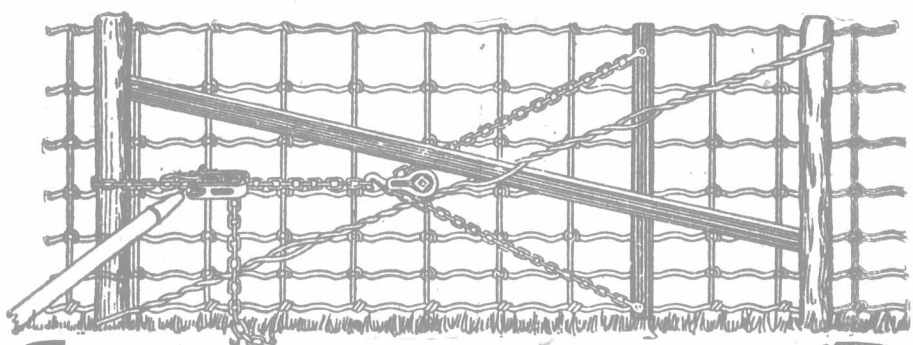


**PAGES
MISSING**

HOW TO BUILD A GOOD FENCE



Our new folder on "Erecting Fences" will tell you and if you will follow the instructions carefully when you are through you will have a good job.

It's full of valuable and interesting information on fence building and tells how to erect woven wire fencing in the quickest and most substantial manner.

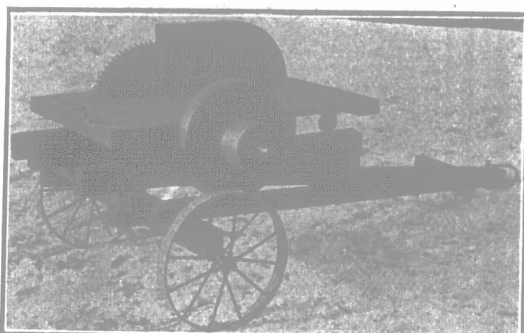
No farmer, fence man or any one interested in fence construction should fail to write for a copy. It gives all the information required for building fences and we send it

FREE!

In addition there is also a complete and very interesting description of the manufacture of fence wire. Persons who have never had the privilege of visiting a wire mill will find this article of especial interest.

It also has an article quoted from a bulletin issued by the U. S. Department of Agriculture on the manufacture of concrete fence posts, showing how posts made of this most useful and durable material can be manufactured at home. Don't fail to write for a copy today. Ask for our folder called, "Erecting Fences." Remember it's free. Address **THE BANWELL HOXIE WIRE FENCE CO., LTD., Dept. B, Hamilton, Ont.**

The Bruce Agricultural Works, Teeswater, Ontario.



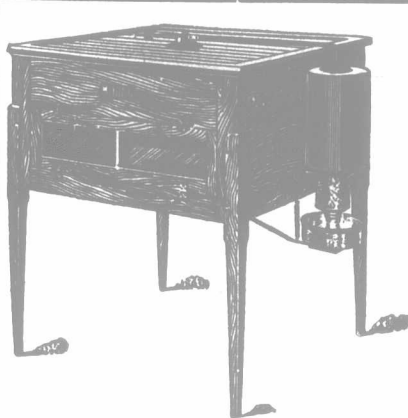
STROME BROS., Props.

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WAGONS, SLEIGHS, PLOWS, HARROWS, SEEDERS, PULPERS, SCHOOL SEATS, MOWERS, DISC HARROWS, SCUFFLERS, TURNIP SEEDERS, WOOD SAWS, and all repairs for Gillies & Martin's Plows kept in stock.

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THE MODEL GOODS Are Always Up-to-date.

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The Model Incubator Co., Toronto:

Dear Sirs,—I am going to let you know what I have done with the Chas. A. Cyphers 1906 and 1907 brooders. Out of 265 Leghorn chicks placed in three brooders, I have lost one only to date, and chicks are very vigorous. I think this is all I need say, except that chicks were started on Model Nursery Food, and that there was 90 degrees of frost with a strong wind some nights.

I am, yours truly, E. C. APPS,
Valley Mills Poultry Ranch, Brantford, Ont.

Our catalogue mailed free.
MODEL INCUBATOR COMPANY, LIMITED,
193 RIVER ST., TORONTO.

A Sacrifice for Quick Sale!

800 Acres 40 MILES from Winnipeg, 2 1/2 miles from station; all fenced; 275 acres under cultivation; 60 acres good timber; balance meadow and light scrub; about \$4,000 worth of buildings; 70 head of good cattle; 4 head of A1 horses; almost two set of farm machinery; about 150 tons of hay; about 700 bushels of potatoes, and about 500 bushels of oats. All household furniture, including a new piano. Artesian well connected by pipes into barn. All land high and dry. No waste land. All level. **Price, \$14,000; cash, \$8,000; balance arranged.**

For further information apply:

THE HOUGHTON LAND CORPORATION, LTD.,
314 Union Bank Building, Winnipeg.

If You'll Do The Painting Yourself

get Ramsay's Paints. If you intend to have it done—insist that the painter uses Ramsay's Paints.

They go farther—last longer—hold their freshness and beauty longer—and cost less in the end—than any other good paint you can buy.

Write us, mentioning this paper, and receive Souvenir Post Card Series showing how some houses are painted.

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What's the use of putting up a barn that will last only ten or twenty years, when, for the same money, or even less, you can build one that is good for a generation at least, and is lightning-proof, fire-proof and water-proof?

Use "Acorn Quality"

Corrugated Galvanized Sheets

and both price and quality will be right. They will cost no more than an all-wood building. The process of corrugating, renders the sheets so rigid that a lighter frame may be used, than with any other structure. Sheeting boards are quite unnecessary and only wood strips are required.

Then, the cost for labor in applying Corrugated Sheets, is, by actual test, less than half what it would be for wood shingles. The economy effected by labor, sheeting boards, and lighter frame-work, more than makes up the difference in cost between present day wooden shingles and our "Acorn Quality Corrugated Galvanized Sheets."

Our lightning proof barns are in almost every locality in Canada. We will mail you, on request, a list of users in your own county. Get their opinion.

The Metal Shingle & Siding Co. Limited, Preston, Ont.



How the U.S. CREAM SEPARATOR Starts Itself

At the right is an exact copy of a photograph of a number 7 U. S. Cream Separator. Someone raised the crank to the height shown and had just let go as the photograph was taken. Now if another photograph had been taken about a minute later the crank would have been in the position shown by the dotted lines. In other words, the slight weight of the crank is enough to start the gears and bowl of the U. S. Separator turning. If the crank was raised enough times and allowed to lower itself each time it would get the gears and bowl going very fast. This would take some time so it is not practical, but it gives you an idea of how lightly and easily the U. S. Separator runs.

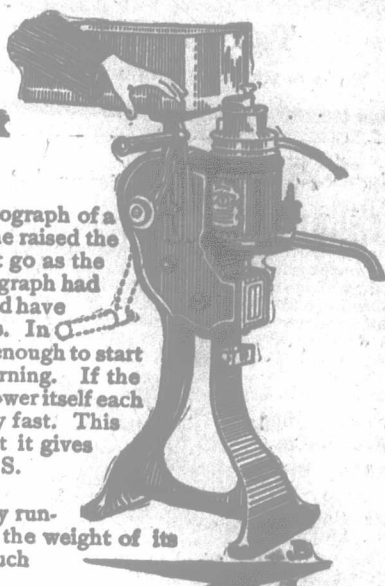
Other separators are advertised as "easy running" but the U. S. is easy running. When the weight of its crank will run a U. S. it certainly can't take much power on the part of the operator to do it.

We haven't room here to tell you more about the U. S. Separator, but if you want we'll be glad to mail you free a copy of our big, interesting, new separator catalogue. It tells all about the U. S. Just say, "Send catalogue number C 110". Write it on a postal if it's handiest, and address

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Prompt deliveries of U. S. Separators from warehouses at Auburn, Me., Buffalo, N. Y., Toledo, O., Chicago, Ill., LaCrosse, Wis., Minneapolis, Minn., Sioux City, Ia., Kansas City, Mo., Omaha, Neb., San Francisco, Cal., Portland, Ore., Sherbrooke and Montreal, Que., Hamilton, Ont., Winnipeg, Man. and Calgary, Alta.

Address all letters to Bellows Falls, Vt.



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Let me show you why you, personally, can make money with a PEERLESS Incubator

I Take Most of the Risk

There is money in raising poultry, big money. Why can't you get some of it?

You can; and I know you can, if you make the right start. I am so sure you can that I will outfit you to start without your paying me a cent beforehand.

No philanthropy about it—just plain business with me. I mean exactly what I say when I propose to do just this:

I will furnish what you need to start with, and you needn't pay for it until it has paid for itself twice over, at least. This is the idea:

Tell me who you are, to begin with. Then I will show you where the profit in poultry really is, and that you can get as big a share of it as you deserve.

When I have satisfied you on that, just tell me you are ready to start after that profit, and—

I will ship you a Peerless Incubator, and a Peerless Brooder,—or just the incubator alone.

I will pay the freight charges.

I will tell you how to run the incubator and run it right.

I will stand right back of you all the time, tell you anything you want to know about poultry-raising, find a good market for any poultry you want to sell, act as your expert advisor, and leave the profit for you.

All I ask you to do is to promise to pay me for what I ship you, after it has had time to earn twice its cost and more.

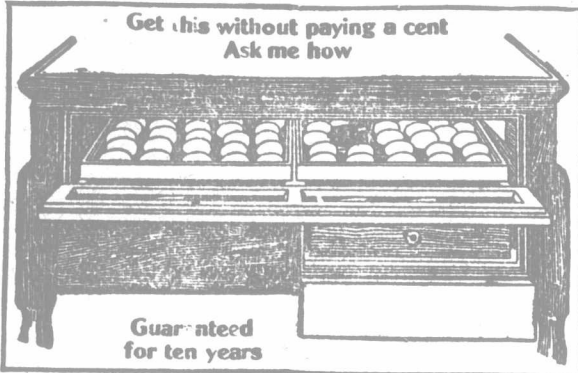
I know it sounds almost too alluring,—but it's true, and it's honest. Write to me and I will prove that to you.

I want to get you into the poultry business for my own sake, you see. I know that if you succeed at it you will be a customer of mine as long as you live, and you will send me other customers.

That's one reason why I am willing to send you my incubator on your say-so.

I KNOW you can't help succeeding with poultry, if you start in earnest and start right.

Tell me your name and address, and hear what I have to say. You aren't committed to anything by writing to me,—hear what I have to say to you, that's all. Suppose you write now?



You don't have to 'putter' with a Peerless Incubator to get good hatches. Anybody who can tend a lamp can run it, and run it profitably, because the Peerless is simple, practicable, sensible. It is built by practical poultry-men who put into it what 15

years' incubator-running has taught them,—and who have left out of the Peerless everything that makes other incubators give trouble and waste money. It hatches hearty, sturdy, sure-to-grow chicks, because it is properly ventilated, because it hasn't any moisture problem, because it uses heat in the only way that is certainly right.

I will give you any time you want to pay in,—three years, if you say so

I will guarantee everything about the incubator to be all right,—I will take just about all the risks, in fact.

You supply the eggs and the oil for the lamp, and use common-sense and a little energy,—that's your part of it.

I can show you why that is so, if you will ask me to,—can't do it here, because there's no room. Tell me you'd like to know why the Peerless Way Makes Poultry Pay. I will see that you get the facts. Write and ask to-day.

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For water, oil, gas, piercer and prospect wells. Blast hole drills.

Tell us your needs and catalogue will be sent you showing your kind.

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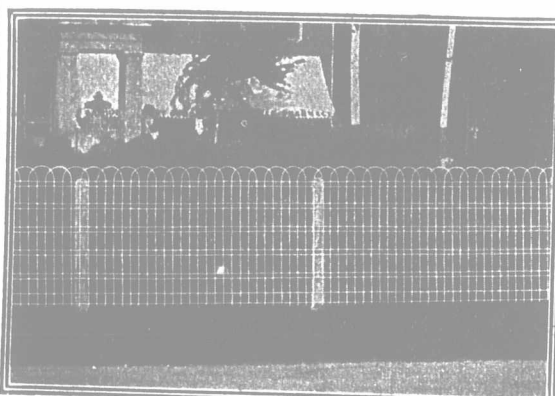
Toronto, Winnipeg, Vancouver, Williams & Wilson, Montreal, agents for Canada.



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J. F. MIDDLEMISS, Wolsley, Sask.

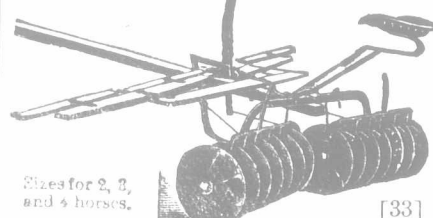


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Any height to 8 ft. Any length you say. From 16 cents a foot. Gates to match, from \$2.25. Last longer. Easy to put up. Get booklet.

PAGE WIRE FENCE CO., Limited Walkerville - Toronto - Montreal St. John - Winnipeg

THE BISSELL



The only Disk that does Twice the Work while half easier on horses—a Record Not Equalled by anything else built for cultivating. A Success for making Seed Bed on Fall Plowed Land. For Summer Fallows or Stubble Fields after harvest. Look for the name "BISSELL." None genuine without it. For Sale by Agents and Manufactured by

T. E. BISSELL, ELORA, ONT. Drop a post card for Booklet "W"



SUPERIOR ORNAMENTAL FENCE

More attractive in appearance, stronger and more durable than the usual run,—that's the kind of an ornamental fence we would like to interest you in.

Any one of our many designs will make a handsome and artistic ornamentation to the front of your property. A permanent attraction, mind you, for our ornamental fences are so strongly constructed, with hard steel wire fillings and famous Samson locks, that they will still be in service twenty years after erection.

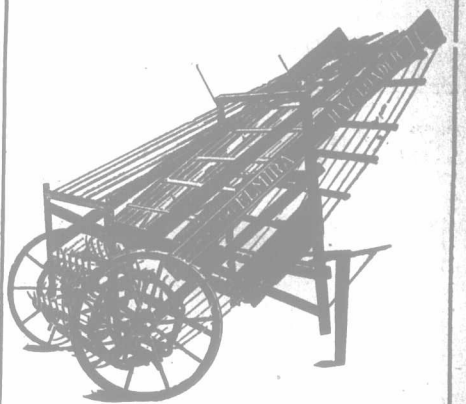
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AGENTS WANTED to represent us in every locality. Exclusive territory. Write to-day for our good proposition.

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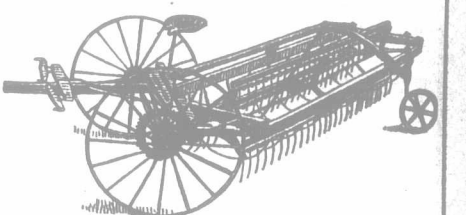
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"Ever striving to improve" is our motto.

We can supply you with either a Rotary Side Delivery Rake, as shown below, or a Fork Side Delivery Rake.



We invite your correspondence. Elmira Agricultural Works Co., Ltd. Elmira, Ontario.

SUCCESS DAIRY FEED

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\$17.00 per ton, in sacks on cars at Woodstock. Write for samples and freight rates.

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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 scientifically and accurately constructed, more easily applied and will last longer than any other. Eastlake Shingles have been made since 1868.

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.

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TOWER'S FISH BRAND

IF YOUR DEALER IS OUT OF FISH BRAND, DON'T CHANGE YOUR MIND, HAVE HIM GET THEM OR SEND ORDER AND PRICE TO US.
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LONDON, ONT. WINNIPEG, MAN.

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In buying "Brantford" you can depend on it being right. We never had a roll returned of inferior quality yet.

Write for special offer to clubs.
Samples, prices, directions FREE.

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Brantford, Can.

DID YOU GET ONE

Of Those Farms on a 10-per-cent. Basis?

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Write us for maps, etc.

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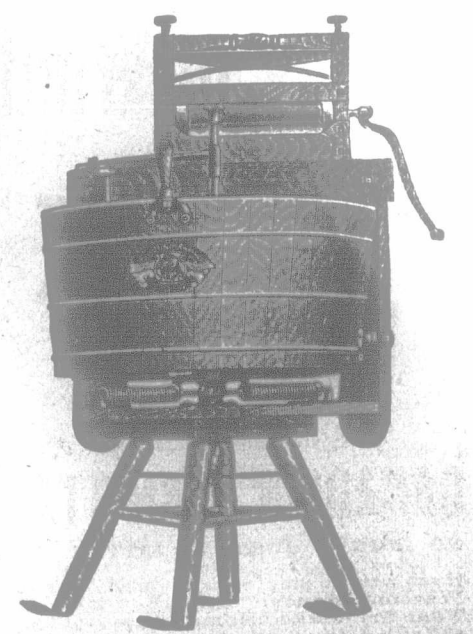
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Our extra-strong wide-tire steel wheels run easy, are low and handy. There are no tires to reset, and they are always ready to use. Made to fit any axle, and of any width of tire and height desired.

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The material and workmanship are the best, and both wheels and trucks are fully guaranteed. Write for illustrated catalogue.

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There are Motor Springs beneath the tub. These springs do nearly all the hard work, when once you start them going. And this washing machine works as easy as a bicycle wheel does. There are slats on the inside bottom of the tub. These slats act as paddles, to swing the water in the same direction you revolve the tub. You throw the soiled clothes into the tub first. Then you throw enough water over the clothes to float them. Next you put the heavy wooden cover on top of the clothes to anchor them, and to press them down. This cover has slats on its lower side to grip the clothes and hold them from turning around when the tub turns. Now, we are all ready for quick and easy washing. You grasp the upright handle on the side of the tub and, with it, you revolve the tub one-third way round, till it strikes a motor-spring. This motor-spring throws the tub back till it strikes the other motor-spring, which in turn throws it back on the first motor-spring. The machine must have a little help from you, at every swing, but the motor-springs and the ball-bearings, do practically all the hard work. You can sit in a rocking chair and do all that the washer requires of you. A child can run it easily full of clothes. When you revolve the tub the clothes don't move. But the water moves like a mill race through the clothes. The paddles on the tub bottom drive the soapy water THROUGH and through the clothes at every swing of the tub. Back and forth, in and out of every fold, and through every mesh in the cloth, the hot soapy water runs like a torrent. This is how it carries away all the dirt from the clothes, in from six to ten minutes by the clock. It drives the dirt out through the meshes of the fabrics WITHOUT ANY BUBBLING, without any WEAR and TEAR from the washboard. It will wash the finest lace fabric without breaking a thread, or a button, and it will wash a heavy, dirty carpet with equal ease and rapidity. Fifteen to twenty garments, or five large bed-sheets, can be washed at one time with this "1900 Junior" Washer. A child can do this in six to twelve minutes better than any able washerwoman could do the same clothes in TWICE the time, with three times the wear and tear from the washboard. This is what we SAY; now, how do we PROVE IT? We send any reliable person our "1900 Junior" Washer, free of charge, on a full month's trial, and we even pay the freight out of our own pockets. No cash deposit is asked, no notes, no contract, no security. You may use the washer four weeks at our expense. If you find it won't wash as many clothes in FOUR hours as you can wash by hand in EIGHT hours you send it back to the railway station, — that's all. But, if, from a month's actual use, you are convinced it saves HALF the time in washing, does the work better, and does it twice as easily as it could be done by hand, you keep the machine. Then you mail us 50 cents a week till it is paid for. Remember that 50 cents is part of what the machine saves you every week on your own, or on a washerwoman's labor. We intend that the "1900 Junior" Washer shall pay for itself and thus cost you nothing. You don't risk a cent from first to last, and you don't buy it until you have had a full month's trial. Could we afford to pay freight on thousands of these machines every month, if we did not positively KNOW they would do all we claim for them? Can you afford to be without a machine that will do your washing in HALF THE TIME, with half the wear and tear of the washboard, when you can have that machine for a month's free trial, and let it PAY FOR ITSELF? This offer may be withdrawn at any time it overflows our factory. Write us TODAY, while the offer is still open, and while you think of it. The postage stamp is all you risk. Write me personally on this offer, via: F. A. A. Bach, Manager "1900" Washer Co., 285 Yonge St., Toronto, Ont.

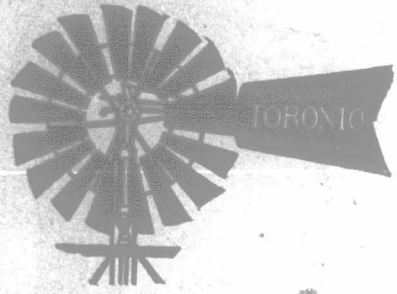
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Ontario Wind Engine & Pump Co., Ltd., Toronto.

SEND FOR FREE SAMPLES

and handsome booklet which tells all about

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—the most weather-proof and best-wearing of all prepared roofs. Let us prove our claims—it means as much to you as it does to us.

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GASOLINE
ENGINE
For Pumping, Cream
Separator, Churn, Wash Ma-
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YOU AND THE COWS

Protect your dairy investment by a policy that pays dividends.

De Laval Cream Separators

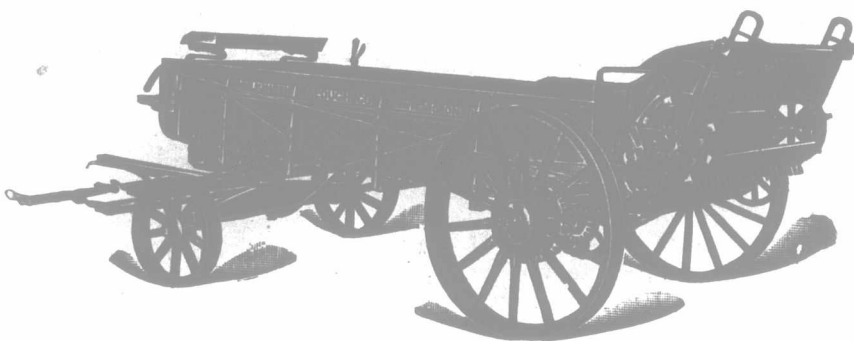
Squeeze the profits out of the milk and make you successful.

That's the Policy for You
800,000 Users

Their Investigation Confirms the Claims.

The DeLaval Separator Co., 173-177 William St.
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FREE A SEVENTY-BUSHEL GREAT WESTERN SPREADER FREE



Have you 125 loads of manure, or more, to spread? Are you going to plant 25 or more acres of oats? If so, let us know, and we will show you how you can own a manure spreader absolutely FREE. Write just these words on a postal card or in a letter: I have loads of manure to spread this spring. I will plant acres of oats. I have acres of land: horses; cows, and small stock. Write to-day.

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ARMSTRONG STANDARD BUGGY
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Last Mountain Valley Lands

We own thousands of acres of **Choice Selected Land** in this district, which is in the heart of the

GREAT WHEAT PLAINS

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Prof. Thos. Shaw, after personal inspection, writes: "This rich and beautiful farming section lying in the vicinity of Last Mountain Lake, embraces one of the finest areas in the Northwest. The land is undulating in this region, mostly open prairie. The soil is rich black vegetable loam, from one to two feet deep, and is underlaid with a clay subsoil. Frost, so injure the wheat, is virtually unknown. Being thus favored so highly by nature, it is not surprising that the production of wheat in this region is phenomenally high; in several instances forty to forty-five bushels per acre have been reaped. Oats, Barley, Flax and all small grains yield relatively as good as those of wheat. Potatoes grow most luxuriantly. Two or three years ago there were not more than thirty-five settlers in the entire area; now there are over a thousand, and others rapidly coming in."

Send 25c. for our beautiful new photographic souvenir, entitled "The Lake and Lands of Last Mountain Valley," which is not only a work of art, but a book of authentic information. We will also send Atlas of Canada, Maps, etc.

Wm. Pearson Co., Limited,
304 NORTHERN BANK BUILDING, WINNIPEG.

The Farmer's Advocate and Home Magazine

"Persevere and Succeed."

Established 1866.

Vol. XII.

LONDON, ONTARIO, APRIL 25, 1907.

No. 761.

EDITORIAL.

OUR IRRATIONAL SCHOOL SYSTEMS.

The teacher of Agriculture in a Pennsylvania High School has instituted a cow census, for the dual purpose of educating his pupils and benefiting the owners of the cows. The school proposes to test the milk and tabulate the record of every cow whose owner is willing to weigh each mess of milk and take samples for the Babcock test. The work will be done at the school much as it would be at an ordinary creamery. The idea is a splendid one. By impressing on the pupils, as it is bound to do, the fundamental importance of knowing the performance of every cow kept, and, best of all, by familiarizing them with the actual testing, an influence will be set at work that cannot fail to have a telling effect when they grow up, not only upon their dairy practice, but their whole system of farming.

The enterprise of the Pennsylvanian carries a suggestion that might be adopted elsewhere. If some Canadian teachers, for instance, could take up more work of this kind, as practice in mathematics, it would be infinitely more to the purpose than these endless problems about movement of the hands of clocks, A and B doing work on shares, or difference in the time it requires to row ten miles up and ten miles down stream. We are not contending for the teaching of agriculture as a subject in public schools, because it seems very difficult to introduce agriculture as a subject and have it taught in a beneficial way. Our teachers are not qualified for it, and even though they were trained as well as they could be in Normal Schools, many of them would still be liable to present the subject in an absurdly impractical light. But in this country, where agriculture is admittedly the foundation of material progress, and where the great national problem is how to keep a sufficiently large proportion of our bright young men and women on the land, why not give our schooling an agricultural trend? We should have the text-books revised, and, wherever possible, more problems, exercises and passages introduced that will tend to interest and instruct the pupils in things pertaining to the farm, rather than those tending so frequently to the professions and the trades. Also there should be an especially earnest attempt made to introduce nature-study and school-gardening.

Some may wonder in what way our schooling has tended to fill the trades. A little reflection will show that man is a gregarious animal—he is prone to companionship—living in groups. This desire asserts itself with increasing emphasis in the individual whose social character has been somewhat developed, as it generally is by schooling. The desire to live in a town or city, or to work in a gang, induces many a lad, influenced mayhap by his girl friends, also of cityward inclination, to choose a trade, or even the lot of an unskilled town laborer, in preference to farming, which, of course, involves a more or less isolated life and solitary work. To regulate or balance the well-marked cityward tendency of the schools, we must take particular and unceasing pains to educate the boy to appreciate nature and open his eyes to the possibilities the farm offers in the way of a happy, prosperous life. Heretofore our school education has lacked this essential corrective or counterbalancing influence.

The fact must be recognized that the vaunted school systems of our Canadian Provinces have tended strongly to depopulate the country, draining it of much of the flower of its young manhood and womanhood, because the effect has been to incline far too large a proportion of our

people towards urban occupations, such as the professions, clerical employment, and the trades. For the services of these classes the home demand is limited by the number of people engaged in the basic productive industries, especially agriculture and manufacturing—two lines for which we have done far too little to educate our people. In the overcrowded professions and trades congestion has been automatically relieved by exodus to the neighboring Republic, a combination of circumstances having developed that country rapidly and afforded larger opportunities for all classes than we have had at home. As a rule, therefore, it was our best men who were attracted thither, and the effects on Canadian development were the more serious for that reason. It kept Canada almost standing still, and the longer we lagged behind, the greater became the disparity between opportunities at home and abroad. Of late years the outgoing tide of population from the Eastern Provinces has been fortunately diverted to our own West, though small thanks is due our school systems for this fact. But for their adverse influence, continually prying our people from the land, the southward current would have turned west long ago.

We are glad the West is being settled at last, but the necessity for better adapting our school systems to our needs still remains. When immigration of farmers from foreign countries to the West slackens, while at the same time opportunities for profitable investment by our own people in western lands diminish with the approximate settlement of that country, we will again realize acutely the need of an educational system which will help to make our people better farmers. At present many in the West are accumulating money, not so much by their farming as by the holding of lands that are rapidly appreciating in value. When this opportunity is closed, not a few will despair of agriculture and again turn their backs upon the farms, unless, meantime, we have been training the rising generations to esteem the occupation and make a genuine success out of farming in spite of difficulties.

Then, too, we have a more immediate reason for modifying our school systems. We must do it in order to interest our children more speedily in the Eastern farm, and the more of them we can draw to it the better. Ontario, for instance, can easily support in comfort two or three times her present farming population, and as cities grow, affording larger home markets for the products of intensive farming, the more numerous will be the openings for properly-trained agriculturists to make a good living in the Province. This will benefit all classes, for agriculture, manufacturing, fishing, lumbering and mining are the foundation upon which our material prosperity must be built. Of these, agriculture and manufacturing offer by far the best opportunities for extension, always provided our people are fitted and inclined to embrace the opportunities in these lines. We need school-gardening, nature study, manual training and domestic science substituted for some of the history and other subjects.

