy your weekly chats. Do you know, I would like to meet you. I

have formed my opinion of what you look like, and would like to see the original and compare; however, perhaps some day I will have the honor.

Oxford Co., Ont. FLORA DORA.

A friend of mine turned a navy-blue hat into a black one by giving it several coats of liquid shoe blacking, letting each dry before applying the next. I should think the same plan might work all right with your sun-browned hat.

Really, Flora Dora, I should like to know the mental picture which you have formed of myself. Only don't, please don't, as some of the other Chatters have done, invest me with a morning coat, striped trousers and a goatee. I do most emphatically state that the Ingle Nook doesn't harbor a man.

Re a June Wedding.

Dear Dame Durden,—We take "The Farmer's Advocate," and like it very much. I would like a recipe for a wedding cake. Perhaps you, or one of the Chatters, could give one through the columns of your paper, also how to make the icing? When should it be iced, while the cake is warm, or when cold? Is the groom's cake the same as the bride's? If not, how is it fixed? Could you give a description of a June wedding? Would it be all right to be married under an evergreen arch in June? At what hour do they call high noon?

A READER.

The following is a recipe for wedding cake: One lb. brown sugar; 1 lb. butter; 1 lb. flour; 4 lbs. raisins; 3 lbs. currants; 1 lb. citron; 2 cups molasses; 1 wine-glass brandy; ½ oz. mace; ½ oz. cinnamon; ½ oz. nutmeg; ½ oz. cloves; 10 eggs. Seed and chop raisins; wash and dry the currants; and cut up the citron. Sift the flour with the spice. Rub butter and sugar together to form a cream. Separate whites and yolks of the eggs; beat the yolks light, and add to the butter and sugar; then add molasses and brandy, stirring well after each is added. Sift a little flour upon the raisins and currants, and stir the rest of it into the mixture, beating well; then add the fruit, and, lastly, the beaten whites of the eggs. Line two medium-sized cake tins with well-buttered paper, divide the mixture between them, and bake for two hours in a slow oven. Keep this cake in a stone jar in a cool place, and it will last for years.

Almond icing is by far the nicest for wedding cake. A very good recipe for it is as follows: Take the whites of 3 eggs, 1 lb. icing sugar, 1 lb. sweet almonds, and 1½ ozs. bitter almonds. Blanch the almonds on the day before using by scalding and rubbing off the skins. Let them get perfectly dry. Put them through a chopper 7 or 8 times (or pound to a fine mass); add the slightly-beaten whites; then the sugar. Use a silver knife dipped in hot water to make smooth. Cover with a plain icing, made of powdered sugar and milk. Cake should always be iced when cold.

It is not necessary to have a groom's cake; the bride's cake is all that is ever used nowadays.

A June wedding is conducted the same as any other, except that, if you choose, the luncheon tables may be set out of doors under the trees. The evergreen arch would, we think, be very pretty, especially if, directly beneath its upper portion, a wedding-bell of flowers were hung. In June, especially during the latter part of the month, you should have no difficulty whatever in getting a profusion of flowers for table and other decoration. We should say to keep pretty much to one kind of flowers—Marguerites (ox-eye daisies), roses, or whatever be chosen. The effect is much prettier than if a variety is used.

High noon is twelve o'clock, midday.

We have not given any detailed description of the ceremony itself, as you did not say whether it is to take place in the church or at home, or whether the bride and groom intend going unattended, or accompanied by bridesmaids, best man, etc. . . . If any further information is desired, kindly write us in detail in regard to these particulars.

A Letter from Aunt Nan.

Dear Dame Durden,—So often I have resolved to chime in and have my say on the various subjects discussed in our Ingle Nook, but have failed, until that letter of "Jack's Wife" appeared. She voices my sentiments very decidedly in

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.

CHANCE - White African guinea fowl. Eggs, two dollars per fifteen. George S. Hammond, Poole, Ont.

BARRED ROCK eggs safely packed in Morgan baskets. One dollar per fifteen. C. H. Chalme s, Smith's Falls, Ont.

BARRED ROCK eggs from heavy winter layers. \$1 per 15. Circular free. W. W. Dods, Alton, Ont.

BARGAIN - S. White Leghorns. Choice pen \$1.75 per thirty; \$5.50, 350. Write Ernest Flindall, Smithfield Ont.

BLACH Orpington prizewinners, \$1.50 per 13; White Rocks, \$1 per 13. W. J. Rebstock, Ridgeway, Ont.

BUFF Orpington eggs from prizewinning stock. \$1 for 15. S. L. Anderson, Crossland, Ont.

BUFF Orpingtons - Splendid cockerels for sale. Also few pullets. Prices right. Eggs \$1 and \$2 per fifteen. Special prices for hundred lots. James McGregor, Caledonia.

BUFF Orpingtons White Wyandottes, Rocks, Leghorns, Black Minorcas, Buff, Fayrbridge Cochins, Hamburgs, Pekin, Aylesburg ducks. Settings \$1. R. L. u. ie, Drumbo.

BUFF ORPINGTONS - Pure-bred - Eggs, \$1 per 15. 9 chicks guaranteed. \$5 per 100. Extra heavy layers. Hugh A. Scott, Caledonia, Ont.

CLOVER Crest Farm Buff Orpingtons; pure bred choice laying strain, \$1.00 per 15 eggs. Mrs. A. W. Ross, Douglas, Ont.

CLARK'S Buff Orpingtons. 12 pens. Exhibition, egg strain and utility pens. National winners. Eggs from \$1.00 to \$5.00 per 15, 12 fertile eggs guaranteed. Incubator eggs a specialty, \$5.00 per 100. To raise birds for the fall shows get my eggs. Free mating list. J. W. Clark, Cainsville Ont.

EGGS from excellent laying strain of Buff Orpingtons. Typical shape and good color. \$1 per 15. Edgar Staples, Bright, Ont.

EGGS from Mammoth Bronze turkeys. Won 8 prizes at Guelph Show. Eggs from these birds, \$5 per 9; \$5 per 15. Chas. B. Gould, Box 242, Glenora, Ont.

EGGS from pure-bred Barred Rocks, White Wyandottes, one dollar per setting. John R. Morgan, Wales

EGGS for hatching. Choice White Wyandotte and Barred Rocks, \$1 per two settings. W. A. Bryant, Cairnform, Ont.

EGGS FOR HATCHING - From a pen of Buff Orpingtons, selected for their persistant laying of large, rich colored eggs. Having the run of the orchard and mated with three AI cocks - large, strong-boned, healthy birds. Price, \$1 per 13, or \$3 per 40. W. C. Shearer, Bright, Ont.

FOR SALE - Eggs from choice pens of Barred Plymouth Rocks, \$1 per 15; 45 eggs, \$2.50 J. F. Treverton Poucher's Mills, Ont.

GET eggs from prizewinners. My birds won over 350 firsts at eleven shows. Barred and White Rocks, White and Silver-laced Wyandottes, Brown and White Leghorns, Silver and Black Hamburgs, Single and Rose-combed R. I. Reds, Buff Orpingtons, \$1 per 15 eggs. Special matings. A few eggs to spare from Black and Buff Orpingtons, Black Javas, Blue Andalusians, Barred and White Rocks, Black and Silver-spangled Hamburgs, Brown and White Leghorns, Single and Rose combed R. I. Reds, White and Silver penciled and Silver-laced and Black Wyandottes, at \$2 per 15 eggs. F. W. Krons, Guelph.

INGLE NOK Poultry Farm offers eggs from selected pairs of heavy laying strains - Brown and White Leghorns, Buff Orpingtons, B. Minorcas, a d Barred Rocks \$1 per 13. White Leghorns only \$5 per hundred. W. H. Smith 41 Spruce St., Toronto.

LOOK! Canada's champion exhibition and heavy-laying strain Single-Comb White Leghorns. Send for free mating list, which gives complete winnings at Canada's leading shows, and prices of eggs at \$1.00 per 15 upward. Address Jas. L. McCormack, Brantford, Ont.

MOTTLED Ancona eggs, \$1.50 per 15; single-comb White Leghorn eggs, \$1.00 per 15, \$4.50 per 100. Winter layers. Money makers both. All eggs now test 95% fertile. Cockerels and yearling hens one dollar each. Circulars free. E. C. Apps, Box 984 Brantford, Ont.

MY Barred Rock - 237-egg-hen - is still Canadian champion. Send for circular. J. R. Henry, Watertown

PEACHGROVE FARM - Eggs, grand laying strains, a d Barred Rocks, \$1 per 15. Indian Runner ducks, 10c each. Frank Binard, Glanworth, Ont.

RHODE Island Reds rose-comb. Bred nine years from carefully selected heavy winter layers. Large brown eggs. Dollar-half per fifteen. Good hatch guaranteed. Jno. Luscombe Merton, Ont.

SINGLE-COMB Snow-white Leghorns, bred for size. Heavy layers and beauty. Two hundred-egg strain. Hatching eggs, from six hundred selected breeders, \$1 fifteen, \$5 hundred. Prompt, safe delivery and good hatch guaranteed. G. Norman Shields & Mains, 1559 Bloor West, Toronto, Ont.

WHITE Wyandottes only - Two grand pens. Bred for size and winter egg production. None better. Eggs \$1.50 per 15. Mrs. James Smith Pine Grove, Rockland, Ont.

WHITE Rocks, Buff Orpingtons, prize-winning, heavy-laying strains. Eggs one dollar and a half per setting. Rife Bros., Hespeler, Ont.

WYCKOFF'S 280-egg strain S. C. White Leghorn eggs. Fifteen, \$1; thirty, \$1.75. Geo. Easton, Jr., Whitney, Ont.

WHITE and Buff Wyandottes. Prize fowl, great winter layers; \$1.00 for 13 eggs. Order to-day for April and May setting. Harold Hunter, Barrie, Ont.

Queen's University and College KINGSTON, ONTARIO

ARTS EDUCATION THEOLOGY MEDICINE SCIENCE (Including Engineering)

The Arts Course may be taken without attendance.

For Calendars, write the Registrar, GEO. Y. CHOWN, B.A., Kingston, Ontario.

Mouse-proof (PEDALS) That Won't Work Loose

You don't want an organ that can be ruined by mice getting inside and gnawing holes through the bellows; therefore select a

SHERLOCK-MANNING ORGAN

Mice cannot eat through the nickel frames and heel-guards which protect our pedals. Our pedals also have improved hinges with special bent staple, which prevents pedals from working loose.

THE SHERLOCK-MANNING ORGAN CO. London, Ontario.

Every Woman is interested and should know about the wonderful Marvel Whirling Spray Douche

LEARN DRESS-MAKING BY MAIL In your spare time at home. We will give, direct to the public, our \$15 course, including our Ladies Tailor System for wholesale price, \$5.

Samuel Falkenberg, Baron, Alberta, knows Western conditions well. He came direct to Central Telegraph School, Toronto, to learn railway operating. Better do likewise. Catalogue free.

LADIES' SUITS \$7.50 to \$19. - Tailored to order. Beautiful voil skirts, \$5 to \$9. New silk coats, \$5 to \$10. Nice cloth skirts, \$2 to \$6. New waists in lawn and silk, 50c to \$4. Wash jumper suits, \$2.25. Lustré jumper suits, \$4.75. Silk jumper suits, \$12. Linen suits (coat and skirt) \$4 and up. Send to-day for the sample materials and style book. They are free. Southcott Suit Co., London, Ont.

many things, but in others I hardly agree.

For one thing, I think her ideas of a farmer's home are all very well for that class of farmer who has made his home, and is spending the autumn of life on the farm. Nothing is too good for him and his worthy helpmate. But what of the man who is striving and struggling to attain that home, and is trying to make the best out of houses and barns built years before the idea of parlors and dens came into existence?

It seems cruel to be continually reminding him of the comforts others will have each day, and the things you should have, or should do, to be up to the times, as one often sees it in the numerous letters of advice given.

Are those people any happier who have dens and parlors, and the many attachments in their home than those content with plainer things and more ordinary methods of living?

Do not the more things collected together only help to make work? And we all know the farmer and his family have sufficient of that commodity to satisfy any reasonable person.

Is there not a tendency among many farmers to-day to keep up with the times, regardless whether the farm is paid for or anything laid by for the rainy day?

I enjoy seeing improvements, and think there is no place where there should be easy and thorough methods of doing things like the farm; but I fear some farmers would run before they walk, and their example will tend to lead others astray.

Now, I have no particular spite against "dens and parlors"; they are all very well for those who can afford them, and for those whose homes have been built recently or are prospective builders, but in the majority of country homes there is neither the allowance nor the rooms; consequently, the living-room is the one term that appeals to most.

That stencil idea is splendid, and helps very common-looking things to look better. I mean to try one pattern given in a back number. But I can hardly agree with you, Dame Durden, regarding Alabastine as a wall finish. Say, did you ever have to wash it off? I have, and a more disgusting piece of work I don't know where to find.

The light tints look very well at first, but fade dreadfully, except the green, and it is apt to make one feel green all through.

Do any of the mothers and daughters have trouble with the kettles, etc., in the pantry, making shelves as black as can be? If so, let them get some strong hooks like those used for key racks, and screw them into the underside of the lowest shelf, far enough apart to allow space for each kettle, and save a constant annoyance. Also, when house-cleaning, try the crushed newspaper for the windows, and save muscle. I have found it a good idea to start house-cleaning at the kitchen and pantry first. Then go to the upstairs, if need be. It is so pleasant when done with the rest of the house, to have the kitchen freed; for don't we all know how we dread the moving of so many things when the days are getting warmer and we are tired out. We have tried putting down both beef and pork by frying and sealing with lard; they keep well if properly sealed by placing a weight on an inverted plate on the top before pouring the hot lard on, and the convenience of the plan should recommend it to one and all.

Can anyone tell me why some woollen coverlets, when washed, should be sticky and harsh, when washed carefully with Surprise or Sunlight soap, and dried thoroughly in the balmy spring days? Would the coloring matter, think you, have anything to do with it? Do any know that old chenille curtains, cut in strips and woven into rugs, have a better appearance than most rag ones, and wear well?

I fear the other chairs at the Ingle Nook will be vacant pretty soon, so I will take a breath, and close, by thanking Dame Durden and the Nookers for many helpful hints; and, then, too, "Hope" should be commended for the good work done each week, as, also, those of the various departments. I am proud of "The Farmer's Advocate," and hope it may long prosper and prove the best of the kind twenty years from now, as it does at the present. AUNT NAN.

No, Aunt Nan, I never tried washing Alabastine, for I knew it would not wash. It has to be renewed instead of washed, and is, of course, not suitable for kitchens or living-rooms for large families of children, where the walls are likely to be soiled quickly, and where paint is the only sensible finish. Its advantage over paint for other rooms is that, being dull instead of glazed, it is softer and more artistic in appearance. Of course it fades, but not worse than the cheap wall papers usually seen, and if the fading is uniform, it is not so very objectionable. The only advantage of Alabastine over paper is that it costs less. . . . By the way, I agree with you that a living-room is parlor enough for a farm; but, if in a large house there is a room to spare, I don't see any objection to making it into a den, a little private spot where one can read or sew if one chooses, without danger of interruption. You see, we have to give hints of all sorts in our journal. We do not publish it exclusively for the poor and struggling, nor yet exclusively for the well-to-do; and so we must permit discussions by all classes, discussions on economy at one time, and on beautifying the home with the expenditure of a little money at others. We have all kinds of people among our subscribers, with all kinds of tastes and inclinations, and so we try to help all in the things which they ask. In the matter of spending money, it seems to me, each must use his or her own judgment. If one can buy something nice - say, a new piano - there is pleasure in doing so; if one can't afford a piano, one should surely be philosopher enough to do without it. But it would scarcely do to say that, because all people cannot afford pianos, pianos should never be mentioned. And so it is in regard to all other things.

It is not what we have, or have not, that spoils us, but our attitude in regard to those things. It is surely no harm for us to have pretty things if we can well afford them, but if we pride ourselves on having them, and hold ourselves above others because of them, then are we just proclaiming how narrow and foolish and selfish we are. The country spirit of good fellowship to all and one as good as another should never be permitted to die out. It is just that spirit which has made the country such a pleasant place to live in in the past, and it would be a great pity if conditions ever became otherwise. By all means let us cling to our free-and-easy, good-hearted country life, no matter what our possessions may be; for our possessions should be for our own pleasure, or our own advancement; and not that we may shine among our neighbors.

"THE FARMER'S ADVOCATE" FASHIONS.



5959 Loose Coat, 32 to 40 bust. 5965 Child's Dress, 2, 4 and 6 years.

The above patterns will be sent to any subscriber at the very low price of ten cents per pattern. Be careful to give Correct Number and Size of Patterns Wanted. When the Pattern is Bust Measure, you need only mark 32, 34, 36, or whatever it may be. When Waist Measure, 22, 24, 26, or whatever it may be. When Misses' or Child's pattern, write only the figure representing the age. Allow from one to two weeks in which to fill order, and where two numbers appear, as for waist and skirt, enclose ten cents for each number. If only one number appears, ten cents will be sufficient.

Address: "Fashion Department," "The Farmer's Advocate," London, Ont.

Current Events.

Peter Hing, a Chinaman, headed the list in the recent law examinations at McGill.

The list of the dead, due to the avalanche at Notre Dame de la Sallette, Que., has been ascertained to be thirty-three.

The Dominion Commissioner in London has begun strict supervision to prevent undesirables from emigrating to Canada.

Three hundred and fifty people were killed and many injured by tornadoes which swept recently over the Southern States.

The Standard Gearing Factory, at Niagara Falls, formerly the Henderson Roller Bearing Works, of Toronto, has been seized by the sheriff.

King Manuel of Portugal has promised to refund the value of the crown jewels which were sold by his father. The amount totals \$750,000.

A serious revolt has broken out in Argentina, where the Governor of the Province of Santiago has been driven from office and a provisional government set up.

Professor Petrie, the famous Egyptologist, has undertaken to dig



The EDISON PHONOGRAPH

THE most wonderful thing about the Edison Phonograph is its versatility. It is equally good in entertaining a crowd of friends or in helping you pass a few hours by yourself. It has just as many moods as you have. It is just as good in rendering a plaintive ballad as it is in rendering a lively waltz.

The new model with the big horn is now at all dealers'. You should see and hear it or write for a descriptive booklet. WE DESIRE GOOD, LIVE DEALERS to sell Edison Phonographs in every town where we are not now well represented. Dealers should write at once to National Phonograph Co., 100 Lakeside Ave., Orange, N. J., U. S. A.



WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

out of the sand the city of Memphis, the ancient capital of Egypt during the rule of the pyramid-builders.