Having adjusted our courses and improved the text-books, we must train the teachers as carefully as possible in agriculture, in order that they may give their instruction an appreciative savoring of nature and the farm. The Macdonald Institute at Guelph, Ont., and the Macdonald College at Ste. Anne de Bellevue, Que., were conceived with this purpose in view. The former is a place not only to educate farmers' daughters in housekeeping, but also to train rural public-school teachers in such special phases as nature study, manual training, domestic science and school-gardening. The Macdonald College, now be-

ing completed, is commonly thought of simply as an agricultural college for young men, but part of its function is to train rural teachers that, going out through Quebec, they may prove missionaries to enlist farm boys as students in the agricultural courses. We welcome the Institute and the College as well. Our only wish is that some means might be devised by which the teachers' courses of the Macdonald Institute might be more largely patronized. A regular Provincial Normal School should be established in connection with the Institute for the training of rural school-teachers in agriculture and allied sciences. Here, at the Institute, and alongside the Ontario Agricultural College, they might receive a training and an inspiration that would enable them to infuse their pupils with enthusiasm for the new agriculture, and thus might we hope to mitigate the unfortunate academic tendency of our whole school system, which has imbued so many with the deplorable idea that an educated man can find no scope for his intellect on the farm. Just the other day we heard of an excellent lady teacher, herself a farmer's daughter, who never was known to hold out any hope to her pupils of prospering or succeeding on the farm. To her it was a place for them to get away from, and High School and University were the avenue by which to leave.

The mental pabulum doled out in our classrooms, from public school to university, has been irrational and unbalanced. There has been too much classics, history, geometry and algebra, and far too little that bore on agriculture and applied science—too much delving into the past and not enough grappling with the living present. While the object of education should not be mere money-making, still that education is unfit for the masses which does not help to make them efficient workers, prepared to earn good livelihoods, by skillfully employing hands and brain in useful, productive labor. And in acquiring such proficiency, they may be more truly and nobly trained to live than by cramming them with abstract principles and ancient lore.

Back to our schools goes the farm-labor problem. Back to them goes the problem of keeping our children on the farm. Back there goes the problem of developing our country's resources. Back to the school may be clearly traced what has been, and may be some day again, a great national problem—emigration.

It may be asked why should education in Canada have such untoward effects? Have not the great nations of the past been those which prized their schools? Quite true, but in the past education was for the few, not for the many, and then it mattered less what its effect on the individual's capabilities and tastes might be. If it trained teachers and orators and statesmen and kings, it filled the bill for those days. In Canada we have striven to put every child through the schools—farmers' boys, artisans' and all. This is well, but let us not forget that, in proportion as we place school education within reach of the general public, the responsibility increases in compound ratio, to see that the courses of study through which our children are put do not alienate their interest more than we can help from the basic occupations of the country. In the past this great fundamental principle has been largely ignored. Our educationists have, for the most part, shut their eyes to this stern fact, hoping against all kinds of evidence that the ultimate effect of our school systems, adapted from earlier ages, would be good. How sadly they deceived themselves, the past century's history reveals.

As a nation, we have a right to in-

THE FARMER'S ADVOCATE AND HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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sist—nay, more, it is our duty to insist—on having our whole educational system recast and better adapted to our needs; and let us never forget that the paramount material need of Canada has been, is, and probably always will be, more good farming.

THE DAIRY INSTRUCTOR'S AUTHORITY.

The year 1907 introduces a radical departure in the system and method of dairy instruction which has been carried on in the Province of Ontario the past few years. In 1903 the Dairymen's Associations of Eastern and Western Ontario, aided financially by the Provincial Department of Agriculture, undertook what has been called the system of syndicate instruction in cheese factories and creameries. Each factory, for a moderate fee, could have the services of one of the Association's corps of expert practical instructors, who would visit it occasionally throughout the making season, assist the maker to overcome difficulties when possible, and advise him generally. The instructors also did not a little testing of milk for adulteration, and on the strength of their findings prosecutions of patrons were sometimes instituted. Thus a wrong impression gained ground among the patrons, who came to think of the instructors rather as inspectors or spies, whereas their chief duty was not milk-testing, but practical help for the makers. Under Chief Instructors Barr in the West, and Piblow in the East, two of the most devoted and capable men who ever gave their time to the public service, a marked improvement was effected in the manufacture of butter and cheese. Two obstacles remained, however, to further improvement. First, the quality of the raw material delivered by a minority of the patrons at nearly all the factories was not what it should be. Overripe and bad-flavored milk, due in most cases to carelessness and dirt, often defeated the makers' most earnest efforts to produce a gilt edge quality of goods, and resulted, moreover, in a reduced make

of cheese per vat of milk, entailing a really serious loss on all the good patrons. The man at the weighstand was lectured about his duty to return overripe or bad-flavored milk, but he generally erred on the side of leniency, fearing to drive away a patron, especially when the latter happened to live on the boundary of another factory district. Some makers rose to their responsibility, and educated their patrons to deliver better milk and cream; but, for the most part, there still remained great room for improvement. In the hope of getting to the heart of the difficulty, the instructors were directed to spend less time in the factories and more in visiting the patrons. In Western Ontario a good deal was done on the farms in 1905. What were the results? The patrons whose dairies and practices were the worst laughed at the instructors' recommendations. Did they move their milkstands away from the pigsty when asked? A few did; more did not. Did they provide ice to cool their milk, or take any pains to keep it clean? Many made not even a pretence at improvement, and when next they sent sour milk, chances were the maker accepted it as of old. The patrons despised the authority of the instructors with impunity, and went on in the old ruts. The other thorn in the side of the export business was the minority of factories—almost invariably the poor, little ones—which refused to employ the instructors. Here inferior cheese and butter were manufactured, which went to the British market as Canadian, to the prejudice of our national reputation.

The system of instruction as heretofore organized had gone about as far as it could go. Something was required to get after the shiftless patrons and factories. Accordingly, some additional legislation was passed by the Legislature a year ago, in the form of an amendment to the Act to Prevent Fraud in the Manufacture of Dairy Products. This, in substance, simply required patrons and factories to be cleanly in handling dairy products. To enforce the law, two sanitary inspectors were appointed by the Department of Agriculture. These men were absolutely distinct from and independent of the regular staff of 35 or 40 inspectors engaged by the Dairymen's Associations. During the summer the two sanitary inspectors accomplished quite a little good in having the drainage and water supply of factories improved, in having milkstands moved away from unwholesome quarters, and in other ways seeing that our goods were manufactured in sanitary surroundings.

It soon became plain, however, that two sanitary inspectors were altogether inadequate to cover the ground. Besides, it savored of super-erogation to have one staff of instructors and another of inspectors. It was, therefore, mooted, first through "The Farmer's Advocate," that the two offices be combined in one staff, and that all the instructors be given legal authority to act as sanitary inspectors, in order that they might enforce their recommendations where necessary. To the mind of the Minister of Agriculture this involved complications and possibly trouble, for some of the inspectors might take too much upon themselves, and apply unnecessarily drastic measures. Then, too, it would be awkward to ask a factory to hire an instructor-inspector who might find himself called upon to require the proprietor to go to expenses for improvements. The upshot of it all has been that the Department of Agriculture has taken over the administration of the whole system, and will henceforth handle it from Toronto, in co-operation, however, with the Dairymen's Associations.

The work will be carried on in much the same way as before, but the instruction fee is abolished, and every factory in the Province will be visited. To lessen expense, the number of instructors will be cut down; but as they will be given power to insist on sanitary conditions on farm and in factory, it is expected their work will be more effective than ever before. Where conditions are found unsatisfactory from a hygienic standpoint, instructions will be given how to improve them, and a reasonable time allowed in which to effect the change. If the producer or proprietor does not comply, an appeal will be made to a board of arbitrators, consisting of the local director of the Dairymen's Association, the Chief Instructor,

and a representative of the Department of Agriculture. These men will finally decide what improvements must be made, and allow a reasonable time for their completion. The Department is determined to allow nothing unreasonable or unjust to be done, but is awake to the necessity for insisting that all factories shall come up to a reasonable standard so far as sanitary conditions are concerned. The same is true as regards the farms where the raw material is produced.

It has been decided not to have the instructors devote their time to testing milk for adulteration, except where the authorities of a factory or creamery state that they have clear evidence of milk having been tampered with. Then the instructor will be allowed to assist in making a further test.

In short, the object of the instructors' work is and always has been helpfulness to maker and patron. They are not detectives nor constables, but instructors, with just enough authority in reserve to bring indifferent or obstinate proprietors, patrons and makers to time. The new system is an excellent one, and Hon. Nelson Monteith is to be congratulated on having effected the desired change, while at the same time providing against unnecessary friction or the semblance of political interference. To the patrons it will work only benefit, resulting in a higher average standard of quality in exported products, and ultimately in the enhanced prices which uniform excellence is always in a position to command.

OUR MARITIME LETTER.

If we are without specific information on any matter of public utility, at least—in these days, it is largely our own fault. We were rash enough a few weeks ago, to write that some outspoken critic of the Experimental Farms stumped us with a demand for anything of permanent value they had done for agriculture in the country. Our impression was that they had done much, but it was not so easy to produce the arguments. Some were produced, it is true, but what is asserted without proof is denied without proof—Quod gratis assentitur, gratis negatur, as we say in dialectics. Now, the other side is to be heard, as is right and proper. Last week's mail brought me a letter from a much-respected official of the Farms in question, in which we find the following, which is significant enough for anything: "I do not know whether you have yet received a copy of the Inter-Report of the Experimental Farms. There have not been many published yet. I send you one, as it is a good thing to have by you when people ask you what the Experimental Farms have done for the country. I notice that in one of your Maritime Letters you said that you were at a loss to say at a moment's notice just what the Farms have done. This will be a good pamphlet to carry about with you." Could anything be done more innocently? Then copies from others came flocking in upon us.

Well, we embraced the very first opportunity of using this life-preserver, in pamphlet form, and feel that it is but right that we send the answer, as far as the question which the doubter of yesterday proposed. This report seems to have been gotten up as an answer to just such doubting Thomases as he whom we encountered on the Mainland. It resumes the whole condition of agriculture in Canada since the finding of the Select Committee of the House of Commons in 1884; remarks upon the establishment of experimental farms through the action of Sir John Carling in 1885, and claims that in the couple of decades since there has been "an unprecedented advancement" along all lines, for which, after giving due credit to the O. A. C., at Guelph, to the Farmers' Institutes, agricultural circles, dairy, live-stock and fruit-growers' associations, agricultural and horticultural societies, and the work of the Commissioner's Branch of the Dominion Dept. of Agriculture, there still remains the largest measure to make the ample justification of the Farms. This progress, Director Saunders freely asserts, "has resulted in a general improvement in the condition of the agricultural population all over the country, and in a vast increase in the exports of agricultural products."

"The experimental work which has been done at the Farms since their organization," he con-

HORSES.

POINTS OF THE CLYDESDALE.

It is not easy to find language which will adequately convey an idea of the present standard of points in the Clydesdale, mainly because the terms employed are of necessity relative, and have different shades of meaning, according to the example of the breed present to the mind's eye of the writer or reader.



Chibiabar.

Thoroughbred stallion. A King's Premium winner.

The old school of Clydesdale judges—that is, the school of thirty-five years ago—began to judge at the head, travelled over the back and quarters, finishing up with the limbs and feet. The new school, which began to assert itself say about fifteen years ago, begin with the feet—"no foot, no horse"—and travel upwards. We follow their example. The ideal Clydesdale horse of modern days has large, round, open feet, with particularly wide coronets, and the heels are also wide and clearly defined. His pasterns are long, and set back at an angle which would be considered too

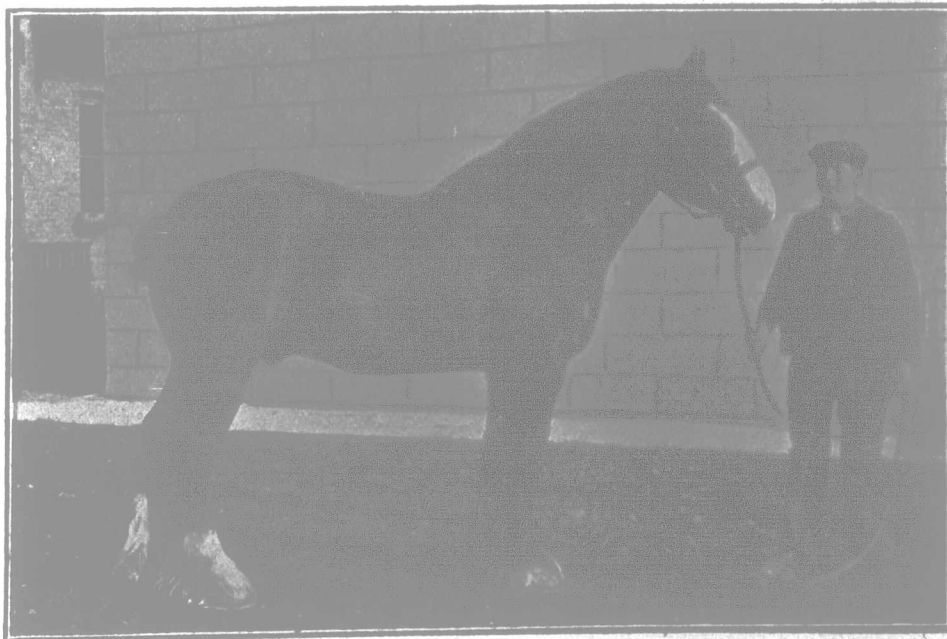
desdale is regarded as unpardonable. The Clydesdale has an oblique shoulder, lying well back on high withers. A ewe neck—that is, a neck which carries the crown of the head at about the same level as the top of the shoulders—is not regarded with favor, and an arching, high neck, whether in the male or female, is always an attraction. The head should be of medium length, and broad between the eyes and at the muzzle. A tendency to "dish-face" may be observed in some tribes, and this is generally accompanied by a small ear, and what, in the

main, is characterized as a "pony head." Wherever this style predominates, there is probably a strain of Highland or old Galloway in the blood. On the other hand, the hard, narrow face and Roman nose are regarded as equally, if not more, objectionable. Such features are usually indicative of a strain of Shire blood, and, indeed, they are not otherwise to be accounted for in the Clydesdale. An open, level countenance, vigorous eye, and large ear, are greatly valued, and not readily sacrificed. The hard limbs of the Clydesdale have not nearly so much attention paid to them as the fore legs—and in this, we think, Clydesdale judges err. Especially in regard to entire horses, it is true that no part of their anatomy should be more carefully attended to, and broad bones, of the texture indicated as essential in the fore legs; broad, clean, sharply-defined hocks, with the hams coming well down into the thighs, and the latter maintaining their strength and muscular development right down, almost to the hocks, should be more insisted on than they are. The truth is that we are disposed to regard weakness in the

thighs as the most undesirable blemish on the Clydesdale at the present day. If Prince of Wales 678 gave us rather more of the hard, narrow head, with Roman nose, and the straight hock, than was desirable, Darnley 222 gave us too great a lack of muscular development in the thighs, and rather a sudden droop in the quarters. Thoroughbred quarters are not asked for in the Clydesdale, but, on the other hand, neither are the quarters of the Percheron. The tail should be well set on, by which we mean that it should be well set up, and the quarters and thighs should not be too sharply marked off.

Action is all-important in the Clydesdale. Even his most severe critic will not deny that in this particular he generally excels. He is never judged travelling round about the ring, but always up and down the center in front of his judges. Hence his limbs must be squarely planted under him; they must follow each other in an undeviating line, and it is an all-important requisite that the points of the hocks be inclined inward and not outward. A Clydesdale must stand with his hind legs in regulation military form—heels in and toes out. Any other arrangement is tabooed, and if perfection is not always attained, it is always sought for, and many things are sacrificed to secure the prize for

an animal which keeps its hocks well together. The consequence of the attention bestowed on action is that the Clydesdale, as a rule, is both a good walker and a good trotter. Some of the best show horses have had trotting action almost equal to that of the best Hackneys, while there probably never was a stallion of any breed which could have excelled Darnley at the walking pace. The chief improvements effected in the Clydesdale during the recent years are, in our opinion, these: An increase in the quality, by which we mean the



Celtic Prince (imp.) [5313] (12901).

Clydesdale stallion, black; foaled May, 1904. Sire Everlasting (11831), by Baron's Pride; dam Flora McDonald, by Hiawatha; grandam Sunflower, by Prince of Wales (673). Winner of 1st at Ottawa, 1905; 2nd at Toronto, February, 1906; 2nd at London, 1906. Owned by A. F. O'Neil, Maple Lodge, Ont.

acute in the Shire. His bones are wide, flat, thin and dense.

In approaching one, the ideal Clydesdale should carry both feet absolutely straight and level. He has a wide chest and low counter, but his limbs are planted well under him, and there is no tendency to what is called being wide at the shoulder—that is, having the fore limbs so coming out of the shoulder that the horse is compelled to walk in front somewhat after the fashion of a bulldog. The slightest inclination to this in a Cly-

tinues, "covers so large a field that it is impossible to present in a limited space anything like a complete report. We shall, however, refer to some of the important lines of investigation." He then aminadverts to their efforts in "Maintaining the fertility of the soil, the adoption of a judicious system of rotation of crops, following the best methods of preparing the land, the selection of plump and well-ripened seed, early sowing, and choosing the best and most productive varieties. Along all these lines many experiments have been conducted, under the different climatic influences which prevail where the several experimental farms have been located. Continued efforts have been made to gain knowledge as to the best methods of maintaining and adding to the fertility of the land."

After detailing to some considerable extent the work accomplished under these heads, he refers to what has been done in improving the seed grain of Canada by the introduction of promising varieties grown in other countries, by the improvement of existing sorts by judicious selection, and by the production of new varieties by cross-fertilization and subsequent selection of the most promising types.

Our Thomas, the reader will remember, had asked us to name the single new variety of grain originated in Canada by those specialists, and we couldn't bring our memory into range, no matter how sure we were of our ground. The Principal doesn't, however, make any such claim in the Interim Report. But let him speak for himself:

"The third method referred to by which improvement has been made in the grain grown in Canada is by cross-fertilizing of different varieties. This has already produced very useful results, and the prospect of further improvement from this line of work is most hopeful and encouraging. The natural variations which occur in varieties, and which may be maintained by careful selection, are, for the most part, bounded by narrow limits; but in cross-fertilizing, the outlook for variations of a much wider character is practically unlimited, and the number of distinct varieties which may be bred from a single cross is sometimes startling. Many of these, after careful testing, are found to be lacking in some particular quality desired, or are inferior in quality to the parents from which they were produced. All such are promptly discarded, especially those inferior in quality, since quality is most important, and must be maintained. Others of promise have been retained for further trial, and the aim in all this work is to produce cereals equal in quality and productiveness with the best varieties now in cultivation, and earlier in ripening. It is also desired to have these good qualities combined with stiffness of straw and more or less immunity from rust. Varieties have already been produced superior in some of these particulars, but not in all. Some of the cross-bred wheats in a ten-years' trial have proved more productive than Red Fife, and have ripened a week earlier. Other varieties have a higher proportion of proteids, and hence would probably be more nutritive. A variety has been produced with nearly fifty per cent. more protein than Red Fife. Others have been obtained which ripened two to three weeks earlier than Red Fife. In most cases extreme earliness has been associated with a somewhat lessened crop. Indeed, it is only reasonable that such should be the case. Where a grain has such an early ripening tendency, it is hurried along by the forces of nature so rapidly that it has not time to store in the fast-ripening head kernels so plump as in the case of a slower-ripening sort, and it is not unlikely that it may be exceedingly difficult, if not impossible, to combine all these good qualities in the highest degree in any single variety, but the interests involved are so great that the possibility of its attainment should prove a stimulus to unceasing work in this direction."

So it would appear that we have thus far originated little worth while that is distinctively Canadian in the grain line; nothing which we can claim as a pure and simple contribution to the biological science of the country. This goal is still before us.

The other results in the special lines of experimental agriculture followed, we must refer to in a subsequent letter, in order to hold the scales fairly between the parties. A. E. BURKE.

density and wearing properties of the bones; a marked advance in the direction of deepening the rib, shortening the coupling, and rounding the barrel; a gradual but quite discernible return to the old Clydesdale type of head, and a very distinct advance in general soundness and freedom from the diseases scheduled as hereditary unsoundnesses by the Royal College of Veterinary Surgeons. In proof of this, it is but necessary to refer to the results of the veterinary examinations at the Royal Agricultural Society's Shows since these came into force. None of the other draft breeds has come anything like so well through this ordeal as the Clydesdale.

DEFECTIVE ACTION IN HORSES.

Defective action in horses is usually due to undesirable conformation, and, in many cases, little can be done to correct it. The height of action can be greatly influenced by careful shoeing and driving, but these factors do not influence the line of action to any considerable degree. The true actor will fetch each foot forward in a straight line, neither paddling nor rolling the fore feet nor going wide, nor yet close enough to interfere with his hind feet. Any deviation from the straight line is defective. An exception to this may be made in respect to the roadster, which is allowed to go somewhat wide behind, although the "straight-line" trotter is preferred. The line of action a horse will show can, with reasonable certainty, be told by his conformation. This is especially true in regard to fore action. A horse with a breast of average breadth, with fore legs set well under the body, and descending downwards in a straight line, deviating neither outwards nor inwards, and standing straight, turning the toes neither outwards nor inwards, will, with few if any exceptions, go straight, while if there be any deviation in the direction of the limbs from the shoulder to the ground, or if he turn his toes either way, there will be a deviation from the straight line of action. If the limbs deviate outwards he will of necessity stand with his feet wide apart, and will usually stand out-toed. Out-toed horses usually roll their feet; that is, when the foot is lifted and brought forward the toe deviates inwards towards the pastern, fetlock, cannon or knee of the opposite limb, according to the height of action. In many cases the opposite limb is struck (wounds from this cause are called "speedy stroke"). In the case just mentioned there will probably not be speedy stroke, as the feet are planted at considerable distance apart, and though when lifted a foot tends to come inwards under the center of gravity, and at the same time the toe rolls towards the other limb, in most cases will not strike it, because it, instead of being well under the body, deviates outwards from the line of probable contact with the shoe of the lifted foot. The opposite conformation is when the limbs deviate downwards and inwards from the shoulder to the ground (which conformation is usually accompanied by a very wide breast), the feet are planted close together, and in most cases the toes turn inwards. In-toed horses usually paddle or dish; that is, when the foot is lifted and brought forward the toe describes a segment of a circle outwards, requiring for progression a much wider space than for standing. At the same time, horses of the conformation under discussion will not show the paddling gait to a marked degree, as when a foot is lifted the tendency of the whole limb is to incline outwards under the center of gravity, and this removes from the foot the well-marked rolling motion. In either of the above cases there is practically no danger of the animal injuring himself on account of defective action, and although such defects lessen his value, they do not greatly lessen his usefulness, and little if anything can be done to rectify the defects.

Probably rolling causing "speedy stroke" is the most serious defect in fore action. This is noticed in horses whose conformation from shoulder to fetlock or pastern joint is normal, those which stand with the feet the proper distance apart, but whose toes turn outwards. The malformation may, and often is, from the fetlock downwards; the bones below the fetlock deviate outwards to a greater or less degree, and, as a consequence, when the foot is planted the toe turns outwards. In other cases the defect is from the pastern joint downwards. The danger of the horse injuring himself is influenced by the degree of deviation and the height of action. The tendency is to roll the foot and strike the opposite limb. The liability to strike can, in many cases, be lessened by careful shoeing. When the fetlock of the opposite leg is the seat of contact, a heavy shoe, with the toe rounded instead of having a calk, will in many cases cause the horse to lift the foot higher, and thereby prevent striking. When the knee is the seat of contact a light shoe will usually cause lower action and prevent wounding. When the defect in action is so marked that he will strike at all heights, prevention is very difficult. All manners of shoeing have been tried, such as shoeing with tips—that is, shoes covering only part of the lower border of the wall, reaching only partly around and leaving the heels bare; lowering the under side of the foot in order to correct the standing position, and to some extent turn the toe inwards. This, in our opinion, is dangerous, as in order to keep the foot and limb sound it is necessary that the horse stand nearly or quite level, as any material deviation from this tends to put too much strain on certain tendons or ligaments, or to place the bones forming the joints in an unnatural position, and hence predispose to disease. Another method of shoe-

ing is to put on a shoe the outside of which from the toe to the heel is light, being of the same thickness, but much narrower than the inside from toe to heel. The shoe must be of the same thickness in order that he may stand and plant the foot level, but the inside being much wider is consequently much heavier, and the theory (a mechanical one) is that when the foot is suspended in the air the weight on the inside tends to keep it down below the level of the outside, and thereby prevent the rolling motion. Some claim that the outer side of the shoe should be the heavier, but we have never known it to correct the action and cannot understand the principle upon which it is supposed to act. The rolling motion of some horses is more easily modified than that of others, and what will affect one will often have no beneficial action upon another. In many cases we find that the fault cannot be corrected by any manner of shoeing, and unless the animal can do his work without shoes, we are compelled to use ankle, shin or knee boots, according to the height of action, and as the height of action often depends upon the speed at which a horse is driven, and some horses will strike at any and all gaits, it is sometimes necessary to use both an ankle and shin boot and also a knee boot. "WHIP."

HAND-RAISING COLTS.

Editor "The Farmer's Advocate":

Seeing an inquiry from Bruce County, asking for experience in hand-raising colts, I will give ours. We had one which the mother would not own, but she was held for the colt to get a little of her milk for the first week, besides a little milk of a fresh cow; and it was fed nights the first two weeks. The second week it got a cup of milk with a teaspoon of brown sugar every two hours (no water). As the colt got older, it got a quart of milk with a tablespoon of sugar, and then three quarts with a handful of sugar. The colt was fed every two hours all summer—not nights, but the last thing on going to bed—and got a handful or two of oats as soon as it was old enough, and was kept in a little field handy to the house, and was put in the stable every night. It never was sick, and has grown to be a fine large colt. ONE WHO RAISED THE COLT. Wentworth Co., Ont.

LIVE STOCK.

DETERMINATION OF SEX.

Many and strange are the theories put forth to explain the determination of sex in animals, man among the rest. Many of these conjectures are absurd on the face of them; others seem more or less plausible, but fail when put to the test. Casual observers often construe a few striking coincidences as cause and effect, and jump to unwarranted conclusions. The subject is, nevertheless, a legitimate one for speculation, and we were somewhat interested the other day to notice the following experience, related by one who calls himself "Spero," writing in the English Live-stock Journal. This man became interested about twenty-six years ago by a paragraph in the above journal setting forth the theory of an American rancher who claimed to have discovered that the sex of possible calves changes regularly every time the cow is in season. To test this theory, the English breeder selected nineteen of his pedigree Shorthorn cows, which had already produced cows, for an elaborate trial. The cows were served at the usual time after calving, the intervening periods of oestrus being carefully kept track of. As cows vary considerably in the time between calving and their first heat, it follows that some were served at their first heat and others at their third or fourth. The result was startling, for in every case, except possibly one, the theory panned out. The cows which produced bull calves, and were got in calf again at the first, third or fifth period, produced heifer calves, while those bred at the second, fourth and sixth periods dropped calves of the same sex as before.

Some years later he changed the breed of his herd and went in for Jerseys. It was then desirable to secure heifer calves, and the rule was applied with general success. As absolute certainty in selecting the odd or even numbered heats was not always possible, occasional disappointments were met with, but this happened rarely, and never when there was not room for doubt.

The correspondent does not remember of any other similar experiment with cattle, but mentions the case of a gentleman who tried it on poultry. Selecting a prolific hen, he placed her eggs in two baskets, alternately, as they were laid. One lot hatched all cockerels, the other all pullets. How this theory could be reconciled with the occurrence of both males and females in litters, we are not told.

The above theory is simple, and seems at least quite as plausible as most others we have ever heard relative to this interesting subject. If true, it is certainly remarkable that it has not been scientifically and publicly demonstrated long

ago, but sometimes simple explanations long elude the attention of investigators. Will some of our experiment-station authorities undertake an answer by demonstration?

THE HOG INDUSTRY IN GLENGARRY.

The following is a copy of portions of a letter, dated April 10th, and received by Superintendent of Farmers' Institutes, G. A. Putnam, from Mr. Duncan Anderson, who has been attending special bacon meetings in Eastern Ontario:

"I finished the meetings in Glengarry County this afternoon. The attendance was not large, would average about 30. At Lancaster, Bainsville, Alexandria and Maxville the meetings were interesting. At the four points named the discussion was animated and keen. Bainsville was in this respect one of the best Institute meetings I have ever attended. Sometimes I was deluged with questions, such as, 'Does it not cost more to produce the bacon type than the thick fat?' 'Is it profitable to grow hogs in winter?' 'What is the best kind of pen to build?' 'Should hogs not be crowded fast so as to be ready for the market at five months or earlier?'

"I have been urging them to grow more hogs of the correct bacon type; to grow more and buy less grain feed; break up some of their worn-out hay fields; grow roots for hogs in winter; and re-seed to grass, they would get more and better hay.

"I tell them they have in Glengarry 31,000 milch cows, and only kill or sell 21,000 hogs. That to work up their dairy by-products to the best advantage they should at least sell two hogs to the cow, that would be 60,000, and instead of getting \$200,000 as they are now, the income from this source would be over \$500,000. I am urging them to grow roots; there are not 700 acres of mangolds and turnips raised in the whole county. I gave a number of reasons why roots should be fed—that the hogs will thrive better, that they save meal and make a better use of what is fed, that when a liberal quantity of roots are in the ration when the hogs are growing and being finished, they help make a firm and superior quality of bacon.

"In Montreal we visited several pork-packing establishments, and found at one place a bunch of 54 hogs, but in the lot there were not one dozen good ones. Thirty of them were unfinished, and did not weigh more than from 100 to 130 pounds, and were very thin, skinny, lean, and undesirable lot, and should have been fed at least six weeks longer. Another company had, at least, 500 fine hogs; 70% were first-class in both bacon conformation and finish. They came from Campbellford, Ont., and gave evidence that the producers of them had made profitable use of the instructions received from your Department. You may judge the quality of the hogs by the price paid, \$7.65 delivered in Montreal."

OXYGENIZED MEAT.

Cable despatches from Sydney, Australia, recently announced the alleged discovery of a new method of preserving meat by oxygenizing, that would entirely supersede cold storage, with its freezing and chilling processes, reducing the cost from 60 or 70 shillings per ton to 8 or 10 shillings, with about one quarter the cost for plant. It was stated that shipments were about to be made to England of the meat. We at once wrote to Australia and England for verification of the story, and from one of the leading houses in the dressed-meat trade of Liverpool, Eng., the following reply is just to hand:

"We are in receipt of your favor of the 20th ult., regarding the reported process for oxygenizing meat, and in reply thereto beg to say that we have no more information of this process than what you also seem to be possessed of, nor can we glean any here. We may say that similar processes are announced here about every three months, but they never come to anything. If any interesting information reaches us later we shall have much pleasure in sending it on to you."

DOGS, AND WATER SYSTEM.

Editor "The Farmer's Advocate":

The dog question was settled in our municipality long ago; \$1 is charged for every dog over six months, \$2 for bitches. If any sheep are killed by unknown dogs, owner is compensated for two-thirds of sworn value of sheep. A bonus is also paid to any party shooting a dog worrying sheep.

Our system of watering cattle is very satisfactory, though probably common. A galvanized sheet-iron trough runs full length of row of cattle. Water is supplied by gravitation through iron piping from a spring twenty rods away. The cost of the whole system did not exceed fifty dollars, including labor. An overflow is connected to trough.

Ontario Co., Ont.

Let us not live fretful lives. God will never stretch the line of our duty beyond the measure of our strength. We ought to live with the grace of the flowers, with the joy of the birds, with the freedom of wind and wave. Without question this is God's ideal of human life.—W. L. Watkinson.

NOTES FROM IRELAND.

SHORTHORNS BOOMING.

We are going ahead in Ireland, in some things, at all events, and Shorthorn breeding is one of them. Judging from its popularity with us, the cosmopolitan red, white and roan is the breed for this country, and its supporters have every reason to feel gratified with the progress it is making. By the results of public sales, one can best judge the measure of appreciation entertained for any class of live stock, and the recent extensive Belfast auction of pedigree Shorthorn bulls was not without satisfactory significance. The bulls catalogued were of a very useful character, and afforded unmistakable evidence of the skill and enterprise which the majority of the tenant-farmer breeders of the north are bringing to bear upon the management of their herds, which, for the most part, are of recent origin. To Mr. F. Miller, of Birkenhead, the well-known and extensive exporter of pedigree stock, fell the distinction of giving the highest price yet realized at a public Shorthorn sale in Ireland, namely, 300 gs. This figure he paid for a remarkably level, well-made young red yearling, bred by Mr. J. A. Gibson, of Craigavad, Co. Down, and rejoicing in the name of Enfield, Bonnyblink. This calf is from the best strains of the old Sittyton Clipper tribe. We may briefly summarize the trend of the sale prices by saying that upwards of one hundred bulls sold at the very considerable average of over £42 11s. per head. The best prices were realized by Mr. R. W. Bell, Coagh; Mr. Thos. Pattleton, Money-more; Mr. W. J. Lyness, Moira; Mr. I. H. Cowan, Money-more; Mr. George Dickson, Newtownard, etc.

The increase in the number of pedigree breeders has been commented on in many places, and some of the English papers are now referring to the Irish herds as valuable sources from which to derive changes of blood. Recently one of our leading breed enthusiasts, Land Commissioner Hon. Fred Wrench, who is also a noted Hackney supporter, drew the attention of the Shorthorn Society of Great Britain and Ireland to the progress of the breed on this side of the Channel, and requested the Society to arrange for occasional meetings in Ireland. This proposal seemed only fair, but some worthy English and Scotch members, at the meeting at which it was considered, raised unreasonable objections. It was then decided by some of the leading Irish breeders to hold a meeting of their own on the occasion of the annual spring cattle show of the Royal Dublin Society, about the middle of April, and the arrangements for this junction, which is to be partially of a social character, have been completed. A deputation will attend the gathering from the Shorthorn Society, and there is every likelihood that from it will emerge an association of Irish Shorthorn breeders, not, of course, as a rival, but as a branch of the existing Society. There are some three hundred pedigree Shorthorn herds in Ireland, and the periodic meetings of and discussions among the owners of these cannot fail to be productive of beneficial results.

DEATH BUSY.

Agricultural and live-stock interests have recently received some serious losses through death. I may mention the passing away, at 69 years of age, of the noted agricultural chemist, Prof. Warrington, M. A., who for many years was intimately associated with the Lawes Experimental and Research Station at Rothamsted. He was the author of some standard works, the best known of which were his "Chemistry of the Farm," the demand for which exhausted fifteen editions, and a treatise on "Soil Analyses." In Ireland one of our most extensive and most popular land-owners has been called away, in the person of Mr. E. T. Dawes Longworth, D. L., who, at his beautiful estate at Glynwood, Athlone, Co. Westmeath, carried on successfully the breeding of Clydesdale horses, Hereford cattle and Oxford Down sheep, bringing out some choice specimens to our leading shows. He was identified with several agricultural and breed societies, and an active member of the Royal Dublin Society. From the ranks of yet a third section of the agricultural community, viz., the land stewards and farm managers, a well-known and much-esteemed personality has entered into rest, in Mr. John Murison, who was only about thirty years of age, but had already won remarkable success in his work at Dunmore, Durrrow, Queen's Co., the headquarters of that well-known stock exhibitor, Miss Staples. Only last year Mr. Murison led the champion Shorthorn bull at the Dublin Spring Show, and at the English Royal, also, it was he who brought into the ring the animal that eventually won first prize in the aged bull class among the reds, whites and roans.

THE INTERNATIONAL EXHIBITION.

Arrangements for this great venture are being energetically pushed on, and a staff of well over 1,000 workers are rapidly bringing the structural and other features to completion. The opening

ceremony is to be performed on the 4th of May by His Excellency the Earl of Aberdeen, and will be vested with all the pomp and splendor inseparable from a state function.

"EMERALD ISLE."

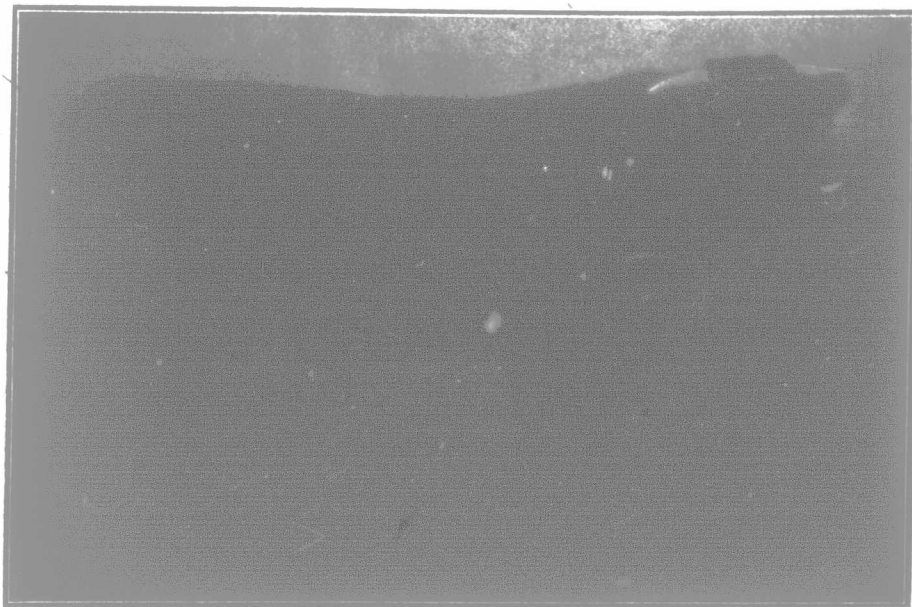
Progress in the sense of acquisition is something; but progress in the sense of being is a great deal more. To grow higher, deeper, wider, as the years go on; to conquer difficulties, and to acquire more and more power; to feel all one's faculties unfolding, and truth descending into the soul—this makes life worth living.—[James Freeman Clarke.

There are many farms throughout the country from which the wood-lot is rapidly disappearing. If the owners could be induced to preserve the wood-lot by fencing out stock and restoring natural conditions, in a few years they would have reason to congratulate themselves on having avoided a serious mistake, and conferred a blessing on the community at large. Middlesex Co., Ont. J. R. COLEMAN.

SPLIT-LOG DRAG BEATS THE OLD LEVELLER

Editor "The Farmer's Advocate":

I saw a statement by a Quebec writer to the effect that in his opinion the style of scraper they use in his locality is more suitable for clay roads than the split-log drag. Now, I would like to say to this gentleman, or any others who are skeptical as to the relative merits of the split-log drag and the old-style read scraper, just construct a drag and use it as per directions on the worst clay road you can find, and I am sure you will change your mind, for this is where it shines. We have constructed and used a split-log drag on a clay road that has been scraped for years with just the style of scraper represented, and of recent years with a much more improved scraper than your Quebec friend described. We have to admit that we were skeptical ourselves, but thought we would give the thing a trial, and were greatly surprised at results. At the very first attempt we did a much better job than we ever did with the old-style scraper, and with only one team, whereas we had to use two before, and wait till we should have been seeding. People don't like to go scraping roads just at the beginning of seeding. The split-log drag can be used—in fact, must be used—at a time when seeding operations are at a standstill on account of too much moisture. The thing looks trifling, but just try it. There is scarcely any expense in connection therewith. Essex Co., Ont. OBERVER.



Broadhooks Champion.

Yearling Shorthorn bull. Sold at Perth sale, Scotland, 1906, for 1,500 guineas.

THE FARM.

AN UNPASTURED WOOD-LOT RESTOCKING ITSELF.

Editor "The Farmer's Advocate":

Herewith I send you a couple of prints from a negative, giving a view of an unpastured wood-lot on the farm of Mr. E. Guest, Middlesex Co. Stock have been kept out of this wood-lot for from eight to ten years. The owner informs me that at one time they contemplated selling the wood, but are very glad now that such a plan was not carried out.

Under such ideal natural conditions as to soil moisture, etc., the growth of the young trees is quite



An Unpastured Wood-lot Reseeding Itself.

rapid, much more so than that of ornamental trees ordinarily planted about residences. The trees shown are almost entirely sugar maple, and vary from eight to twenty feet in height, with a diameter of 1/4 to 2 inches, besides smaller trees down to seedlings just above the ground.

It is a beautiful place about the 24th of May, but such sentimental considerations do not appeal to the majority. There are many other arguments, however, with which such can be met, and I know Mr. Guest considers himself well repaid for maintaining such a wood-lot upon his farm.

tion; and, after being treated in this way, we never saw a grain or blade of corn taken, pulled or destroyed by the crows. They simply did not go near it, although last summer our cornfield was several hundred yards from our dwelling house, while in the two former seasons the corn was planted in the immediate vicinity of our dwelling house and buildings, where we had to replant parts of the field a second time owing to the crows pulling out every blade of corn as it came through the ground, for yards at a stretch in some places, although we used the shotgun and

will soon be around again, I herewith send you my method, which proved successful last year, to prevent crows from eating or pulling up the seed corn in springtime, as in former years. Last spring, a couple of days before planting, I took about a pint of coal tar and heated it to almost a boiling point, which made it very thin. After dumping our corn in some large tubs, one end of a stick was dipped in the hot tar, then used to stir the corn for several minutes, which just gave the corn enough tar to darken the color a little, but at the same time it gave a strong tar odor. After exposing the corn to the sun for a few hours, it was completely dry, and could be run through the seeder as well as before receiving this preparation. In this way, we never saw a grain or blade of corn taken, pulled or destroyed by the crows. They simply did not go near it, although last summer our cornfield was several hundred yards from our dwelling house, while in the two former seasons the corn was planted in the immediate vicinity of our dwelling house and buildings, where we had to replant parts of the field a second time owing to the crows pulling out every blade of corn as it came through the ground, for yards at a stretch in some places, although we used the shotgun and

rifle on them, leaving some of the dead ones lying where they were shot, while others were hung up on stakes, fence posts, etc., as well as other scarecrows displayed in different shapes and forms. In spite of all this, we lost a large part of our corn crop every year.

I may add that it is important to heat the tar hot, and stir the corn thoroughly with a stick or corncob after being dipped in it, and the corn left in shallow lots, exposed to the sun or wind for a few hours to dry, otherwise the corn might stick together and not go through the seeder or corn-planter evenly.

W. A. OSWALD.
Two Mountains Co., Que.

TRY SOME "EMMER."

Editor "The Farmer's Advocate":

I notice that emmer is not generally grown throughout the country. This spring grain, we believe, should receive more attention. We have been growing it now for four years, and find it very desirable. Last year it yielded us sixty measured bushels to the acre. Mixed with oats or other rough grain, it makes an excellent chop either for cattle or hogs.

Emmer requires the same cultivation as our ordinary spring-grain crops. It, however, has the advantage that it does almost as well sown late as sown early. One bushel of seed per acre, we find, is plenty to obtain the best results, and also give an ideal nurse crop for clover or grass seed. Remember that emmer is not speltz. It is superior in almost every respect. I trust, Mr. Editor, that you will advise the many readers of your valuable paper to give emmer a trial this spring.

Middlesex Co., Ont.

B. J. WATERS.

ALFALFA SEEDING IN JULY.

Editor "The Farmer's Advocate":

Quite a number of your subscribers are asking for information about alfalfa. I have been growing it for several years, and have tried many ways, seeding in spring with fall wheat, harrowing it in, sowing one bushel of barley as a nurse crop, and sowing it alone at various dates. My soil is a rich sandy loam, gravel subsoil, and I am firmly convinced that for me the best plan is to fall-plow and thoroughly cultivate until about first of July, then sow 20 lbs. per acre. This method thoroughly cleans soil of all grass and weeds, and conserves abundance of moisture, and the ground is very mellow. Under similar conditions, on the 4th of July last I sowed a patch, and just seven weeks after went to clip it with mower, and found it 14 to 16 inches in height, and had to cure it for hay. I tried some nitro-culture on part of a field, but got no benefit whatever; however, if anyone has any doubt it is not much expense nor trouble to try.

Select a small piece of ground where water will not stand, make it rich, have soil in good state of tilth when seed is sown, sow plenty, and you will get what you will want more of. It is not a plant for building up a poor piece of land, as our common red clover, but one that under conditions favorable to it will produce more nutritious food than any other that we are growing at this present time.

F. M. LEWIS.

[Note.—We are very glad indeed to receive this experience in sowing alfalfa in midsummer. In the United States a good deal has been said of recent years about sowing in August, and we have thought possibly summer seeding would be successful in Canada, but scarcely felt warranted in recommending it. Will others who have tried it kindly communicate their experience? As for the nitro-culture, it is plain that the land on this farm does not require it, being already inoculated. There are some cases, however, where nitro-culture produces striking results.—Editor.]

WHAT UNDERDRAINAGE WILL DO FOR ROADS.

We must not let our exploitation of the split-log-drag idea obscure the importance of other means of road-maintenance. The drag will do wonders, but it is not everything. There are many pieces of road that will never be good till they are underdrained, and many others that could be improved more economically in this way than in any other.

About a year ago (see "The Farmer's Advocate," May 31, 1906, page 885) an observant correspondent referred to a piece of highway called the Wellington Road, south of the City of London, which used to be almost impassable in spring when the frost was coming out of the ground. The bog-hole was done away with by a large tile drain up the center of the road, and that part has been good ever since. Inquiry revealed that the draining was done by the city corporation some six or seven years ago, and as there were municipal funds to use, no expense was spared. A large tile was laid some six feet below the surface, and the trench filled with gravel. A less

elaborate system would have sufficed, but there is no doubt the filling with gravel helped, perhaps almost as much as the tile. The results have been a matter of comment to everybody using that highway.

One day this spring, April 5th, by which time most roads in the vicinity had fairly well dried up, a member of "The Farmer's Advocate" staff took out his camera and photographed the underdrained piece, which is a gentle grade on the south side of a hollow. By way of contrast, the camera was then turned north, and a snap taken of the opposite slope. The results are indicated by the accompanying engravings, but the reader must bear in mind that it is impossible to show depth of mud with a camera. A road with a few shallow ruts looks nearly as bad in a picture as one that is badly cut up. Notwithstanding this, the difference is brought out fairly well. The



Cut 1.—An Underdrained Road in April.

underdrained road, we are told, has been fairly good at all times this spring, and on the day of our inspection was in excellent condition, except for one shallow, muddy spot, which would not have been there if there were any semblance of a crown. Crown there is not, the tough sod shoulders being as high as the center of the road.

The opposite slope, shown in the contrast picture, used to be considered quite good by comparison, but this spring was at times well-nigh impassable. Even the day we saw it water was standing in the holes and ruts, some of which



Cut 2.—Underdrainage Needed. The photo from which this engraving was made was taken the same day as that reproduced in Cut 1. This piece of road is just north of the other, and until the other was underdrained this was much the better of the two.

were nearly a foot deep, while the whole surface was spongy, and in such condition that few men would trot a buggy horse over it. In the center, just in front of where the horse is shown in the illustration, two or three loads of cinders had been used to fill a bog hole, and the general condition was such as to afford a most striking contrast with the underdrained stretch.

A \$1.00 KNIFE.

I received the premium knife March 29th, and am well satisfied with it. It is fine, just as good as you advertised it to be, and exactly the thing on the farm. Every farmer and farmer's son should have one. They are worth \$1.00. I hope I may be able to favor you with a few more new subscribers soon, and obtain some more of your valuable premiums.

St. Louis, Mo.

LOUIS A. MARTIN.

THE DAIRY.

GARGET AND CAKED UDDERS.

There appears to be a growing belief that caked udders, diseased teats and affected quarters are on the increase among cows. These troubles condemn many good milkers to the butcher's block. Lately we sent to a number of dairy breeders a letter containing the subjoined catechism. A few replies appear below, but the subject deserves fuller discussion, and we shall be pleased to hear from any commercial dairymen or breeders of registered stock who have had helpful experience. We are particularly anxious to obtain the experience of any who have tried the air or oxygen treatment, which is now recognized as the only treatment worth while for milk fever, and is also recommended by Dr. A. T. Peters, Veterinarian of the Nebraska Experiment Station, for the cure of garget and caked udder.

QUESTIONS FOR READERS.

1. According to your experience and observation, are cases of garget and caked udder on the increase?
2. If so, to what causes do you attribute the fact?
3. What preventive or remedial measures have you found most effective?
4. Have you tried, or have you any knowledge of the treatment advised by the Veterinarian of the Nebraska Experiment Station, viz., pump-in air with a hand bicycle pump through a teat siphon, and massaging the udder?

G. W. CLEMONS, Brant Co., Ont.—I am inclined to believe that these troubles are on the increase, partly, I believe, through carelessness in drying cows; i. e., neglecting to care for them properly, often from press of other work; partly through epidemics of contagious mammitis, which seem to be general in the last two or three years; also from colds, resulting in inflammation (in hind quarters particularly), from cows lying on the wet ground after prolonged cold rains, particularly so in 1904 and 1905.

I would recommend greater care when drying up cows, stabling cows at night during heavy rains, and the free use of disinfectants. I have never tried the air treatment, but a well-known breeder informed me last summer that he had tried it, with complete success, on a case of mammitis, the treatment acting like magic.

I may add that, for inflamed quarters, which are so common in wet summers, the best remedy I have found is a liniment composed of 4 ounces sweet oil, 4 ounces laudanum and 3 ounces extract of belladonna, well rubbed in after milking.

GEO. RICE, Oxford Co., Ont.—Caked udder—so called—I consider to be the normal condition of good cows when in good condition at freshening. It is to be hoped that large udders are on the increase, as it means better cows. I have had people come to the stable when the cow is freshening, and, consequently, having a very large udder, and think there is something wrong with them, and want to know what I would do for it, while that same udder was just what I was working for. Poor cows are not troubled with caked udder, and good cows in poor condition are not so troubled. A good large udder, which is necessarily somewhat caked, does not alarm the man who keeps good cows. Of course, in reaching this desirable end, trouble may come to the inexperienced; and if the udder should appear to be rather hard, or if the cow is in a very flush condition, there is nothing better to soften up the cow's udder before freshening than to put a halter on her and give her a mile or so of exercise—slow walk. Then, of course, she must be put in a fairly warm place after exercising, else she will catch cold after the warming up.

A cow's udder is really a complicated piece of machinery, and if there has been any trouble with her udder before, it is likely to be aggravated when freshening again. In this case, besides exercising, it would be well to give a cow a good dose of salts—1½ pounds to the dose—followed up by a tablespoonful of saltpetre once or twice a day, as the case may seem to call for, in her feed. Saltpetre is a mild purge, and cooling to the blood. Udder trouble is nearly always caused by a poor condition of the blood. It is for this reason that a good dose of salts, given promptly upon any appearance of trouble, so quickly relieves the soreness of the udder.

Another prolific cause of udder trouble or garget is often carelessness in milking—not milking clean. Take a poor milker in a stable, and he will be having trouble all the time, while a good, thorough milker will not have any trouble, when the cows are otherwise all under the same conditions. If, however, garget strikes in, from neglect or any other cause, it should be attended to at once by purging the cow with a good dose of salts. If allowed to go even one day, it may result in a partial loss of that quarter of the udder.

There is considerable trouble from cow pox.

which is a different "pox" than we were used to some years ago. That is, we have had of late years what we may call a species of cow pox that is very similar to a boil. It forms a hard lump, and inflames the spot larger than an egg, and after a number of days it will gather and break. In the treatment of this, it is not well to go squeezing this lump before it is "ripe." It is something, in this respect, like a boil. Then, when it breaks, or is ready to break, the putrid stuff will come out, and there is a "core," as in a boil, that comes from it. This complaint will spread from cow to cow, and the best way to keep it out is to use disinfectants strongly about, nothing better than diluted carbolic acid to fill up the sore after the "core" is out, and rub around the udder for a few days. This complaint is not likely to be of any permanent injury to the cow, although it is very painful, and, to very nervous cows, makes them touchy to milk. Some cows it does not bother at all, or lower their milk yield.

The treatment for a shrunken quarter, as recommended by the Nebraska Experimental Station, of pumping it with a bicycle pump, might in some cases be of benefit. If the trouble with the udder has been so serious as to make the active parts of that udder practically dead, any treatment is not likely to be very effective. We have known cases, though, where a cow has nearly lost part of her udder, and has had this damaged part brought back to use by commencing on the cow a couple of weeks before she freshens with massage on that part of the udder, and stripping and bringing it to milk before the other parts of the udder have started. In some cases this has worked out all right, and in others it has been impossible to bring the part of the udder back to life again. It all depends, seemingly, upon how much injury to the udder has been done while the udder was in an inflamed state.

The most important point in case of any udder trouble is to act at once. Garget and similar troubles can be scattered—warded off—by giving immediately on the appearance a big dose of Epsom salts. If a cow trembles—appears in pain, with no apparent cause—it's garget coming, and give her a purge at once. Prevention is better than cure. Prompt treatment comes next.

ALEX. HUME, Northumberland Co., Ont.—We think caked udders and diseased teats and quarters are on the increase, owing to several causes. The dairy cows are kept under higher pressure as to feed, close stabling, etc. Their blood is hotter, and, under the high pressure to produce to their utmost capacity, they are more susceptible to changes of weather, surroundings, or other conditions. The greatest care and attention should be given them to note the first symptoms of any of these troubles; in fact, to foresee the causes of these troubles, as only the born cattleman can. Do not allow them in draughts or cold weather, and keep them clean. We do not know from experience the treatment advised by the Veterinarian of the Nebraska Experimental Station.

JUDGMENT FALLIBLE WITHOUT FIGURES.

Editor "The Farmer's Advocate":

We have been keeping individual cow records since last March. We were anxious to find out not only which were the best and poorest cows in the herd by actual test, but also to determine just how far wrong we might be in our judgment of each cow's production. We wished, also, to find out the difference, if any, in total yield between cows which milk well for a short season and those which give a smaller yield for a longer period.

For weighing, we used a spring balance, procured from the Department of Agriculture, and the weights were recorded upon milk sheets prepared and furnished free by the Department. If the balance is hung in a convenient place in the stable, very little time indeed need be lost in taking the weights, and, after a milker has become familiar with the usual yields of his cows he can milk and weigh several before stopping to record the weights.

As a result of one season's work, I am convinced that no one can judge the merits of his cows individually without keeping actual records; that one is very liable to be mistaken in his judgment of a cow's total yield by guessing at the amount in the pail, and that the cow that keeps up her average for nine or ten months of the year will make a much better showing at the close than might at first be supposed.

If a man is already caring for his herd to the best of his knowledge, the establishment of an individual milk record would, I feel quite safe in saying, be still another step in advance. When it has been in operation a short time, it soon creates a lively rivalry among the milkers as to which can make his cows do the best, and when this feeling exists the owner may rest assured that his cattle will not be neglected by those in charge.

It is possible, by this means, to increase the yield gradually, and to know just when the limit

of profit has been reached; and so long as an increase in the feed is repaid by a proportionate increase in the pail, one may know he can safely continue.

Hastings Co., Ont.

H. S. TUCKER.

OBJECTS OF CHEESE-FACTORY INSTRUCTION.

In view of the change in the system of dairy instruction in Ontario, whereby it is taken over this year and administered directly by the Department of Agriculture, the following summary of the objects of this instruction work is of special significance and importance:

OBJECTS OF INSTRUCTION.

In the production of high-class cheese, it is essential that the milk be clean, sweet and free from foreign flavor upon reaching the factory. Both the quantity and the quality of the product will suffer when the raw material is inferior. Unless the patrons supply milk of good quality, they cannot in justice hold the maker responsible for the quality of goods made therefrom. The health of the cows, the water supply, the quality of the food, the condition under which milk is drawn from the cow, the care used in seeing that it is not exposed to dirt or dust of any kind, proper handling, etc., all require unceasing watchfulness and care.

In order that the maker may receive instruction regularly and periodically, and that the producer may be directed wherein he may improve in the production and care of milk, the Department of Agriculture has employed a staff of instructors to visit both the factories and the farms upon which the milk is produced. The instructor is not a detective, but a co-worker and educator. All tests for adulteration will be made at the factory, and action for prosecution left with some official of the factory concerned.

To dispel the misapprehension which exists in the minds of many as to the aim of the Department of Agriculture and the Dairymen's Association in providing instructors, a few statements as to the work they are doing will here be given:

1. To assist the makers in producing a high-class article by

- (a) Pointing out defects in the cheese on hand, and suggesting to the makers means of overcoming these defects.
- (b) Explaining to the makers as clearly as possible the quality of cheese required by the trade, so far as acidity, texture, color, finish, etc., are concerned.
- (c) Following the different stages of manufacture from the time the milk is received until the curd has been put to press, and pointing out the importance of care, watchfulness, and a definite aim at all times.
- (d) Suggesting needed improvements in equipment, drainage, methods of disposing of whey, etc.
- (e) Examining the curing room, and instructing as to requirements so far as ventilation, degree of moisture, regulation of temperature, etc., are concerned.
- (f) Drawing attention to the necessity for absolute cleanliness at all times and in all stages of manufacture.
- (g) Making curd tests of each patron's milk, in order that foreign flavors and undesirable qualities may be detected.
- (h) Testing samples of milk for butter-fat content.
- (i) Doing anything and everything which will tend to stimulate both maker and patron to do their best.