Mr. Alfred Mosely, the noted educationist, is at present in Canada, arranging for the visit of a large number of Canadian and United States school teachers to England.

It is reported that whalers have found the vessel "Investigator," which was frozen in The Bay of God's Mercy during the search for Sir John Franklin. The ship is said to be in as good condition as when abandoned by McClure and his party in 1851.

Mr. Ernest Thompson-Seton, in addressing the Toronto Canadian Club, recently, on his trip to the far Northwest last summer, told of great timber wealth and abundant vegetation in regions which have hitherto been regarded as barren. He discovered two rivers, which he named Grey and Laurier.

Damage to the amount of \$10,000 was done by fire during the recent exhibit of the Royal Canadian Academy, Toronto. Among the pictures destroyed was Mr. G. A. Reid's fine mural decoration, "Spring," a reproduction of which was given in "The Farmer's Advocate" Christmas number for 1906.

POWER LOT A Story of "Down East."

BY SARAH McLEAN GREENE.

[Rights of publication secured by The Wm. Weld Co., Limited, London, Ont.]

CHAPTER V.—Continued.

Mary, who was, if the truth must be known, about as pliant and romantic a farmer as Rob himself, went into the house. Rob made a virtuous show of walking toward the barnyard, where the oxen stood. He saw Bate, tinkering with real skill and ingenuity over a gate which the wind had dislodged and broken. Bate did not look up, and Rob marched deliberately out of sight, with the absorbing purpose of counting his money in solitude. He searched his pockets and the contents of his purse with feverish anxiety, for he had an impression—nay, he recalled clearly now the reckless dissipation which had marked the progress of his overland journey to Waldeck; the night at St. Frederick's, especially, where he had stopped to enjoy the jovial companionship of some chance acquaintances, and had spent the night in uproarious drinking and gambling.

He searched himself, therefore, with feverish haste, and stood appalled, open-mouthed, at the result: Two dollars and sixteen cents. The fare alone to New York, without the usual extravagant and luxurious accessories which he employed in travelling, was fifty-five dollars.

Rob searched his pockets, the deep crannies of his folding billbook, the lining of his purse, his huge overcoat pockets, his inner vest pockets: three cigarettes, one match, his handkerchief, his cardcase, and two dollars and sixteen cents; and searching till doomsday could produce no more.

"Lord, what a fool I was." Rob gritted his teeth, struck the match, and almost swallowed the smoke from his cigarette, as a man snatching wildly at his last gasp of elysium.

"Oh, Lord, what a dense fool, fool, fool, I've been. Didn't even put in a supply of cigarettes. Nothing to drink, no cigars, no money to fight out with—what an ass I must have made of myself on the way. What an idiotic fool ass? What in h—l did I do? What 'll I do? What 'll I do?"

What he did was to make his way

Be Prepared for Emergencies.

If you live in a small village or country district, you will appreciate the value of a telephone.

Haven't there been times when you would have given a good deal to communicate with a friend?

Or, perhaps you needed the services of a doctor, in a hurry, but had no way of communicating with him, at once.

The minutes seemed like hours, didn't they, when you've had to suffer while the doctor was being sent for?

Have one of our telephones placed in your house and so be prepared to summon the doctor at a moment's notice.

A short delay in getting a doctor may mean life or death, so why take chances, why not be prepared for any emergency?

Suppose a fire should occur or burglars break in and your wife and children were alone, what protection would they have if there was no telephone in the house?

But a telephone is something you can't take chances with.

You must have one that you can absolutely depend upon.

Send us your address and we will tell you all about a reliable telephone that is easily installed at a small cost.

Northern Electric & M'fg. Co., Ltd.
Montreal and Winnipeg. No. 303

Use address nearest you.

desperately down through the woods to the shore, straight for a vessel which some men were loading with wood.

"Fine boat," said Rob critically and ingratiatingly, putting his hands in his pockets with a nonchalant air, though he was suspiciously out of breath.

"Fine nawthin'," bellowed the familiar voice of Captain Belcher. "She's the contrariest old sucker 't ever run her nozzle through salt water. Durn old suicide. I've a good mind to let 'er rip next time she goes smellin' 'round for a ledge ter stave 'er ribs into."

"Pshaw, I wish I owned her. She looks very fine to me," said Rob, with truth and diplomacy combined. "I see that her name is 'Leevya Potter.' It's a pretty name. Very."

"She'll leave ye, all right," responded Captain Belcher, "she'll leave ye to go to pot; oh, she's the 'Leevya Potter,' all right."

The men guffawed in appreciation. "I think it's too bad to talk that way about a nice boat like that," Rob pursued his devoted way. "Looks to me like first-class wood you're loading there. Going to the States, of course? Looks as though you'd be all ready to sail in an hour or so now?"

The men looked with simple curiosity at this anomaly of an astute New Yorker.

"By Tar an' Bloaters, Daisy Lee," roared Captain Belcher, "why, you're goin' to have the Leevya Potter for a pleasin' dot on the lan'scape fer a long while to come. Great Tamarrack! she ain't half loaded. We got ter finish our plowin' an' haul thirty cord more o' birch over from Owl's Head, an' make a new main boom an' rudder for 'er afore she's ready. Don't you worry about the Leevya Potter, Daisy. She's goin' to look 'purty' to ye, an' she's goin' to look 'nice' to ye, layin' here on her old eel-trap o' a bottom fer a long while to come. 'Hour or so'!—the Leevya Potter!—Don't say a word—I got wore out with one circus yisterday, an' I'm tendin' to business to-day strictly."

He directed some wood toward the hold of the Leevya with the energy of a giant, and shouted his orders to his men.

Rob longed for the retinue which but a few short days before it had been in his power to call together, to punish and humiliate this coarse offender. The main thing in his consciousness, however, was to get a passage, somehow, back to Waldeck, as his starting place for the journey home. He swallowed his pride, he buried his resentment. It was on his tongue to say: "I will give you the worth of the whole cargo if you'll sail me over to Waldeck station," but his fingers felt despairingly only the two dollars and sixteen cents in his pocket.

"Wonder," said Rob, in his lion-like pursuance of affability, amid the crash of lading wood, "wonder if there are any smaller boats 'long shore here, as—as seaworthy as this one?"

"Jim's got a top-notch," observed one who spoke, but did not consider the question of consequence enough to turn his head.

"Where is Jim?" Rob called cheerfully amid the din.

"Gone 'round the Gut fishin'."

"Where is the 'Gut'?"

"Way off yander whar' ye kin jist see the big ledges buttin' out."

"Looks a mile or so away," Rob suggested, hopefully.

"The Gut's six mild away."

Rob strolled on. Out of sight of the men, around a bend of the shore, his head drooped.

"Better place to die down here by the water, anyway," he muttered; "not so dizzy."

He sat down on a crystallized spar, leaning over, his head on his hands, watching the incoming tide. After a while he was conscious that two boys had seated themselves silently on two boulders, one on either side of him, intimately close. They were both whittling absordedly.

The younger one, conscious that Rob was astir, said monotonously, without lifting his eyes from the artistry of his jackknife:

"Kind o' funny, too, the way the tide makes in here, ain't it?"

Rob made no reply. The older boy offered no suggestions. The speaker had not expected a reply; apparently, he was entirely without grudge or disappointment at this lack of recognition of his subject. He whittled on.

After a while the younger boy spake again, in the same dispassionate tone:

"Lon Garby trapped a b'ar up back thar' a mild in the woods last night."

He whittled on.

After a long interval, the peace of which was made more profound by the monody of the waves, he said once more:

"Kind o' funny, too, the way the tide makes in here, ain't it?"

Rob spoke, the seething of the brine answering the bitterness of despair in his own soul:

"It is indeed—excruciatingly ludicrous."

Both boys whittled on in the same unperturbed, stolid content. In due time the younger spake again: "Old man Trawles is courtin' Widder Treet up to Power Lot, God Help Us. Nell an' Gid runs arfter him ter git him home, but he slopes 'round the lots like a fox chasin' arfter a woodchuck—so my folks was tellin'." Mis' Trawles ain't two months in her coffin—so my folks was tellin'."

He whittled on.

"Do you boys know of any way to get over to Waldeck station?" said Rob.

"In all my lifetime," said the younger boy (he was twelve), "in all my lifetime I never yit cruised over t' Waldeck."

He whittled on.

"Once," spake the elder boy, laying aside one finished piece of carving and reaching among a pile of driftwood for further crude material, "once, I went with father to Waldeck. Father hugged shore too clost comin' home, an' we run aground off thar' by Pin'cle Ledge, an' I walked seven mild around the shore home. Father—he waited f'r the tide."

They both whittled.

"Kind o' funny, too," the younger boy mused aloud, and interrogatively, "the way the tide makes in here, ain't it?"

"It surely is jocular to an unprecedented degree," said Rob.

"Twelve hours, makin' and goin'," continued the younger, conscientiously completing his sentimental theme.

"Six hours she takes ter ebb out, an' six hours she takes ter make in. Kind o' funny, too—"

"I've already expressed, as well as I know how, my sense of the extreme gleefulness of the business," Rob interrupted, his eyes black and savage with misery.

The boys whittled on, undisturbed and unembittered. The younger spake:

"Got an order f'r a mess o' clams off Ma'y Sting'ree. Guess I'll hike off an' rake 'em up 'fore the tide makes in too fur."

He folded up his knife; laid, unregretfully, the treasures of his patient toil to be swallowed up of the next seamaw on the beach and rose; the older boy followed his example. As informally as they had come, they trudged away, around a bend to the flats. Rob was alone again, but not for long.

With a hoe over one shoulder and a bucket of clams weighing down the other slender arm, came Cleota Thibault homeward, singing, along the beach. She had on a blue skirt, a pink waist, a green apron, and a boy's brown soft felt hat; that last was the sorrow of this occasion to the girl, for Cleota had a new Sunday hat, and she loved it with a sort of tender human love; she had stood dandling it that very morning, riven

Have you Received YOUR Copy?



Thousands have sent for a free copy of "Practical Farm Buildings"—are you one of them—are you getting the help of its expert directions for erecting and repairing all farm buildings? Don't miss your copy. Incidentally, it gives mighty valuable information on the roofing question.



There's no part of your building so exposed as the roof. PAROID READY ROOFING steadily withstands abuse from the elements—you know when you lay it that your roof will last for years to come.

But this is one quality only—you'll learn the others and a great deal more when you get the book. Send for it—send NOW.

F. W. BIRD & SON, Established 1817 in U. S. A. (Dept. B) Hamilton, Ont.

of heart desiring to wear it, even clammung; but prudence had finally conquered, and that of Cleota's own volition, for she had neither mother nor any other female relative to act as guardian over her, poor lass. And now here she was in the old brown felt, and there was the beautiful, aristocratic, new young man—who had come to Power Lot, God Help Us—disclosed before her on the beach. She ceased her song, and made haste to get past unobserved.

Now, what Rob noted first in the luminous picture of health and color which she made against the cold gray of the ocean was the admirable setting afforded by the dull old hat for her bright-brown curls, her bright brown eyes, and the glow of her countenance—a living bloom which made the blue skirt, the pink waist, and all the other colors tame in comparison. The young man cleared his sorrowful throat, sighed deeply, and gazed.

Cleota heard the sigh, stole a sidelong glance, and beheld the dreary despair of his attitude. Humanity conquered vanity.

"Don't you think you're goin' to like it over to Power Lot, God Help Us, Mr. Lee? May be you like it better down to Bear River, where me—I live?" she added, innocently. It was evident that Captain Belcher's invention of "Daisy Lee" had spread trustfully abroad in Bear River.

"My name is Robert Hilton," Rob answered drearily, almost with tears in his eyes, while his lip curled with mortification and anger.

Cleota put down her hoe and her bucket of clams.

"You mus' not mind, Mr. Hilton," said she, approaching a step or two. "All the folks 'roun' here—they call other folks them comical names. They call me 'Cuby.'"

"Why?"

"Wa-a-al," said she, drawing a serious though delicious adaptation of the common idiom; "wa-a-al, firs' they did call me 'Cloves' for Cleota, then 'Cinnamon,' then 'All-spice,' an' sometimes 'Pepper,' an' now they call me 'Cuby' for good an' all, because all them things grow in Cuby, don't you think?"

"You are tropical in beauty, that is sure. You have so much of it, I mean," said Rob. "What may I call you?"

(To be continued.)

GOSSIP.

A subscriber writes that a pure-bred cow, owned by Morton Griffin, of Whitehurst, Ont., on April 7th, gave birth to a calf which weighed 105 lbs.; both cow and calf doing well.

Mr. John T. Gibson, Denfield, Ont., makes a change in his advertisement of Shorthorn cattle and Lincoln sheep, in which he offers for sale two red yearling bulls of choice feeding and type, one of an extra good milking dam. He also offers females of all ages.

Mr. A. W. Smith, Maple Lodge, Ont., writes: "I have sold two of the young bulls advertised in 'The Farmer's Advocate' for a couple of weeks. Have two very nice ones left yet, one of them from an extra good milker."

Mr. George Nicol, Waubuno, Ont., writes that capital is being made of a reply from this office that his imported Clydesdale stallion, Diplomat, was not found registered in the published volumes of the Clydesdale Studbooks. Mr. Nicol states that Diplomat is a young horse, rising three, imported last November, and that he is registered in volume 16 of the Canadian studbook, and in volume 30 of the Scottish studbook, neither of which are yet published, his number in the former being [6828], and in the latter [13923].

Mr. A. W. Shaver, Ancaster, Ont., writes: "In renewing my advertisement of Shorthorns, would say I have been much interested, recently, in the dual-purpose discussion in your paper. Our cattle have wintered well. We are milking most of our cows now, and find we can make a profit at the pail, besides rearing the calves. Our present stock bull, Trout Creek Sailor, is doing good service, and proving himself a good stock-getter; he is by Nonpareil Archer (imp.); dam by Royal Sailor (imp.); grandam by Lancaster Royal (imp.), and great-grandam was Village Blossom (imp.). One of his calves, nursed by its dam, gained, in 30 days, 110 lbs.; another, on skim milk, in the same time, gained 60 lbs. We have three good young red bulls for sale, ten, eleven and twelve months old, one of which is specially mentioned elsewhere in this issue as weighing 950 lbs. at twelve months. All three are from good milking dams, and will be sold right."

Dispersion Sale, Wed., May 20, At Glenoro Stock Farm, Rodney, Ont.

45 SHORTHORNS of the popular Scotch families—Marr Roan Ladys, Missies, Miss Ramsdens, and Urys. Money-making sorts. The get of noted sires. Heavy-milking and regular-breeding matrons with calves at foot and bred again to the great sire, Nonpareil Count. Eight choice heifers in calf—show-yard material. Seven young bulls of unusual merit, and the herd bull—one of the best of the breed. One span of A1 heavy horses, 6 and 7 years, mare and gelding, 2,800 lbs. One choice black gelding, 8 years old, 15.3; ideal family driver, perfect at either gait—pace or trot; perfectly safe, not afraid of autos or tractions of any kind. 100 Barred Rocks, one and two years old, finest strains. No reserve, as the proprietor has leased the farm for a term of years.

Six months' credit, or 5% per annum off for cash.

Catalogues on application after May 1st.

Auctioneers: Capt. T. E. Robson; Col. P. A. McVicar.

A. D. McGugan, Rodney, Ontario.

Bruce's Big Four Root Specialties.

Bruce's Giant Feeding Sugar Beets.

The best in existence, introduced by us in 1900. Sales in 1907, 9,800 lbs. We offer two varieties—white and rose. Prices: $\frac{1}{2}$ lb., 10c; $\frac{1}{4}$ lb., 15c; 1-lb., 25c; 4-lbs., 90c. Add 5c. lb. postage to Canadian points and 16c. lb. to Newfoundland and the United States.

Bruce's Giant Yellow Intermediate Mangel.

The favorite variety with all cattle men; introduced by us in 1891. Sales in 1907, 16,785 lbs. Prices: $\frac{1}{2}$ lb., 10c; $\frac{1}{4}$ lb., 15c; 1-lb., 25c; 4-lbs., 90c. Add 5c. lb. postage to Canadian points, and 16c. lb. to Newfoundland and the United States.

Bruce's Mammoth Intermediate, Smooth White Carrot.

The favorite field Carrot, splendid for horse. Introduced by us in 1890. Price: $\frac{1}{2}$ lb., 15c; $\frac{1}{4}$ lb., 30c; 1-lb., 50c. Add 5c. lb. postage to Canadian points, and 16c. lb. to Newfoundland and the United States.



Bruce's New Century Swede Turnip.

The best all-round Swede Turnip in existence. Introduced by us 1901. Sales in 1907, 6,550 lbs. Price: $\frac{1}{2}$ lb., 10c; $\frac{1}{4}$ lb., 15c; 1-lb., 25c; 4-lbs., 90c. Add 5c. lb. postage to Canadian points, and 16c. lb. to Newfoundland and the United States.

FREE.—Our 100-page Catalogue of Seeds, Plants, Bulbs, Implements, etc. Send for it.

John A. Bruce & Co., Hamilton, Ont.
Seed Merchants. Established 1850.

POTASH

Is an indispensable ingredient of a complete fertilizer and has absolutely no substitute.

POTASH may be had from all leading fertilizer dealers in the highly-concentrated forms of

MURIATE OF POTASH and SULPHATE OF POTASH

Copies of our publications, including "Tabulated Results of Fertilizer Experiments," "The Potato Crop in Canada," "Fertilizers for Hay and Grain Crops," etc., will be mailed free to any address in Canada.

The Dominion Agricultural Offices of the Potash Syndicate
Rooms 1102-1105, Temple Building,
TORONTO, CANADA.

WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

GOSSIP.

Messrs. W. J. Shean & Son, Owen Sound, Ont., write: "We have recently sold to Mr. W. F. McDonald, of Mt. Forest, the grand young Shorthorn bull, Royal Member =68264=, sired by the well-known sire and show bull, Marquis of Zenda (imp.), full brother to the famous Marr Missie cow, Missie 153rd (imp.), purchased by W. C. Edwards & Co. at a cost of \$6,000 Royal Member is out of Deveron Side (imp.) =54028=, a member of the well-known Jealousy tribe, and sired by the famous Roxwell (82124). This young bull's breeding, coupled with his individual excellence, should go towards making up a grand sire of excellent stock, as well as developing into a good show bull."

In another column will be found the advertisement of Mr. H. M. Douglas, of Meaford, Ont., in which he is offering the services of the French Coach stallion, Gauthier 3383, bred at Sedgeby farm, Hinsdale, Ill., sired by the great show horse, Imp. Regent, only beaten once in all America, dam Gabrielle (imp.), winner of first wherever shown, at World's Fair (Chicago), at Madison Square Gardens (New York), at Trans-Mississippi (Omaha), etc.; he is also a grandson of the unbeaten champion, Imp. Perfection. Gauthier is a chestnut, rising seven, an ideal type of the upstanding, beautifully-moulded, carriage horse; his get having won repeatedly at Toronto over all comers in the carriage class. Last fall, at the Dominion Exhibition, at Sherbrooke, Que., he won the special gold medal for best stallion and four of his get. With his get last fall, the total winnings were, at Toronto, Sherbrooke and Ottawa, 10 firsts, 5 seconds, 5 thirds, 1 fourth, besides the gold medal, stamping him at once as probably the greatest living sire in Canada of high-class carriage horses. Mr. Douglas has also for service the big, drafty Clydesdale stallion, Cremorne (imp.) [7903] (12927), a black, rising four, sired by Boreland Pride, by Baron's Pride, dam Rival Belle [14295], by Lord of the Isles [7904], grandam by Paisley Jock [6175]; he is a big, tippy horse, full of Clydesdale character, on a grand, good bottom. He has also on hand an exceedingly sweet chestnut colt, rising three, a son of Gauthier, that last fall won first at Toronto, Sherbrooke and Ottawa; this young stallion is perfection in horse-flesh, with style and action galore. He is for sale. Look up the advertisement, and book your mares early, as Gauthier's book is filling rapidly.

SHEEP SCAB.

The disease known as scab is caused by a mite which pricks the skin of the sheep, causing a scab to form, under which the mite lives.

The animals become restless. They scratch and bite themselves, and rub against fences, etc. The fleece looks tufted, or matted, and portions of it are pulled out by the sheep with its mouth. If the hand is held to the sheep's nose while it is being scratched, the animal will commence nibbling. This is one sure symptom of the disease. The fleece falls out, usually beginning at the shoulders, and working backward and downward. Ewes may abort, or if lambs are carried to full time, they are likely to be weak and unthrifty.

The treatment recommended is to dip all animals and spray all buildings where affected sheep have been housed. Shear sheep, and put in dipping vat for at least two minutes. See that the animals are completely submerged at least once. A second dipping must follow at an interval of seven to ten days. Isolate animals from fields or lots where disease is suspected for at least two months, at the end of which time the mites should be dead. Any good stock dip, as advertised in "The Farmer's Advocate," should be effective. The lime-and-sulphur dip is also recommended. It is made by taking eight pounds of unslaked lime, put in a mortar box or tub, and slake with water so as to form a lime paste, add twenty-four pounds of flowers of sulphur, and stir well. Put this mixture in about twenty-five gallons of water, and boil for two hours, stirring constantly. When boiled, strain the mixture through sacks, and add enough water to bring the total amount of dip up to one hundred gallons. Use the dip at a temperature of 100 degrees to 111 degrees F.

GOSSIP.

Two registered French-Canadian stallions are advertised for sale by Owens Bros., Monte Bello, Quebec.



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.

AN improved farm for \$1,500 to close an estate, 100 acres, 60 under cultivation. Buildings alone worth the money. For particulars apply to Mr. O. M. Arnold, Barrister, Bracebridge, Ontario.

SITUATION wanted by Canadian young man (29) accustomed to handling and in potting horses, or would engage for general farm work. Apply G., Farmer's Advocate, London, Ont.

WANTED—Good draft horses, weighing upwards of thirty hundred per team. Give price and particulars to A. T. Fraser, Port Elmsley, Ont.

BOOKKEEPING BY MAIL.

Easily learned at home through excellent individual lesson method of **Law Correspondence School**, Toronto. Catalogue and testimonials mailed free on request. Write.

Saw Mills All sizes—most work with least power and last longest. All latest improvements. Send for free catalogue. **American Saw Mill Machinery Co.**, 113 Hope St., Hackettstown, N. J. 624 Engineering Bldg., New York City.

BEAL

Engraving and Electrotyping Company, Limited

MAKERS OF EVERYTHING
IN FINE PRINTING PLATES

LARGEST STOCK CUT
HOUSE IN CANADA

WHEN ISSUING YOUR
NEXT ROUTE OR SALE
CARD, ORDER YOUR
ENGRAVING FROM US.
193-195-KING ST.
LONDON, CANADA.
WE MAKE THE FACTS
SEE THIS ISSUE

TRADE TOPIC.

FOR "PRESSING NEEDS."—Attention is directed to the advertisement of the Hydraulic Press Manufacturing Co., of Mt. Gilead, Ohio, manufacturers of hydraulic presses and pumps for all purposes. The firm make a specialty of turning out a most efficient type of apparatus for such lines as the cider-making, whereby a great deal of waste fruit can be utilized. In a leaflet, issued by the firm, two methods of operating a cider press are described, viz., as a merchant mill and as a custom mill. It is estimated that from a bushel of apples a hydraulic press will produce 4½ gallons of cider, or 11 bushels would make a barrel (50 gallons); converted into vinegar at 14c. per gallon, wholesale, is worth \$7, at a cost of \$3.25, profit \$3.75; but sold retail, at, say, 40c. per gallon, as it is quoted in Canadian Groceries, shows a very large return. It is also pointed out that large profits are available by converting the cider into the form of jellies and syrups. Reckoned as custom work at 1c. to 3c. per gallon, the hydraulic mill is shown capable of good earnings. Particulars as to apparatus and prices may be obtained by writing the company at above address.

QUESTIONS AND ANSWERS.
Veterinary.

COLT TREMBLES.

Three-year-old colt that has been idle all winter, when working now trembles with the muscles of the right shoulder and breast. This colt is said to have been worked to a plow last fall.

1. Do you think it was hurt last fall?
2. Why does it tremble in only one shoulder?
3. Would it be better to allow it to go idle for one or two years more?
4. Will this hurt her for a brood mare?

W. L.

Ans.—1. Last fall's work has nothing to do with it. The trembling of the muscles is due to weakness or want of tone. If the colt had been given regular exercise or light work all winter, it would not now tremble; and if it is worked lightly for some time, the trembling will cease as the muscles acquire tone.

2. Probably the muscles on one side are not quite so strong as those of the other. It is not unusual to observe, under similar circumstances, colts tremble in either or both shoulders.

3. It certainly would be better for the colt, as a three-year-old is not strong enough for much work, unless very gradually and carefully fitted.

4. No.

V.

LITTER OF WEAK PIGS.

Sow, bred on Dec. 11, 1907, and fed during pregnancy on a little of everything, as table slops, potatoes, turnips, mixed ground oats and corn, etc., and the last six weeks on table slops, wheat bran and milk; she had run of yard during fine weather; at 119 days of gestation, she farrowed 16 pigs. Two were dead; only partly developed and partly decayed. The rest were alive, but very weak, and could not be induced to nurse. There was very little hair on them. All are dead but two. Give cause of the trouble and preventive treatment. Would it be wise to breed her again?

E. W.

Ans.—The immature and decayed condition of two of the litter, and the comparative absence of hair, and weak state of the others, indicate that an accident of some kind occurred that killed two and affected the others to such an extent that they did not develop. Your treatment of the sow during pregnancy was very good, except some raw roots should have been given during the full term, while you gave none the last six weeks. I can offer no suggestions to prevent a recurrence, other than careful attention and feeding during pregnancy. It is quite probable she will produce a strong and less numerous litter next time.

V.

ABORTION.

1. I bought two cows in October. They were said to be due to calve in February. One aborted a dead calf, about half grown, early in January. The other did not calve until March. Two more cows aborted. One that would have been due May 18th aborted a half-grown and badly-decayed calf the first week in March. Another, also due in May, aborted a very small and badly-decayed calf yesterday. This last fetus was not larger than a newly-born pig. During a thunder storm, in September, four animals of the bunch were killed by lightning, and the cow that aborted in March was evidently affected, as she became very thin and gave little milk for a time. The first cow that aborted was not here at the time.

2. Is it safe to breed these cows again, and when?

A. J. C.

Ans.—1. These were cases of accidental abortion. The fetuses were dead for some considerable time before delivery, as evidenced by the small size and decomposed condition. In infectious abortion this is never noticed. It is quite possible the lightning caused death of the fetuses in the cows that were present. This might be done by an electric shock or fright. What caused abortion in the other cow, of course, I cannot tell, but it was doubtless some accident.

2. I cannot see any reason why these cows should not be bred as soon as all uterine and vaginal discharge ceases.

V.

KNIVES CUT WHEN WHEELS START

No flying start needed with a No. 8 Frost & Wood Mower, because we build our mowers with the internal gear instead of the external variety. The large gear-wheel with inside teeth encircles the engaging pinion inside, they both travel from left to right, are always in mesh. They do not jar away from each other, neither wedge nor slip. This prevents rapid wear. Moreover, there is no lost motion.

This Mower is uniformly popular among farmers, because it is so convenient, of just the right weight, cuts such a clean, even swath, and is so readily manipulated. It is strong, rigid, durable; being made of highest quality of steel and malleable iron. The large sized Roller and Ball Bearings at all points of friction make it quiet and bring little neck-weight on horses. The pitman jaws are forged steel—the toughest material we can use. The Cutter-Bar can be raised fully two feet from the ground in passing obstructions, and folds back when passing through gates or going a long distance in road or laneway. No. 8 Mower is made in 4, 5, 6 and 7 foot widths. These are only a few of a score of good reasons why you should own a

FROST & WOOD MOWER

the machine for your work. Write now for "Farmers' Ready Reckoner" and catalog "F." We have a local agent near you, for our organization reaches every part of Canada. Consult him—he will answer any question; or write to us direct—we will give you any information you desire.

The Frost & Wood Co., (Limited)
Smith's Falls, Canada



Take Care of the Chicks

It is said there is a mortality of 50% among young chicks every spring. This means a tremendous loss. Think how great the poultry industry would be if even a fraction of these lost chicks were saved to become egg producers or fat market fowls. Care and proper feeding at the time of hatching and during the first days of the chick's life are absolutely essential to its well-being.

Begin as soon as the chick takes food regularly and give a little of Dr. Hess Poultry Pan-a-ce-a once a day in soft food. If you do this and chicks are kept dry and warm, your losses will be very slight.

DR. HESS Poultry PAN-A-CE-A

was formulated by Dr. Hess (M. D., D. V. S.) for the express purpose of meeting and overcoming the hundred and one ills that perplex the poultryman. While it is beneficial in many ways and also destroys germs, its greatest worth is as an assistant to the digestive organs. Its use makes the largest possible per cent of food available for healthy growth. Hence chicks mature early, hens lay many eggs, and market birds fat quickly. Endorsed by the most prominent poultry men in the United States and Canada. Costs but a penny a day for 30 hens.

Sold on a written Guarantee.
1 1/2 lbs. 35c. 5 lbs. 85c.
12 lbs. \$1.75. 25 lb. pail \$3.50.

Send two cents for Dr. Hess 48-page Poultry Book, free.

DR. HESS & CLARK,
Ashland, Ohio, U. S. A.
INSTANT LOUSE KILLER KILLS LICE.



DIFFICULTY IN MASTICATING

Cow has difficulty in grinding her food. Partially-masticated hay accumulates between teeth and cheek. I had her teeth dressed, but it did no good. Teeth look all right. She has become quite thin, and her feces are raw-looking, almost like diarrhea.

E. H. W.

Ans.—The trouble is paralysis of the muscles of the cheeks, and it is doubtful if she will recover. Clip the hair off the cheeks, and rub well, once daily, until well blistered, with 4 drams cantharides, mixed with 8 ounces alcohol. When blistered, rub, once daily, with vaseline until the scale comes off. Then blister again, and again, if necessary. Give her, internally, 2 drams nux vomica three times daily, and feed food that requires little mastication, as cut hay, pulped turnips, chop and bran.

V.

PARTIAL DISLOCATION OF PATELLA.

Colt, five weeks old, goes lame. There is a soft lump at the stifle joint, and a clicking or snapping can be heard when it moves.

R. J. W.

Ans.—The patella or stifle bone becomes partially dislocated, and the clicking mentioned is caused by the bone resuming its position. The soft lump you mention is usually a little below the point of the joint. This is a difficult condition to treat. Take 2 drams each of biniodide of mercury and iodide of potassium, put into an eight-ounce bottle and add four ounces each of alcohol and water. Rub the front and inside of the joint well with this once daily until it blisters. Then apply vaseline until smooth again. Then blister again, etc., etc. Keep this treatment up, and keep colt off rough or uneven ground.

V.

Miscellaneous.

CLYDESDALE REGISTRATION.

I have a four-year-old Clydesdale mare, in foal, due to foal in two weeks. She has very little bag; in fact, one can hardly notice any enlargement.

1. Is this unusual in a young mare? Is there anything I can do that would benefit?

2. How many straight crosses does it require before a Clydesdale mare can be registered, providing the second cross was a Canadian-bred horse?

G. P.

Ans.—1. We would not be uneasy about this condition. Young mares do not make nearly as much show of mammae as older ones, and she will probably develop considerably in that regard before foaling. It is good practice to rub the udder and grease it, but do not attempt to draw milk.

2. Four top crosses by registered Clydesdale stallions entitles to registry. If the Canadian-bred horse is registered, this cross will count for as much as if he were imported; but if he is not registered, or eligible, two more crosses will be required.

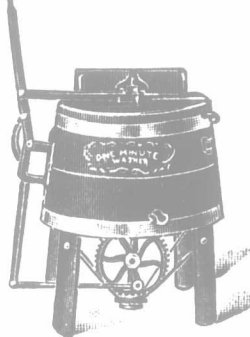
"One Minute" Washer

FOUR GREAT FEATURES:

1. Easy to operate.
2. Not hard on the clothes.
3. Constructed of the best materials.
4. Moderate in price.

For sale by one dealer in every town in Canada. Write us to-day for the name of dealer in your locality, and we will mail you free circular describing the merits of this machine.

122
White, Ehrhardt & Co., Logan Ave., Toronto, Can.



WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

See that Lock

It is the perfect fitting, patented side lock on

EASTLAKE METALLIC SHINGLES

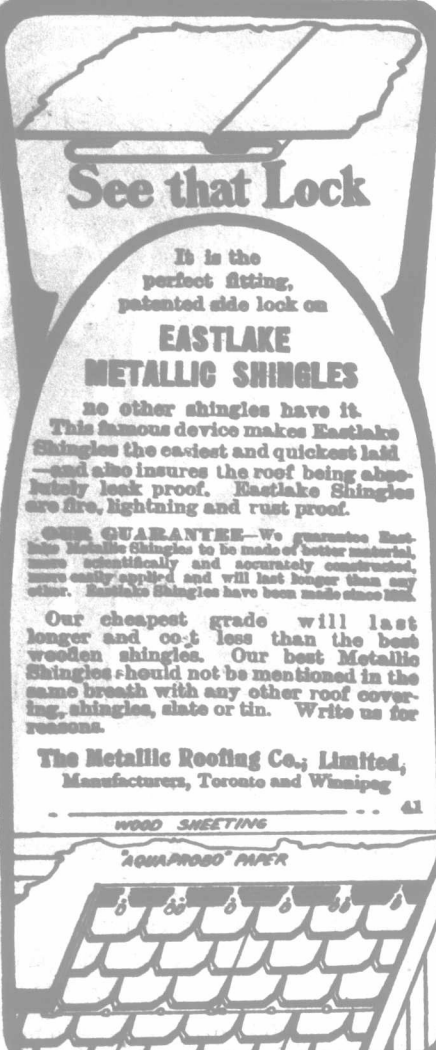
No other shingles have it. This famous device makes Eastlake Shingles the easiest and quickest laid—and also insures the roof being absolutely leak proof. Eastlake Shingles are fire, lightning and rust proof.

OUR GUARANTEE—We guarantee Eastlake Metallic Shingles to be made of better material, more substantially and accurately constructed, more easily applied and will last longer than any other. Eastlake Shingles have been made since 1882.

Our cheapest grade will last longer and cost less than the best wooden shingles. Our best Metallic Shingles should not be mentioned in the same breath with any other roof covering, shingles, slate or tin. Write us for reasons.

The Metallic Roofing Co., Limited,
Manufacturers, Toronto and Winnipeg

WOOD SHEETING
"ROMPROS" PAPER



Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with

Fleming's
Fistula and Poll Evil Cure

—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

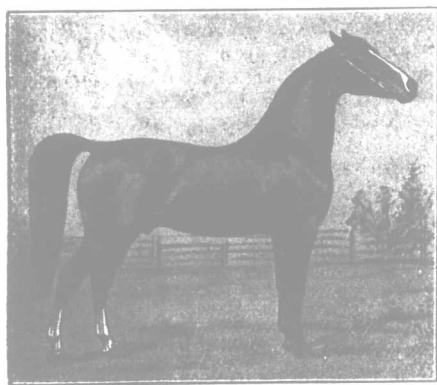
Fleming's Vest-Pocket
Veterinary Adviser

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated.

FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario



French Coach Stallion for Service!
GAUTHIER 3383.



Sire of more winners than any other Coach stallion in Canada. Sired by Regent, imp., only beaten once in America. Dam Gabrielle, imp., unbeaten in America. G. sire Imp. Perfection, five times champion of America. Will stand for service at Meaford, Thornbury, Heathcote, Walter's Falls, Chataworth, and Owen Sound. Home stand Meaford. Terms to insure, \$13. For particulars write:

M. M. Douglas, Meaford, Ont., Owner.
P.S.—The above illustration is taken from an actual photograph.

Send \$1—Receive 5 wool remnants suitable for Boys' Knee Pants up to 11 years. Give age, and we will cut out pants free. Add 25c. for postage.
N. Southcott & Co., 8 Cooke Block, London, Canada.

Strawberry Plants!

Twenty leading varieties.
Write for price list
Chas. S. Moore, East Stanbridge, Quebec.

GOSSIP.

SALE DATES CLAIMED.

May 13th.—John A. Govenlock, Forest, Ont., Herefords and Shorthorns.
May 20th.—A. D. McGugan, Rodney, Ont., Shorthorns.
June 4th.—John Dryden & Son, Brooklyn, Ont., Shorthorns.
June 23rd.—Richard Gibson, Delaware, Ont., dispersion sale of Shorthorns.

CRESCUS, 2.02½, GOES TO RUSSIA.

The world's champion trotting stallion, Crescus, 2.02½, has been sold by M. W. Savage, of Indianapolis, to Russian breeders, who will soon take him to St. Petersburg. The Russians have been trying to buy Crescus for some time, and, after much correspondence, finally decided to take him at Mr. Savage's price, \$25,000. As yet, Crescus has not established a great reputation as a sire, but it must be remembered that the fruits of his stud services most likely to be productive of good results are still little more than colts.