2. To visit the farms of patrons, not in the capacity of a detective, but to see the conditions under which the milk is kept, and give instructions as to

- (a) Most effective and simple method of cooling and caring for the milk.
- (b) Best location and equipment for cooling purposes.
- (c) Necessity for an abundant supply of pure water both for cattle and for cleaning purposes.
- (d) The desirability of not allowing cows to have access to swamps, stagnant ponds, weedy pasture, etc.
- (e) Suitable places for milking. Cows should not be milked where they are exposed to odors from hogpens or filthy barnyards.

NAMES OF THE INSTRUCTORS.

In connection with the above statement, we are able to announce the personnel of the instruction staff for 1907. In Eastern Ontario they are: Dr. C. A. Publow, at Picton; D. J. Cameron, Lindsay; J. B. Lowery, Bancroft; R. W. Ward, Peterboro; R. T. Grey, Campbellford; Hugh Howie, Belleville; Geo. Bensley, Napanee; H. Brentnell, Kingston; S. S. Cheatham, Gananoque; D. H. Wilson, Brockville East; P. Nilan, Brockville West; F. Singleton, Smith's Falls; W. G. Gardiner, Kemptville; J. H. Eclin, Perth; J. B. Larry, Finch; W. J. Ragsdale, Vankleek Hill; I. Villeneuve, St. Isadore; J. Charbinau, Plantagenet; W. Doole, Ottawa; R. Elliott, Ren-

frew; C. W. Norvell, Morrisburg; J. Buro, Cornwall; L. A. Zuefelt, Chesterville. Chief Instructor, G. G. Publow, Kingston.

At a meeting held at Guelph, April 1st to 5th, plans for dairy-instruction work in Western Ontario were fully discussed, and Chief Instructor Hems announces the following appointments:

Jas. Burgess, Listowel, Listowel District; E. N. Hart, Woodstock, Woodstock District; Alex. McKay, St. Mary's, Stratford District; Geo. Travis, Tillsonburg, Simcoe District; R. H. Green, Cayuga, Brantford District; W. Hamilton, London, London and Western District; Fred Dean, Strathroy, Western Creameries; Mac. Robinson, St. Mary's, Eastern Creameries. Frank Hems, Chief Instructor, will look after the factories not included in any of the above groups.

A COMPREHENSIVE ARGUMENT.

Editor "The Farmer's Advocate":

The keeping of individual milk records is a subject which has not received the attention by farmers that it should, owing, possibly, to the fact that they think it is not necessary, and that they think they know what their cows are doing, and need no further proof. I have talked to men on the subject of keeping records, and they would pooch-pooch the idea of a farmer taking the time to weigh the milk from each cow, and say they could not be bothered with such nonsense.

I started to weigh the milk from my cows because I wanted to know whether they were working for me, or I working for them and boarding myself, which I found to be the case with some of them, and not always the suspected one.

By weighing the milk from each cow, I have learned that, whereas I thought I knew which were the best, in fact I knew very little about them. We had some cows that when they freshened would do very well, but after a few months would shrink in their milk, but we thought, of course, that they were all right because they filled the pail at the start. We did not take into account what it meant for them to shrink later on, but when we put them to the test by the scale then we had our eyes opened to the fact that we had deceived ourselves. Another cow, which did not start out with a very great flow of milk, but which kept up pretty evenly all through the season, came out at the end with about 2,000 pounds of milk more to her credit than the other that gave such a great promise. It takes the scale to pick them out; figures do not lie.

When I started to weigh milk first, our average for the herd was comparatively low; but by the searchlight of individual milk records we have, in a few years, raised the average of our herd by 1,500 pounds per cow, which, for ten cows, amounts to 15,000 pounds for the season. Figuring that at 80 cents per hundred pounds, I find that I have, for one season alone, \$120 in hard cash as a result of keeping records.

Sell the poor cows to the butcher; keep the good ones and raise their heifer calves; buy a good one when you can, and you will soon raise your average. You ask, are milk records a benefit to a man who is already taking as good care of his herd as he knows how? Decidedly, yes. By referring to his record he finds how each cow responds to feed, and it is up to him to watch closely, and as they increase the milk flow, so increase the feed, and find how much she will stand. Some will take more than others; some will respond to feed and put the product in the pail, while others will not increase the milk flow but put on flesh, and that is a trait you do not want in a dairy cow. So, in conclusion I would say, find out what your cows are doing—whether they are paying or not. The surest way to do that is by keeping an individual record.

Perth Co., Ont.

THOMAS JOHNSON.

WORKING OUT THE SUNDAY CHEESEMAKING PROBLEM.

The letter from J. G. Shearer, published in the April 11th "Farmer's Advocate," calls attention to the application of the new Lord's Day Act to cheese-factory management. Under "work of necessity and mercy" not prohibited, are some two dozen classes specified, one of which (m) reads: "The caring for milk, cheese and live animals, and the unloading of and caring for perishable products and live animals arriving at any point during the Lord's Day." The following interpretive clause is given by the legal advisers of the Lord's Day Alliance:

"Hauling milk to factories and making cheese or butter, even out of Saturday night's milk, is not here allowed, only 'caring for' the things named."

Under the Provincial Act employees are liable, but under the new Dominion Act, Mr. Shearer pointed out that joint-stock companies or individual owners are subject to heavy penalties for violation. The chief trouble is with the Saturday night's milk, taken in that evening. The process of making it into cheese begins that night, and is completed some time during Sun-

day. To do away with this work, and to secure the workers in the factory their Day of Rest, Mr. Shearer suggests three plans:

(a) The Saturday night's milk to be cared for by the farmer with cold water, ice, etc., at the farm, and taken to the factory Monday morning. At this date ice is not available, and in case of herds of 25 to 40 cows, in hot, muggy weather, to keep the milk sweet, even with spring water, is exceedingly difficult, though it has been done. There must also be provision for drawing the extra day's milk to the factory, and extra factory and vat space for making it up on Monday. Farmers and those with milk routes manage to handle the extra Sunday morning's milk all right, as a rule, but to include Saturday night's milk also adds much to the difficulty.

(b) Factories to put in butter plant, cream Saturday night's milk, and make it into butter the following week, say about Tuesday. The owners of some very successful factories, like that of Harrietsville, Ont., adopt this plan, and report it very satisfactory, as it furnishes the patrons with their butter, and relieves the factory employees of the Sunday work. It requires the maker or assistants to understand butter-making, and adds to the work of salesman and secretary.

(c) The farmer himself making Saturday night's milk into butter. Where he has a separator or other creaming facilities, and a small herd of cows, this is not difficult to do, but with large herds, such as many of our dairymen have, it will hardly commend itself.

Solution (b) appears to be the most feasible and satisfactory of the problem which confronts the factory-owner or company, who are directly responsible under the Act, and doubtless the Lord's Day Alliance and the Crown authorities will be disposed to allow reasonable time for factory management to be readjusted to the situation under the Act. The experience of dairymen in solving the difficulties referred to should be of service.

POULTRY.

HOT-WATER INCUBATION.

Editor "The Farmer's Advocate":

In your issue of March 28th, on pages 530-1, you reprinted from Farm Poultry an article headed, "General Directions for Operating an Incubator." That article expounds certain fallacies. It suppresses certain vital facts. It is, seemingly, conceived in a tone of lofty disregard for the experience of successful poultrymen. In substance and in implication, that article is a veiled attack upon the hot-water incubator, and a plea in behalf of a certain make of hot-air incubator. As I cannot believe that "The Farmer's Advocate" wilfully approves injustice or propagates error, I must assume that you printed this article as the mere expression of an individual opinion, and that you do not endorse its assertions. But I feel that I may reasonably expect you to accord the facts the same publicity and emphasis you granted the fallacies; and to those facts I now ask your attention.

I am a practical poultryman, interested financially in the largest poultry-growing enterprise in Canada. Also, I am identified with the corporation which builds the Peerless Hot-water Incubators; and in your advertising columns—not through the ingenious and inexpensive method of "General Directions," printed as reading matter—that corporation tells in plain English the provable facts about its product. In those facts, and in our incubator, thousands of successful poultrymen believe implicitly, and they so believe for the best of reasons—it has helped them make money.

But, if we are to credit the article you reprint, the hot-water incubator is a failure, and the hot-air machine the sheet-anchor of artificial incubation for profit's sake; and not merely the hot-air machine, but one specific make of hot-air machines—which one, anybody may discern who can read between the lines of the obviously inspired article in question. Now, sir, I say to you, speaking as a practical poultryman, and supported by evidence not even the writer in Farm Poultry can distort nor challenge, that the hot-water incubator, and no other type of artificial hatching device, has proved itself.

The article ingeniously specifies, so that he who can read between the lines can hardly err, which hot-air machine is the one that reduces all other incubators to mere ciphers. The machine which inspires the pen of the writer of that article is, he tells us—and as he declares every incubator must be to be worth while—double cased with double-glass doors in front. Its trays must slope towards the center, its lamp must be asbestos-cased. Moisture must be provided in it during the final stages of incubation. And there are other guideboards dotted through the article to tell us whence came the inspiration which conceived these "General Directions"; while, oddly enough, the animus of the article is aimed not at the competing hot-air incubators, but at the one alternative method of hatching which the hot-air advocate declares he has tried—a leaky hot-water incubator.

The Peerless happens to be the latest against leak-

age for ten years; and in its whole successful history not one of its users has suffered one cent's loss through leakage. But it may leak—the writer of the article says he once had a hot-water incubator which did leak; ergo, every hot-water incubator leaks. To such an amazing postulate, I, as a maker of hot-water incubators, might reasonably enough point out the countless losses that have resulted from hot-air incubators catching fire. And I might with equal reason deduce that every hot-air incubator is a menace.

But I do no such thing. I know, as every reputable and honest incubator maker does know, that as between the best of hot-air machines and ours there is no such wide gulf of merit fixed that we may not grant the other certain excellencies. The issue between ours and the hot-air method is one of principle, of mechanics. We maintain, and we have sufficiently proved, that hatching by radiated warmth is more efficient, more economical, and more trustworthy than hatching by diffused heat (the hot-air method). The question is by no means finally settled. It will, probably, never be finally settled, since it can never be possible to hatch the same lot of eggs twice, nor to hatch any two lots of eggs by different methods under precisely identical conditions.

But, in so far as comparative tests go, in so far as actual comparison can demonstrably be carried, our hot-water method has, decidedly, obviously, and profitably, the best of the argument. The question of artificial incubation is primarily one of even heat, of simplified operation, and of results, cost as compared with results produced, dealing with averages. Again, the Peerless justified its name; and it does this on the very face of the article you reprint. For example:

In the 9th paragraph of that article, in the second column of page 530, the writer you quote says, referring to eggs placed in his favorite hot-air incubator: "Those in the center of the egg chamber, where the temperature is slightly higher, lying furthest from the source of heat." This "slightly-higher" temperature contravenes with the first fundamentals of correct artificial hatching, which is, as I understand it, to simulate as closely as may be, the natural method—in which the temperature is not slightly higher in any part of the nest. Every hot-air incubator has, and must have, its hot and cold spots. But in our hot-water incubator the temperature everywhere in the hatching chamber is identical—as it should be for right hatching. It cannot help being so—just as no hot-air machine can help being otherwise.

Again, the article you quote states (paragraph 12, 3rd column, page 530) that "there is a period in each hatch when moisture is absolutely necessary, namely, at hatching time." Doubtless this is true of certain wrongly-built hot-air machines; and it is true because the heating method of these incubators so robs the embryo chick of its moisture that extraneous means must restore the balance. But I would remind you, and your readers, that the most eminent authorities on embryology and on artificial incubation have long ago reached the final conclusion that the egg itself contains all the moisture needed to hatch any fowl properly.

That machine which requires additional moisture in any climate, is built wrong, and cannot hatch right. Our machine uses no moisture at any stage of hatching; and it has made hatching records which have yet to be excelled.

But, says the writer you quote, a hot-water machine once leaked. My answer to that—the one possible answer—is that the Peerless, at least, does not—and under any normal usage, cannot—leak. On page ten of our catalogue you will find this asserted as follows:

"We further guarantee this incubator, with ordinary usage, to develop no leakage in its heating tank or pipes within ten years from the date below, under penalty of replacement free of charge." Remove this objection after this fashion; cite the fact that the Peerless method of ventilation has been declared absolutely perfect by engineers, and by the actual cold-cash results of practical poultrymen; add the truth that no properly-constructed incubator has any need for added moisture in its hatching; consider that we definitely assert, and can prove, that hot-water heat is clean heat (and the only clean heat possible for an incubator), that hot-water heat is even heat (and the only even heat possible for an incubator), that hot-water heat is safe heat (and the only safe heat possible for incubation), that the ventilation, the heat regulation and the question of moisture are dealt with and solved practically only in the Peerless—and not in any hot-air hatching machine—and—

Does it not seem to you that the advocate of the hot-air machine has set up a false and delusive guidepost in his so-called "General Directions"?

THOMAS W. LEE,

Manager, The Lee-Hodgins Co., Limited.

Frequently the question is asked about hens eating eggs, and a cure? I cured a flock of hens that were eating dozens of eggs daily, in two days, by giving free access to oyster-shell, and have never since had any bother. Keep constantly before them.

Brant Co., Ont.

F. M. LEWIS.

In thanking you for reply to question re trap-nests, I beg to enclose my subscription to your valuable paper, "The Farmer's Advocate," for ensuing year, \$1.50—a paper without which no Canadian home is complete.

York Co., Ont.

RALPH COUPLAND.

GARDEN & ORCHARD.

HORTICULTURAL PROGRESS.

Prepared for "The Farmer's Advocate" by W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa.

THE CONTROL OF PEAR BLIGHT.

Report of the Plant Pathologist, Ralph E. Smith, to July 1st, 1906, Agricultural Experiment Station, Sacramento, Cal.; Bulletin No. 184.

Every fruit-grower in the pear districts of Canada should be interested in this bulletin, which not only treats of pear blight, but of many other diseases with which the fruit-growers of California have to contend. It is, however, the account of the work of controlling the pear blight which is of the most interest to us. During the past few years thousands of dollars have been lost to fruit-growers in the Province of Ontario from the destruction of their pear trees by this disease. The blight is a bacterial disease, which cannot be controlled by spraying. Infection takes place through the flowers and tender shoots of the trees, or through injured places in the bark, insects being principally responsible for its spread, as they carry the germs from one tree or branch to another. Once the disease gains an entrance beneath the bark it is impossible to reach it with a spray. The germs or bacteria multiply by division very rapidly, and if conditions are favorable the disease soon spreads through the orchard, often killing whole trees, while at other times merely destroying branches.

The pear is one of the most important fruits grown in California, there being immense numbers of trees there; hence when the blight began to attack the trees in the chief pear centers in 1904 great alarm was felt. This alarm has been justified by the great ravages the disease has already made in the orchards. The California Government, recognizing the great peril in which the pear orchards stood, voted \$10,000 for the investigation and control of this disease. This money became available in 1905, and since that time there has been a regular campaign against the pear blight. With the advice and aid of Prof. M. B. Waite, of the Department of Agriculture at Washington, who has made a special study of the pear blight, together with twelve other assistants, the Plant Pathologist of the California Station, Prof. Ralph E. Smith, determined to stamp out the disease. As the life history and treatment for the pear blight had been well worked out by Prof. Waite, the method of control which he recommended was adopted. This consists "in inspecting the trees carefully in winter, cutting off all the affected branches below the point to which the disease has extended, and disinfecting the cut surfaces and the tools with an antiseptic solution. (The antiseptic recommended is one part of corrosive sublimate to one thousand parts of water.) Trees in which the butt is affected are condemned and removed. The method also insists on keeping the butt and main limbs of the trees free from all sprouts and fruit spurs (as these are vulnerable points of infection); recommends a certain style of pruning (a branching or vase-shaped top rather than a pyramidal one, so that if one branch is affected the others stand a good chance of escaping), and advises as much moderation as possible in cultivation and irrigation, since a rapid growth of the tree favors the disease. Cutting out the blighted twigs as they appear in spring and summer is recommended with some reserve, the danger being that at this season, when the disease is active, careless cutting or disinfecting may spread rather than eradicate the blight. Particular stress is laid upon the necessity of complete eradication of the blight in large districts rather than single efforts in individual orchards."

Up to July, 1906, no less than 647,300 pear trees had been inspected, and if the co-operation of the growers could be obtained, as it was in most cases, the diseased trees were treated. In this work it was found that it was not enough to simply walk through an orchard looking for blighted limbs, but each assistant or inspector was provided with a gouge or chisel, and a thorough examination of the trunk of every tree was made, as the blight is often hidden in winter.

Following are the results and conclusions reached, which should lead pear-growers in Ontario and other parts of Canada to take some combined action in eradicating the pear blight:

1. That thorough work in winter eradication prevents blossom infection in spring.

2. That the larger the district which can be covered in winter the less will be the infection next spring, and all the infection will come from blight which remained over winter.

3. That so long as sources of infection remain over winter, producing infection even in well-worked orchards near by, frequent, prompt summer cutting and removal of butt sprouts and spurs must be practiced in order to prevent serious damage and loss of trees.

4. That if not exposed to extremely abundant infection from neglected trees near by, a pear orchard can be profitably maintained in good condition and cultivated, pruned and irrigated in the manner necessary to secure a crop, by thorough winter-blight work and prompt summer cutting and sprout removal. The farther away the blight can be held the less will be the trouble.

THE ADORNMENT OF RURAL HOMES.

By Prof. H. L. Hutt, O. A. C., Guelph.

TREE-PLANTING.

Every farm home should be a picture in itself, and may easily be made one. Any person who has the artistic taste harmoniously to arrange trees, shrubs and plants, so as to make a beautiful landscape, a picture in reality, may be truly called an artist, and our country needs more of such artists. In making the farm home a picture, the lawn and greensward may be looked upon as the canvas on which the picture is placed. The dwelling and buildings naturally form the central feature, and about these the trees, shrubs, vines and plants may be artistically grouped and arranged so as to blend with each other in making the whole scene.

It is advisable, in beginning work of this kind, to make a plan on paper of the whole place, marking the principal objects, such as buildings, trees, etc., as they already stand. The proposed improvements and additions may then be indicated, and the whole thing carefully worked out on paper before the actual work of planting begins. In the preparation of such a plan, all members of the family should be consulted, and they naturally will become interested in the working out of its details. This may be done during the winter months, when there is plenty of time to consider it carefully. The more thoroughly the planning is done, the more readily the planting will be accomplished, and the better will be the general effect secured.

After grading and seeding the lawn and grounds, the selection of trees and shrubs, and their disposition and arrangement, is the next consideration. In the selection of trees, it is wise to choose, as a rule, those which naturally grow in the section, and in this particular the list will vary considerably with the different parts of the Province. As a guide in the selection of trees, we cannot do better than refer our readers to the list of forest trees indigenous to Ontario, as given in the O. A. C. Bulletin on "Farm Forestry," by Mr. E. J. Zavitz, recently published by the Ontario Department of Agriculture. There should be a due proportion of both the evergreens, which are particularly valuable for their shelter, and give a cosy appearance to the place in winter, and the deciduous trees, which give a cool and restful shade in summer. Among the evergreens generally planted are the spruces, pines and cedars, and there are numerous varieties of each of these. The Norway is the most commonly-planted spruce, although our native White Spruce is a handsomer tree than its imported relative. For shelter-belts and wind-breaks about the farm, the spruce is one of the most desirable trees, although pines or cedars may also be used for this purpose, and all may be used with pleasing effect in grouping and planting about the buildings. The establishment of a suitable wind-break or shelter-belt on the most exposed sides of the farm, should be a first consideration in the planting of evergreens. The trees for this purpose should be set at least eight or ten feet apart to allow for good development, and even at this distance it may be advisable in time to cut out alternate tree. Where the place is much exposed, a double row of trees, eight or ten feet apart, those in the first row alternating with those in the second, makes a stronger break.

About the buildings, evergreens should be used as additional protection from the prevailing winds, but in this case they need not be arranged in straight lines, as they should be around the boundaries of the farm. In proximity to the buildings, it is better to adopt nature's method of planting, and group them as if they had grown up naturally, to shelter both dwelling and stables from the north and west winds. The most common mistake made in planting evergreens about the home is to plant them in straight lines on each side of the front yard, so as to shut it off from the rest of the place. If the natural grouping of trees is adopted near the buildings, and the straight-line planting left to the boundaries about the place, the general effect will be far more pleasing.

In the selection of deciduous trees, there is room for much greater variety than among the evergreens. A few of the best of the large trees for planting about the home are elms, maples, lindens, birches and oaks, and, where the climate will admit of it, some of the nut trees, such as walnut, hickory-nut and the sweet chestnut, should be planted, for the sake of the younger members of the family. For roadside planting, the white elm and hard maple can hardly be surpassed, and it goes without saying there should be an unbroken line of one or the other of such trees along the whole front of the farm. In planting trees along the roadside, it is best to select trees of one kind and make the row as uniform as possible. Uniformity and variety may be attained, however, by planting maples and elms alternately, although

nothing could be finer than an avenue arched with tall specimens of the American White Elm.

About the buildings, one or two of the largest-growing shade trees should be planted, so as to afford shade to the dwelling from the heat of the midday sun. If they are placed on the south and west of the house, far enough away that their branches will not overhang the roof, and yet that their shade may fall upon it, they may be effective in keeping the temperature of the living-rooms ten to fifteen degrees cooler than it would be if the building were exposed to the boiling rays of the sun. When locating trees and shrubs upon

on an adjoining farm, or, it may be, some of the unsightly billboards which are now disfiguring so much of the beautiful landscape throughout the country. The more carefully such things are studied from the most advantageous viewpoints, the more pleasing will be the outlook from the dwelling and the general view from the roadway looking in upon it.

The matter of procuring trees and the method of planting them, are points upon which we need say but little. In many places good trees suitable for planting may be obtained from an adjoining wood-lot, but unless they are first-class, it is no economy to put time upon them, for straight, thrifty trees, with good root development, may be procured so cheaply from wholesale nurserymen that it pays to get good trees, rather than waste time upon poor ones. It is a good plan, particularly with evergreens, to purchase quite young trees, not more than ten or twelve inches in height, and grow them for a year or two in a home nursery row, and then transplant them to the wind-break or other permanent position when they have begun to make good growth and are a foot and a half or two feet in height. Even the deciduous trees may be advantageously grown for a year or so in the same way. Where this plan is adopted, there need be little loss in the final planting, as the transplanting can be done at the most convenient time, when the weather is suitable.

The best time for transplanting in our northern climate is early in spring, although there is no doubt the work may be done in the fall if

weather is suitable and planting is done carefully, but, as a rule, there are fewer failures with spring planting.

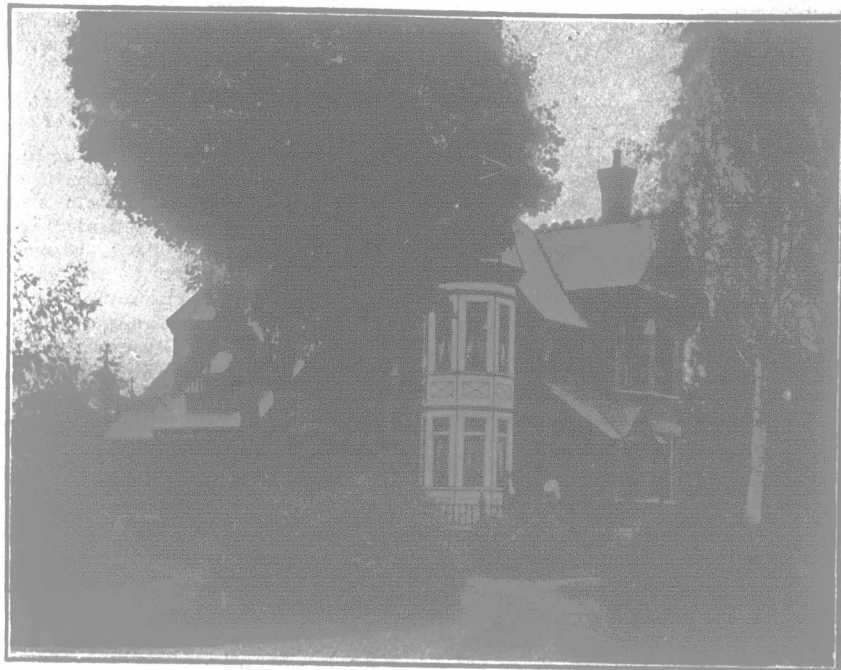
TRIMMING EVERGREENS.

Editor "The Farmer's Advocate":

I planted a Norway-spruce hedge four years ago, and it has never been trimmed. The trees were planted two feet apart. Would you kindly give instructions how to trim it? J. D. P.

It is much better to allow evergreens to assume their natural shape without trimming than to compel them by means of hedge shears into some unnatural form. If, however, it is desirable to keep them as a trimmed hedge, the shape of the hedge should conform as nearly as possible to the natural habit of growth of the trees. With the Norway spruce, which grows in tall, pyramidal form, the tops should be cut off at a uniform height, and the side branches trimmed from the base upward in pyramidal form. It is a serious mistake to attempt to grow evergreen hedges of this kind with perpendicular sides and flat tops, as the trees cannot long be kept in this unnatural form and retain healthy growth.

The best time to trim evergreens is early in the spring, before growth starts; that is, in April or May, depending upon locality and season. Some insist on trimming throughout the greater part of the season, but in doing this they lose all the beautiful new growth, and if the pruning is done late in the season, the terminal buds, with their natural winter protection, are removed, and there is danger of the wood being winter-killed. In trimming evergreens, it must not be forgotten that they do not have dormant buds, as do the deciduous trees, so that wherever pruning back is done, at least an inch of the last season's growth should be left, for it is only upon this there are buds to continue the season's growth. Wherever the wood is cut back to old wood, and all of the leaves removed, there can be no further growth, and the branch soon dies. This is one main reason for the unsightly hedges seen in many places, with dead patches of wood. O. A. C., Guelph. H. L. HUTT.



Maplehurst.

The beautiful home of L. Woolverton, Grimsby, Ont., embellished by judicious use of shrubs and trees.

the grounds, it is best to preserve a more or less open lawn in front of the dwelling. This gives an air of breadth and expanse to the place, which, on the other hand, should not be lost by planting the trees in straight lines along the edge of the grounds. If trees are grouped together, or arranged as naturally as possible around the buildings and at the sides of the lawn, the naturalness so gained is most pleasing. Care should be taken in disposing trees and shrubs about the place, to avoid obstructing the best views from the principal windows of the house. In fact, the best arrangement of the trees may be made by viewing the place from the veranda or living-rooms



View from Front Veranda.

Note the open lawn in front of the house and grouping of the trees and shrubs at the sides. These locusts are stately and picturesque.

of the house, and keeping in mind what the effect will be when the trees are full-grown. It will often be desirable to leave openings in the planting, so that through the vistas a glimpse may be caught of some beautiful scene beyond the confines of the front yard. In one direction it may be possible to get a view of some stately tree in an adjoining pasture, in another a glimpse of a distant wooded hillside, or perhaps a stretch of river or lake expanse; or, in another, even a neighbor's friendly light at night. In like manner, it may be desirable to hide from view some unsightly object, such as a dilapidated building

KEROSENE EMULSION AND OTHER SPRAY MIXTURES MADE WITH FLOUR.

Our horticultural friends who are on the alert for improved methods of spraying, will read with much interest the following two articles, one by W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa, the other by Frank T. Shutt, Chemist at the Farm. In publishing these, we are anxious not to confuse the amateur, who is advised to stick to the well-known, reliable formula (see issue March 28th), but those with some experience in spraying are requested to give the flour-kerosene mixture and the kerosene-Bordeaux prescription a trial and report results.

W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa.—It having been discovered and demonstrated at the Central Experimental Farm that kerosene emulsion could be made with flour instead of soap for holding the kerosene in suspension, this form of emulsion was used successfully in a practical way in 1905 and 1906. As the emulsion made in this way is much easier to make than with soap, it was desirable to learn what percentage of oil was necessary to kill the aphids, as soap, in addition to its value in holding the kerosene in emulsion, is an insecticide itself, and without it more kerosene might be required. The following percentages of kerosene were, therefore, used on July 16th, 1906, in spraying apple trees badly infested with aphids. Percentages used, approximately, 6 per cent., 7½ per cent., 9 per cent., 11 per cent. The following notes were made:

Kerosene emulsion with—
6 per cent. kerosene—Aphides not affected
7½ per cent. kerosene—Aphides not affected.
9 per cent. kerosene—Not so effective as 11 per cent., but most of the aphides destroyed.
10 per cent. kerosene—Practically all aphides destroyed.

In the kerosene emulsion made with soap, scarcely 7 per cent. kerosene is recommended.

There was no injury to the foliage of the trees in any case. Apple trees in nursery were sprayed on July 12th, with very good results, the insects being nearly all killed.

Plum trees were sprayed July 12th with 11 per cent. kerosene emulsion. Many aphides were killed, without apparent injury to the trees.