Veterinary surgeons, like other mortals, sometimes make mistakes, but it is not often they have to pay for them. One of the fraternity, however, recently had to make amends for what was held in the law courts to be his error. He was called in to attend a mare belonging to an English farmer, and whatever he did, or did not do, the result was that the patient died. The owner, however, sued the veterinary for incorrectly diagnosing the case and wrongly treating the mare, claiming £50 for the loss of the animal. This the judge allowed, though His Honor also sanctioned a counter-claim of £12 18s. 6d. for professional attendance, which closed an unusually interesting case.—[Farmer's Gazette.

Mr. J. A. Watt, Salem, Ont., writes: "I wish to report the following sales of Shorthorn cattle: To Messrs. Hagerty Bros., Goldstone, the choicely-bred roan bull, Expectation, by Springhurst; dam Imp. Donside Pride. Messrs. Short Bros., of Salem, selected Royal Senator; this young bull is a full brother to our show heifer, Roan Beauty. Messrs. R. Marshall & Son selected the beautiful roan yearling heifer, Mildred 4th, at a good figure. Mr. Brown, of Alma, a very wide-awake buyer, selected the five-months-old white bull, Fair Jilt; this is the only white calf Jilt Victor has left us; this youngster is royally well-bred, having for dam the noted breeding cow, Mildred 4th, the dam of Mildred 7th, that sold at one of the Platt sales in Chicago at \$1,350. I wish to thank my customers of last year for their continued patronage of this old herd, which has changed hands three times in the last four years; yet is considered, by capable judges, larger and better than ever, after having sold some fifty-odd head by private sale in the last twelve months."

TRADE TOPICS.

POTATO-DIGGER IMPROVEMENTS.
—The Hoover Manufacturing Co., of Avery, Ohio, whose advertisement appears in "The Farmer's Advocate," announce several very important improvements in their potato digger, in which potato-growers will be interested. The construction of the machine has been simplified, its draft reduced, and its general efficiency increased. Write the firm for their latest catalogue.

NOTED AUTHOR A WHEELMAN.—Charles Major, author of "When Knighthood was in Flower," and one of the bright particular stars in Indiana's galaxy of writers, is an enthusiast in the use of the bicycle, and makes it a point to do some riding every day, when the weather is not absolutely prohibitory. Mr. Major is a systematic worker, and is equally regular in his daily recreation. His bicycle rides are taken at the same hour every morning, and he usually goes in for road-work that will take him out in the country surrounding his home town of Shelbyville.

The Stock Exchange is the investor's safeguard

EVERYONE who has money to put out at interest can be served by the Stock Exchange in many important ways.

It keeps a list of excellent investments, both stocks and bonds, before the public in the daily press, so that all news about these securities is published and the investor is kept posted.

It gives daily quotations of values of all listed securities, so that the investor knows the exact value of his investment.

It affords a ready market for all these securities.

Every security is carefully scrutinized before it is listed.

Don't buy a security that is peddled about—you'll find they are hard to realize on.

Listed securities are cheap now—this is the time to buy.

We are members of the Toronto Stock Exchange, and have connections with all the leading exchanges. We would be glad to give you full information about many choice investments which are now offering.

John Stark & Co.

Stock Brokers and Investment Agents
26 Toronto Street Toronto

S U S U

The BEST Improved!

1908

IMPROVED

U.S. Cream Separator

It gives us much pleasure to receive daily the good words dairymen are saying, the country over, about the 1908 Improved U.S. Cream Separator. Why not—YOU—join this army of satisfied users.

Do get interested and send for general information catalogue No. 110 at once. A postal brings it to you. Address all letters to

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Canadian Shipments made from our Warehouses at Sherbrooke, Hamilton, Calgary and Winnipeg, but correspondence should be addressed to our Head Office, Bellows Falls, Vt.

S U S U



Fourteen Years Selling Direct

International Carriage Co.,
BRIGHTON, ONTARIO.

We are the only manufacturers of Vehicles and Harness in Canada selling direct to the consumer, and have been doing business in this way for 15 years. We have no agents, but ship anywhere for examination. You are out nothing if not satisfied. Our prices represent the cost of making, plus one profit. Our large free catalogue shows complete line and gives prices. Send for it to-day.

No. 10 Piano Box Buggy.
Price \$57.00.



CLYDESDALES AND FRENCH COACHERS, IMP.

Scottish and Canadian winners, stallions, mares and fillies. The Clydes represent the blood of such noted sires as Baron's Pride, Up-to-Time, Royal Favorite, Ethiopia and Acme. They combine size, quality and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephone.

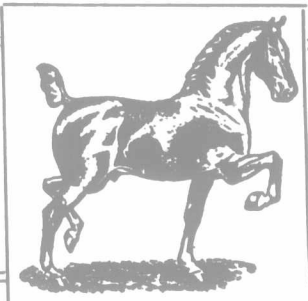
ROBT. NESS & SON,

HOWICK, QUEBEC.



**THE UNION STOCK-YARDS COMPANY, Ltd.
HORSE EXCHANGE**
KEELE ST., - - TORONTO JUNCTION

**Auction Sales of
Horses, Carriages and
Harness every
Monday and Wednesday.
Private Sales every
day.**



Come and see this new
Horse Exchange,
it will interest you, also
the Quarter-mile Track
for showing
and exercising

The Directors of the above Company have not spared anything in the building of this new Horse Exchange. The stables, which are built of cement and brick, will stall between 800 and 300 head of horses and are considered by judges, who have seen them, to be the most sanitary they have yet seen.

We have sold on an average of 100 horses per week since the opening of this great horse market, and now that the success of the horse business is assured, we are in a position to handle **Breeders' Stock Sales of all kinds, Cattle, Sheep, and Hogs.**

Breeders will find that advertising from a central place like Toronto will be advantageous in many ways, as this is unquestionably the most complete market of its kind in America for both buyer and seller.

We have our own railway chutes, which are the finest, and can load any number of cars at once on both G.T.R. and C.P.R. No charge for loading or unloading stock of any kind.

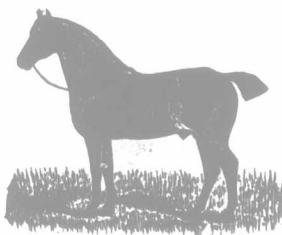
Correspondence solicited as to terms, etc.

HERBERT SMITH, Manager.
(Late Grand's Repository).

IMPORTED CLYDESDALES AND HACKNEYS



Stallions and mares, both breeds, representing the best blood of England and Scotland, combining size, quality and faultless action. Stallions are all guaranteed sure foal-getters, or replaced by one of equal value. All will be sold on the long-time payment plan. Stallions insured against risks of all kinds. If in need of something choice of the above breeds, write or wire for full particulars and catalogues.



DUGALD ROSS, Streetsville, Ontario

Largest Importation of Clydesdales, Hackneys and Percherons of the Year.



My latest importation has just arrived home. I have now on hand for sale: 20 Clydesdale stallions from 1 to 5 years of age; 25 Clydesdale fillies from 1 to 4 years of age; 15 Hackney stallions from 2 to 8 years of age; 19 Hackney fillies, all young; and 4 Percheron stallions 3 and 4 years of age. A total of 79 head, with size, quality and action, and bred in the purple. Largest selection in Canada. Will be sold right, and on terms to suit.

T. H. HASSARD, MILLBROOK, ONT.

CLYDESDALES



At Columbus, Ont., the home of the winners, this year's importation just arrived. The pick of Scotland's best. For size, style, conformation, quality and royal breeding, they eclipse any former importation we ever made. Look them up in our barn on Exhibition Grounds. Over 30 head to select from.

SMITH & RICHARDSON, COLUMBUS, ONTARIO.
Long distance phone.

**Graham - Renfrew Co.'s
CLYDESDALES and HACKNEYS.**



Our Clydes now on hand are all prizewinners. Their breeding is gilt-edged. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge street cars pass the door every hour. Phone North 4488.

GRAHAM-RENFREW CO., LTD., Bedford Park, Ont.

Shires, Shorthorns and Lincolns.

At present we are offering a very choice consignment of imported stallions, mares and fillies received from the great Shire stud of R. Moore & Sons, Beeston Fields, Nottingham, England. They are a grand lot, and will be sold at right prices.

In Shorthorns we have a number of choice young bulls, three of them show animals; also an excellent lot of females—all ages.

John Gardhouse & Sons, Highfield, Ont.
Toronto, 14 miles. Weston, 34 miles. Long-distance phone.

IMPORTED CLYDESDALES! 9 stallions, 1 to 6 years of age; 10 fillies, 1 to 3 years of age, several of them in foal; 1 two-year-old Hackney stallion; 1 two-year-old Shire stallion; 3 Percheron stallions, 3 years old. All are selected animals, bred in the purple. Will be sold cheap and on terms to suit. **T. D. ELLIOTT, BOLTON, ONT.** Phone.

IMP. CLYDESDALE STALLIONS AND FILLIES.—Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-rog and bred, come and see them. Will sell on terms to suit. **JOHN A. BOAG & SONS**, Queen's P. O., Ont., Newmarket Sta., G. T. R. Telegraph and telephone one-half mile from farm. Metropolitan Street By. from Toronto crosses the farm.

**QUESTIONS AND ANSWERS.
Veterinary.**

PREGNANT MARE SWELLS UNDER ABDOMEN.

Pregnant mare swells under the floor of her abdomen. Her mammae and hind legs also swell.

H. H.
Ans.—The legs and floor of the abdomen of all horses have a tendency to swell during idleness, and, in many cases, this tendency is intensified in pregnant mares, and, of course, there is a strong tendency to swelling of the mammae. No drugs should be given. Give laxative, easily-digested food, and give regular exercise or light work, and a box stall when in the stable. V.

RINGBONE OR BONE SPAVINS.

Colt, three years old, has a hard swelling on his foot, just where a bone spavin grows. It is growing larger and harder. Do you advise blistering?

M. M. G.
Ans.—I am at a loss to know what you mean, as, of course, spavins do not grow on the foot. A spavin is a disease of the hock, and a ringbone of the coronet (that part just above the hoof). From the character of the swelling, I am of the opinion that the trouble is either one or the other, and, if so, it is doubtful if treatment will do any good unless lameness appears. These growths are lameness appears. These growths are lameness appears. These growths are lameness appears. A cure of these cases is considered to have been effected when lameness ceases. If your colt goes lame, get your veterinarian to fire and blister. Even though there be no lameness, you might blister, as the counter irritation thus produced will have an effect in hastening the process and terminating growth of the enlargement. V.

FATAL INDIGESTION.

Cow became uneasy, and her bowels constipated. Next day she bloated and refused food. I gave her two quarts linseed oil, followed by 1 pound Epsom salts. This produced slight action. I then gave one and a half pounds Epsom salts, which caused purgation; but she got worse, and died on the sixth day. A post-mortem revealed the contents of stomach and bowels soft. In the third stomach, I found a crooked pin piercing the walls, and around the head was a red and sore patch, and at the same place there were about three dozen stones, the largest about 1/2 inch in diameter. What caused death? H. S. H.

Ans.—The cow died from indigestion, and if you are correct in saying that you found those foreign objects in the third stomach, the cause of the indigestion is apparent. Stones, nails, etc., are frequently found in the first stomach, and occasionally, in the fourth, in which case trouble is likely to result; but I have never found foreign objects in the third. The penetrating the walls of the stomach would help to cause trouble. V.

LICE ON STOCK.

Why are lice and ticks found in larger numbers on poor animals than on those in good condition? In summer, the lice disappear, but appear again next winter. Where do they board? J. D. M.

Ans.—The principal reason is the fact that vermin thrive better on an animal with a heavy, dry coat, and the coats of poor animals are usually heavier and less oily than those of fat animals. My experience has taught me that while this is the case, lice may be said to have no respect for condition or pedigree, and are quite willing to attack any animal in any condition. They succeed, if allowed to accumulate, in reducing the animal in condition. In the spring, when animals shed their coats, they shed large numbers of the lice, and practically all their eggs, and the coats of the animals remaining short and fine during the warm weather, the lice do not multiply much; but there are a few remaining to get to business as soon as the coat grows. They have no boarding places, except on animals. At the same time, it is possible their eggs may last through the summer in stables, and it is well to give a coat of hot lime wash, with five per cent. carbolic acid. V.

**HORSE OWNERS! USE
GOMBALZ'S
CAUSTIC BALSAM.**



A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

THE LAWRENCE-WILLIAMS CO., Toronto, Can.

**Dr. Page's English
Spavin Cure.**

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hocks, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle and to remove all unnatural enlargements.



This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin or money refunded, and will not kill the hair. Manufactured by Dr. Fredrick Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to all addresses upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO. Druggists.
171 King St. E., Toronto, Ont.

ACTION DEVELOPERS

For Producing and Improving Action in Horses.



Used by all successful exhibitors and dealers in England.

Illustrated pamphlets, testimonials and prices of product.

G. E. GIBSON, OAKHAM, ENGLAND.

**ARTIFICIAL
MARE IMPREGNATORS**

For getting in foal from 1 to 6 mares from one service of a stallion or jack, \$2.50 to \$3.00. Safely impregnating outfit, especially adapted for getting in foal so-called barren and irregular breeders, \$7.50. All goods prepared and guaranteed. Write for Stallion Goods Catalog. **CRITTENDEN & CO., Dept. 38, Cleveland, Ohio, U.S.A.**

**2 Aged Imported
Clydesdale Stallions**

For sale at \$100 each. Foal getters, or could work. Also a pair of Canadian-bred stallions, rising four years; registered; not large horses, but all quality. Price very reasonable.

O. SORBY, Guelph, Ont.

MR. A. I. HICKMAN,

Court Lodge, Egerton, Kent, England, exports pedigree live stock of every description to all parts of the world. Exported during 1907 more Shetland ponies, more Romney Marsh sheep, and more champion Oxford Down than any other breeder or exporter, besides large numbers of other breeds of horses, ponies, cattle, sheep and pigs. Correspondence invited. Highest references given.

CLYDESDALES

One 1,750-lb. 8-year-old mare in foal. One 5-year-old mare and one 3-year-old mare.

SHORTHORNS

Two right good yearling bulls left yet, and a lot of heifers cheap. Write, or come and see them.

JAMES McARTHUR, Gobles, Ontario.

FOR SALE: CLYDESDALE STALLION rising 3 years this spring. Grandson of Imp. Bold Boy. His sire full brother to a world-champion show horse at Chicago. A light chestnut. White face. Well feathered. Good mame and tail. Hands 16 hands. Good block and splendid action. Plenty of good fat bone. Was bred to 13 mares last season: 9 or 10 have proved in foal. The property of the late Henry K. Schmidt. Must be sold. For further particulars apply to **GEO. MOORE or J. H. ENGLE, Y. S., Waterloo, Ont.**

Clydesdales, Shorthorns and Cows.—For individuals of above breeds, write me. My new Cotswold and Clydesdale importation will arrive early in the season.

J. O. ROSS, Jarvis, Ont., P. O. and Sta.

Dr. Bell's Veterinary Medical Wonder

cures inflammation of lungs, bowels and kidneys. The 20th-century wonder. Agents wanted in every county. Write for terms.

DR. BELL, V. S., KINGSTON, ONT.

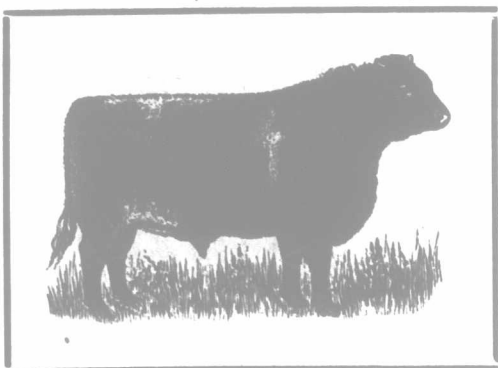
FOR SALE: Hackney Stallion, Wadsworth Squire (Imp.)—517—(1918) (705), sired by Barton Duke of Connaught. Dark chestnut, white star, two feet white; 6 years; 15-2; weighs 1,325 pounds. Good foal-getter. Write to Mrs. E. M. Reutledge, Georgeville, Que.

EXECUTOR'S SALE

OF HIGH-CLASS AND CANADIAN-BRED

Shorthorns

At the Sale Pavilion of the Union Stock Yards, Toronto Junction, Toronto, Ont.



Thursday, June 11th, '08

AT ONE P. M., WITHOUT RESERVE.

There will be sold the entire herd of 43 head of Imported and Canadian-bred Shorthorns, the estate of the late William Hendrie, Valley Farm, Hamilton, Ontario.

TERMS CASH.

Auctioneers: CAPT. T. E. ROBSON.

For further particulars and catalogues, apply to

T. M. POULTER, 52 King St. E., Hamilton, Can.



SHIRE.

Imported Shires!

From the famous breeding farms of

JOHN CHAMBERS & SONS, Holdenby, Northampton, England.

Sixty head have been sold by me in Ontario alone during the past year. The quality of the stock may be judged from the fact that while we have nothing forced for exhibition purposes these horses won in the show-rings at Toronto; The Western Fair, London; The St. Thomas Horse Show, and other places. A fresh consignment of mares and fillies in foal, and stallions ready for service, among them several handsome two-year-olds, will be ready for inspection and sale at my barns, St. Thomas, Ont., about April 10th. We show the goods, and sell at reasonable prices. Our terms are reasonable. Correspondence solicited. G. K. GEARY, St. Thomas, Ont., Agent for Canada and the United States.



IMPORTED CLYDESDALES Up to over a ton in weight, with the very richest of breeding and the best of quality. I think no better shipment of stallions ever left Scotland. I have also nine fillies, without doubt the best lot in Canada. All will be sold cheap and on terms to suit. Long-distance 'phone. GEO. G. STEWART, HOWICK, QUE.

2 IMPORTED CLYDESDALE FILLIES

Sired by Prince Alexander and Macgregor's champion, recorded in Clydesdale Stud-book of Canada. Terms and prices reasonable.

Robt. McEwen, Byron, Ont. London Ry. Station.



Imp. Clydesdales (Stallions and Fillies), Hackneys, Welsh Ponies.

I have now on hand Clydesdale stallions and fillies—Scotland prizewinners and champions; Hackney fillies and Hackney pony; also Welsh ponies. There are no better animals, nor no better bred ones, than I can show. Will be sold cheap and on favorable terms. A. AITCHISON, QUELPH, ONT., P. O. & STATION.

SIMCOE LODGE CLYDESDALES

Our stable of imported and Canadian-bred Clydesdale stallions and fillies was never so strong in show stuff as now, although we have had some very strong lots. Call and see what we have before buying elsewhere. HODGKINSON & TISDALE, BEAVERTON, ONT., G. T. & C. N. R. Long-distance 'phone.