Experiments had been conducted in the Chemical Laboratories with Mr. Frank T. Shutt, Chemist, who discovered the value of flour in making kerosene emulsion, to determine the weight of flour necessary to hold in suspension certain quantities of kerosene. Experiments had also been tried in different methods of preparing the emulsion and the amount of churning necessary. This work being done with small quantities, it remained to determine the best method when made by the barrel.

A dasher was made by nailing two pieces of wood crosswise to one end of a pole, the other end being used as a handle. A piece of sacking with a hole in the center for the pole to go through, held in place on the barrel by a hoop, prevented the emulsion from splashing out of the barrel.

To make an emulsion having approximately 11 per cent. of kerosene (or, to be exact, 11.9 per cent.), it was necessary to have five gallons oil to forty gallons of water.

From these experiments, it was clearly demonstrated that a satisfactory emulsion, containing approximately 11 per cent. of kerosene, could be made by using only 5 pounds of flour to the barrel; in other words, only 5 pounds of flour are necessary, when an emulsion is formed, to hold in suspension 5 gallons of kerosene for two hours. A poor grade of flour answers the purpose well. The cost of one barrel of emulsion would thus be:

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|---|----------|
| 5 lbs. flour, at \$1.75 per 100..... | 8½ cts. |
| 5 gallons kerosene, at 16c. per gallon..... | 80 cts. |
| Total | 88½ cts. |

When the emulsion is not to be used at once, or within two hours, twice the quantity of flour should be used, with which quantity the oil will not separate in twelve hours and more.

Formula.—Formula recommended for kerosene emulsion made with flour, for destroying aphids on apple and plum trees: Five pounds flour (or 10 pounds, if emulsion is not used within 2 hours), 5 gallons kerosene, 40 gallons water.

Pour the kerosene in the barrel, put in the flour and stir thoroughly, then pour in 20 gallons of water and churn violently for from four to five minutes; now add remainder of water, and the emulsion is ready for use.

Experiments were tried recently in conjunction with Frank T. Shutt, Chemist, to determine if a satisfactory Bordeaux mixture and kerosene emulsion could be made which could be mixed together and sprayed on the trees at the same time. The results of these experiments are as follows:

Shutt in an article written by him. One of the mixtures appears so satisfactory that it will be given a trial in the orchards at the Central Experimental Farm this year. The mixture is made by churning the kerosene with Bordeaux mixture, flour being added before churning at the rate of 4 ounces to each quart of kerosene which has been used. It will be necessary, in preparing by the barrel, to do the churning with about half the necessary amount of water, in order that the mixture will not splash over, adding the requisite amount of water afterwards. This kerosene emulsion and Bordeaux mixture, made in small quantities, has remained for five weeks without any appreciable separation of kerosene. The mixture is a smooth one, and, after standing, mixes readily again. While this has not been tested sufficiently to recommend unreservedly, it gives promise of being a very desirable combination.

Frank T. Shutt, M. A., Chemist, Dominion Experimental Farms.—In an investigation carried on about a year and a half ago, to ascertain the emulsifying effect of certain materials—and more particularly lime, as advocated by Prof. Close—in the preparation of kerosene emulsion, it occurred to the writer that flour might answer for this purpose of holding coal oil in suspension. Experiments proved this to be the case, a very satisfactory emulsion for immediate use resulting. Eight ounces of flour were found sufficient to hold in perfect suspension one quart of coal oil. The emulsion is, simply and easily made, as follows:

The requisite amount of coal oil (kerosene) is poured into the pail or barrel, and flour added in the proportion of 8 ounces to 1 quart of coal oil, the mass thoroughly stirred and the water added—2 gallons for every quart of coal oil. The whole is then vigorously churned, say, for five minutes, by means of a pump and coarse nozzle, or a wooden paddle or dasher, as used in upright churns, and the emulsion is ready for use. The spray is smooth, easily atomized, and does not clog the nozzle.

During the last few weeks, this investigation, at the suggestion and with the assistance of Mr. Macoun, has been extended to the preparation with flour of certain sprays that might prove useful both as insecticides and fungicides—winter washes to be employed on dormant wood only, and sprays that would combine the properties of Bordeaux mixture and kerosene emulsion for summer use. The following notes give briefly information regarding the emulsion which it has been thought might be serviceable to the fruit-grower:

WINTER WASHES.

Formula—"A"—Bluestone, One Per Cent.
Bluestone 4 lbs.
Flour 8 lbs.
Kerosene 4 gals.
Water 36 gals.

Mix the flour with the kerosene, as before described. The bluestone being dissolved in the water, pour about one-half of the solution (the exact quantity is a matter of no moment) onto the kerosene-flour mixture, and churn for five minutes. Pour in the remainder of the bluestone solution, stir, and the emulsion is ready for use.

On standing, this spray separates into two layers, which, however, are readily remixed by stirring. Free oil does not appear, if the churning has been efficient, for at least 20 hours.

Formula—"B"—Caustic Soda, 2%; Kerosene, 10%.
Caustic soda 8 lbs.
Flour 8 lbs.
Kerosene 4 gals.
Water 36 gals.

Formula—"D"—Caustic Soda, 2%; Kerosene, 5%.
Caustic soda 8 lbs.
Flour 8 lbs.
Kerosene 2 gals.
Water 38 gals.

Formula—"E"—Caustic Soda, 1%; Kerosene, 5%.
Caustic soda 4 lbs.
Flour 4 lbs.
Kerosene 2 gals.
Water 38 gals.

It will be noticed that these three emulsions contain the same ingredients, but differ in strength; i. e., in proportion of caustic soda and kerosene. The preparation is alike in all. The flour and the kerosene being mixed in the desired proportion, the solution of the caustic soda (lye) is poured on, and the whole churned for five minutes. They are all remarkably stable, no free oil appearing after standing for four days, save that in the case of "E," which contained but 4 pounds flour for 40 gallons in this emulsion. The stability, or permanence of these emulsions is un-

doubtedly due to the action of the caustic soda on the flour, making a viscous fluid, which is eminently adapted for holding the coal oil in suspension.

SUMMER SPRAYS.

"H"—Bordeaux and Kerosene.

Formula—
Bluestone 4 lbs.
Lime 4 lbs.
Kerosene 4 gals.
Water 36 gals.

This is the usual Bordeaux mixture, plus 10 per cent. kerosene. It is best made as follows: To the freshly-slaked lime add one-half the total volume of water and pour in the requisite amount of coal oil, emulsify for five minutes, then pour in the remainder of the water, in which the bluestone has been dissolved, and stir well for one minute. Though, on standing, a thick, creamy layer forms, there is no separation of oil for at least 24 hours, and simple stirring is all that is necessary, within a few days of making, to bring about a perfect mixture.

"K"—Bordeaux, Flour and Kerosene.

Formula—
Bluestone 4 lbs.
Lime 4 lbs.
Flour 4 lbs.
Kerosene 4 gals.
Water 36 gals.

This, it will be observed, is the Bordeaux-kerosene emulsion just described, plus flour. To the diluted, slaked lime the kerosene containing the flour is added, and the whole emulsified for five minutes; the solution of bluestone (approximately one-half of the total volume) is then poured in, and the whole well stirred. This is a particularly stable emulsion, no free oil showing after five weeks. The thick layer that has separated at the end of this period, and which contained the oil, readily mixed again, forming a perfect emulsion. As a spray, furnishing at once Bordeaux mixture and coal oil—a combined fungicide and insecticide—one simply made, and of excellent keeping quality, this formula gives great promise. Certainly, from the standpoint of preparation and the laboratory tests, it leaves nothing to be desired.

TRELLISING TOMATOES.

Editor "The Farmer's Advocate":

Perhaps the easiest way to keep tomatoes off the ground is to spread several folds of paper under the bunches of fruit. The hoop, supported by three stakes, is quite good; also the ladder or lattice, supported on either side of the row. Tying to stakes does not give the plants very good chances, unless pruning is also practiced. Mulching with straw, or even with papers, conserves moisture, thus prolonging bearing season and increasing the yield, but also greatly increasing rot in the fruit. After all, perhaps the most satisfactory way is to nail scantling to stakes on either side of the row, a foot from the ground, and to lay strips across them for the vines to spread over. This allows the plant and fruit the best possible development, and the outfit is easily stored away afterwards.

King's Co., N. S. H. W. WOODWORTH.

[Note.—Where tomatoes are grown on a large scale out of doors, the vines are very rarely trellised or supported in any way, but for the amateur's garden they may be kept off the ground by various means, such as Mr. Woodworth suggests. The one advantage of keeping the vines near the ground is that they receive more of the soil heat during the night, when the atmosphere cools off, and are thus enabled to mature their fruit earlier than if kept away from the ground by supports of any kind. There is often a difference of 10 to 15 degrees in temperature between the soil and the air a foot or two from the surface of the ground during cool night after warm days in summer. This can be accounted for from the fact that the earth takes up much heat during the day, and does not cool off so readily as the atmosphere. Hence the advantage of keeping tomatoes as close to the ground as possible, as they require all the heat they can get to enable them to mature their crop in good season. Rather than put the vines on a trellis, we prefer to spread the vines out in every direction from the center, so that they lie flat upon the ground, and get all the soil heat possible.—H. L. Hutt.]

There is no hope of making anything out of the neglected apple orchards to be seen almost everywhere in Western and Southern Ontario, until we get rid of the idea that a crop of hay, grain or roots may be grown in it as well as not. Apple trees need all the moisture and plant food the average soil affords, and generous fertilizing with ashes as well.

THE FARM BULLETIN.

P. E. ISLAND SEED SHOW AND INSTITUTE CONVENTION.

This show and meeting took place in Summerside, the capital of Prince County, on March 27th and 28th, at which was shown the finest display of seed grain, grass seed and potatoes that was ever seen here. There were a very large number of entries, and the competition was keen. The quality was of the very best in all lines, and the judges, F. L. Fuller, of the Truro Agricultural College, and S. J. Moore, of the Seed Division, pronounced it the best seed show they had seen. The only criticism they offered was that the potatoes shown were too large. The smaller potatoes that they had left at home were the best quality, and would have been the prizewinners. J. A. Clark, B. S. A., of Bay View, assisted with the judging, which was quite a difficult task, as the samples were uniformly good, but the awards called forth no protests. One thing that came out clearly was that the seed wheat and oats that had been hand-selected for a number of years always won first place in competition with seed grown in the ordinary way, though the judges had no way of knowing which was the hand-selected samples. This, I think, pretty clearly shows the great value of hand selection. Seed corn was shown on the cob that was grown here last season. It was of the Longfellow variety, and well matured.

The show was managed by a committee of Prince County men, assisted by the Provincial Department of Agriculture. Great credit is due the management for the manner in which everything connected with it was arranged and carried out. One of the principal winners was Isaac Doughart, Long River, who showed seed wheat and oats and a large collection of grass and clover seed, and carried off the most money in prizes. Other exhibitors who were successful were Thomas Waugh, North Bedeque, and Marchbank Bros., New Annan, both of whom have been hand-selecting grain ever since the Macdonald-Robertson competition. A large collection of native weed seeds was shown by Master Fowler, of Bedeque. An interesting part of the show was the seed-judging competition, in which there were a large number of entries.

A first and second prize of \$3 and \$2, offered by the Patriot newspaper for the best essay on "Seed Selection," was won, the first by Thomas Waugh, and second by Percy Marchbank; and a prize of \$5, offered by the Maritime Farmer, for the best essay on "The Cultivation of Fodder Corn," was won by Walter Simpson, of Bay View. P. E. Island farmers are beginning to see the necessity of growing more of their grass and clover seed at home, as by so doing they will avoid the risk of getting bad weeds into their farms. The show was opened by addresses by His Honor Lt.-Governor McKinnon and Mayor Saunders, of Summerside.

The programme of the Institute convention, which was carried out in the afternoon, evening and next forenoon, was as follows: Address, "The Potato Industry," by Capt. Joseph Reid, M. L. A.; address, "Some Problems in Agriculture," by J. A. Clark, B. S. A.; address, "The Pictou Cattle Disease," by Dr. Pethick, V.S.; essay, "Growing of Fodder Corn," prize essay read by the winner.

Mr. Reid's address was a strong plea for the potato, as the most profitable crop a P. E. Island farmer could grow. He said if we had a tunnel to connect the Island with the mainland, we would now be getting 60c. per bushel for our potatoes instead of 40c., the present price. Mr. Clark's address was a discussion of the problem of how the farmer's boy could get a measure of agricultural education. He thought our Provincial Government should do something to help the boys who remain on the farm to get some knowledge of scientific agriculture in our schools. The affiliation of our "Prince of Wales College" with "Magill University" came up in a discussion of this address, and a strong resolution was passed unanimously, to the effect that if affiliation did take place, agriculture, nature study and kindred subjects should retain their place and be increased rather than diminished in the curriculum of our college, if the proposed affiliation was accomplished.

Dr. Pethick's address was a clear exposition of how they had proved by a great number of experiments that the "Pictou Cattle Disease" was caused by cattle eating the weed known as ragwort. This was interesting to Island farmers, as ragwort has obtained a strong foothold here. W. S.

Dr. Jas. Fletcher, Dominion Entomologist and Botanist, informs us that he has recently received from C. Percy Foote, of Lakeville, N.S., a winter nest of the brown-tail moth filled with the living caterpillars, proving that this insect has established itself in at least one place in Canada. Next to San Jose scale the brown-tail moth is one of the most dreaded insect pests on which money has ever been spent. The moth passes the winter in the form of half-grown caterpillars, little more than a quarter of an inch in length, in colonies of between 200 and 300 inside these nests of leaves at the tips of the branches. They are easily seen, and every person in Nova Scotia and New Brunswick should destroy every nest of leaves found to contain caterpillars which he may notice. The destruction of these winter nests is the most effective way of keeping them within bounds.

ONTARIO'S NEW PROFESSOR OF FORESTRY.

Bernard Eduard Fernow, the distinguished forestry expert who has been called to the Chair of Forestry in the University of Toronto, was born in Inowraclaw, Province of Posen, Prussia, January 7th, 1851. He graduated at the gymnasium at Bromberg; entered the profession of forestry, following the regular prescribed courses for Government service at Muenden Forest Academy, and also studying law at the University of Koenigsberg. He served his year in the army during the Franco-German war, 1870-71, and became lieutenant of reserves. In 1876 he emigrated to America, and engaged in metallurgical business, and as a consulting forest engineer. He served as the Secretary of the American Forestry Association (formerly Congress) 1883-87, and from 1887 as Chairman of its Executive Committee, and later as its First Vice-President. He was made Chief of the Division of Forestry of the United States Department of Agriculture at Washington in March, 1886, and continued in that office for thirteen years, when in 1898 he became Director of the New York State College of Forestry at Cornell University, the first institution of its kind in the United States. Since the close of this institution in 1902 he has been in private practice as Consulting Forest Engineer, besides giving a course of lectures at the Yale Forest School on the history of forestry. In 1907 he was called to Pennsylvania State College, to organize a forestry school on the same lines as the Cornell school, from which position he has been called to Toronto University for the same purpose. He was made an honorary LL.D. by the State University of Wisconsin in 1897, and later by Queen's University. He was made a fellow of the American Association for the Advancement of Science; a life member of the Amer-



Prof. B. E. Fernow.

Appointed to the Chair of Forestry, Toronto University

ican Institute of Mining Engineers; an honorary curator of the National Museum; an honorary member of the Scotch Arboricultural Association; of the Academy of Science of St. Petersburg; of the Pennsylvania Forestry Association, and an active member of various scientific societies of the United States. He is the author of Economics of Forestry, a full treatment of the subject, published by T. Y. Crowell & Co., N. Y.; has almost completed a new book on History of Forests and Forestry in the United States and other countries, and is publishing the Forestry Quarterly, the only strictly professional journal of forestry in the United States. He has also been the author of many official reports, bulletins and other publications of professional or propagandist character, establishing the science of forestry in the United States. In him Canadian forestry will have a needed champion and an invaluable friend.

A GOOD LOCAL HORSE SHOW.

Dr. A. B. Campbell, V.S., the judge supplied by the Department of Agriculture to the spring horse show in the Village of Bright, Oxford Co., Ont., on Friday, April 12th, writes "The Farmer's Advocate," reporting very favorably upon it. The country surrounding Bright is recognized as one of the best districts in the Province from which to select draft horses, and credit should be given to the enterprising horsemen of the village, in their efforts to advance the cause by carrying out such a successful show. It was manifest that the heavy breeds take first place, and among the sires exhibited they will have at least one grand model towards which to strive.

THE WOODSTOCK CLYDESDALE SALE.

The joint sale of imported Clydesdale fillies, property of Messrs. Innes, Schaefer & Co., Elliott and Butler, advertised for April 16th, came off successfully at Woodstock, Ont., on that date. There was a very large attendance of farmers from many districts of Central and Western Ontario, and a few orders for Manitoba. The day was uncomfortably chilly, but the crowd stayed with the sale from start to finish, and Captain Robson, as salesman, was in his best form, and disposed of 52 of the 53 catalogued in about two hours and a half, at an average of \$277, which was, perhaps, as good a result as could be expected, considering that many of the fillies were in quite thin and rough condition, and a number of them under a year old. The majority were of a very good class, however, and those in best condition were promptly taken at good prices, the highest price being \$500 for the beautiful brown filly, Royal Madge, coming three, and sired by Royal Favorite (10630). She was taken by Mr. R. M. Holtby, of Manchester, Ont.; four others selling for \$400 to \$435 each. Following is the sale list:

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| Lady Elgin, foaled 1905; Jos. Boyle, Woodstock. | \$ 435 |
| Royal Madge, 1904; R. M. Holtby, Manchester. | 500 |
| Lady Kildrochat, 1904; Jas. Wilson & Son, Fergus. | 410 |
| Nan, 1904; R. M. Holtby. | 410 |
| Flora McCohn, 1904; Wm. Parkinson, Jarvis. | 320 |
| Susy of Crawfordston, 1905; Walter Schell, Woodstock. | 275 |
| Lady Adams, 1904; R. M. Holtby. | 350 |
| Miss Guild, 1902; R. M. Holtby. | 455 |
| Lady II. of Denduffy, 1905; W. Johnston, Ingersoll. | 320 |
| Kilfillan Queen, 1904; D. McKinnon, Hillsbury. | 315 |
| Eva Todd, 1905; W. Johnston. | 300 |
| Dumfries Lass, 1904; J. Issler, Shakespeare. | 300 |
| Nellie MacIntyre, 1904; A. W. Harwood, Hickson. | 280 |
| Argyle Maid, 1906; J. B. Calder, Carlisle. | 255 |
| Islay Lass, 1906; Jas. Ogram, Linwood. | 240 |
| Kippen Lass, 1905; D. McKinnon. | 300 |
| Maid of Boquhan, 1905; A. Turnbull, Branston. | 315 |
| Lady Fife, 1905; Hunter Bros., Drumbo. | 200 |
| Lady Sterling, 1904. | 285 |
| Lady Hesketh, 1905; W. Johnston. | 225 |
| Lady Austen, 1906; J. B. Calder. | 205 |
| Woodend Annie, 1904; M. McBurney. | 265 |
| Ursula, 1905; Andrew Douglas, Strathroy. | 220 |
| Maggie Jackson, 1904; Hunter Bros. | 255 |
| Tossie, 1906; J. M. Johnston, Springford. | 160 |
| Polly Crawford, 1904; W. Prouse, Mt. Elgin. | 265 |
| Princess McGaw, 1904; W. McCorqudale, Bennington. | 225 |
| Lily Webster, 1905; Walter Schell. | 220 |
| Niobe, 1905; Jas. Wilson & Son. | 230 |
| Lady Arundel, 1905; Wm. Cade, St. Mary's. | 260 |
| Egeria, 1905; Hunter Bros. | 205 |
| Black Belle; Jas. Wilson & Son. | 240 |
| Black Susie, 1905; J. Chapman, Toronto. | 250 |
| Fanny III., 1905; Walter Schell. | 825 |
| Henrietta, 1905; Wm. McFadden, Fergus. | 355 |
| Charity, 1905; Walter Schell. | 255 |
| Sally McKnaughton, 1905; G. D. Fletcher, Binkham. | 310 |
| Given, 1905; J. Innes, Woodstock. | 225 |
| Lady Butler, 1904; W. Prouse. | 245 |
| Miss Wilroy, 1904; T. West, Woodstock. | 290 |
| Lady Drumbredan, 1905; W. Prouse. | 205 |
| Ballochgair Queen, 1903; W. A. Walker, Carnegie, Man. | 325 |
| Broadholm Lily, 1905; J. W. Johnston. | 220 |
| Whitehill's Princess, 1905; J. W. Johnston. | 220 |
| Rosegay, 1906; Alex. Innes, Brooksdale. | 195 |
| Belle of Broadcarse, 1904; Walter Schell. | 305 |
| Kate Stewart, 1904; P. Fry, Shakespeare. | 290 |
| Lady Beauty, 1905; Hunter Bros. | 175 |
| Bessie of Moor Row, 1904; E. Robson, Ilderton. | 270 |
| Waterside Queen, 1897; D. McBurney, Embro. | 205 |
| Peg, 1903; W. A. Walker, Carnegie. | 275 |
| Rosalie, 1904; D. Forbes, Stratford. | 300 |

ROYAL AGRICULTURAL SOCIETY'S SHOW.

The annual show of the Royal Agricultural Society of England will this year be held at Lincoln, from June 25th to 29th, inclusive. It bids fair to be one of the largest shows which has ever been held. The value of prizes offered in connection with live stock, poultry, farm and dairy produce, etc., totals to £8,866, and a record entry is anticipated. The implement and heavy machinery section will also, no doubt, receive good support. Several new features of interest to agriculturists are being introduced, and the show will be well worthy of a visit. For reaching Lincoln from London, the Great Northern Railway Company's route is the quickest. Their station in London (King's Cross) can be easily reached from any point by means of the several tube railways, and their station in Lincoln is not only very convenient for the show, but also for the Cathedral, and other interesting places in this old Roman City. Near to Lincoln is the inland watering place of Woodhall Spa, famous for its mineral springs, and there are other attractions in the neighborhood.

The New York State Assembly has passed a bill providing for a flat rate of two cents a mile on all railroads in that State.

ALBERTA BREEDERS' MEETINGS AND SHOW.

In the first week in April the annual meetings of the Alberta Horse-breeders' and Cattle-breeders' Associations were held in Calgary. The annual horse show, fat-stock show and bull show and sale was held the same week also in Calgary.

The Horse-breeders' Association met on April 1st, President J. A. Turner presiding. The meeting passed a resolution to affiliate with the National Live-stock Assn., and another memorializing the different Dominion breed associations to hold their annual meetings just after the Ontario Winter Fair at Guelph. The election of officers for 1907 resulted as follows: President, J. A. Turner, Calgary; Vice-President, D. Cargill, Seven Persons; 2nd Vice-President, D. Thorburn, Davisbury; Secretary, E. L. Richardson, Calgary.

In the horse show, Clydesdales were conspicuously in the majority. A few Shires and Percherons were shown, and a strong showing of Hackneys, Standard-breds and Thoroughbreds was made. Mr. John Gardhouse, Highfield, Ont., was the judge, and gave general satisfaction in his awards. In the section for aged Clyde stallions the imported four-year-old, Consul, imported by Mr. Turner, and exhibited by his present owner, F. Bedingford, Pekisko, was placed first; R. W. Meiklejohn's Charming Prince second, and Jas. Jones' Gold Medal third. The contest for the prize for the best heavy-draft stallion any age was between the Clydesdale, Consul, and the Shire, Bramhope Governor, owned by J. R. Henshaw, High River, the Clydesdale eventually winning. The Canadian Clydesdale Association gave prizes for the best Clydesdale stallion bred in Canada, the first award going to Charming Prince, second to Turner's Everard's Prince, and third to Moodie's Exalted. Mr. Moodie's Agility was the winning Hackney stallion, Connell's Alert being second, and Hoodley's Glenlyon (imp.) third.

The judging of the sale bulls, and of all the fat stock, was in the hands of Mr. A. W. Smith, of Maple Lodge, Ont., who has been in Alberta all winter regaining his health. The classes of sale bulls were large and required exceptional judgment to place them satisfactorily, and the fact that the prizewinners in most cases afterwards brought the highest prices in the sale speaks for the sagacity of the judge.

There were some one hundred and fifty Shorthorn bulls of all ages shown, as many as twenty being entered in some classes. The Alberta champion and grand champion was the red senior yearling, Farmer, bred and shown by Jas. Sharp, Lacombe. In the sale

he brought the highest price of the day, \$170, and went to the herd of P. M. Brett, Regina.

In Herefords the championship went to the five-year-old American-bred bull, Hamilton, shown by S. M. Mace, Pekisko. Five of the prizewinning bulls in this class in the sale brought from \$100 to \$135 each.

There was only one class for Aberdeen-Angus bulls, the first prize going to Lew Hutchinson's two-year-old, Black Beaver; second to Jas. McNicol's Blackfalds, and third to Wm. Greer's Canton Don. The four bulls of this breed sold averaged \$73.

For the sale there were 241 bulls catalogued; 50 head of Herefords averaged \$76; 4 Aberdeen-Angus, \$73, and 120 Shorthorns, \$75 each.

The Cattle-breeders' Association met on April 3rd, the President, Mr. R. K. Bennett, presiding. The Secretary, Mr. E. L. Richardson, reported a steady increase in the average price for bulls at the sales from 1901 to 1906, from \$85 to \$108, and of the highest price for a single animal, an increase from \$250 in 1901, to \$365 in 1906. After a lengthy discussion as to the best date for the annual sales, a motion, authorizing the executive to arrange dates after May 20th, was carried. The election of officers for 1907 resulted as follows: President, R. K. Bennett, Midnapore; 1st Vice-President, J. Sharp, Lacombe; 2nd Vice-President, Jas. Wilson, Innisfail; Secretary, E. L. Richardson, Calgary.

At a meeting of the directors of the Eastern Ontario Live-stock and Poultry Show, on April 17th, it was decided to limit entries of live stock (excepting poultry) to Eastern Ontario, i.e., Hastings County, and counties east of that. In past years the stockmen of Eastern Ontario, for whom this show is especially intended, have hesitated to compete with those from Western Ontario, which is acknowledged as a better beef district. It is not anticipated that the western men will raise any objections, as nearly all of them who have exhibited at Ottawa have gone there on special solicitation, with the object of helping the show. There is, of course, another side to the matter, for if entries are confined to the Eastern counties there will be color for the inference that the class of stock at the Eastern show will not be as good as at Guelph. Before any action is taken in the direction indicated, the proposed plan must be laid before the Minister of Agriculture, and it is by no means certain that the rule will be allowed.

FOR THOSE WHO WOULD BURN ASHES.

The sensation of last week was the discovery of the Pennsylvania cobbler's recipe for burning ashes. The method is to dampen coal ashes with brine made by dissolving two handfuls of salt in a pailful of water. The salt, moisture and ashes produce a lye, which, upon the application of heat, gives off oxygen and thereby brings about a rapid and more complete combustion than is otherwise possible or likely. The addition of a small amount of oxalic acid to the brine is said to result in a second and more valuable chemical action, by which a carbide is formed. This intensifies the heat and makes the combustion more perfect. To use the treated ashes, it is advised to mix with coal, in the proportion of three to one. Experimental tests by many householders, among them one of the editors of this paper, have seemed to substantiate the claims of the inventor, in part at least. But along comes the skeptical scientist, who asserts that it is an absolutely established fact that pure ash will not burn, and that no possible treatment can make them produce heat. Ashes which can be made to burn are the product of incomplete combustion, so that, after all, the experimentation simply conveys a lesson to be more careful in the use of fuel. One serious objection to the ash-burning scheme is that the salt tends speedily to rust the iron utensils, and probably would have the same effect on the stove grates and pipes. Finally, it appears that the reputed discovery has not even the virtue of novelty, for a substance, consisting of roasted salt, was exploited in Toronto as far back as 1895.

A SIMPLE HOMEMADE LINIMENT.

Geo. Lill, an esteemed subscriber, living in London, Ont., while calling at our office recently left the following prescription, which he said years of experience have proven to be an excellent homemade liniment. It is 2 ounces ammonia, 2 ounces turpentine, 2 ounces sweet oil and 6 ounces water.

Everything is waiting for spring, wrote a correspondent last week from King's Co., N. S. April beats the record for cold and snow, so far. It has been much the same in Upper Canada. The illusions of March's genial promises were dispelled by Easter's chills, and the chills have seemed to last a good while.

GOSSIP.

SUCCESSFUL SHORTHORN SALES.

The gratifying success attending recent Shorthorn sales in the United States augurs well for the future of the breed on this continent, and is decidedly encouraging to breeders, both in that country and in Canada, as good prices in the States are sure to have a reflex influence on values in this country, since American breeders logically look to Canada for supplies when values rise in their own country. A striking feature in the report of the most successful sale of the recent series on the other side of the line, that of Mr. F. W. Harding, of Wisconsin, on April 10th, is that half a dozen of the animals selling for the highest prices were bred in Canada in the Pine Grove herd of Hon. W. C. Edwards, of Rockland, Ont. The highest-priced animal in the herd was the roan 2-year-old Lucy of Pine Grove 3rd, by Missie Champion, taken by Mr. Thos. Johnson, of Ohio, at 1,075. Pine Grove Mildred 3rd, by Marquis of Zenda Imp., sold for \$800, to W. H. Earles, Wisconsin; Lily of Pine Grove 3rd, by Village Champion, to the same buyer for \$700; Zoe of Pine Grove 6th, by Marquis of Zenda, for \$600; Pine Grove Clipper 11th, by Missie Champion, to F. O. Lowden, Illinois, for \$605; and Missie of Pine Grove 7th, by Marquis of Zenda, to Thos. Johnson, Ohio, for \$855, an average price for these six Canadian-bred cows of \$772 each, and an outcome which cannot but be gratifying and encouraging to Canadian breeders generally.

The highest price for a bull at this sale was \$900, for the yearling, City Marshal, by Whitehall Marshal, taken by Flynn Farm, Iowa. The average for the 48 head sold was \$375.

At the annual sale on April 9th of a draft from the herd of Mr. H. F. Brown, Minneapolis, Minn., 38 head sold for an average of \$317, the highest price being \$1,025, and the second highest, \$1,000, while a dozen others sold for \$300 to \$900 each.

At the dispersion sale on April 11th of the herd of H. S. Bright, Versailles, Ky., 32 head sold for an average of \$220, the white 2-year-old bull, Gen. Brown Sultan, by Whitehall Sultan, being taken by Mr. Thos. Johnson, of Ohio, at \$2,025, and the cow Amaranth being the same buyer, at \$810.

The 19th volume of the American Shropshire Sheep Record has been issued. It is a ponderous book of 1,897 pages, the pedigrees numbering from 190777 to 211122, making 20,345 sheep recorded in it. This is, we believe, the largest volume, and contains the largest number of recorded pedigrees of any ever issued of any breed of live-stock. Much of this success is due to the energetic work of the Secretary-Treasurer, Mr. Mortimer Levering, of Lafayette, Indiana.

On April 19th, Colorado lambs of last year made the record price of \$8.80 per cwt., at Chicago Stock-yards. Eight dollars and fifty cents was paid for lambs of choice quality to take back to the country to feed. When the wool is secured, and the ewe lambs are held for breeding purposes and the wether lambs put in prime condition for slaughter, the transaction may prove a profitable one.

TRADE TOPICS.

PEA MEAL.

The well-known and reliable milling firm of Walter Thompson & Son, Limited, of London, Ont., is offering through our advertising columns a quantity of pure pea meal at \$26 per ton in bags, F. O. B. London. Peas are the richest feed of all our common grains, ranking almost with linseed and cottonseed meals, and pea meal at \$26 per ton is good value at the present price of other millfeeds. Write for free samples, mentioning this paper.

TREES, SHRUBS AND FLOWERING PLANTS.—Those who follow the special series of articles on the "Adornment of Rural Homes," commencing in this issue, will be wondering where they can obtain trees, shrubs and flowering plants with which to adorn their homes. In our advertising columns will be found an announcement by C. Baker, Nursery, General Delivery, London, Ont., who has had long experience and can supply the trade in all parts of Canada. Mr. Baker may be rated, has complied with the Government regulations regarding fumigation, and his customers may be assured of getting a good stock.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

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

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

4th.—When a reply by mail is required, it urgent veterinary or legal enquiries, \$1 must be enclosed.

Miscellaneous.

STALLION'S NUMBER.

Please give me number of Clydesdale stallion Craigen Darrach, imported by John Dryden, Brooklyn, Ont.

SUBSCRIBER.

Ans.—We do not find this horse in the Canadian Clydesdale Studbook.

LOOKING FOR POLAND-CHINAS.

Are there any breeders of Poland-China hogs in Ontario, as I desire to communicate with them?

H. C.

Ans.—Breeders of Poland-China swine, for which we are from time to time receiving enquiries, should not allow their modesty to prevent them making the fact known through our advertising columns.

RETENTION OF AFTERBIRTH.

1. Clyde mare, at foaling last year, retained the afterbirth. In about six hours after foaling we removed it. Some say it should be taken away before the mare rises. If so, in what way would you proceed?

2. Is there any way to feed a mare to prevent her running out her milk?

T. J. M.

Ans.—That the mare retained the afterbirth for six hours was no cause for alarm. While retention of the afterbirth for longer than an hour or two is not common in mares, still we should allow 20 or 24 hours to elapse before undertaking manual assistance. Blanketing the mare and warming her drinking water at parturition tends to a normally prompt expulsion of the foetal membranes.

2. Withholding milk-producing foods such as bran, oats and clover hay, would probably have some effect on preventing leakage of milk, but would not be advisable as general practice. An easy milker is liable to lose a little milk if she is secreting as much as she should.

COAL ASHES.

I have a big pile of coal ashes. Had I better have them hauled to the garden, the soil of which is rather heavy clay, or to my lane to improve the road?

J. H. K.

Ans.—Coal ashes are of little or no value upon the soil for garden purposes. In fact, if they have not been screened and contain clinkers and unburnt coal, they are an injury rather than a benefit to the soil for garden purposes. The best place to make use of them is on the roads and drives.

H. L. HUTT.

MISCELLANEOUS QUERIES.

1. Would you give information of how to treat sheep having trouble to lamb? The sheep I am mentioning is about seven years old, has had twins a number of times, and never had any trouble before.

2. Could you give me an idea of how to make a stand, with drawers, for holding tools, wrenches, nails, etc.; just want it plain.

3. Could you give recipe for making shoe-thread wax?

4. Please tell how to tie up a horse's tail so as it will hold without shaking out. Have been a reader of "The Farmer's Advocate" for five years, and I consider it one of the best, if not the best, in America.

R. L. C.

Ans.—1. This subject was treated pretty fully in a seasonable article in "The Farmer's Advocate" of Feb. 28th, 1907, page 338. Look up this back number on your file.

2. It would be difficult to describe on paper how such a stand of drawers should be made. Better consult a carpenter, who could no doubt describe in words how to do the job, then learn to do by doing it.

3. Shoemaker's wax is made by melting together the best Swedish pitch and tallow in a vessel over the fire, the quantity of tallow must be determined by experiment. Keep well stirred while melting, pour into cold water, grease the hands and pull to mix well, and roll the wax into balls. The right kind of pitch is of a brown color when broken.

4. Plait the hair in three separate three-ply strands, then plait these three together, tie in a single bow, pass the ends through the loop of bow and pull down tight.

MARKETS.

TORONTO.

LIVE STOCK.

Receipts of live stock at the City and Junction markets last week were moderate. The quality of shipping cattle was fairly good, but there were few of the butchers that could be classed as choice. Trade was better than for some time, with prices for the bulk of all classes higher. On Monday, at the Junction, receipts of cattle numbered 19,000. Ocean space scarce.

Exporters.—Prices, last week, ranged from \$5 to \$5.50, the bulk going at \$5.20 to \$5.35. Bulls for export sold at \$3.75 to \$4.40. On Monday, exporters were easier at \$4.90 to \$5.35.

Butchers.—Prime picked lots sold at \$5.20 to \$5.30; loads of good at \$5 to \$5.15; medium, \$4.50 to \$4.75; common, \$4 to \$4.40; cows, \$3.50 to \$4.50; canners, \$1.75 to \$2.75 per cwt.

Feeders and Stockers.—Feeders of good quality are scarce. Steers, 1,000 to 1,150 lbs., are worth \$4.40 to \$4.70; stockers range in price from \$3.25 to \$3.75 per cwt.

Milkers and Springers.—The quality of milkers and springers, generally, was not good, the bulk selling at \$40 to \$55 each, with a few as high as \$60 each.

Veal Calves.—Liberal supplies caused prices to be easy at \$3 to \$6.50 per cwt.

Sheep and Lambs.—Light receipts caused prices to be firmer. Export ewes, \$5.25 to \$5.75; rams, \$4 to \$4.50; yearlings, \$6.50 to \$7.75, with some select lots of ewes and wethers at \$8 per cwt.; spring lambs, \$5 to \$9 each, the bulk selling at \$6 to \$7 each.

Hogs.—Prices were reported by the packers to be 25c. per cwt. lower; selects, \$6.40, and lights at \$6.15 per cwt., with receipts light.

Horses.—The horse market last week was reported by the dealers as being the best of the season thus far. While no extraordinary prices were paid, all of good quality in the different classes found ready sale at fair quotations all round. The outlook for the future is reported as being bright. There is a better demand from the Northwest, and dealers do not have to keep horses for any length of time to find customers. Besides the steady demand for workers, there is an active enquiry for roadsters and saddle horses of extra quality, for which high figures are said to have been paid in some instances for the coming spring horse show. Burns & Sheppard report the following: Single roadsters, 15 to 16 hands, \$150 to \$170; single cobs and carriage horses, 15 to 16.1 hands, \$150 to \$180; matched pairs, 15 to 16.1 hands, \$300 to \$500; delivery horses, 1,100 to 1,200 lbs., \$150 to \$165; general-purpose and express horses, 1,200 to 1,350 lbs., \$150 to \$180; draft horses, 1,350 to 1,750 lbs., \$165 to \$225.

BREADSTUFFS.

Grain.—Wheat—No. 2 white, 72c. to 72½c.; mixed, No. 2, 71c.; No. 2 red, 72c. to 72½c.; Manitoba, No. 1 North-east, 96c., at North Bay; No. 1 Hard, 86c. to 87c.

Buckwheat.—56c. Corn.—No. 3 American, 52c. bid, at Toronto; No. 2 American Yellow, 53c. to 53½c., with market strong; Ontario, 45c. to 46c.

Oats.—No. 2 white, 38½c. to 39½c. Rye.—No. 2, 62c. to 63c. Barley.—No. 2, 53c.; No. 3X, 52c. to 52½c.; No. 3, 51c. to 51½c.

Peas.—78c. to 78½c. Bran.—Scarce at \$23 to \$24, at city mills.

Shorts.—Scarce at \$24 to \$25. Flour.—Manitoba patents, \$3.85, track, Toronto, Ontario, 90 per cent. patents, \$2.67; Manitoba patent, special brands, \$4.50; strong bakers', \$4.

COUNTRY PRODUCE.

Butter.—Light receipts. Market stronger than at any time this year. Creamery rolls, 29c. to 31c.; creamery boxes, 27c. to 28c.; dairy pound rolls, 26c. to 27c.; tubs, 23c. to 25c.; bakers' tub, 19c. to 20c.

Eggs.—Market stronger at 17c. to 17½c.

Cheese.—Market steady at 14c. for large twins, 14½c. Now is quoted at 11½c. to 12c.

Honey.—Market steady, but firm.

The Sovereign Bank of Canada

NOTICE is hereby given that a dividend of one and one half per cent. (1½%) for the current quarter, being at the rate of six per cent. (6%) per annum on the capital stock of this bank, has been declared, and that the same will be payable at the head office and at the branches on and after Thursday, the 16th day of May next. The transfer books will be closed from the 1st to the 15th May, both days inclusive. By order of the Board.

78 Branches Throughout Canada.

D. M. STEWART, General Manager.

Strained, 12c.; combs, \$2.60 to \$2.75 per doz.

Evaporated Apples.—9c.

Potatoes.—Ontario car lots, 80c. to 85c. per bag. New Brunswick car lots, on track, here, 90c. to 95c. per bag for Delawares.

Poultry.—Yearling chickens scarce at 18c. to 20c. per lb.; turkeys, 16c. to 20c. per lb.; hens, 12c. to 15c. per lb.

Baled Hay.—Prices firm at \$13.50 per ton per car lot, on track, for No. 1 timothy; No. 2, \$11 to \$11.50.

Baled Straw.—Car lots, on track, at Toronto, \$7 per ton.

Beans.—Car lots, in bags, at Toronto. Hand-picked, \$1.25 to \$1.30; primes, \$1.15 to \$1.20. Broken lots at \$1.45 to \$1.55 for hand-picked, \$1.30 to \$1.35 for primes, in bags.

Seeds.—Toronto seedsmen report the market for red clover seed as being firm, with stocks none too large. For re-cleaned seed, the following prices are quoted to farmers: Red clover, \$14.50 to \$16.50 per cwt.; alsike, \$10.50 to \$13 per cwt.; timothy seed, \$5 to \$7 per cwt.

HIDES AND TALLOW.

Prices are quoted as follows by E. T. Carter & Co., 85 East Front St., Toronto: Inspected hides, No. 1 cows and steers, 10½c.; inspected hides, No. 2 cows and steers, 9½c.; country hides, 8c. to 8½c.; calf skins, No. 1, city, 13c.; calf skins, No. 1, country, 11c. to 12c.; sheep skins, each, \$1.70 to \$1.80; horse hides, No. 1, each, \$3.50 to \$3.75; horse hair, 30c. to 32c.; tallow, 5½c. to 6½c.

MONTREAL.

Live Stock.—The export trade in cattle showed a slight improvement last week. Prices were somewhat more tempting, shippers taking rather more space. It is expected that the export trade will show considerable improvement after the opening of navigation to the port of Montreal. Locally, receipts of all kinds of live stock have been very fair of late, but, as demand was active, prices showed practically no change. Exporters were paying 5½c. to 5 2-5c. for choice steers, and 4½c. to 4¾c. for bulls; butchers', 5½c. to 5¾c. for best steers, 4½c. to 5c. for good, 4c. to 4¾c. for medium, and 3c. to 4c. for common. Prices of sheep are strong, at 5½c. to 6c. per lb., lambs being 7c., spring lambs being \$2 to \$6 each. Fine calves are scarce, at \$6 to \$10 each. Trade in hogs is rather slow, and prices are a little on the easy side, sales of selected lots being made at 7½c. to 7¾c. The English market for hogs is reported on the easy side. Receipts of poor calves are large, and canners are said to be taking them.

Horses.—Last week was bad for trade in the horse market. The snows and succeeding cold and wet weather seemed to be an influence for dullness. Horses are hard to get, and prices show no evidence of falling off. Heavy-draft animals, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$200 to \$250 each; express horses, \$175 to \$225; common plugs, \$75 to \$125, and choice driving and saddle animals, \$300 to \$500 each.

Dressed Hogs.—Owing to the decline in the market for live hogs, prices of dressed showed a disposition towards easiness, and purchases were made at a slight decline. Abattoir fresh-killed stock, 10c. to 10½c.; demand fair. Bacon has been selling briskly.

Maple Products.—The general quotation on syrup, in tins, is about 6½c. per lb. This figures out to about 90c. per imperial gallon. Some quote 5½c. to 6c. in wood, and even less, but others say the price is too low. Sugar is quoted about 10c. per lb., but very little has been received here so far, apparently. The opinion here is that the run of sugar was not up to previous years until week

before last, but that the snows and subsequent thaws, followed by frosty nights and sunny days, may have turned the season into a somewhat unusually good one.

Potatoes.—Market stronger again. Turn-over fairly large, and stock is not offering quite so freely as previously, and from this forward the scarcity will be more noticeable. A car of Prolifics was sold at a basis of about \$1 per 90 lbs., Sault Ste Marie, recently, which would mean possibly 75c., Montreal. The general range is 68c. to 75c., Montreal, for white, or 90c. to 95c., bagged and delivered into store in a jobbing way, reds being 5c. or more less than these figures.

Eggs.—The trade seems to have come to the conclusion that the market will be a high one this year. At present, purchases cannot be made in the country at less than 15½c. per dozen, and some say they are paying more. Sales are being made here at 17c. to 17½c. for wholesale and jobbing lots, and at 18c. for single cases. It is stated that some of these eggs are being put away in cold storage. There will be very few eggs picked this season. Four of the large houses are not pickling at all, cold-storage arrangements being now so perfect.

Butter.—After being up to 83c., the market for butter declined. Small lots of new-milk creamery are selling here at 29c. to 30c., and it is likely that large lots of new goods could be had at rather less. Held butter, as stated a week ago, is practically out of stock. The outlook for the coming season is still uncertain. There is little doubt, however, that prices will be high, though factory men need not be disappointed if they do not realize the extraordinary figures which prevailed last season.

Cheese.—Cheese boards are opening up again throughout the country, both in the provinces of Ontario and Quebec. In Quebec, about 11½c., country points, was the idea of values which prevailed, those in Ontario being fractionally more. It would seem that purchases may be made in Montreal at 12c. to perhaps a little more.

Flour and Feed.—Dealers are demanding \$23 to \$24 per ton for shorts, bagged, and \$25 to \$26 for bran. Millers are quoting for future delivery, but allow that they are selling practically nothing. They claim a little flour is going out at \$4 per bbl., in bags, for Manitoba strong bakers', and \$4.60 for patents. There is very little doing, but there will be more activity after the opening of navigation.

Hay and Seeds.—The market for hay is reported easy and dull, not only abroad, but here. Prices are about \$13.50 to \$14 (some ask \$14) for No. 1 timothy, \$12 for No. 2, and \$11 for clover. The market for seed is quite firm and fairly active. Timothy is up to \$5.50 to \$7.50 per 100 lbs., Montreal; red clover, \$16 to \$17.50; white clover, \$14 to \$20; alsike being plentiful, and a shade easy, at \$13 to \$16.

Grain.—Oats firmer; good demand for export; some two or three million bushels Manitoba booked for shipment, May, June and July. Present price is equal to 42c. to 45c. per bushel. Local prices are 43c. to 43½c., store, for No. 2, 42c. to 42½c. for No. 3, and 41c. to 42½c. for No. 4.

Hides.—Market steady; demand dull, and quality of beef hides about the worst of the year. Prices steady all around, at 11½c., 10½c. and 9½c. per lb., for Nos. 1, 2 and 3, respectively. Calf skins are improving, and prices are still 13c. for No. 2, and 15c. for No. 1. Spring lambs are 19c., and sheep skins \$1 each; No. 1 horse hides, \$2.50, No. 2 being \$2 each. Rough tallow, 1½c. to 1¾c. per lb., and refined, 6½c.

CHICAGO.

Cattle.—Common to best steers, \$4.40 to \$6.65; cows, \$3.50 to \$5.30; heifers, \$3.25 to \$5.50; bulls, \$3.40 to \$4.75; calves, \$3 to \$4.25; stockers and feeders, \$3 to \$5.25.

Hogs.—Choice heavy shipping, \$6.57½ to \$6.65; light butchers', \$6.60 to \$6.65; light mixed, \$6.57½ to \$6.62½; choice light, \$6.60 to \$6.65; packing, \$6 to \$6.57½; pigs, \$4 to \$6.60; bulk of sales, \$6.55 to \$6.60.

Sheep and Lambs.—Sheep, \$4.25 to \$7.75; yearlings, \$5.25 to \$7.75; lambs, \$6.75 to \$8.80.

BRITISH CATTLE MARKET.

London.—Liverpool and London cables are steady at 11½c. to 12½c. per lb., dressed weight; refrigerator beef is quoted at 9c. to 9½c. per lb.

BUFFALO.

Veals.—\$4.25 to \$7.50. Hogs.—Heavy, \$6.85 to \$7.10; mixed, \$7; Yorkers and pigs, \$7 to \$7.10; roughs, \$6 to \$6.10; stags, \$4.75 to \$5.

QUESTIONS AND ANSWERS. Veterinary.

STRINGHALT.

Driver lifts hind leg high with a jerk when asked to stand over in the stall.

J. C.

Ans.—This is stringhalt, a nervous disease that is usually progressive and worse in cold than in warm weather. Medicinal treatment has practically no effect. An operation, which consists in severing the peroneal tendons and can be performed only by a veterinarian, often effects a cure, but in some cases does not.

CAPPED KNEE.

Three-year-old pregnant mare that wore a poke last summer has an enlargement in front of her knee. I have been advised to bathe well with warm water and then lance. Is there any danger of the enlargement being joint oil?

E. R.

Ans.—This is doubtless due to bruising by the poke. If the enlargement is soft, indicating that it contains a fluid, it should be carefully lanced and the serum allowed to escape and the cavity flushed out twice daily with an antiseptic, as a 5 per cent. solution of carbolic acid, until healed. It would be wise to get a veterinarian to operate, as too deep cutting would puncture the capsular ligament and make an open joint. If the enlargement is hard it is doubtful if you will be able to reduce it. Get a liniment made of 4 drams each of iodine and iodide of potassium and 4 oz. each of alcohol and glycerine and rub the knee well with this once daily.

LAME MARE — THOROUGHPIN.

1. Aged mare, in foal, went lame in off fore foot last fall and has been more or less lame ever since.

2. Four-year-old has lump on both sides of the back portion of hock, on both legs. He is not lame and lumps disappear when he lifts the leg.

J. E. R.

Ans.—1. The symptoms given indicate navicular disease, which is hard to treat, and while you can relieve the symptoms to a greater or less extent, when the disease is well established a permanent cure cannot be effected. Make a blister of 2 drams each of biniodide of mercury and cantharides mixed with 2 ozs. vaseline. Clip the hair off for two inches high all around the hoof. Tie her so that she cannot bite the parts. Rub well with the blister, once daily, for two days. On the third day wash off and apply sweet oil. Let loose in a box stall and oil every day. As soon as the scale comes off, tie up and blister again, and then blister once monthly all the time she is nursing her colt.

2. These are thoroughpins and very hard to remove. Treatment is repeated blistering as described for question No. 1.

V.



Life, Literature and Education.

(Contributions on all subjects of popular interest are always welcome in this Department.)

SONG FROM "PIPPA PASSES," BY ROBERT BROWNING.

The year's at the spring
And day's at the morn;
Morning's at seven;
The hillside's dew-pearled;
The lark's on the wing;
The snail's on the thorn;
God's in his heaven—
All's right with the world!

A JAPANESE RECEPTION.

The two months since I reached this honorable and friendly land have been one long reception. Even the islands seemed to have reached out into the ocean to receive our vessel as she slowly drew into port. Looking over the side of the ship down into the upturned faces of hundreds of people in every variety of water craft, clustered like chicks around the mother hen, I heard my name called. What pleasure it is to hear one's own name on the borders of a foreign land and amongst strangers!

My friends had found me, and, conducted by them through crowds of half-clad, starving navvies and kurumayas, I reached Yokohama station. My first impression was of sound, not sight—the noise of the thousands of wooden geta on the pavements.

From Yokohama we took train for Tokyo—my future home. Our train was late, and, on arriving, we found that most of the missionaries had called in the afternoon—a reception without a lion, a "Hamlet" without a ghost. But the welcome extended by the Japanese Christians was yet to come, and I was informed through an interpreter that my "honorable self" would be welcomed on Saturday, and "please come early."

I came early—at half-past one on the appointed day, attended by an escort of four boys to the reception hall. Before entering it was necessary to remove my shoes and substitute a pair of gorgeous purple Dutch socks provided for the occasion.

With much bowing and smiling, I was ushered into a large room, whose original size had been increased by sliding back the walls which separated it from adjacent apartments. This room, the floor covered with tatami, was empty of furniture, save for a small, low card-table. Around the walls numerous cushions were placed. These are like the Canadian variety, only much thinner, and on them the people sit.

Conducted to the place of honor, I wondered with consternation how I could reach that level gracefully. A gentleman saw the difficulty and relieved it with great good nature by bringing forward the aforementioned table, placing upon it four of the cushions, and begging me to

be seated. This was an improvement on the floor, but the table plus the cushions were not yet so high as one of our chairs, and I was woefully tired before the festivities were over. When I was seated, a diminutive lady dropped on her knees before me, bowed till her forehead touched the floor, and presented a cup of tea (green it was), with no condiments.

For my amusement, until all had arrived, those present played a game after this fashion: One person called the name of one of the company, and

giving no sign (they are so trained), —but my name ceased to be called.

After all had assembled, there was a short service of singing and prayers. Then Muriyama San gave the address of welcome. The appropriateness of my reply was somewhat doubtful, through my ignorance as to what the welcomer had said.

Japanese etiquette presents some difficulties to foreigners, but the custom of taking refreshments home to be eaten has its advantages. The gentlemen waited upon the ladies with tea, and cakes served on a clean piece of wood wrapped in dainty Japanese paper. The cakes were made of bean paste, served in different styles. One was like two pancakes, having brown bean paste between; one was a ball of paste covered in white candy, another with brown. I tried manfully to partake, but, nevertheless, was glad to be able to wrap up the cakes and carry them home, secure in the thought that no one would be offended.

A short programme of Japanese speeches and Chinese songs was followed by another game. In this, a ball of paper, wrapped in a furashiki (the national shopping-bag), was passed quickly from hand to hand around the circle, while one in the middle, blindfolded, sang "Goro, Goro, Goro," which means "go around." The person who held the ball when the singing stopped had to contribute to the programme. A lady, when caught, sang "God Save the King"; another acted the beggar; a third recited, in English, "Little Drops of Water." One boy



Two High-class Ladies.



Afternoon Tea in Japan.

the latter in his turn must call the name of someone else within a given time limit. If he failed to pronounce the name in time, he must perform for the amusement of the rest. Such names as Katayama San, Muriyama San, Kiwai San and Yado No San proved my downfall, for they politely called my name. After the mournful Chinese dirges that some of the rest had sung, I thought my attempt to sing one verse of "Mary's Lamb" might be endured. They listened—

offered to display his English for the sake of the honored guest, and then eloquently and impressively delivered that best-known sentence in English literature, "It is a cat."

A boy persuaded me, with the formality and reserve due to a princess, to have yet another cup of tea and some additional cakes. Even the memory of the four already in my pocket did not make me refuse, though I'm afraid my gratitude was not too apparent. This was the

final effort for my entertainment, and the guests departed, bowing lavishly and thanking me for coming among them.
M. F. L.
Tokyo.

"CANADA'S NATIONAL DESTINY."

In the trend of events and the growing sentiment of the age, we fail to find any justification for Mr. Justus Miller's recent prophecy that Canada will eventually cut adrift from the British Empire. While Canada, strong in the vigor of her youth, confident in the immense, almost unlimited potentialities of her inherent wealth, may not submit to the paternal meddlesomeness that has, too often, in the past, characterized the attitude of the mother country, we believe her attachment to the land and the race from whence the best of her population has sprung, will grow stronger and more genuine as time goes by.

The advantages of union with the Empire will be apparent to any fairly close observer, who cannot fail to notice the crippling expenditures on armies and navies of the countries of Europe, the suicidal restrictions on trade that the nations of the world foolishly impose on free and natural commercial intercourse. "In union there is strength." The nations that comprise the Empire can much more economically and efficiently maintain the legitimate defence and police surveillance that is required by uniting their efforts. The tendency, we believe, will be to moderate tariff restrictions within the Empire, which anyone, not interested in restricting trade, can see will be to the mutual advantage of all parts of the Empire participating.

If these considerations, and others of a like nature, do not influence the peoples and statesmen of the Empire in holding the Empire together in the future, we very much misjudge the good sense of the peoples making up the British Empire.

J. D. TAYLOR.

WOOD ALCOHOL.

Among the list of casualties chronicled in the daily papers, there not infrequently appears an account of a person or persons being poisoned by "wood alcohol." To many people, still, it is to be feared, the word alcohol is only suggestive of spirituous liquor in some form. We knew personally of a woman who was about to mix up a hot drink of wood alcohol for someone who had a cold, and only found out in the nick of time what she was about to do. No doubt many of the deaths from this cause recorded in the newspapers are due to a similar ignorance. Since, then, the risk is one hard to be met, especially among people who seldom or never read—and there are many such—why not change the name completely, giving such substances as wood alcohol, denatured alcohol, etc., names that from the first shall stand for poisons that are not to be tampered with? The changing would be an insignificant matter, and if even one human life were saved thereby, it would be well worth while.

WOMEN'S INSTITUTES.

Provisional lists for the summer series of meetings, which will begin in most of the sections on May 27th, have been sent out for the approval of the Institute officers. The number will be considerably in excess of last year. The total to date, including the northern sections of the Province, numbers 298. As an indication of what the Institutes in New Ontario, which were formed last year, are doing, we beg to quote the following extract from a letter received from the secretary of the Hanbury Women's Institute, Temiscamingue District:

"In reply to your inquiry as to the method adopted by our Institute, in carrying on our work, I may say that the subjects chosen are usually those which interest or concern our daily lives. For instance, spring is almost here, and our subject for March was 'Seeds,' dealing with the places from which to procure them, the best kinds to get for our locality, and the best methods of planting, etc. Of course, you know this is quite a newly-settled country, and our members, a majority of whom are either from town or the Old Country, found our subject quite interesting and instructive. We intend to carry the subject through the season, taking up 'Transplanting' next month, with our other subject, 'Care of Poultry,' and so on as the season advances.