OAK PARK STOCK FARM HACKNEYS!

Four imported and home-bred stallions for sale. Ten imported and home-bred mares for sale. Among these are prizewinners at Toronto, Chicago and New York. Prices reasonable. Visitors always welcome to inspect stock. JAS. J. BROWN, Manager BRANTFORD, CAN.



Clydesdales Imported and Canadian-bred. Imp. brood mares a specialty. Celebrated Clydesdale sire, Acme (Imp.), at head of stud. Will stand in his own stable for mares at \$20 this season. Long-distance 'phone. R. M. HOLBY, Station and P. O. Manches, Ont., G. T. R. Myrtle, Ont., C. P. R.



25 Imported Clydesdale Stallions and Fillies 25 Two Clyde stallions, 1 Hackney stallion, over 90 Clyde mares and fillies, from 1 to 5 years of age. Many high-class show animals among this lot. Many winners in Scotland among them. They have size, quality, style, action and breeding. Come and see them. GEO. A. BRODIE, Bethesda, Ont., P. O., Stouffville and Gormley Stations.

GOSSIP.

Mr. David Duncan, of Don, Ont., Duncan Station (C. N. R.), near Toronto, breeder of high-class Jersey cattle, makes a change in his advertisement in this issue in which a number of choice, richly-bred heifers and young bulls are offered for sale.

If you want to train your driver to step high and get up a bit of style, see the advertisement of G. E. Gibson, Oakham, England, and write him for his illustrated pamphlet, mentioning "The Farmer's Advocate."

By a typographical error in our last issue, the railway station of Messrs. E. Jeffs & Son, breeders of Shorthorn cattle and Berkshire swine, Bond Head P. O., Ont., was given as Buton. It should read Beeton Station, which is on the Hamilton-to-Barrie branch of the G. T. R.

The noted Scottish Clydesdale stallion, Everlasting, has been let by Messrs. Montgomery for the season of 1909. Mr. Marshall's noted breeding horse, Mercurio, goes to the Seaham Harbour stud for this season. Iron Duke, the choice-bred son of Everlasting, has been already re-let for 1909 to the Kirkcudbright Society, by whom he is hired for the present season.

TRADE TOPICS.

CHEAP EXCURSIONS TO THE WEST have been arranged by the land department of the Union Trust Company, Toronto, as shown in their advertisement in this issue. Excursions are arranged for each month from now until September, and intending purchasers of Western lands are invited to join these excursions. See the advertisement, and write for full information.

WILEY, THE MUCH-TRAVELLED RIDER.—Figured on a point system, which could give a belt to the bicycle rider who has ridden in the greatest number of cities in the country, it is probable that the prize would go to George Wiley, the messenger boy racer, of Syracuse, without a contest. According to Charley Sherwood, who was Wiley's team mate in Kansas City, the messenger boy is a walking or riding gazetteer of American cities and their local-track promoters, and he has them all rated from "fine" to "rotten." "You can scarcely mention a town of importance," said Sherwood, "and make a hazard as to the chances of the racing game there, without getting an authoritative statement from Wiley, succinctly describing what happened to him when he raced there back in!"

Wiley, according to his friends, ranks among the first road riders in the country, and yet is none too proud to take up his messenger work when he is spending some time in his home town. At that, Wiley is fairly well off, and owns a farm near Syracuse which would earn him a good living, if he chose to settle down.

A VALUABLE VETERINARY BOOK.—A little book, which our readers have seen mentioned frequently in advertisements and in live-stock discussions, called "Zenozeum Veterinary Adviser," holds much that is of interest to farmers and stockmen, whether owners of few or many animals. It is valuable because it gives methods of treating along lines of the commonest troubles that all classes of live stock are heir to. The book is carefully indexed, and was designed primarily to show the relation of the celebrated Zenozeum Animal Dip and Disinfectant to domestic husbandry economy. Zenozeum has come to be a very popular thing among owners of live stock. Its standing among high authorities appears from the fact that forty-two agricultural colleges in the United States and Canada unhesitatingly give it their recommendation. The Zenozeum Veterinary Adviser gives many descriptions of diseases and ailments, their causes and symptoms, etc., that could hardly be had in such compact and reliable form in any other book we can now call to mind. There are sixty-four pages, splendidly printed in large, readable type, and well bound in a serviceable cover. This book can be had free by any reader of this paper by writing to the Zenozeum Disinfectant Company, 112 Lafayette Avenue, Detroit, Mich., for it.

MILBURN'S LAXA-LIVER PILLS

are mild, sure and safe, and are a perfect regulator of the system.

They gently unlock the secretions, clear away all effete and waste matter from the system, and give tone and vitality to the whole intestinal tract, curing Constipation, Sick Headache, Biliousness, Dyspepsia, Coated Tongue, Foul Breath, Jaundice, Heartburn, and Water Brash. Mrs. R. S. Ogden, Woodstock, N.B., writes: "My husband and myself have used Milburn's Laxa-Liver Pills for a number of years. We think we cannot do without them. They are the only pills we ever take."

Price 25 cents or five bottles for \$1.00, at all dealers or direct on receipt of price. The T. Milburn Co., Limited, Toronto, Ont.

Free Veterinary Book

Be your own horse doctor. Book enables you to cure all the common ailments, curb, splint, spavin, lameness, etc. Prepared by the makers of

Tuttle's Elixir



The world's greatest horse remedy. \$100 reward for failure to cure above diseases where cure is possible. Write for the book. Postage 2c. TUTTLE'S ELIXIR CO., 66 Beverly St., Boston, Mass. M. Street: H. A. Tuttle, Mgr., 32 St. Gabriel St. Beware of all blisters; only temporary relief, if any.

Kendall's Spavin Cure

PORTAGE RIVER, N.B., March 5 '06.

"I am using your Spavin Cure and can say there is nothing to be compared with it." Gilbert Muzerall.



\$1 a bottle—6 for \$5. Our great book—"Treatise on the Horse"—free from dealers or 22 Dr. B. J. KENDALL CO., Essexburg Falls, Vermont, U.S.A.

THICK, SWOLLEN GLANDS

that make a horse Wheeze, have Thick Wind, or Choke-down, can be removed with

ABSORBINE

or any Bunch or Swelling caused by strain or inflammation. No blister, no hair gone, and horse kept at work. \$2.00 per bottle, delivered. Book 3c. free.

ABSORBINE, J.R., for mankind, \$1.00, delivered. Cures Gout, Tumors, Varicose Veins, Hydrocele, Varicocele. Book free. Made only by W.F. YOUNG, P.O.F., 73 Monmouth St., Springfield, Mass. Canadian Agents: LYLE & CO., Montreal.

RIVER VALLEY CLYDESDALES AND SHORTHORNS.

For Sale—Two stallions, one imp., the other imp. in dam; 9 imp. mares 3 and 4 yrs. of age—a grand pair, with size and quality; 1 fully foal imp. in dam. Shorthorns all ages, of both sexes; straight milking strain. A. V. Carefoot, Thornbury Sta., Reading P. O.

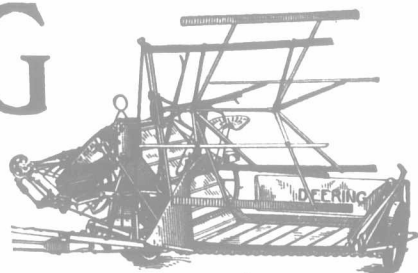
Shannonbank Clydesdales, Ayrshires, Yorkshires One stallion rising three years, by imported Hopewell. Two young bulls ten months, and some heifers from six months to two years. Yorkshires of both sexes. W. H. TRAN, Cedar Grove P.O., Locust Hill Sta., C.P.R.

FOR SALE—Canadian Stallions (registered). No. (342), a roan with black points; 15 hands high; weight, 1,400; 9 years old. No. (1789), brown, 15 hands high; weight, 1,250; 9 years old. Apply to

OWENS BROS. Monte Bello, Que.

YOUNG MEN WANTED—To learn the Veterinary Profession. Catalogue sent free. Address VETERINARY COLLEGE, Department Y, Grand Rapids, Mich.

DEERING MACHINES



MAKE SURE OF RESULTS

MONEY making farmers all belong to the class who are ready for each season's work when it comes. It is of greatest importance to be ready for the grain harvest. It is double waste to lose any part of the grain after the labor and expense of growing it.

The most important step is to purchase one of the old reliable Deering harvesting machines.

Then you can go into the field knowing that the work will go right along. There will be no breakdowns or delays.

You can do fast work and good work, and it does not matter about the condition of the grain. Whether it be long or short, thick or thin, even lodged and tangled, the Deering harvester will save it all.

If your grain is dead ripe or you have a large acreage to cut, you will want to crowd the work. The Deering harvester will enable you to do it. Machines are made in 5, 6, 7 and 8-foot cut. If you keep the working parts oiled, you can keep your machine going till you are through, and not be troubled with vexatious delays.

The famous Deering line includes, in addition to harvesters, binder twine, mowers, tedders, sweep rakes, side delivery rakes, hay loaders, stackers, corn machines and knife grinders. Also a complete line of tillage implements and seeding machines, comprising disk drills, shoe drills, hoe drills, cultivators and seeders, smoothing, spring-tooth and disk harrows, land rollers and scufflers. Also gasoline engines, cream separators, hay presses, wagons, sleighs and manure spreaders.

Call on the local Deering agent for catalog and all particulars or write to any of the following branch houses:

CANADIAN BRANCHES: Calgary, Hamilton, London, Montreal, Ottawa, Regina, St. John, Winnipeg
INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U.S.A.
(Incorporated)



IMPORTANT TO FARMERS

Your fences are your fortress against loss and damage. They must be strong enough to resist invasion from without, and to keep within bounds your flocks and herds. You can't afford to take chances on soft, slack, or brittle wire fences, which may fail just when most needed.

Peerless Woven Wire Fence

has the elastic springiness and resisting qualities that make an A 1 farm fence. Once up it lasts—no breaking—no falling down. There are reasons why. We can't tell them all in this ad, but if you will write to us we will send you some valuable fence facts.

The Banwell Hoxie Wire Fence Co. Ltd.
Dept. B, Hamilton, Ont.
Winnipeg, Manitoba.

ANIMAL DIP-DISINFECTANT-LICE KILLER-WORM POWDER
USED AT 44 AGRICULTURAL COLLEGES
IS FOR SALE AT ALL DEALERS EVERYWHERE

ZENOLEUM

SEND FOR FREE 64 PAGE VETERINARY BOOK

IF ZENOLEUM IS NOT SATISFACTORY, EITHER WE OR YOUR DEALER WILL REFUND YOUR MONEY
THE ZENNER DISINFECTANT CO., MAKERS, 112 WINDSOR, ONTARIO.

GOSSIP.

Mr. R. J. Doyle, Owen Sound, Ont., in ordering a change in his advertisement of Shorthorn cattle, writes: "The young bulls offered are exceptionally good ones, and should sell quickly at the prices asked."

Earl Beauchamp's grand Shire mare, Sussex Bluegown, that so nearly won the female championship in London last year, recently gave birth to a good colt foal, the sire of which is Present King II., that won the championship for Messrs. Forshaw & Sons, at the London Show in 1906.

The Lincoln Long-wool Sheep-breeders' Association of Great Britain will hold its annual auction sales of Lincoln rams in the City of Lincoln, on July 11th and September 4th, 1908, as advertised in this issue, when selections from a number of high-class flocks will be offered. The sheep will be on view the day previous to each sale.

BRAMPTON JERSEYS.

The far-famed Brampton Jersey herd, the property of Messrs. B. H. Bull & Son, Brampton, Ont., were never stronger, numerically or otherwise, than at present, with 150 head, twenty of which were imported directly from the Island by the firm, a great many others being daughters and granddaughters of these imported cows. No trouble or expense has ever been spared to make this the leading herd in Canada, and one of the leading herds in America; and that the firm have been successful in their efforts is proven by the fact that for years, at the leading Canadian exhibitions, they have persistently won the lion's share of the first prizes, the individual male and female championships, and the senior and junior herd championships. A great deal of this phenomenal success is due to the high-class character of the stock bulls always found at the head of the herd. Those in use at the present time are Fereor (imp.), that last fall won second at Toronto and first at Ottawa and Sherbrooke; Arthur's Golden Fox (imp.), which last fall won first at London and third at Toronto, and Brampton King (imp. in dam), a son of Imp. Crusoe's Belle, which was fourth at Toronto, and second at Ottawa and Sherbrooke; a trio of stock bulls, strictly high-class in character and individuality, and proven sires of showing winners. In young bulls for sale is a two-year-old, got by Brampton Nameless King, a son of Financial King (imp.), and out of Imp. Adoration. Here is a young bull, built on show lines all over. Another is a two-year-old, got by the great champion of champions, Blue Blood of Dentonia, and out of a daughter of the champion, Imp. Brampton Monarch. Then there are four yearlings, three of them sons of Blue Blood, and out of show cows. Among these young bulls are winners at Toronto and other leading shows, a high-class lot, richly bred, and most desirable herd-heads. Individual mention of the many high-class and imported cows of the herd, winners of first prizes and championships galore, is out of the question, as it would require more space than is at our disposal, but it will be interesting to readers acquainted with the herd to know that the grand old cow, Sunbeam, winner of the dairy test at Brantford over all breeds, in 1896, is still hale and hearty and breeding regularly, and several of her daughters and granddaughters now in the herd are capable of nearly or quite as great things as their illustrious dam and granddam. Imp. Fancy Maid has regularly given 46 lbs. of milk a day, and out of her for sale is a fourteen-month-old bull, sired by the great Blue Blood; this young bull will make a name for himself in the show-ring at the first opportunity. Very prominent among the large number of heifers is a yearling out of the dam of the four-times champion, Blue Blood, and sired by Arthur's Golden Fox (imp.). From present indications, this heifer is a sure winner, and certainly her breeding is royal indeed. In the herd for sale are females of any age, and in almost any number; a lot that for rich showing breeding cannot be excelled, and whose individuality leave little to be desired.

Stock-raisers Getting Better Results Than Ever Before.

If the stock-raisers that are making their stock food at home with Barnes' English Compound did not get the very best results, would they keep on buying it, would they send in for from one to six cans more and tell me that it is the best they have ever used?

I your friends find my formula right, why won't you keep away from the secret preparations and know that you are using the purest medicine in concentrated form? Make a stock food at home that will fatten and condition your stock as it has never been before.

Thoroughly mix one pound of Barnes' English Compound with six pounds of corn meal and three pounds of linseed meal.

I will send postpaid one-pound can of Barnes' English Compound for 50c, or 6 cans for \$2.50, with full directions.

S. G. AMSDEN, Box 668, Windsor, Ont.

THE SUNNYSIDE HEREFORDS



To reduce herd will sell:
10 cows at \$100 each
10 heifers at 50 each
10 bulls from \$50 to 100 each
Come and see them or address
M. H. O'NEIL,
Southgate, Ontario.

Hyde Park Herefords

Choice young heifers, and cows with calves at foot and bred again, for sale.

Thomas Skippon, Hyde Park, Ont.

ABERDEEN - ANGUS

For sale, 50 head to pick from, males or females by imported sire. Drumbo station.

WALTER HALL, Washington, Ontario.

Aberdeen - Angus Bulls!

Two nice young Aberdeen-Angus bulls for sale at a bargain; also females.

J. W. BURT, Erin station, O. P. R.

Shorthorns, Cotswolds, Berkshires

For sale: 3 bulls 18 months, 1 bull 12 months, and 4 from 7 to 9 months; and females all ages. In Cotswolds a few good ewe lambs. Nothing to offer in Berkshires.

CHAS. B. BONNYCASTLE, P. O. and Station, Campbellford, Ont.

Willow Bank Stock Farm

Herd Established 1855

The great Duthie-bred bull, Imported Joy of Morning - 33070 - and Scottish Banner - 61023 - at head of herd. Young cows bred to the above sires; also bulls and younger heifers for sale. Very choice.

James Douglas, Caledonia, Ont.

Do you want a SHORTHORN bull cheap?

12 months old. Weight 900 pounds. Dam, good milker. Also choice cows and heifers. Write: A. M. SHAVER, ANCASTER, ONTARIO.

Shorthorn Bulls—Ready for service. One will make a show bull. Also young things from Matchless, Crimson Flower, Miss Ramsden, Rosemary, Diamond and Lady Fanny dams, the set of Chancellor's Model. Prices to suit times. Come and see. ISRAEL GROFF, Elmira, Ont.

Elijah said on Mount Carmel: "Fill four barrels with water and pour it on the burnt sacrifice and on the wood."

Few of us have faith like this! We are not so sure of God that we dare to pile difficulties in His way. We all try our best to make it easy for Him to help us. Yet what Elijah had, we, too, may have, by prayer and fasting.—Rev. F. B. Meyer.

Black Watch

Chewing Tobacco

The big black plug.

2269

Don't Neglect a Cough or Cold

IT CAN HAVE BUT ONE RESULT. IT LEAVES THE THROAT or LUNGS, OR BOTH, AFFECTED.

DR. WOOD'S NORWAY PINE SYRUP IS THE MEDICINE YOU NEED.

It is without an equal as a remedy for Coughs, Colds, Bronchitis, Sore Throat, Pain in the Chest, Asthma, Whooping Cough, Quinsy and all affections of the Throat and Lungs.

A single dose of Dr. Wood's Norway Pine Syrup will stop the cough, soothe the throat, and if the cough or cold has become settled on the lungs, the healing properties of the Norway Pine Tree will proclaim its great virtue by promptly eradicating the bad effects, and a persistent use of the remedy cannot fail to bring about a complete cure.

Do not be humbugged into buying so-called Norway Pine Syrups, but be sure and insist on having Dr. Wood's. It is put up in a yellow wrapper, three pine trees the trade mark, and price 25 cts.

Mrs. Henry Seabrook, Hepworth, Ont., writes: "I have used Dr. Wood's Norway Pine Syrup in our family for the past three years and I consider it the best remedy known for the cure of colds. It has cured all my children and myself."



Am offering at the present time

3 Very Fine Imp. Young Bulls.

Good colors, and of the best breeding; also some extra good Canadian-bred bulls ready for service. Also cows and heifers imported and Canadian-bred. Prices reasonable.

H. J. DAVIS, Importer and Breeder, Woodstock, Ont.

SHORTHORNS AND LEICESTERS.

For sale: One extra good young bull, 11 months old, from imp sire and dam; also a few good young Leicester ewes in lamb. At easy prices for quick sale.