In furtherance of this, we have applied, as an Institute, to the Ontario Agricultural College for plants for experiments in fruit. The women here have the care of the gardens, the men being busy clearing the land.

The members seem to prefer a conversational style of conducting the meetings to a formal one, although we always have a short address or paper read on the subject chosen."

The officers of the Women's Institutes would do well to plan at an early date for the holding of the Branch Annual Meetings during the month of May. Communications have been sent to all officers regarding this, and it is hoped that the members generally will see to it that at the annual meeting enthusiastic and competent persons are placed in office. There is no one meeting which will tell for more in the work of the Institute than the annual meeting.

Arrangements have been made for the holding of a special conference for those who will attend Women's Institute meetings this season, beginning the last week in May, and continuing until the first or second week in July. By having the speakers—some twenty-two in number—spend a couple of days at Guelph in talking over the work in hand, and in visiting the different departments of the Macdonald Institute, thus acquiring additional material and information, will, it is thought, much strengthen the work of the delegates this year. There will be a uniform and definite purpose, which has not always existed among delegates sent out. Final announcements as to dates of meetings, delegates and subjects will be made about the 20th inst.

GEO. A. PUTNAM,
Supt. Farmers' Institutes,
Parliament Buildings, Toronto.

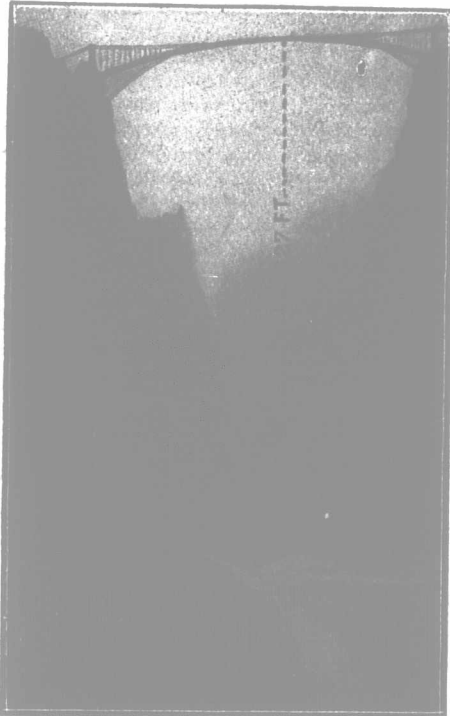
PROF. LEACOCK'S "CRY FOR IMPERIAL RIGHTS."

In a recent article, headed "Canada's Cry for Imperial Rights," the Literary Digest (N.Y.) quotes extensively from a recent article written by Prof. Stephen Leacock, of Montreal, in which he makes much of our "trucking subservience to English people," and declares that his spirit rebels against being a colonial. Surely a publication so eminent as the Literary Digest cannot take all this seriously, at least so far as the general sentiment of Canada is concerned. Canada is made up of at least two or three people beside Prof. Leacock—two or three very quiet, contented people, too, who have never even seen or felt the pricks against which the

learned Professor so vigorously kicks. Were it not too late, it might be suggested that "Prof. Leacock's Cry for Imperial Rights" might have been a much more suitable caption for the article in question than the one given in Literary Digest.

THE HIGHEST BRIDGE IN THE WORLD.

One of the most unique trolley trips in America is that which will soon be possible from Canyon City, Colo., to the top of the Royal Gorge and back. The ascent will cover a distance by rail of 2,800 feet, and on the return trip gravity alone will be the propelling power, the speed being regulated by brakes. On the way, the cars will cross the highest bridge in the world, and a pause will be made to enable tourists to view from it one of the most magnificent panoramas of mountain scenery, even in mountain-filled Colorado. But quite as much as the



The Highest Bridge in the World.
(From Literary Digest.)

scenery will the wonders of the bridge (which is now under construction) engage the attention of the visitor. Braced upon steel girders which are planted in the solid rock, it will swing across a dizzy chasm 230 feet wide. Two thousand six hundred and twenty-seven feet—nearly half a mile—below, the waters of the river swirl and boil, finding their way between precipices at that point only 50 feet apart. The bridge itself is 22 feet wide, and will, when completed, cost \$1,000,000. It is made of flat steel and steel cables. Its floor is of plate glass, 1 1/2 inches thick, set in a strong framework of steel, this provision being for the benefit of tourists, who may thus look down the terrible chasm below without danger from dizziness, while, to still further insure safety, high steel railings are being erected at each side.

The building of this bridge has been described as "one of the most difficult and dangerous projects yet attempted by engineers." For many years even the route at either side was deemed impracticable, but the seemingly impregnable mountains must, it seems, give way before twentieth-century skill.

The next highest bridge in the world is that over the Zambesi River, in South Africa, built by the British in 1905, to afford a passage for the Cape-to-Cairo Railway. This bridge is only 450 feet in height, but it was built under other conditions, whose difficulty rendered it the engineering achievement of the year, while its economic value as a factor in African civilization can scarcely be overestimated.

The Quiet Hour.

WALKING WITH GOD.

Jesus Himself drew near, and went with them. But their eyes were holden that they should not know Him.—St. Luke xxiv.: 15, 16.

"Come Thou as Guest within the breast
That burns to follow Thee.
Within our heart of hearts,
In nearest nearness be;
Set up Thy throne within Thine own,
Go, Lord; we follow Thee."

There is a wonderful biography contained in one short verse in the Book of Genesis. It is the story of a life which shines still in radiant beauty, though 6,000 years have passed since it was lived on this earth: "Enoch walked with God; and he was not; for God took him." He was translated that he should not see death, but that is not the fact which makes his record so splendid; but, as we are told in the Epistle to the Hebrews, he "pleased God." Anyone who is ambitious to achieve greatness should study that short biography and discover the best kind of greatness to aim at. Let us all aim at the highest; and the highest greatness is not reserved for a few, but is open to old and young, rich and poor, educated and ignorant. We can—each one of us—walk with God and please God. Then let us do it—NOW.

Though God may seem very far away,
yet He is really close beside us. We may know this as a matter of theory and yet fail to realize His Presence, and so miss the gladness and strength of walking consciously with Him. We may, in the "darkness of a half-belief," grope for His heart, like a child blindly seeking its natural resting-place, as Margaret Deland says:

O distant Christ! the crowded, darkening years
Drift slow between Thy gracious face and me;
My hungry heart leans back to look for Thee.
But finds the way set thick with doubts and fears.
My groping hands would touch Thy garment's hem,
Would find some token Thou art walking near;
Instead they clasp but empty darkness drear,
And no diviner hands reach out to them!
Sometimes my listening soul, with bated breath,
Stands still to catch a footfall by my side,
Lest, haply, my earth-blinded eyes but hide
Thy stately figure, leading life and death;
My straining eyes, O Christ! but long to mark
A shadow of Thy presence, dim and sweet,
Or far-off light to guide my wandering feet.
Or hope for hands prayer-beating 'gainst the dark.
O Thou! unseen by me, that like a child
Tries in the night to find its mother's heart,
And weeping wanders only more apart,
Not knowing in the darkness that she smiled.
Thou, all unseen, dost hear my tired cry,
As I, in darkness of a half-belief,
Grope for Thy heart, in love and doubt and grief;
O Lord, speak soon to me—"Lo, here am I!"

But let us think of our next. Two men were walking along the road between Jerusalem and Emmaus, taking sadly about the tragedy of the first Good Friday, and feeling utterly hopeless and disheartened. Suddenly they noticed that a Stranger was walking with them. As they listened to His quiet words they learned that life had a grander object than just the attainment of present glory or happiness. They began to dimly understand the great mystery of the perfecting wrought through suffering. They saw that an easy, painless victory was a very small thing compared with patient, heroic endurance and self-sacrifice for love's sake. Their hearts burned

within them as the mysterious Stranger explained their own Scriptures, showing that all through the ages God had been leading up to His grand revelation of Love; preparing men by types, sacrifices and prophecies, so that they might understand that it was no new thing for glory to be won through suffering and shame.

That walk to Emmaus was indeed a bright spot in their lives, an hour which would stand out in memory as long as they lived. They had walked with God, though they did not drink in all the sweetness of the experience because their eyes were holden that they should not know Him.

How we should have liked to have made one of that little company. Think what it would have been like to have heard the words of Him who had passed through death as a Conqueror and yet lingered in the world He loved. Divine tenderness must have thrilled in His tones, and His face must have been beautiful as He pleaded with them to trust God in spite of the downfall of their hopes.

But what is the use of wishing we had been there, when we know quite well that we have never had such an opportunity. Have we not? Then the great Christian faith, which can transfigure the dullest lives and sweeten the most bitter trials, cannot be founded on truth. He who is the Truth has said that where two or three are gathered together in His name He will always be present, and that He will be with His own until the end of the world.

We can, to-day, walk with God as truly as those disciples did that Easter afternoon; and if our eyes are holden so that we do not know Him, it is entirely our own fault.

Think of the joy of walking hand-in-hand with our Lord! Perhaps we are living through a time of perplexity and cannot see how the tangle is to be straightened out. We can look up in His face and tell Him simply and trustfully that we are willing to do what He commands, and to accept whatever He gives, knowing that He is able and willing to make all things work together for our good. We can, as has been said, tie our lives to God at the center; and so remain fixed in the midst of turmoil and unrest because our anchor is sunk deep in the Heart of God.

To walk with God all the time, conscious of His presence and leaning on His strength, is to drink in joy and peace with every breath and to press on eagerly in spite of rocky road and stormy weather.

We are worried and anxious, careful and troubled about many things, just because we forget or doubt His presence. It cannot be that we doubt His power. The universe in which we live—from the wonderful, blazing, life-giving sun, down to the tiniest insect whose life is beyond our powers of understanding—testifies with millions of voices to His power. We can hardly doubt His love—the Cross witnesses to that with a voice which grows louder all through the centuries, as we see more and more that no other ideal of love can compare with that once for all revealed on Calvary. No, what we doubt is not God's power to love, but His near presence. We could not murmur and complain if we felt that He was close beside us, for if we walked always with Him we must know certainly that all was well. Then the pressure of daily work could not crush out all freshness and spring. Why does it fret and chafe us until we grow cross and impatient? Is it not—partly at least—because it is piling up ahead of us and we see no way to get it done? There is always more work than we have time or strength to do? Yes, there is more work that we can see, but in reality God never requires of us more than we can do: To walk with God means to take duties straight from His hand, one at a time; not to stay awake at night wondering how we can ever get through all there is to do. There is a wonderful gladness in the remembrance that our days are planned out for us, down to the smallest detail, the work to be done this minute is laid in my hands by my Master. I can touch His hand as I take it and as I give it back to Him. All the other work I can see—which he has not given to me yet and may not give to me at all—is still in His hand. He will see to that, and give it out bit by bit to the work-

ers as He pleases. Then there is the pain or the disappointment which is so hard to bear. Don't let us be satisfied with quiet endurance, but let us find the joy which He has hidden in the bitter draught. It did not come to us by chance. Let us take the cup from His hand, looking up and thanking Him for it trustfully; because we know the bitter medicine is given in love, to make us strong with the strength of purity and radiant with the beauty of holiness.

We are dishonoring our King before the world when we murmur and complain, refusing to accept in childlike trust His will concerning us. If we, who profess to be willing to obey Him, have no confidence in His dealings with us, then those who are still looking for the Truth will give up hope and will not dare to lean with all their weight on One who is evidently not trusted by His own disciples. Think what a lot of mischief a soldier could do if he doubted the wisdom of his general, and plainly showed, by doleful voice and gloomy face, that he had no confidence in his management of the campaign. Such disloyalty would not only make him restless and troubled, but the contagion of doubt would soon spread to

his fellows, and he would do more to injure the cause than any outside enemy could do.

And we must also walk with God in our prayers, putting our requests into His hands in trustful meekness. To pray wilfully is not only wrong, but foolish and dangerous. We have had enough experience to know that if God had always given us exactly what we asked for, we should have brought heavy trouble down on our own heads by our prayers. God is too kind and loving to give us things that will hurt us, even though we may plead earnestly for them. When a little boy asks his father for a gun, a really kind and loving father will not put the gift into his hands until he is old enough and wise enough to handle it safely. Perhaps the things we are most thankful now for having escaped are the very things we were most eager to get a few years ago. The only safe prayer to place as a solid foundation beneath every petition is: "Not my will but Thine be done!" Too often we reverse this prayer and insist that not God's will but our own should be done—though all the time we know that we are very ignorant and short-sighted, like children

who beg for something without caring in the least whether it will harm them.

One more thought, and I have done. To walk with God means to walk also close to our nearest and dearest friends. I don't believe he ever intends to separate friends, though He often removes them from sight. To really walk with God is to be one with Him and to feel His life in every part of our being. Then we can, in Him, reach out at any moment and touch the heart or hand of one we love and who is also one with Him. "In Christ His chosen ones are near each other, though continents and oceans may divide them;" and even Death—the great Divider—has been robbed of his terrors. Christ has conquered him and has a right to say, "If a man keeps My saying, he shall never see death." As our Living Head is very really on this side of the Veil as well as on the other side: to be one with Him means that we, too, are on the other side as well as on this.

"Beside the dead I knelt for prayer,
And felt a Presence as I prayed,
Lo! it was Jesus standing there,
He smiled, 'Be not afraid!'"

"Lord, Thou hast conquered death, we know,

Restore again to life,' I said,
'This one who died an hour ago.'
He smiled, 'She is not dead!'"

"Asleep, then, as Thyself did say,
But Thou can't lift the lids that keep
Her prisoned eyes from ours away.'
He smiled, 'She doth not sleep!'"

"Nay, then, tho' haply she doth wake,
And look upon some fairer dawn,
Restore her to our hearts that ache!
He smiled, 'She is not gone!'"

"Alas! too well we know our loss,
Nor hope again our joy to touch,
Until the stream of death we cross!
He smiled, 'There is no such!'"

"Yet our beloved seem so far
The while we yearn to feel them near,
Albeit with Thee we trust they are.'
He smiled, 'And I am here!'"

"Dear Lord, how shall we know that
they
Still walk unseen with us and Thee;
Nor sleep nor wander far away?'"
He smiled, 'Abide in Me!'"

HOPE.

The Ingle Nook.

HEATING AND LIGHTING.

As regards the heating of a house there is, perhaps, little to be said. There are three popular methods, hot air, hot water and steam. The first of these is the one most commonly used, obviously because it is the cheapest. Either steam or hot-water fittings will cost from three to four hundred dollars more, but will provide for a more even heat, and do away altogether with the over-dry air, belches of coal gas, and puffing up of dust, which are the usual accompaniments of a hot-air furnace. However, a hot-air furnace is much better than stoves, much more labor-saving, much more likely to keep the house at a bearable temperature throughout. In buying a furnace it is well to choose one that is not too small, as a small fire in a large furnace will produce much more heat than a large fire in a small one. The larger furnace may cost more to begin with, but the difference will be regained many times over in the saving of fuel, and in general satisfaction.

Every house in which stoves are not used for heating should be supplied with at least one fireplace—as many more as can be afforded. If but one, it should be in the room most frequented by the family as a living-room. It is, of course, possible to do without grates, yet there are several reasons why they should be used. In the first place, a room without a glint of fire in it at all is, in winter, no matter how warm it may be, a rather cheerless place. There is nothing like the glow and murmur of a fire to produce a general feeling of well-being, and good cheer, and sociability. In the second, fireplaces are most excellent ventilators, and every room, especially one wherein several people are wont to congregate, needs ventilation. In the third a fireplace is a real saving in fuel in fall and spring, when a little fire is needed, and yet not as much heat as would be thrown off by a furnace. It may be necessary to remark, perhaps, that all modern fireplaces are made with provision for dropping the ashes down into an ash-bin in the cellar, also with close fronts, which may be put on when the grate is not in use. Grates may be bought all ready for putting in place, or the entire fireplace may be built of brick or cobblestone, the two latter kinds being much the more artistic, and much more suitable for country houses. We hope to give pictures of different kinds before long.

As regards lighting, a great change has come over the "manner of it" during the last few years. The time was when windows had to be very symmetrical—all of the same size, all placed at severely regular intervals about the wall, no matter how the lighting of the inside was served. Now people are learning that windows may

placed to suit the interior, both as regards size and disposition—that, too, without spoiling in the least the appearance of the outside of the house; on the contrary, even improving it. Of course the matter needs consideration; one can't patch on windows here, there, and anywhere, and have a pleasing result. One must look ahead, and see with the imagination just how they will look when in place. Nevertheless, by paying due attention to this point one can have high, narrow windows here, long low ones there, a whole cluster of them together if one chooses, with an effect both inside and out one hundred per cent. more interesting and artistic than the old severely symmetrical arrangement ever could be. Besides, this possibility of diversity forms a ready loophole to individuality of design. No one wants one's house

glass which was so much in vogue some years ago. For this last fact there is cause to be truly thankful. Stained glass is, as a rule, a thing to be handled with tongs, so often, and especially in the cheaper grades, is it likely to be harsh and crude, even vulgar, in coloring. Even when handsome one is likely to grow tired of it, as of all things that tend towards extremes. In exceptional cases to brighten a dark uninteresting corner, or in city houses to shut out the view of an uninteresting blank wall, it may be permissible, but in the country it would seem a pity to cover up a vista of trees and field and hillside, with a great blur of crimson and green. Bow or bay windows have, perhaps, much to recommend them, but are scarcely to be recommended for a cold country. An occasional unusually-shaped

for, say, four windows. If plants be placed on the sills, and a long window-seat run quite the length of the windows the effect is very pleasing.

And now I must close for to-day. Next time our talk will be of "exteriors."
DAME DURDEN.

Margaret Guthrie's Furnishing Hints.

Dear Dame Durden,—As spring approaches and the housekeeper's attention turns towards renewing parts of her house, a little chat on the dining-room, referred to some time ago, may interest some of the friends.

The most essential point in furnishing is to have harmony in color, and make the material suit the purse. This particular room is carried out in green and white; the wall paper a good quality of dark green, with scrolls of yellow lined with dark maroon, for which reason pictures in modest tints, mostly black and white, had to be chosen, and framed in narrow black frames edged with gilt.

As frost and damp loosened the plaster of the ceiling, it was deemed advisable to procure an art metal ceiling in Louis XIV. pattern from a Galt firm. The firm advertises in "The Farmer's Advocate," and are to be recommended for their fine work and careful attention given to details. By painting the center blocks cream, and shading the border green, blending into a darker green to match the paper, a very artistic decoration was obtained. The woodwork was finished in cream, and has only to be seen to be admired. The oak poles were also enamelled in cream, and hold in place white scrim curtains, edged with a green vine. The curtains reach about ten inches below the window sill. The remainder of the second can of paint was used on the flower cans, and the transformation was complete. The flowers are mostly pink and white, and with the luxuriant foliage, owing to a big Art Souvenir heater burning day and night, the show is beautiful; one especially fine one, of the dew or ice-plant family—a Californian—has over twenty most exquisite coral-shaded flowers, and will continue blooming till June. Many thanks to Flora Fernleaf for hints. "To resoom and continue on," as Samantha Allan says, the linoleum blends with the wall and ceiling, hence the two colors predominate, although brown and yellow appear. The lighter and brighter colors add cheeriness.

For a Christmas gift came new furniture, a couch and two easy chairs upholstered in green velvet the exact shade of the wall paper, half a dozen chairs, a table, writing desk and one bedroom suite. The sideboard has not appeared yet, but one can be patient. Instead, a fine old cherry and ash case, with a cleaning of sand paper and a coating of shellac, does service for china closet and bookcase. A corner shelf is to be placed for the clock. You see, Dame Durden, your ideas and mine on furnishing are identical. The photographs and bric-a-brac are for the little girl's room, which is soon to be finished in blue and white, if possible.

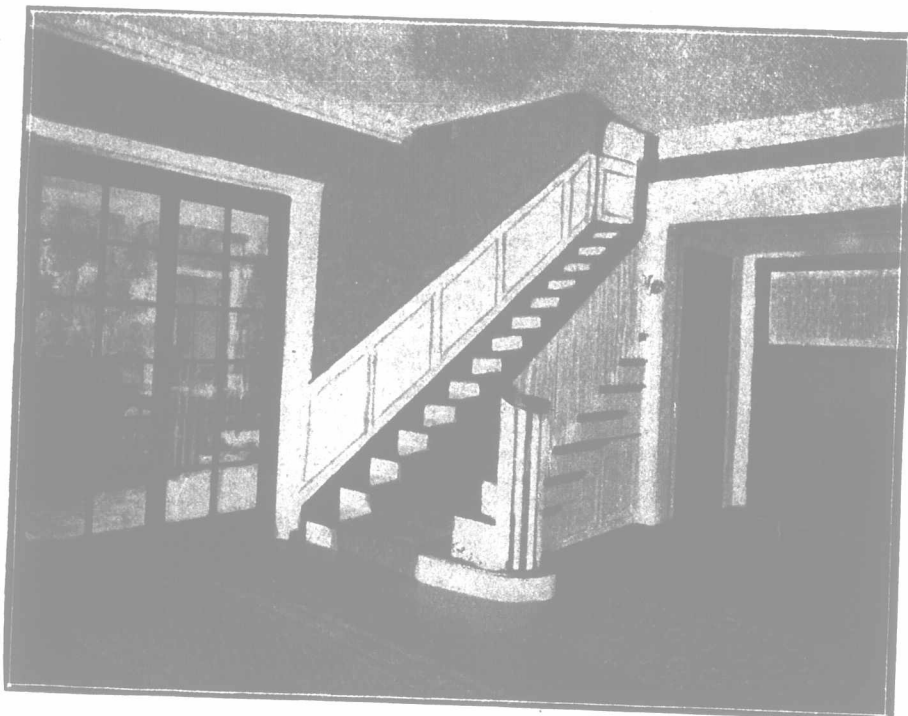


Fig. 1.—Glass doors between two rooms. A good plan for lighting a dark hall. Small fancy windows between room and room are sometimes used for the same purpose. (By permission of House Beautiful.)

exactly like everyone else's, and a different placing of windows often gives a touch of distinction attainable so easily in no other way. The illustrations given with this article will, we hope, serve to bring out this point.

Windows, with large panes are, of course, the easiest to clean, and for many years the large plate-glass "front" has held place as the summum bonum in the window family. Of late, however, there is a strong tendency to return to the old small-paned windows in all houses of an artistic type. In a very handsome house in this city, built after the Elizabethan fashion, all of the windows are small-paned. Leaded panes, especially diamond-shaped, are very handsome in certain situations, but are rather expensive. Small, square panes, often seen in old-fashioned houses, are also very effective. In some cases, above the plate-glass window, a small, square, stained

window, or a cluster of them together, on the other hand, helps to furnish a room, the latter arrangement giving an extended view of the outdoors, a picture ever changing, better than any that ever left artist's brush. A rather novel idea, which is meeting with much favor on the "other side," is, in certain situations, to have a window in the wall between two rooms; this placing, of course, being resorted to only when it is necessary to give added light to a room, or to a portion of it. Glass doors have also been found of great value, as in the otherwise dark hall shown in one illustration. When several windows are arranged side by side the curtains may be placed over the partitions between the windows and caught together away from the glass; or a short full "valance" may be run all along at the top, with a single long curtain at each end, one pair of curtains and a valance thus doing

For the table, a yard of the best Irish linen was bought and double hem-stitched. The little lady from the manse kindly offered to embroider flowers in the four corners. A silkoline curtain is to be run on a rod to screen the lower part of the desk.

If suggestions can be taken from this the writer will be amply repaid, and the cost of anything will readily be given.

MARGARET GUTHRIE.

Margaret's observation re the cream curtains with a green vine reminded me of some curtains that a friend is making for her summer cottage. They are of cheesecloth, and all around the edge she is stenciling on them a conventional pattern in blue—the room in which they are to hang being old blue in tone. To stencil, you first cut out a pattern from very stiff paper, the "hole" being the pattern. Varnish with shellac on both sides, and when dry lay on the material to be stenciled, painting the pattern in with a brush dipped in whatever coloring medium is to be used. My friend is going to do hers with diamond dye. By moving the pattern along, the one block of paper will be enough. For stenciling borders around rooms, as is sometimes done, paint must of course be used instead of the dye.

Cookies and Gingersnaps.

Dear Dame Durden,—I have been an interested reader of "The Farmer's Advocate" for a long time, and especially Ingle Nook—it is the first thing I turn to. I have never written before, being a little timid, and always busy.

Will someone, or Dame Durden, kindly send some names of some good recitation books suitable for small children about nine or ten years of age? Any information will be thankfully received. Also, as to where I might purchase them.

Would like a recipe for good ginger cookies. Here is one for white cookies: 3 eggs, 1 cup butter, 2 cups of sugar, 1 teaspoon soda; flour to make a dough; bake in a quick oven.

Here is another one: 2 eggs, 3 cups of sugar, 1 cup of buttermilk, 2 cups of butter, 2 teaspoons of soda, flour as necessary. INDUSTRY.

Elgin Co.

I should think if you write to T. Eaton & Co., Toronto, stating what you want, they will be able to send you a good juvenile recitation book.

The following is a good recipe for gingersnaps: 2 cups molasses, 1 cup butter or lard, 1 teaspoon soda, 1 teaspoon ginger. Heat all until melted, and then add just enough flour to roll nicely. Bake in a quick oven.

From a Women's Institute Member.

Dear Dame Durden,—I have been an interested reader of the Ingle Nook for some time, but never took courage to write until I saw Helena's request for a recipe for butter tarts. As we have a good one, I will send it: Three-quarters cup of brown sugar, 1/2 cup of butter (melted), 1 cup of currants, and 1 egg. Here is also an excellent recipe for chocolate pudding, which, by the way, I got from a Women's Institute meeting: One quart of milk, 1 cup of sugar, 1 square of chocolate, 6 tablespoons cornstarch, 1/2 teaspoon salt, and 1 teaspoon vanilla. Scald the milk. Mix cornstarch with a little cold milk; add salt, sugar and chocolate; pour into scalded milk, and stir. Cook about ten minutes; take off stove, and add vanilla. I sometimes use cocoa instead of chocolate.

A Delicious Cake.—Two cups of white sugar, 1 cup of butter, 1 cup of milk, 3 eggs, 1/2 teaspoon of soda, 1 teaspoon of cream of tartar and 3 cups flour. Beat butter and sugar together; add yolks of eggs, then beaten whites; dissolve soda in milk; rub cream of tartar in flour, and add last.

We have taken "The Farmer's Advocate" for about four years, and would not like to be without it. There is so much one can learn in it. I am always interested in the poultry section. I raised over one hundred chicks last year, and had but a few die. We have not an incubator. A number of our neighbors have them, but they have

so many chicks die of disease. I think incubator chicks are bothered with disease more than those with hens, so I have come to the conclusion that hens are the best incubators. In feeding young chicks, the first 24 hours, at least, after hatching, I do not feed them, then I give them some sand, and then I crumble bread and give them, and keep them on that feed for about a week before starting them (gradually) with more solid feed. In feeding them this way, I seldom lose one, except by accident. I think crumbled bread is better for them than bread soaked in water.

York Co., Ont. BLUE BELL.

Children's Corner.

[All letters for Children's Corner must be addressed "Cousin Dorothy," 52 Victor Ave., Toronto. Otherwise they will not be published.]

SOMETHING ABOUT OTTERS.

Among the animals that live partly on land and partly in water, that can run about on shore and breathe the air just as well as we can, and yet dive under

that some part of it is always dry and well ventilated.

When the otter wants his supper—for, as he eats only at night, it may be said that he takes neither breakfast nor dinner—he slips quietly into the water, and, as soon as he sees a fish, he gives chase to it. He has large, full eyes, like a seal's and he can see in the water as well as on land. He is web-footed, and his long, flexible body and stout tail enable him to move through the water with a motion very much like that of a fish. He can thus swim very fast and few fish are able to escape him.

During the day, the otter generally stays quiet in his burrow, but at night he comes out, and makes it very lively for the fish. Sometimes, when fish are scarce, he will do his midnight hunting on land, and will catch a chicken, or any small animal he may meet.

If caught when quite young, otters can be tamed so that they will follow their masters about, and even catch fish for them. They are as playful as kittens, and make very interesting pets. In India and other Eastern countries, tame otters are largely used in the catching of fish, and a very nice business is done in this way. The fur of the otter is quite valuable, hence the scarcity of the animal in this country. The sea otter, which inhabits the Arctic regions, is much larger than our common otter, and its fur is much more valuable. They are killed in large quantities in the regions about Behring Straits and Kamschatka.

The otter is such a clever, interesting little fellow, with so much common sense and shrewdness, that it seems a pity to kill him and use his skin simply for purposes of adornment.—[Boy's World.]

THE ADVANTAGES OF EDUCATION FOR FARMERS.