W. A. Douglas, Oshawa P. O.

Glen Gow Shorthorns



Our present offering is 9 bulls, from 6 to 14 months of age, sired by Imp. Ben Loman and Imp. Joy of Morning, and out of imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance phone.

Wm. Smith, Brooklin & Myrtle Sts., Columbus P. O.

J. Watt & Son SALEM ONT.,

Offer 12 or 15 high-class young cows and heifers in calf, or calves at foot, to (imp.) Pride of Scotland. Show stuff of different ages always on hand.

ELORA STA., G.T.R. and C.P.R.

Choice Shorthorns for Sale!



Some fine young stock, either sex, including some extra heifers from imp. dams, and all got by the Cruickshank (Duthie-bred) bull, Sittytion Victor, Imp. = 50093 = (87397). Also young Yorkshires, either sex. Address JOHN BRYDONE, Milverton, C.P.R. & G.T.R.

For 10 Shorthorn Bulls

from 10 to 12 months old, sired by Imp. Lord Roseberry, and most of them out of imp. cows. Prices right.

R. Mitchell & Sons, Burlington Jct. Sta., Nelson P. O., Ont.

GOSSIP.

The famous English Shire stallion, Dunsmore Jameson (17972), belonging to Sir Albert Muntz, died last month at the age of 10 years. He was sired by Moor's Zealot; dam Moor's Bonny, by Regent 2nd. In 1903 to 1906, inclusive, he was the champion sire of England, in the last year being particularly successful, with no less than 143 winners at the London Shire and other shows where Shire Horse Society's medals were given.

Mr. Wm. Thorn, Lynedoch, Ont., writes: "My herd of Ayrshires have come through the winter in good condition. I have for immediate sale five bulls, coming one year old, from \$30 to \$50 each, also one yearling bull imported direct from Scotland, from the noted Garclaugh herd of Andrew M. Bairds, price \$150; this bull is a beauty; will make a fine exhibition animal, as well as a grand stock bull, fashionable color, grand head and horns; is cheap at \$200. Females, from two years old up to four, in calf to my present imported stock bull, Holehouse Pilot, from \$65 to \$85 each, also yearling heifers. I also have some choice, large Toulouse geese at \$6 per pair, also Buff Orpington, Buff Cochin, and S.-C. Brown Leghorn cockerels, right good ones, at \$1.50 each, also eggs for hatching at \$1.50 per setting."

EXECUTOR'S SALE OF SHORT-HORNS.

In order to wind up the estate of the late Mr. William Hendrie, of Hamilton, Ontario, the executors announce in our advertising columns that, on June 11th, at the Union Stock-yards, Toronto Junction, they will sell at auction the entire herd of 43 imported and Canadian-bred Shorthorns. The herd is made up largely of richly-bred cattle, purchased from the noted herds of Messrs. W. D. Flatt, the late Senator Cochrane, and W. C. Edwards & Co., Rockland, and comprises representatives of many of the most desirable of Scotch-bred families, as well as of several of the good old dual-purpose strains, notable for their good milking qualities. A considerable number of the younger animals are the get of Imp. Magstrand, of the Bruce Marigold tribe, and of Strathallan Hillhurst, by Imp. Scottish Beau. The roan two-year-old bull, Scottish Fashion, bred by W. C. Edwards & Co., and sired by Imp. Prince of Fashion, is included in the sale, besides half a dozen nicely-bred young bulls of serviceable age. See the advertisement, and send for catalogue.

Anent the subject of giving more attention to the dairy proclivities of the Shorthorn, the following review by John Thornton & Sons, English live-stock auctioneers, is pertinent:

"One of the principal features of the Shorthorn trade of the year has been the revival in the demand for the old Bates strains of blood, which commenced about two years ago. The few adherents of these lines who have kept their herds virtually pure, with a judicious blend of fresh blood, have reaped the reward of their patience, and realized high prices, both privately and at public auction. A less number have been taken to the Argentine than in 1906, but the best specimens have been in as great request as ever, and at as high figures. The competition from home breeders at sales has been very good. Not only have a number of new herds been founded, but old breeders have drafted animals of inferior breeding, and replaced them with those of more fashionable blood and longer pedigrees. Indeed, many grand animals of short pedigree have been sold at far less than their intrinsic value; this has given farmers and breeders with a small capital the opportunity of obtaining splendid breeding animals at little over market prices. During the year there has been a decided advance in the price of heavy-milking Shorthorns. The encouragement given by the Shorthorn Society and Dairy Shorthorn Association, in the form of special classes at the leading shows for pure-bred dairy Shorthorns, shows signs of bearing good fruit. These classes have generally been well filled, and it may be safely said that the quality of animals exhibited has been better than in former years."

Whether you have any intention of buying a cream separator or not

You Positively Cannot Afford To Be Without Our Free Dairy Book.

You need it, because it tells you how to get more butter fat from the milk than you get now—that means a fatter pocketbook for you.

In fact, our Free Dairy Book gives many money-making pointers new to you, besides proving just why the Frictionless Empire Cream Separator is the easiest-running, closest-skimming, safest separator in the whole wide world.

The outlay of a one cent stamp will bring information worth many dollars. Write now.

The Empire Cream Separator

Company of Canada, Limited, Western Office: WINNIPEG. Toronto, Ont.



5 IMPORTED Shorthorn Bulls 10 HOME-BRED

Herd headed by the grand champion, Prime Favorite, imp. You cannot afford to buy without seeing these bulls. We will appreciate a visit. Females of all ages and most popular lines of breeding. Bell telephone on each farm. Burlington Jct. Sta., G. T. R. W. G. Pettit & Sons, Freeman, Ont.

SHORTHORN BULLS For Sale.

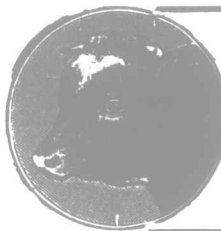
At the dispersion of the "Thistle Ha" herd in Jan., 1905, I purchased a few of the best breeding cows. From these cows I now have 6 extra good young bulls for sale. For pedigrees and other particulars apply to

JOHN MILLER, Brougham, Ont. Claremont Sta., C. P. R.

The Salem Stock Farm

SHORTHORNS A SPECIALTY. WRITE FOR ANY INFORMATION.

J. A. Watt, Elora, Ont. G. T. R. AND C. P. R.



We are offering a very superior lot of SHORTHORN

Home-bred Bulls

of the best breeding and quality at attractive prices for the buyer. To see them is all that is necessary. Try to do so if you are in the market. It will pay you.

JNO. CLANCY, Manager. H. CARGILL & SON, Cargill, Ont.

TWO IMPORTED BULLS

Direct from Aberdeenshire, Scotland, of excellent quality, color and breeding, two from imp sire and dam, and others sired by Joy of Morning (Imp.) = 3070. Prices in Shorthorns and Yorkshires will interest intending purchasers. GEO. D. FLEICHER, Binkham P.O., Ont. Erin Sta., C. P. R.

SHORTHORN BULL OFFERED

Dark roan; real good head and horns; excellent back and quarters; capital legs, properly set; and attractive appearance. Year old April 2nd. He is a Strathallan, by Golden Count = 4787, and we think is good enough to fit for showing in junior yearling class at Toronto, and head any good herd. J. & D. J. CAMPBELL, Fairview Farm, Woodville, Ont.

LIVINGSTON'S OIL CAKE MEAL.

OLD PROCESS

Nothing is better for fattening steers quickly and putting them on the market in prime condition than Oil Cake Meal. Thousands of Canadian and English stockmen use Livingston's, and would have no other. It is equally good for milk cows. They give more and better milk when fed Livingston's Oil Cake Meal. Also used for horses, sheep and hogs. Write for information regarding prices, etc., etc., to

DOMINION LINSEED OIL CO., LIMITED Montreal, Que. Baden, Ont.

SPRING VALLEY SHORTHORNS

We still have three choice young bulls that will be sold very reasonable, as we do not care to run them over; also a choice lot of cows and heifers, bred to the champion, Clipper Chief, imp. KYLE BROS., AYR, ONTARIO.

R. H. REID,

Glover Lea Stock Farm, PINE RIVER, ONT.,

BREEDER OF SHORTHORN CATTLE Golden Cross (imp.) at head of herd.

Shorthorns For Sale

FOR SALE: 4 Shorthorn Bulls fit for service. Dairy type. Some of them from imp. cows, and all got by Broadhook Prince (imp.) 55002. Prices the lowest. Also cows or heifers. 60 head to select from. DAVID MILNE, ETHEL, ONT.

High-class Shorthorns Royal Chief, a son of Mildred's Royal, at head of herd. We are offering a few choice heifers of show-ring form. Pure Scotch. Terms reasonable. A. DUNCAN & SONS, Carleton Place, Ont.

One red, 18 months' old bull, sire Golden Abel (imp.) and from a Lavinia dam. One roan, 17 months' old bull, sire Butterfly King (imp.), and from an imported Nonpareil dam. Also several younger bulls of good breeding. The above are strictly first-class, and will be priced right. R. J. DOYLE, Owen Sound, Ont.

GOSSIP

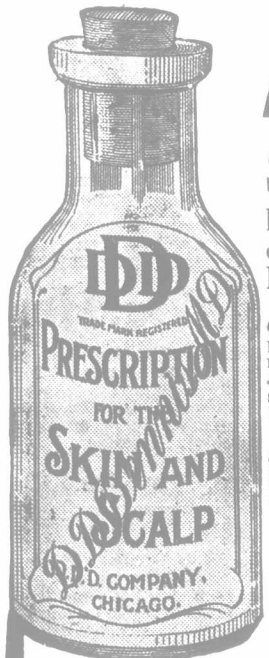
At the dispersion sale, last month, of the old-established Craigsdale herd of English Shorthorns, belonging to Lord Armstrong, founded in the early seventies by the purchase of the Bates-bred cows, Wild Duchess of Geneva 1st, 2nd and 3rd, from Mr. Cheney, of Gaddesby Hall, Leicester, at a cost of 335 to 355 guineas; the average price for the entire herd figured at \$280, and had the calves been sold with their dam, the average would have been nearly \$360. One cow sold for 255 guineas (\$1,300), another for 250 guineas, and two others for £100 each. Two bulls sold for 140 to 150 guineas, respectively.

Writing of the care of the mare at foaling, a correspondent of an English exchange says:

"Those that earn their living during the time they are in foal invariably do best at foaling time. The racing mare, which has been in training up to within four months of foaling, and kept in a hard sort of muscular condition, will always foal easily, and the working farm mare, on just the same rations as the other horses, will work up to the very day of her time and give no trouble. Some have been taken in labor when actually pulling a plow, and unharnessed at once, have had it all over in ten minutes, with the foal running round her. This sort of thing wants care, however, and a mare should be timed with certainly three or four days' grace, or, better still, turned out in a field for a fortnight beforehand. Unless the weather is very boisterous, they do quite as well when foaling in the open fields, and the less they are interfered with at such times, the better. In some countries, the mare is shut into a box when it is known that she is going to foal, and not looked at for twelve hours. That may be taking an unnecessary risk, as the foal should be looked to. The plan of watching, but not to assist a mare unless she wants it, is doubtless the correct view. Then, after giving a little gruel, she is better left, as the mare will be excited on such occasions, and is better to cool down by herself. This is following nature, as the pony mare will steal off to some hollow, or behind some furze bushes, have her offspring, and stay there until the next day. All mares will be somewhat shy and nervous for a few days, and they should at that time be humored; the blood mare in her luxurious box, the farm mare in some quiet little paddock."

WINNING HACKNEY SIRES.

The Live-stock Journal publishes a tabulated list of winnings by sons of notable sires at the London Hackney Show of 1908. That great little horse, Polonius, heads the list with the grand total of forty honors won with thirty-nine entries. He has forced his way to the top by his rarely failing ability to produce animals of all heights, with a beautiful class of action and a penchant for going in harness, this latter qualification being one which breeders are annually coming to recognize as being more and more essential. Next come Rosador and Garton Duke of Connaught, two horses which have been in the first three in the list for many years past; and after them, that great sire of true Hackney type, Royal Danegelt, which, it is only fair to state, would, in all probability, have taken a higher position had not his greatest son, Hopwood Viceroy, been so unfortunately prevented from competing for honors, owing to a slight accident in his box the week before. Royal Danegelt's day will assuredly not be long in coming. Another of the Obelia family comes fifth in Mathias, whose progeny, especially in the harness classes, were a treat to behold, their action, style, and beautiful hard colors being quite remarkable. It is noteworthy that the get of Mathias stand highest in championship honors in various classes, there being to his credit four championships; while Rosador, with two, stands second in this column. Then follows that prince of pony sires, Sir Horace, and after him, His Majesty, who is verily hard to beat as a sire of action and quality, and whose son, Flash Cadet, was quite one of the sensations of the show.



ECZEMA! The Cure AT LAST

Skin Sufferers, Read This: The great remedy from the States that has cured thousands of cases of eczema and other forms of skin disease is now offered to Canadian sufferers. Read the offer of a FREE TRIAL BOTTLE.

This wonderful remedy is the famous *Oil of Wintergreen Compound, D.D.D. PRESCRIPTION*. It is an external, pure, mild compound that has received the highest endorsement of medical science—takes away the terrible burning itch as if by magic. Just apply a few drops to the afflicted skin and the itch is gone—the skin is cooled and refreshed, gradually the eruption disappears, the skin is made clean, soft and white—the disease is cured.

INSTANT RELIEF! Just think what it means, after days of untold agony and nights of torments, to have the burning itch suddenly stopped. I wish you could see the hundreds of letters we receive from people who try to tell us how thankful they are—people who have suffered for days, months and years, and then get instant relief. No need to dose the stomach with drugs—the itch is in the skin and you must cure it there. D.D.D. Prescription is a mild, soothing compound containing oil of wintergreen. It is applied direct to the itching skin, gets at the seat of the trouble and kills the disease germ. Stop the itch at once—cure the disease. Hundreds of others have done it, and so can you. **Send Today for a Trial Bottle Free!**

Trial Bottle Free

D.D.D. COMPANY,
29 Wellington St., Dept. A4 Toronto, Ont.
Without obligations on me, please send me free bottle of D.D.D. and free pamphlet on skin disease. I enclose 10c for postage, and have never used D.D.D. Prescription.

Name.....
Address.....
Name of Druggist.....

Let us prove to you that this great remedy will give instant relief, and effect a complete cure.

SIGN THE COUPON

and mail to us today, enclosing only 10c to help pay postage and packing, and we will send you this trial bottle of D.D.D. and a valuable pamphlet on treatment, diet, bathing, exercise, etc., for eczema and other skin trouble. Sign and send coupon **RIGHT NOW.**

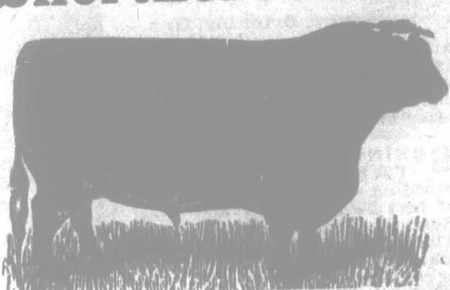
D.D.D. Company
Dept. A4
29 Wellington St., Toronto, Ont.

RECENT CURES BY D.D.D. IN CANADA

Mrs. Sarah E. Hollingsworth, Picton, Ont., writes: "Every other remedy I had tried would help for a while, but D.D.D. cured completely. It also cured a friend of mine who suffered untold agony before using it, and whom no doctor could help."
Mrs. Henry Harvey, Black Lake, P. Q., Canada, says: "I had been a sufferer from facial eczema for about ten years. I was treated unavailingly by several doctors and remembered that two years ago I saw D.D.D. advertised. I at once decided to give it a trial and sent for a sample bottle, which I had not had since. D.D.D. has been a god-send to me as well as many others."
Mrs. William Fox, Chancery Lane, Brockville, Ont., Can., says: "Gladly I give you consent to use any letter I may have sent in praise of your wonderful D.D.D. Prescription. My little daughter's head still remains clear of the horrid scaly disease. Her father and I both notice how much brighter she is and her light hair is simply beautiful, so thick and glossy, after six years of suffering. It seems wonderful that less than four bottles of D.D.D. should have cured her after so much money spent on the X-Ray treatment, failed."
J. Gillespie, 578 Beverly St., Winnipeg, Can., says: "I have found in my case D.D.D. does all that is claimed for it."
Mrs. Wm. Nelson, King St., Picton, Ont., Can., writes: "I have used the D.D.D. Prescription and I feel safe in recommending it to all skin sufferers as a fine medicine. I suffered so much from eczema before I knew of D.D.D. that I feel more than grateful for what it has done for me."
Sign the coupon and let us send you the free sample bottle—then you will know why others are so grateful.

CONSIGNMENTS SOLICITED. WRITE FOR PRICES.
AGENTS WANTED TO BUY, GOOD COMMISSION.
CALFSKINS
E. T. CARTER & CO., FURS & HIDES
TORONTO, ONT.

Shorthorn Bulls



I have for sale four as good young bulls as I ever offered to my customers at my best times. For type, quality and breeding these are up to the standard of first class. Write me for particulars, or come and see.

ARTHUR JOHNSTON,
Greenwood, Ont.
Claremont Stn., C.P.R.; Pickering, G.T.R.

SCOTCH SHORTHORNS **SHORTHORNS AND LINCOLN SHEEP.**
My herd is represented by such noted Scotch families as Victoria, Orange Blossom, Duchess of Gloster Strathallan, Stamford and Lovely. Mostly from imported sire and dams. Write me for prices on what you want.
J. F. MITCHELL,
Burlington Jct. Sta. Burlington, Ont., P.O. & Telegraph.

Shorthorns!
BELMAR PARC.
John Douglas, Manager. Peter White, Pembroke, Ont.
Calves for sale by our grand quartette of breeding and show bulls:
Nonpareil Archer, Imp. Proud Girl, Imp. Marigold Sailer. Nonpareil Eclipse.
Females. Imported and from imported stock in calf to these bulls.
An unsurpassed lot of yearling heifers

Pleasant Valley Shorthorns
Herd headed by Imp. Ben. Lomond = 45160—(80468) and consisting of females of the leading Scotch families. High-class young stock a specialty. Correspondence solicited. Inspection invited.
GEO. AMOS & SON, Moffatt, Ont., Stn. & P.O.
Farm is 11 miles east of Guelph on C.P.R., half mile from station.

Queenston Heights Shorthorns
Young bulls from imported and home-bred Scotch cows, and got by such noted bulls as Derby (Imp.), Spicy Broad-horns (Imp.) and Whitehall Ramaden. Priced for quick sale.
HUDSON USHER, Queenston, Ont.
Farm three miles north of Niagara Falls.

Maple Lodge Stock Farm 1908
Four handsome young Shorthorn bulls for sale. Heifers also.
A. W. SMITH, MAPLE LODGE, ONTARIO.
Lucan Crossing Station, G.T.R.

T. DOUGLAS & SONS, Strathroy, Ont.
SHORTHORNS & CLYDESDALES.
FOR SALE: Several choice young bulls out of the milk-producing dams, females all ages; 85 head to select from. Four imported Clydesdale fillies, all in foal; the imp. stallion, Royal Viscount. A visit to the farm will pay intending purchasers.

NOTED IMP BULL, DERBY, FOR SALE.
Having several of Derby's heifers now ready to breed, we have decided to sell him. He is as active as ever, and has kept his conformation well. His breeding and ability need no comment. **W. J. SHEAN & SON, Box 856, Owen Sound, Ont.**

A. EDWARD MEYER,
Box 378, Guelph, Ont.,

Offers for sale two young Scotch-bred bulls of good colors, both from imported sire: one from imported dam and the other from a Clementina cow; one is 11 months old, the other 8 months. They will be sold well worth the money. Write, or come and see them. Long-distance phone.

SCOTCH SHORTHORNS!
We now offer four heifer calves 10 and 11 months old. All reds. Bred from imp. sire and dams. Will be sold right. **C. RANKIN & SONS, Wyebridge P.O., Ont., Wyevale Sta.**

MAPLE GROVE SHORTHORNS
Scotch and dairy bred; up to date in type; prize-winners at the local shows. A number of 1 and 2 year old heifers, 1 year old bull, and one 5 months old—the last will make a show bull. Fairs bred—will be sold easy. **L. E. POWELL, Wallenstein, Ont., P.O. and Stn., C.P.R.**

Valley Home Shorthorns AND BERKSHIRES.
Our herd numbers sixty-five head. We are prepared to give bargains to suit all who wish to buy from one animal up to a carload of females, and 19 bulls from 9 to 18 months old. Also 26 Berkshires of prolific strains.
S. J. PEARSON, SON & CO., Meadowdale, Ont.
Stations: Meadowdale, C.P.R.; Brampton, G.T.R.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Orb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser

describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario

You Want More Milk! Molassine Meal

given to cows increases the quantity, and makes it richer in butter-fat. Keeps all stock healthy, and brings cattle to perfection quickly. Pamphlets and prices from

ANDREW WATSON, 91 Youville Sq., Montreal.

Blair's Pills

Great English Remedy for Gout & Rheumatism

Safe, Sure, Effective.
All Druggists, 40c and \$1.00
LVER, 50c and 60c.
MONTREAL.



Holsteins & Yorkshires

R. Honey, Brickley, Ont.

All surplus stock in Holsteins sold except this crop of calves. Ready to book orders for them. Best bacon type Yorkshires, one to six months, both sexes, at moderate prices.

SPRING BROOK HOLSTEINS AND TAWORTH S.—Holsteins of richest breeding and highest production. Two worths of best British blood and ideal bacon type. Herd headed by prizewinning Imp. Knowle King David Stock of all ages and both sexes for sale. Young sows bred to imp. boar. Write, or come and see: **A. C. HALLMAN, Breslau, Waterloo Co., Ont.**

FAIRVIEW HOLSTEINS! For sale: Just now we have about a dozen cows and heifers, some of them in the E. of M., and all with official backing on both sides, in calf to the Toronto 3-times champion. Also a number of bull calves with official backing. **THOS HARTLEY, DOWNSVIEW, ONT.** Weston and Downsview stations.

Maple Hill Holstein-Friesians

Bull calves from No. 1 dams, sired by bulls with great official backing. Write for prices.

G. W. Clemons, St. George, Ont.

Queen City Holsteins

Big smooth cows. The sort that fill big pails the year through. They are officially tested in both seven-day and twelve-month tests. Farm seven miles north of Toronto, near Metropolitan Electric Ry. Long-distance telephone. **R. F. HICKS, Newton Brook P. O., Ont.**

The Maples Holstein Herd!

Headed by Lord Wayne Mechthilde Calamity, also in the Record of Merit. Nothing for sale but choice bull calves.

WALBURN RIVERS, FOLDEN'S, ONT.

HILTON STOCK FARM—Holsteins, Cotswolds and Tamworths—Present offering: Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig. **E. O. MORROW & SON, Hilton, Ont.** Brighton Tel. and Stn.

HOLSTEINS Two choice bulls, 10 months. Also calves for April and May delivery, sired by imported Ykema Sir Posch and Johanna Bue Sarcastic. O. I. C. swine. Largest strain bred in Canada. All ag s. Express prepaid. **H. D. GEORGE, Putnam, Ont.**

MAPLE LINE HOLSTEINS—For immediate sale, at give-away prices, is 1 yearling bull and several bull calves from 3 weeks to 2 1/2 months of age, got by my high official-backed stock bull and out of producing cows of a high order. **W. A. Bryant, Gairdorm, Ont.** Strathroy station.

Homestead Holsteins Bull calves for sale 2 months old, out of cows with large A. B. O. records, and sired by Count Meccens Posch, whose dam and sire's dam average 25 1/2 pounds butter in seven days. **G. & F. Griffin, Box 43, Burgessville, Ont.**

SECURE ONE OF OUR PREMIUMS.

GOSSIP.

At an auction sale, on April 9th, of 36 Hackneys and Hackney ponies, from the stud of Sir Gilbert Greenall, at Warrington, England, an average price of £60 (\$300) was realized. The highest price was 450 guineas (\$2,360), given by Mr. P. Smith, Manchester, for the three-year-old filly, Terrington Madcap, by Mathias. Several others brought 100 to 150 guineas each.

AYRSHIRES AT CUMNOCK.

At the annual show, last month, of the district, held at Old Cumnock, Scotland, in the class for aged cows there were only two competitors, Mr. John Murray being first, and the Marquis of Bute, second. There were thirteen competitors in the Derby for three-year-old cows, in which class the winner, in addition to the ordinary prize money, gets the Dumfries Estate Challenge Cup for one year. All over, this was a superior class. First and second prizes fell to Mr. Andrew Mackie, Hall; third to Miss Annie Murray; fourth to Mr. Jacob Murray, Carston. The first cow, Dewdrop, is home-bred, and is got by Bold Baldy, a bull bred by Mr. Andrew Kay, Sauchrie, Maybole. The second, Dinah, which for a time looked like getting the winning ticket, is by the same bull, and out of a cow that was champion at New Cumnock as a quey in 1901. The third and fourth were daughters of previous Derby winners at Cumnock. Sixth prize went to Mr. James Clark, Common; seventh to Mr. Mackie, and eighth and ninth to Mr. James Pearson, Dixon. The first three here won in the in-milk class, and the next four were first, second, third, and fourth in the in-calf class. For aged cows in calf, Mr. John Murray, Muir, led with the champion of last year, a cow got by Wee Earl. She was also champion of the breed, and reserve female champion last year at Kilmarnock. She again took the championship of the section. She was followed in her class by a cow, also sired by Wee Earl, and of Carston breeding, belonging to the Marquis of Bute; while Messrs. Sloan, Castle-mains, were third. The male championship was awarded to the winner in the older class of bulls, Baron's Best, owned by Messrs. D. & H. Wilson, Auchencloch. He was bred at Bargenoch, and is by the noted Durward Lely, with dam, a milk-record cow, by Baron Wallace. In his own class he was followed by bulls from Messrs. Wardrop, Roundshaw, and Robb, Palmerston, who were second and third, respectively. In a nice class of bull stirks, the winner was found in a home-bred, belonging to Mr. John Murdoch, Crofthead. He is sired by Croft-head Oyama's Heir, a bull bred by Mr. Wilson, Finlayston, while his dam was a daughter of Ochiltree Mill Surprise, which was first at Glasgow, and second at the Highland in 1902. Messrs. Sloan were second, and Mr. James Robb, Henston, third, for yearling bulls. The remaining classes were good, there being a fine turnout of yield queys. Back-calving cow—1, J. Pearson; 2, R. Wardrop, Bankend. Two-year-old quey—1 and 2, J. Kennedy, Glenshamrock; 3 and 4, P. Wardrop, Garlaff. Quey stirk—1, P. Wardrop; 2 and 3, W. Wardrop, Rigg. The special prizes for best five females, best two females, and best group, were awarded to Mr. John Murray, Muir.—[Scottish Farmer.]

TRADE TOPIC.

COLLINS' GREAT RECORD ABROAD.—In celebrating the prowess of a young Lynn, Mass., citizen, the Evening Item, of that city, says: "By winning the international paced hour race over English, German and French champions, and breaking all records from five to fifty miles in Paris at the first of this month, Elmer L. Collins, a Lynn boy, known in Europe as 'Le Petit American,' becomes the world's champion pace follower. On foreign soil he has met and defeated Hugh MacLean, Bobbie Walthour, the great American champions, and all Europeans whom he has ridden against. His title, the world's champion, is now disputed only by the great French rider, Darragon, with whom he is expected to ride this coming summer.

HOLSTEINS

We must sell at least 25 cows and heifers at once in order to make room for the increase of our large herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way: arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls. 100 head to select from. Imported Pontine Marves, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. **M. E. GEORGE, Crampton, Ont.** Putnam station, near Ingersoll.



To Head Your Herd

Why not buy Koradyke Lily De Kol. Born January, 1904. Sire Koradyke Queen's Butter Boy. Dam Miss Lily. This is a handsome young bull, and has proved himself a getter of good stock. Write for particulars. We also have a few cows and calves for sale.

E. & F. Mallory, Frankford, Ont.

MAPLE GLEN HOLSTEINS

Herd of 35 head with A. B. O. breeding, backed up by butter tests of over 15 lbs as a two-year old to over 25 lbs as a cow. A good herd to select from. Two spring bull calves on hand A. B. O. test of one is over 95 lbs. for dam and 4 dam. Come and inspect the herd. Any animal will be offered for sale.

G. A. GILROY, GLEN BUELL, ONT.

Centre and Hillview Holsteins!

125 head to select from. \$5 in the R. O. M. Stock bulls Boucheur Statesman, high official backing, and is closely related to Colantha 4th's Johanna; Brookbank Butter Boy. All nearest dams over 20 lbs. From these sires, out of R. O. M. dams, are several young bulls and a few heifers. Prices right. **F. D. EDE, Oxford Centre, Ont.** Woodstock Station.



LYNDALE HOLSTEINS!

Bull calves for sale out of cows with records of from 18 to 20 lbs., also 3 heifers coming 2, and a number of young cows in Record of Merit, bred to a grandson of Pieterje Hengerveld's Count De Kol.

BROWN BROS., LYN, ONTARIO



Only Bull Calves

FOR SALE. HOLSTEIN and AYRSHIRE. Of the best performing strains. **GEO. RICE, Annandale Stock Farm, Tillsonburg, Ont.**

Hillview Herd of Prizewinning AYRSHIRE CATTLE.

All animals bred and carefully selected for use, constitution, long teats and deep-milking qualities. Select animals of both sexes for sale at reasonable prices. For further information and prices write

A. KENNEDY & SON, Hillview Stock Farm, Vermon, Ont. Winchester Station, C. P. R.

Cattle and Sheep Labels

Size	Price, doz.	50 tags
Cattle	75c.	\$2.00
Light Cattle	60c.	\$1.50
Sheep or Hog	40c.	\$1.00

Cattle size with owner's name and address, and numbers; sheep or hog size with name and numbers. Sample and circular mailed free. Get your neighbors to order with you and get lower price. **F. G. JAMES, Bowmanville, Ont.**



Stoneycroft Ayrshires

Choice young bulls and heifers of the very best breeding, combining show and dairy quality. Large Improved Yorkshire Pigs from imported sires and dams, now ready to ship.

STONEYCROFT STOCK FARM, Ste. Anne de Bellevue, Que.

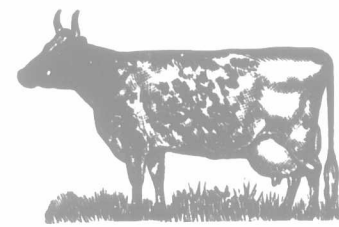
SPRINGBURN STOCK FARM.—Ayrshire Cattle, Oxford Down Sheep, Berkshire Pigs. Young stock for sale. Buff Orpington poultry, eggs \$1 per 15, \$4 per hundred; orders now being booked. **H. J. WHITTEKER & SONS, Williamsburg P. O.**

Ayrshires Bull 4 years old, two yearling bulls, bull calves from \$12 up. Everything in this herd is bred right up to date.

JAMES BEGG, Box 88, St. Thomas.

Evergreen Stock Farm For sale: Choice Holstein bull calves from 4 to 5 months old. A. B. O. backing on both sides; also a few females. Write for prices and terms. **F. C. PETTIT, Burgessville, Ont.**

AYRSHIRES Young bulls from producing dams and same sire, from 7 months up to 2 years. Rare good ones and will speak for themselves. **H. D. HICKS, Hickory Hill Stock Farm, Clappison, Ont.** Dundas Station and Telegraph.



Ayrshires AND Yorkshires

Special offering: Young calves from dams that have qualified for Record of Merit, and others that have made good records. Any ages desired; either imp. or home-bred. If you want an imported bull or heifer write J. Retson, Fenwick, Scotland. Orders taken for young pigs or young sows in farrow. Long-distance phone.

Alex. Hume & Co., Menie, Ont.



The Golden Lad Bull.

Golden Fox of Dentonia. First prize yearling and junior champion at Toronto, 1907, Exhibition. His calves coming from my pure St Lambert cows proves this cross a wonderful success. Correspondence invited.

T. PORTER, Weston Road, Toronto Junction.

Brampton Jerseys!

Select your stock bull or family cow from Canada's most famous and largest Jersey herd.

B. H. BULL & SON, BRAMPTON, CANADA.

Ayrshire Cattle for Quick Sale Choice bulls, heifers and cows, imported or Canadian-bred, for immediate sale. Prices very low considering quality. Good tests. Heavy milkers. For particulars write: **William Thorn, Trout Run Stock Farm Lyndoch, Ont., Norfolk Co.**

Ayrshires from a Prizewinning Herd Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON, Campbellford Stn., Menie P. O., Ont.**

D. M. Watt, St. Louis Station, Quebec, breeder of **HIGH-CLASS AYRSHIRES** Canadian and Scotch-bred. All of deep milking qualities.

DON JERSEYS

We are now offering a number of heifers of all ages, out of producing show stock and by champion sires, and in calf to Pontaine's Boyle. Also several yearling bulls out of high-record cows, and by same sires as the heifers. The best lot of young things we ever had for sale. **D. DUNCAN, DON, ONT.** Duncan Station, C. N. R.

Jerseys 2 Extra Choice Young Bulls For Sale, 8 and 9 months old, grandsons of the great Financial King, out of large, heavy-milking dams. Inquiries solicited. **ARTHUR H. TUFTS, Box 111, Tweed, Ont.**



ALL-STEEL HOG TROUGHS MEAN HEALTHY HOGS.

Hogs chew wooden troughs. Sour, rotten splinters set up stomach troubles that kill the swine. Our Patent All-Steel Troughs prevent this. Made of 14-gauge cold rolled steel imported from Scotland. Guaranteed against frost and decay, and "won't wear out." Write for prices.

The Steel Trough & Machine Co., Limited, Tweed, Ont.

Hampshire Down Sheep

Splendid Mutton, Good Wool, Great Weight.

This highly valuable ENGLISH BREED OF SHEEP is unrivalled in its rapid and WONDERFULLY EARLY MATURITY, hardiness of constitution, adapted to all climates, and in quality of MUTTON AND LARGE PROPORTION OF LEAN MEAT IS UNSURPASSED.

Full information of SECRETARY, Hampshire Down Sheep Breeders' Association SALISBURY, ENGLAND.

SCOTLAND.

DISPERSION SALES OF THE BARRELLWELL FAMED FLOCK OF BORDER LEICESTER SHEEP AND HERD OF PEDIGREE SHORTHORN CATTLE.

MACDONALD, FRASER & CO., LTD., favored with instructions from the representatives of the late David Hume, Esq., J. F., will submit to auction at Barrellwell, near Brechin, Scotland:

On WEDNESDAY, 2nd SEPTEMBER, next, the whole of the very valuable and world-renowned flock of Border Leicester sheep, numbering 446 head, and including 90 superb shearing rams, 100 ram lambs, 6 renowned stud rams, 150 two, three and four year old stud or stock ewes, 100 shearing or maiden ewes. Many of these sheep are prizewinners at National and other shows, and many of the shearing rams are suitable for the show-ring, and the whole comprise one of the grandest and best lots of Border Leicester sheep ever offered to public auction.

On SATURDAY, 10th OCTOBER, next, dispersion sale of the renowned herd of pedigree Shorthorn cattle, numbering 80 head of bulls, cows, heifers, and bull & 3 heifer calves. Catalogues on application. Commissions executed.

MACDONALD, FRASER & CO., LTD., PERTH, SCOTLAND.

SOUTHDOWN SHEEP

Unequaled for fine quality of both mutton and wool, hardiness of constitution, and earliness of maturity.

STRIDE & SON will sell by auction at Chichester, Sussex, England, on

AUGUST 19th, 1908, 6,000 Southdown ewes, 500 Southdown rams and ram lambs.

ON SEPTEMBER 16th, 1908, 4,000 Southdown ewes, 300 Southdown rams and ram lambs.

Commissions carefully executed. Telegrams: STRIDE, Chichester, England.

POSTAL ADDRESS: STRIDE & SON, Chichester, Sussex, Eng.

In every line of duty we rob God if we are content with less than the best we can do.—J. R. Miller, D. D.

DODD'S KIDNEY PILLS
CURES ALL KIDNEY DISEASES
RHEUMATISM
BRIGHT'S DISEASE
DIABETES
BACKACHE
Cures all kidney diseases, rheumatism, Bright's disease, diabetes, backache. Sold only in packages of 10 pills.

QUESTIONS AND ANSWERS. Miscellaneous.

CLYDESDALE REGISTRATION.

How many crosses are needed to register a Clydesdale filly or stallion colt, or have they to trace to imported stock on both sire's and dam's sides? J. L.

Ans.—Four for a filly, and five for a stallion colt. It is not required that they trace to imported stock. If the sires are registered, the produce is eligible.

PROBABLY CHOLERA.

As I am a constant reader of "The Farmer's Advocate" and enjoy it very much, I thought I would write and ask you if you knew what is wrong with my hens. At first, they are very healthy, and the first thing I notice they become lame; in fact, they lose the use of their legs completely; then they take diarrhea, and, during the time they are sick (about four or five days), eat nothing. We have lost several, and our neighbors have lost quite a number with the same complaint. I don't keep them confined; they have a free range, and I feed wheat, barley and a mash made of boiled potatoes and shorts. A CONSTANT READER.

Ans.—It is quite probable that this is a kind of fowl cholera, and that if prompt means are not taken, the whole flock will go. Take all birds affected—kill and burn. Clean out, and thoroughly disinfect the henhouse and all furniture previously used. Repeat the disinfection after three or four days. The disinfectant may be a spraying with Zenoleum, creolin, or a ten-per-cent. solution of carbolic acid and water. Mix any one of these with hot water. While the disinfecting operations are going on, it will, of course, be necessary to confine the birds in another house. Give them, in their drinking water (to every gallon) one teaspoonful of sulpho-carbolic acid of zinc, and keep all other drink away from them. Let them have this for several days, and repeat the dose in a week's time. It will be to your benefit to see that neighbors, having similar trouble, treat their houses and fowls the same way. A number of years ago, flocks in Goderich and Colborne Townships (Huron Co.) were similarly affected, and this treatment saved the flocks. F. C. E.

WALL IN CISTERN—TILE FOUNDATION—FURNACE REGISTERS.

We intend putting in a cistern this summer.

1. Would you advise building a single-brick partition across one corner and let the water percolate through this wall to the pump in the corner to remove all sediment? Would this method tend to harden the water?

2. Is it better to put tile drain outside or inside cellar wall, for house on a good elevation?

3. What system is best for heating house floor, registers or flues in the wall?

Ans.—1. I see no necessity for a partition across the corner of the cistern. The pipe from the pump will not go quite to the bottom of the cistern, hence no sediment will go up the pipe, and no floating material, should there be any, can enter the pipe either, for it will be on the surface, which will always be above the entrance to the pipe. The brick would have no appreciable effect in hardening the water.
2. Outside. It is just as effective, and much more convenient to get at in case of repairs being needed.
3. So far as efficiency is concerned, there can be no appreciable difference, provided the same sizes of pipe and register are used in the two methods. Personally, I prefer the wall register, because of its appearance, and, also, because it does not interfere with carpets, linoleums, etc., on the floor. Some like the floor register, claiming it is better for "warming at," but I have not observed any marked difference on this point. What is of vastly more importance than the question of floor or wall registers in installing a furnace is that there should be plenty of cold-air outlet from the rooms to the furnace. The hot air cannot ascend unless an equal volume of cold air descends. I have seen different furnaces that were inefficient, simply because the cold-air flues were too small. WM. H. DAY.
O. A. C., Guelph

Sheep Breeders' Associations.

American Shropshire Registry Association, the largest live-stock organization in the world. Ricard Gibson, President, Delaware, Canada. Address correspondence to MORTIMER LEV-ERING, Secretary, Lafayette Indiana.

SHROPSHIRE SHEARLING EWES for sale, bred to high-class imported Butlar ram. GEO. HINDMARSH, AILSA CRAIG, ONTARIO.

Lincoln Long-wool Sheep Breeders' Association.
LINCOLN RAM SALES, 1908.

The 23rd and 24th sales of Lincoln Long-wool Rams, by members of this Association, will be held in Lincoln on the 11th July and 4th September next. Rams on view the day previous to each sale.

William Frankish, Secretary, St. Benedict's Square, LINCOLN.

I CAN FURNISH JUST NOW A LARGE NUMBER OF EXTRA GOOD Shropshire & Cotswold Rams

A large number of extra good Shropshire and Cotswold ewes, twelve months old. And a few very high-class Shorthorn bulls and heifers. Any of which will be sold at moderate prices. ROBERT MILLER, STOUFFVILLE, ONT.

EAST BANK HERDS

Large English Yorkshire and Berkshire Swine, Shorthorn Cattle, Barred Rock Poultry.

Am offering bargains in choice suckers at very moderate prices, bred from choice prize-winning stock. Can book orders for immediate delivery in any of the above, also for succeeding months. Barred Rock eggs 75c. for 15, and \$3 per hundred. Try me for a bargain in choice stock. Satisfaction guaranteed. Phone connection.

IRA L. HOWLETT, Keldon, O.-t.

English Berkshires. January pigs ready to ship. Orders booked for March pigs. Boars ready for use. Two-year-old Shorthorn bull and several choice calves. JOHN RACEY, Lennoxville, Que.

Yorkshires and Tamworths Either sex. Any age. Sows bred and ready to breed. Yorkshires from imp. stock. Tamworths from Toronto winners. Pairs not akin. Chas. Currie, Morrison, Ont. Schawstation, C. P. B.

Duroc-Jerseys Boars fit for service. Sows ready to breed. Several sows in pig, also younger ones. Imported Canadian Boy 1907 heads our herd. MAC CAMPBELL & SONS, Harwich, Ont.

LARGE ENGLISH YORKSHIRES.

Pigs of the most approved type of both sexes, all ages, for sale at all times. We have more imported animals in our herd than all other breeders in Canada combined. We won more first prizes at the large shows this year than all other breeders combined. We won every first but one and all silver medals and Bacon prizes at Toronto and London and at St. Louis we furnished all the first prize hogs in the breeding classes except two; also supplied both champions and grand champions. Prices reasonable. D. G. FLATT & SON, Millgrove, Ont.

Maple Grove Yorkshires. Animals of choicest breeding and individual excellence, both imported and Canadian-bred. Young sows due to farrow in April and May. Boars fit for service. A fine lot of boars and sows from 3 to 5 months old. Pigs of both sexes and any age. Everything guaranteed as represented. Price reasonable. H. S. McDIARMID, FINGAL, ONT., SHEDDEN STATION.

YORKSHIRES

Of the Choicest Type of Breeding! Our herd stands second to none in Canada to-day. We invite inspection. Any stock shipped can be returned at our expense if not satisfactory on receipt. Prices not the lowest, but for value received we guarantee them as good as the best. Good stock on hand now. J. W. BOYLE, P. O. Box 563, Woodstock, Ont.

PINE GROVE BERKSHIRES!

Bred from imp. and Canadian-bred sires and dams, which are of choicest breeding. Stock, all ages, for sale. Some Imp in dam. Guaranteed as represented. W. W. BROWNIDGE, Milton, C. P. B. Ashgrove P. O. Georgetown, G. T. B.

SUNNYMOUNT BERKSHIRES!

Boars fit for service, sows safely in pig, young sows 4 months old, young sows and boars 8 months old, imported in dam. JOHN McLEOD, Milton, Ont., P. O. and Sta., C. P. R. & G. T. R.

MONKLAND YORKSHIRES

are the easily fed, quick maturing kind. The sort the farmers want. All ages for sale. 100 sows bred now. JAMES WILSON & SONS, FERGUS, ONTARIO.

Newcastle Tamworths and Shorthorns

For Sale: 100 pigs, both sexes, all ages. Sows from 10 months to 2 years, bred to Imp. Cholesterol Golden Secret, all descendants of Col-will's Choice and Newcastle Warrior, both Toronto champions. Also two choice Shorthorn bulls, ready for service, from choice milkings dams, and sired by a son of Imp. Joy of Morning. A. A. COLWILL, NEWCASTLE, ONT.

Glenburn Herd of Yorkshires

Winner of gold medal three years in succession. 6 young boars from 6 to 9 months; also 75 young sows, from 6 to 12 weeks old. David Barr, Jr., Box 3, Renfrew, Ont.

Elmhurst Berkshires

Our large brood sows are all imported. Stall Pitts Middy, Imp (1895), winner of first at Oxford, 1907, heads the herd. All stock shipped by us as represented or money refunded. Express prepaid. Large stock to choose from. Write us. H. M. VANDERLIP, Importer and Breeder, CAINSVILLE, Ont., BRANT CO.

Meadowbrook Yorkshires.

Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dalmatian Topman. Everything guaranteed as represented. J. H. SNELL, Wagersville, Ont., P. O. & Station.

LARGE ENGLISH YORKSHIRES.

We have a limited number of choice young pigs for sale, bred from our choicest sows and got by the imported boars, Dalmatian Joe 1357 and Broomhouse Beau 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses, and sweetestakes over all breeds or grades. We guarantee satisfaction in all mail orders. JOSEPH FEATHERSTON & SON, STRENTVILLE, ONT.

Willowdale Berkshires

are unsurpassed for quality and breeding. Young stock, all ages, for sale reasonable. Satisfaction guaranteed. Long-distance telephone in residence. J. J. WILSON, Importer and Breeder, Milton, Ont., P. O. & Sta., G. T. R. and C. P. R.

Large English Berkshires

for sale from imported stock. Sows with pig and pigs for sale. All ages. At reasonable prices. Guarantee satisfaction. Boars and sows delivered at Woodstock station, C. P. R. or G. T. R. JOSHUA LAWRENCE, OXFORD CENTER, ONT.



ZAM-BUK SAVED THIS MAN'S FINGER!

Mr. William C. Edwards, Peter Street, Toronto (late steward Elks' Club), sustained a severe cut on the middle finger of the left hand. Blood poisoning ensued and the finger caused him excruciating agony. He says: "My hand was so swollen and painful that I had to carry it in a sling for some months. I was under the care of a well-known doctor in Toronto for several weeks. The wound got no better, and one day he said my finger would have to be taken off. The pain from the wound was terrible and was extending right up the arm. I consulted another medical man and was treated by him for some weeks longer. He then suggested that the finger be opened and the bone scraped. At this stage a friend advised me to try some Zam-Buk which I did. I bathed the wound and applied Zam-Buk as directed. Next morning the wound began to bleed. It was a healthy sign so I continued with the treatment, and in a few weeks time I was able to discard the bandage. A little more perseverance and Zam-Buk cured the wound completely."

Zam-Buk Cures cuts, burns, chafes, itch, eczema, running sores, ringworm, piles, bad legs, poisoned wounds and all skin diseases. All druggists and stores, 50c., or postpaid from Zam-Buk Co., Toronto.



QUESTIONS AND ANSWERS. Miscellaneous.

PULSE AND TEMPERATURE.

1. What are the duties of a clerk in a lumber camp, and what qualifications are necessary?
2. What are a cook's mate's duties in a lumber camp?
3. What is the name and address of the principal of the Toronto Veterinary College?
4. Where can a cow's pulse be gotten?
5. What is normal pulse and temperature for a cow and horse?
6. Do you advise clipping cows' udders? Does it not leave them too exposed?

Ans.—1 and 2. These questions are scarcely within the province of an agricultural journal. Write to some lumber firm.

3. The President of the Ontario Veterinary College is Dr. Andrew Smith, V. S., F. R. C. V. S., Ontario Veterinary College, Toronto.

4. On the cheek bone of the upper jaw.
5. There is considerable variation in the pulse beats, owing to varying conditions, but 34 to the minute is about an average. The normal temperature for a cow may be stated as 100; and for a horse, 99.

6. We do not advise clipping the udders for the reason you mention; but clipping the flanks is good practice.

LINE FENCING AND DITCHING.

In regard to a line fence between two farmers. One has the ditch, which is four feet wide, on his land, and I have the rail fence on my land. If it stands there ten years or more, and I want to replace the fence with wire, can I put the wire fence close to the line, or will I have to put the wire in the middle of the old rail fence? Or, would it be a better plan for each farmer to take half of the ditch, and have a jog in the middle? The ditch is a cut-off for me; an outlet for my neighbor. Does the law compel each man to take his own dirt out of the ditch?

Ontario.

Ans.—The matters in question ought to be arranged by agreement between the two parties interested. If they cannot agree, it will be necessary to call in both the fenceviewers of the locality (under the Line Fences Act), and the municipal engineer (under the Ditches and Watercourses Act). We would not venture to predict what would be the legal outcome, excepting that there would certainly be considerable expense incurred by both parties, and very likely ill-feeling as well. Get together, and settle in your own way, and thereby avoid costs and unpleasantness.

FAILURE TO CONCEIVE.

What is the best thing to do in the case of a mare or cow failing to conceive after being several times served?

A. C. S.

Ans.—The yeast treatment, which has been frequently published in these columns, has, we believe, proved effectual in many cases. Mix an ordinary two-cent cake of yeast to a paste with a little warm water, and allow it to stand for twelve hours in a moderately-warm place; then stir in one pint of freshly-boiled, lukewarm water, and allow it to stand from eight to twelve hours. The mixture will then be ready for use, and the entire quantity should be injected into the vagina of the animal to be bred half an hour before service. Another preparation recommended by an English veterinarian, said to have proven effective, is the following: An ounce of bicarbonate of potash, dissolved in a quart or more of warm water, has to be syringed into the passage about half an hour before service. The water must not boil, or it changes the salt from bicarbonate (which is the most innocent of alkaline substances) to carbonate (salt of tartar), which has a more or less caustic influence. This is just one of those little matters where carelessness defeats the object, and may even do injury. The same remedy, and in the same proportion, is applicable to mares, cows and sows.

INTERNATIONAL STOCK FOOD COSTS ONLY



This Beautiful Picture in 6 Brilliant Colors Mailed to You FREE

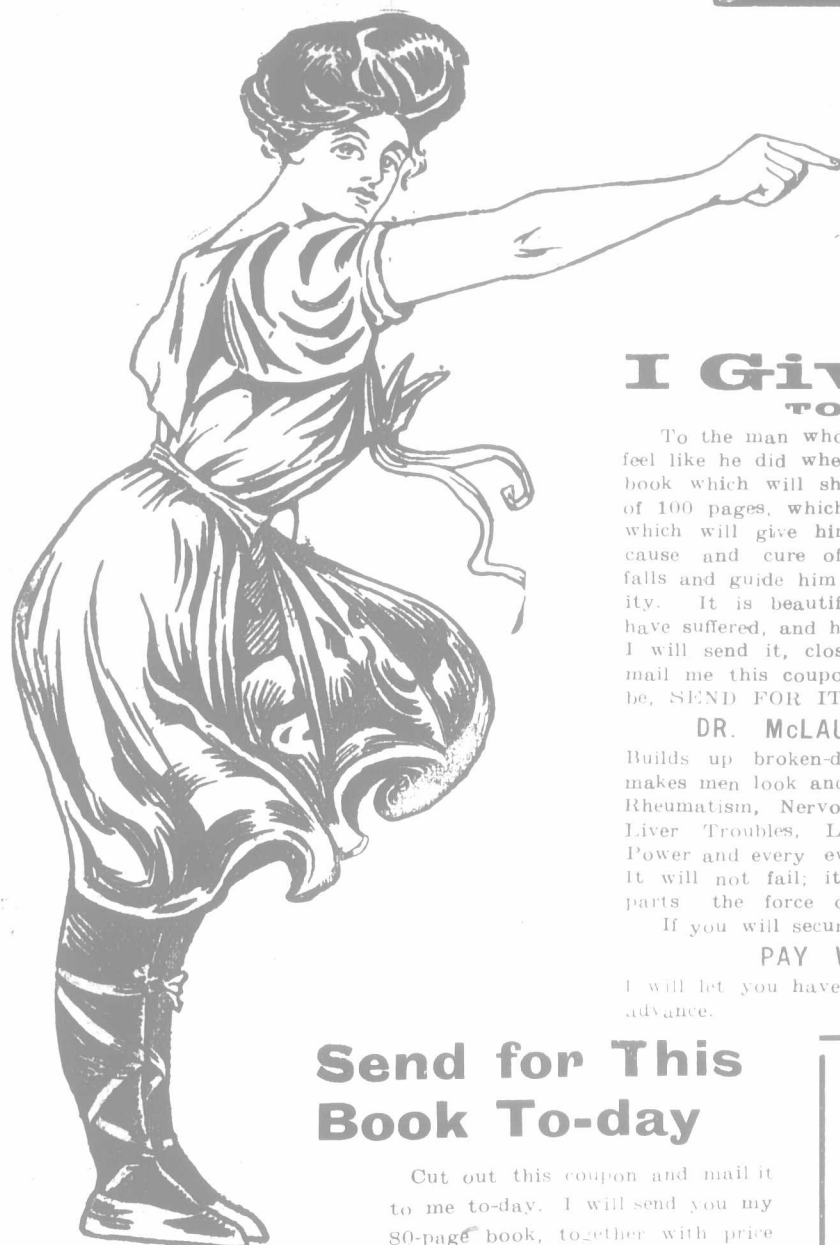
A Marvellous Picture of 2 World Champions
Dan Patch, 1.55, The Facing King
Cresceus 2.02 1/2, The Trotting King
We have large colored lithographs of our World Famous Champion Stallions, Dan Patch 1.55 and Cresceus 2.02 1/2, in an exciting speed contest. It is 16 by 21 in. and shows both horses as life-like as if you saw them racing. You can have one of these Large and Beautiful Colored Pictures of the Two Most Valuable Harness Horse Stallions and Champions of the World, Absolutely Free. We Prepay Postage. This cut is a reduced engraving of the large Colored Lithograph we will send you free.

WRITE AT ONCE

- 1st, Name the Paper in which you saw this offer.
- 2nd, State how much live stock you own.

International Stock Food Co.
TORONTO, CANADA

3 FEEDS FOR ONE CENT



I Give It Free TO WEAK MEN.

To the man who wants to regain his youth, who wants to feel like he did when he was budding into manhood, I offer a book which will show him the road to happiness—a book of 100 pages, which is brimful of the things he likes to read, which will give him courage and enlighten him as to the cause and cure of his troubles. It will point out the pitfalls and guide him safely to a future of strength and vitality. It is beautifully illustrated. It tells what other men have suffered, and how they have cured themselves. It is free. I will send it, closely sealed, without marks, if you will mail me this coupon. If you are not the man you ought to be, SEND FOR IT TO-DAY.

DR. McLAUGHLIN'S ELECTRIC BELT

Builds up broken-down men, restores youth and vigor, and makes men look and feel strong. It will cure every case of Rheumatism, Nervous Debility, Weak Stomach, Kidney and Liver Troubles, Lame Back, Sciatica, Varicocele, Loss of Power and every evidence of weakness in men and women. It will not fail; it cannot fail, as it infuses in the weakened parts the force of life and strength.

If you will secure me my

PAY WHEN YOU ARE CURED

I will let you have my Belt without paying me one cent in advance.

Send for This Book To-day

Cut out this coupon and mail it to me to-day. I will send you my 80-page book, together with price list, prepaid, free. Don't wait a minute; cut out the coupon now.

DR. M. S. McLAUGHLIN,
112 Yonge St., Toronto, Can.

Send me your Free Book, class: send.

NAME _____

ADDRESS _____

Office Hours: 9 a. m. to 6 p. m. Wednesdays and Saturdays until 8:30 p. m.