Dear Cousin Dorothy,—The first and last time I wrote to the Children's Corner was dated last summer, while I was enjoying life on a dairy farm in Ohio. But I am back in old Canada once more, enjoying all the pleasures of our Canadian winter. I think Canada is the best yet; but, still, I suppose that is only natural, it being my home land. I will try now, and give you my ideas regarding the proposed topic, "The Advantages of Education for Farmers." I think education is a branch which our country cannot do too much toward building up and improving. People used to think that education was not needed to run a farm, but nowadays every up-to-date farmer has a good understanding of all the many different branches in connection with farming. If you see a man who does not get along, does not make money, and often is not happy, the fault usually lies in the fact that he does not manage right, and no man can manage if he doesn't know how; so he must have education. I must not occupy too much of your precious room, so, wishing you and all the readers success, I will now withdraw, and give other friends a chance. AUBURN, Beamsville, Ont.

Dear Cousin Dorothy,—After reading so many valuable letters in "The Farmer's Advocate," I decided to come into this cosy corner. Now, for a talk about "The Advantage of Education for Farmers." We must first take into consideration for what a farmer needs education. Some, but few, think that a farmer needs little or no education for his work, only plowing, harrowing, reaping and mowing, but that is not all. After he has done this, he must take his grain and other products to market, and how would he know when a man was cheating him or not, if not for his education? He needs to know how to read, if he wants to know anything about the outside world. He must know how to write, so that he can write to any place or person. I say that a farmer needs education more than any other business man of our Dominion. Before I close, I must say that I agree with Lorne Brooks about Canada. Wishing the Corner and "The Farmer's Advocate" every success. BLUEBELL, Middleport, Ont.

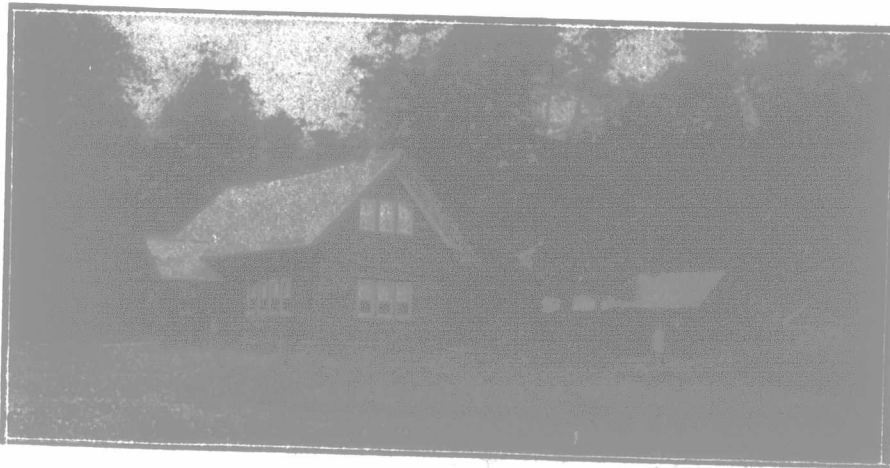


Fig. 2.—A very inexpensive house, rendered uncommon by placing the porch to one side and arranging the windows to secure harmony both inside and out. (By permission of House Beautiful.)

THE GREEN LADY.

A lady sat singing alone in the mire: "The New Year must come, and the Old Year retire;

But I the Green lady, Smell lilacs already,

And I hear in the tree veins the sap rising higher."

The wind was as sharp as the fang of a snake,

But the lady's warm fingers bade snow-drops awake.

"I saw you, I heard you,

When no vision stirred you

Of hursting your buds for the Green Lady's sake."

the water and swim like a fish, one of the most interesting is the otter. A common otter is about the size of a small dog, having a narrow body about two feet long and very short legs. It is covered with handsome fur next to its skin; and, outside of this, there is a coat of long, coarse hair.

As this animal is very fond of the water and lives principally on fish, it makes its home on the shore of a creek or river. This home is a hole underground, generally quite close to the water. The entrance to the burrow is always under water, and leads upward to the main apartment, which is dug out as high up in a bank as possible, so

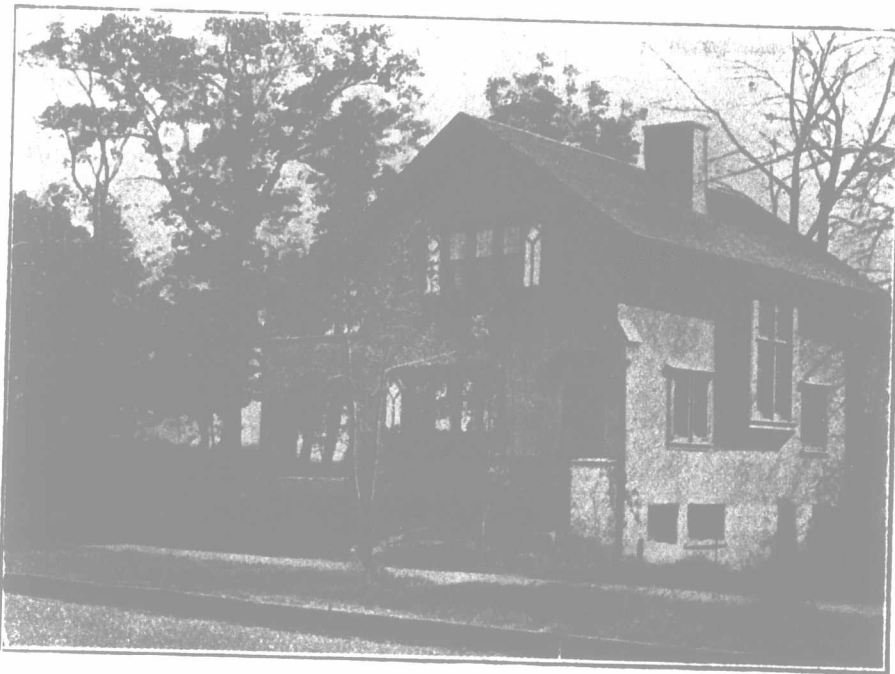


Fig. 3.—Note the arrangement of windows, unique, yet quite compatible with a harmonious exterior. This house was designed by the Crafters. (By permission of House Beautiful.)

The lady went smiling with rain in her face, And the puddle she trod turned a beautiful place,

Where thirsty birds, drinking,

Might sudden be thinking

Of downy broods warm in a feather-lined space.

She passed, the Green Lady, and with her and after

A beam of clear sunshine pierced heaven's cloudy rafter,

It struck to earth's bosom,

And there it bade blossom

The rapture of roses, the hyacinth's laughter.

—Nora Chesson, in the London Chronicle.

that, in case of a flood in the stream, the water will not rise up along the entrance way and into the otter's house. Sometimes the animal makes two of three chambers, one above another, so that, in case the water should rise in a lower room, he and his family could go up higher and keep dry. He does not mind being under the water for a time, but he cannot live under the water. From the top of his house to the surface of the ground he makes a small hole to let in the air, so it will be seen that the otter is a very clever creature. The entrance to his house is hidden under water, where no dog nor other enemy is likely to find it, or to get in if they do find it, and his home is so well planned

Clark's Ox Tongue

Prepared from tongues that are a little better in every way, more tasty, more appetizing, and more carefully cooked.

Just what every woman wants in the house to make every meal more enjoyable. Tender, tasty and delicious. Don't have any other.

WM. CLARK, Mfr., Montreal.

The Cost of Attention

to detail is not small—but the reputation which it brings is priceless. "Five Roses" Flour is made with an attention to detail which has won it a reputation for reliability and uniformity unequalled by any ordinary brand. No single detail is overlooked, and every process known to scientific milling is used in order to maintain the reputation of "Five Roses," which brand is as near perfection as care, skill and science can make it.

LAKE OF THE WOODS MILLING CO., LIMITED.

The Advice of Experts:

"It is always a mistake to plant old seed, and often it is well to procure a supply from a different part of the country, but not very remote nor too different in climate. Seeds of weeds that are hard to kill out are sometimes found in field and garden seeds, and precautions must be exercised against them."

The above is a quotation from *Farmer's Bulletin, No. 94*, of the *United States Department of Agriculture*, and its application to Canadian Growers is this:

Rennie's Seeds are fresh. They are Northern grown and adapted to the Canadian climate. They are carefully selected and free from weeds. This is a plain statement of facts,

and we stand behind it with a record of thirty-seven years' honest service to the Canadian farmer.

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PROTECTION
TO CLIENTS.



TELEGRAMS—
MERCANTILE, REGINA

Current Events.

Four Cobalt mines were quarantined on account of smallpox.

Russia is massing troops on the Persian frontier.

The Collingwood Shipbuilding Co. has decided to double the building plant at Collingwood, Ont.

Earthquake shocks affecting 500 miles of coast in Mexico, have destroyed several towns, causing much loss of life.

In accordance with the terms of the Treaty of Portsmouth, all Japanese and Russian troops have been withdrawn from Manchuria.

The war in Central America has been brought to an end by the surrender of Amalpa to the Nicaraguans.

The Standard Oil Company has been found guilty on 1,463 counts of accepting rebates from the Chicago & Alton Railway.

One of the worst snow blockades on record occurred in the Northwest during the past fortnight. The C. N. R. was completely blocked, and many cattle and horses died of starvation and exposure.

Rear-Admiral Nebogatoff has entered upon his ten-year term of confinement in the fortress of St. Peter and St. Paul, St. Petersburg. He was sentenced to death for surrendering the Third Russian Pacific Squadron at the Battle of the Sea of Japan, but his sentence was shortly afterwards commuted.

At the Colonial Conference in London, Lord Elgin and Mr. Churchill met the seven Colonial Premiers: Laurier, of Canada; Alfred Deakin, of Australia; Sir Joseph Ward, of

New Zealand; Sir Robert Bond, of Newfoundland; Gen. Botha, of the Transvaal; Dr. Jameson, of Cape Colony, and Mr. F. R. Moor, of Natal. These Premiers, who were accompanied by other colonials, represent over 16,000,000 people of the British Empire. The question of greater consolidation of the Empire, and others referring more exclusively to individual colonial needs, were discussed.

THE NEW POSTAL REGULATIONS.

Upon news of the recent postal treaty between Canada and the United States, quadrupling postal rates on second-class mail matter, fears were expressed that, to meet the change, the price of U. S. publications would become almost prohibitive, while there would be few others to fill the gap. Apprehensions on this score have, however, on further information, been removed. United States magazines, etc., may still enter either country at the same rates, but must be sent by express or freight to agents, by whom they will be distributed at ordinary postal rates. In this way Canada will benefit by the amount of postage which heretofore went to the United States Postal Department, and which, owing to the infinitely greater number of American magazines coming to Canada, made no small disparity of revenue. The arrangement will also facilitate the efforts of Canadian authorities to prohibit undesirable literature from entering the country. Almost simultaneously with this movement came another reducing the postage of British publications sent to Canada from eight cents to two cents per pound, the charge on packets not exceeding two ounces still remaining at a half-penny, as before. This decision of the British Government will be hailed with much satisfaction throughout the Dominion. British magazines are comparatively little read in Canada, but the wish to read them has existed. Now that prohibitive postal rates have been removed, there will probably be a great influx of "Old Country" literature, and by it an added bond to the motherland will be established.

With the Flowers.

PLANTING AND CARE OF SHRUBS.

The following, adapted from a paper by R. A. Emerson, in the *Missouri Fruit-Grower*, has many things in it that should recommend themselves to Canadian readers. In especial do we endorse the part referring to planting native shrubbery about our lawns. We have many beautiful native shrubs and trees in Canada that should not be overlooked in laying out home grounds.

Shrubs for ornamental planting are not appreciated as they should be. The hardy shrubs are not only easily grown, but they are one of the most effective things that can be used. Of course, trees should form the background of any large planting, but in some places there is room for no more than a few trees at best. No home ground, unless it is entirely covered by the house, is too small for shrubs, and the larger the place, the more shrubs there should be.

When I say that we of the West do not really appreciate shrubs, I speak advisedly. Many of us like flowering shrubs; that is, we enjoy the flowers that the shrubs produce, but we care little for the shrubs themselves. Most shrubs are more attractive when in flower than when out of bloom, to be sure, but we must remember that the flowers last but a short time at best, while the foliage lasts all the season.

Not long ago a prominent professional man of Lincoln was bemoaning the fact that we could not have in the West the foliage effects, the luxuriant masses of light and shade seen in parks and home grounds, in the East. But we can have them if we want them. It is merely a mat-

ter of choosing the kinds of shrubs adapted to our conditions, of planting lots of them, of arranging them properly, and of tending them with some care. So long as we are satisfied with one Van Houtti spirea, one snowball, one Persian lilac, and one mock orange, and so long as we are content to see these in little holes in the sod in the middle of the front yard, and so long as we let them take care of themselves, we should not expect too much, either in flower or foliage effects.

WHAT SHALL WE PLANT?

Plant first the hardy things, the things that can't help growing. Don't be afraid of the wild things. You do not think you would like some sumac in front of the house? You wouldn't plant elderberry by the front walk? You think wild currant and wild gooseberry and buffalo berry are too scraggy for the lawn? You think choke-cherry and coral berry (buck brush), and the rest of the wild things, would sprout up and take the whole front yard? Well, maybe they would. I would not plant them myself—not in the front yard. I wouldn't plant anything there, in fact, but grass. As a matter of fact, I have all of these things, and more like them, in my own yard, and they have not spoiled it, either. They make the best sort of screen for the chicken-yard, and they hide the vegetable garden and protect it from the wind. They do well under the big apple tree near the back end of the house. How much better the spireas, mock orange, hydrangeas and hardy roses, to say nothing of the phloxes and peonies and columbines and larkspurs and Iris and Shasta daisies—how much better and brighter all things look in front of this vig-

orous, hardy background of wild things than they would standing out singly in the front yard, and wishing that the owner of the place would keep the sod away from them so that they could grow.

Get the "fancy" shrubs from home nurseries. If you cannot afford to buy many of a kind, get a few and increase them by layers, by bending the limbs down and covering them part way with earth. If they do not root well, break them a little below ground or notch them or girdle them. They can't help rooting then. You can grow most of the hardy shrubs from cuttings, but you have to watch cuttings closer. Get lots of shrubs some way. Then go out and dig up some of the wild things and bring them in. They will look entirely different when they are domesticated.

WHERE SHALL WE PLANT THE SHRUBS?

First, don't plant them all through the front lawn. You cannot have good shrubs and a good sod in the same spot, any more than you can have a good orchard and a good meadow on the same piece of ground. Plant the shrubs at the sides and rear of the lawn. If you have a very large place, plant them in groups in front of the trees, which are themselves for the most part along the sides and back of the lawn. If you have no room for trees, put the shrubs at the side and back, anyway. A few specimen shrubs, some especially choice kinds standing out in front of the larger masses, are in place, but keep the center and front of the place open. Grass looks better there than shrubs or flowers. Plant a few choice shrubs by the jog in the wall of the house, some good climbers—the Crimson Rambler rose, the small-flowered white clematis (*Paniculata*)—on the side of the house or on the pillars of the porch, a few other vines—honeysuckle, Virginia creeper, wild grape, trumpet vine, and the like—to cover the unsightly objects that the shrubs do not hide, and you are done. That is, you are done with the lawn planting. You will still need some roses for cut-flowers. Put them in the garden along with the sweet peas or gladioli and other beautiful things that have no place in the general lawn-planting, or prepare a special bed for them in some out-of-the-way place. You can care for them better there than in the lawn, and few roses, except *Rugosa*, *Madam Plantier*, the hardy climbers, and perhaps the yellow briars, look well in the lawn, anyway. In the garden, or in a special bed by themselves, they can be fertilized and pruned and coddled, and the flowers can be picked without hurting the looks of the place.

HOW TO PLANT AND CARE FOR SHRUBS.

Use the same care in planting shrubs as in planting trees. Prepare the ground well. Do not dig a small hole in the sod, but plow or spade up the whole area that is to be set to shrubs. Give each plant all the room it needs to develop naturally.

Dig a hole for each plant. Set it in a little deeper than it stood in the nursery. Keep the roots moist all the time. Work moist soil in about the roots and press it down firmly. Packing it with the feet won't hurt it if it isn't too wet. Leave the soil loose on top. If you must plant in wet weather, be careful not to pack the muddy soil, and don't be surprised if it bakes hard when it dries. If dry at planting time, water the plants. First, pack the dirt firmly about the roots, leaving a basin-like depression about the shrub, then pour in enough water to wet the ground below the lowest root. A dipperful of water won't do that. A half pailful won't. Pour a pailful or two about the shrub, let it all soak away, and then fill up the basin with loose, dry earth. Watering during summer should be done in the same way. It will not be needed often. Watering every few days is worse than no water, because you will not do it right if you water so often.

Cultivate the shrubs until they are large enough to shade the ground. Cultivate all the ground. Do not let the grass get in. Do the work with the hoe, if necessary.

Prune shrubs when they are planted, cutting off a considerable part of the top. Pruning in after years will consist in cutting out the older and weaker parts of the bushes. As a rule, do not cut back the shoots much and do not keep the shrubs sheared, but let them follow their own inclinations as to habit of growth. Just keep them vigorous by judicious thinning. Of course, some things must be pruned more severely. Hydrangeas and the more tender roses should be pruned back severely in spring or fall. Even althea and snowball are sometimes benefited by severe pruning.

All shrubs, even the wild things, will be better for some fertilizer. Mulch the ground with stable litter in the fall, and in the spring remove the coarser part of the mulch, and work the rest into the ground. The mulch in winter will help many of the more tender shrubs, and it will not injure the hardy ones. It will be well to apply some well-decayed stable manure also.

Health in the Home

HOUSEHOLD SANITATION.

By Mary E. Allen Davidson, M. D.

Chapter III.—The Cellar.

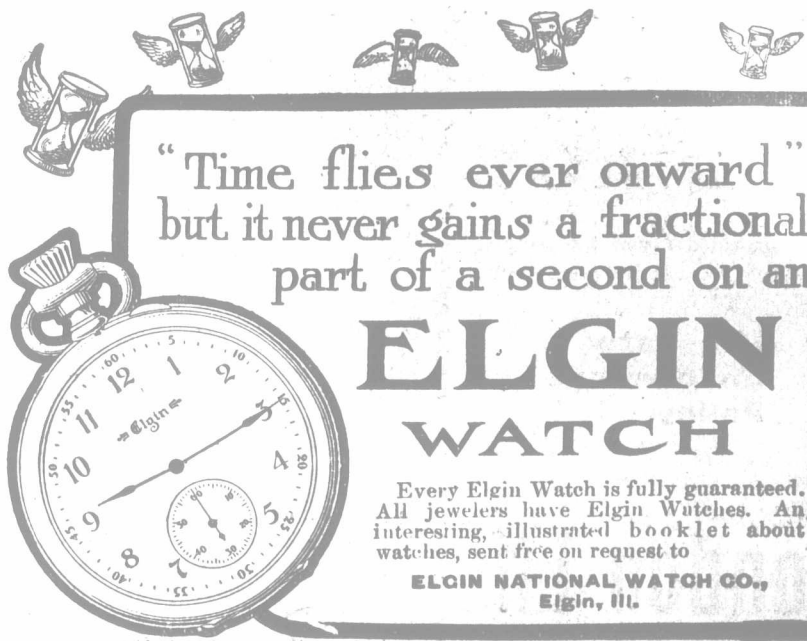
To those who purpose building a home this summer, the question of the cellar is of the first importance. Indeed, a good cellar is vital to the well-being of all the family. In selecting the site for your house, think of the cellar, and secure good drainage, so that there may be no unwholesome dampness at any season of the year. The land should slope away from the house, preferably towards the sun. Don't stint your outlay on the cellar. Plan for the coming years. You must have a furnace. Do without something in the upper part of the house if the cost seems too great at first. This will require considerable space; so build the full size. You will find plenty of use for all the room there is later on, if not now. Build substantial stone wall, using good material. Be sure to have the excavation deep enough to get well below the frost line, to prevent heaving and consequent cracking of the walls. Have these high

enough above the ground level to allow plenty of space to secure abundant light and ventilation for the cellar. This also raises your house high enough above the ground to secure a circulation of air comparatively free from dust and organic particles, which eddy near the ground, and, of course, obtain entrance to houses whose lower floors are nearly level with the ground. A good size for cellar windows is two and a half feet high by two feet wide.

Have well-fitting storm sashes in winter, and full-size wire screens in summer. It will pay. Have the inner sashes swing on hinges from above, so that they can be lifted inward and upward, and fastened by hook and staple to the joists. Thus you can have the full space of as many windows as you desire open all summer, day and night, as the screens will exclude flies and other pests, cats, etc.

In regard to the number of windows, there should be enough to secure good light and thorough ventilation. As a rule, north windows are not desirable, if the requisite light and air can be secured without them. A solid northern wall is preferable, when it is a question of keeping out frost.

Don't forget to have an outside



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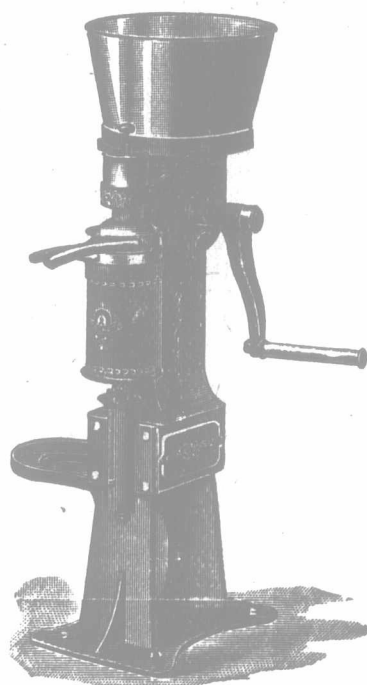
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to look into the construction of a Cream Separator after you have bought it.

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It is not the lowest-priced machine, because we will not sacrifice quality to make it that.

We rest our case on the points above mentioned, and ask you to consider them carefully, well knowing if you do so it is the **MAGNET** that will be your choice.

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Field peas brought 77 cents a bushel last year. The average price was 75 cents. There's good money in peas even at 65c. And you have the vines left for fodder or to plow under—better than stable manure or commercial fertilizer. It paid to grow peas last year. This year it will pay as well,—demand keen, pea bugs vanished,—plant peas for profit. Get them in EARLY.

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EVERGREENS—Norway Spruce, Austrian Pines, Scotch Firs, Juniper, Arbor Vitae, Cedars (various kinds), Flowering Shrubs (30 varieties), all 10c. and upwards; also Perennial Flowering Border Plants, 10c. each, \$1 per doz.; Ornamental Shade and Fruit Trees, 15c. up, according to size; Berry Bushes (all kinds), 50c. to \$1 per doz.; Strawberry Plants (10 varieties), 50c. per 100 and \$2.50 per 1,000. **C. BAKER'S NURSERY, General Delivery, London, Ont.** Telephone 2222.

\$12 WOMAN'S SUITS, \$5

Suits to \$15. Coats, raincoats, skirts and waists at manufacturers' prices. Send for samples and fashions. **Southcott Suit Co., Dept. 27 London, Can.** Send for our catalogue, which lists everything you use.

door, with a stone-walled area for the outside stairs. Have the walls slope from the top of the cellar wall outward five or six feet, to a point about three or four inches above the ground-level. Put in broad plank steps, easy of ascent, and floor this area with cement or brick, so that the rubbish that is sure to drift in can be easily removed. Cover in the area with a substantial two-leaved trap-door. This excludes rain in summer and snow and cold in the winter, and gives easy and comfortable entrance and exit all the year round. This is a consideration when barrels, boxes, bags and other large, clumsy articles have to be taken up and down. The door also aids much in cleaning and ventilating the cellar, as it facilitates removal of rubbish, and, by leaving it open, the place can be thoroughly wind-swept. If a drain be necessary, see that it is efficient, and that it remains so.

If you wish to save money, cement your floor right at the start. You can then keep the cellar healthful

and clean with little effort. Be sure to have depth enough—not less than 7½ feet below the joists; as the cement will take up several inches, you will have to allow this extra amount. This floor is durable, can be swept and washed off, and in summer can be flooded with water and the whole house bathed in a cool, moist air, which will prove very grateful in the hot, dry days that are so trying.

The inside stairs should be of heavy plank, solidly built, and with an easy slope. The steps should be broad and not too high, in order to secure sure footing and to minimize labor in going up and down. Many a fall, with consequent illness and often lasting injury, can be laid to the charge of narrow, ill-built cellar steps. The stairs should open into the kitchen by a door that is from the closet. The old hole in the floor is well named "a trap." It is a menace to life and limb, as well as unsightly and insanitary.

(To be continued.)

About the House.

CEREAL FOODS FOR BREAKFAST.

The history of the use of oatmeal, cracked wheat and corn meal as porridge extends over many centuries; but the prepared food, "fully cooked and predigested," is almost a twentieth-century product.

A few years ago (1902), in the laboratory of the Inland Revenue Department, several of the more common of these foods were analyzed, to see to what extent they were really all they claimed to be—not with regard to wholesomeness, but to see if the extravagant claims made and the high prices asked for them were made justifiable by increased nutrition, palatability and digestibility. The result of the investigation is given in Bulletin No. 84, Inland Revenue Department. Six of the best known of the prepared foods were compared with rolled oats, oatmeal, pea meal, common corn meal and golden corn meal. In reply to the query, "Which of all these breakfast foods is the best value from the point of view of nutrition?" the answer was: "Provided the article is served in such a way as to render it fully digestible, then, from a consideration alone of the energy derived from it, there is very little to choose between them."

The prepared foods were more soluble in cold water than the uncooked meals; but, since we cook porridge to render the starch contained more soluble, the question becomes one of time and fuel. Whether we can afford to pay the prices asked for the prepared foods, in preference to buying the raw material and cooking it at home, is a question each house-keeper must answer for herself.

In regard to protein, pea meal has nearly twice as much as any of the other foods; oatmeal, rolled oats, Ralston's Breakfast Food, grape-nuts and malt breakfast food all contain about equal quantities of protein. But pea meal, as we know, is not easily digested, therefore it cannot take the highest place as a food. In regard to fat, oatmeal and rolled oats stand highest, corn meal a little lower, and all the rest much lower. The analyst sums up by saying: "On the whole, I am of the opinion that, as a well-balanced material for porridge, these analytical results justify me in claiming a very high if not the highest place for oatmeal, especially in the form of rolled oats." Of course, even this is not final judgment, as there is still much to investigate and learn of the value of cereals as food.

The prepared foods come either ready for use or with all directions as to how to prepare them, but there may be new ideas, some in the following method of making the most ordinary meal.

A very useful and necessary utensil for the preparation of cereal foods is a double boiler. These come in all sizes, and are made of metal

not go without one on account of the cost, for the price of one is soon paid for by the material saved. With a double boiler, there should be less than a tablespoonful of material wasted each meal (can that be said of the old method of cooking?), and there is no need of ever scorching any. But for those who find the ordinary boiler of little use for other cooking, one can improvise a boiler by getting a small granite kettle that drops well down into the stove, have a basin that fits tightly in the top of this, and a granite pie-plate makes a good cover. This style of boiler is especially useful in summer, when a small fire (especially if wood is used) is most desirable.

Oatmeal (granulated) needs much cooking, three hours being not too long; but by soaking in cold water before putting over the fire, one aids the process considerably. Rolled or flaked oats can be cooked in half an hour, but longer cooking improves both flavor and digestibility. This long cooking is best accomplished by preparing the porridge in the evening and allowing it to cook as long as the fire lasts. In the morning, see that there is water in the lower vessel, draw to the front of the stove, and leave until breakfast. If the lid be removed for five minutes before serving, it will allow the steam to dry off.

Granulated Oats.—Put one quart cold water in the top vessel, sift in one cup meal and 1 teaspoon salt. Stir only enough to wet the meal. Partly fill the lower vessel with boiling water and set the top part into it, cover, and let cook for as long as is convenient.

Rolled Oats.—One and a half pints of water is sufficient for one cup of meal. Use either cold or boiling water, and put in the salt with the meal. Do not stir after the meal is once wet.

Corn meal is also better for at least three hours' cooking.

Boiled Corn-meal Mush.—Mix a pint of meal with a pint of cold water or milk, and stir the mixture carefully into a quart of boiling water; add one teaspoon salt, and cook in a double boiler. The meal may be sifted in dry, but it is not easy to keep free of lumps. Corn-meal mush may be baked in a covered dish set in a pan of hot water in the oven.

Cracked wheat should be soaked over night in cold water, then cooked at least one hour; or, it may be cooked in the evening, and warmed over. One cup wheat requires one quart water and one teaspoon salt. Wheat germ, wheat grits, wheat-lets, and several other names, are all applied to a fine meal made from the heart of wheat. This also requires one quart of boiling water (be sure it is boiling rapidly) to each cup of meal. Sift the meal in carefully and stir rapidly, to avoid lumps. Cook at least 20 minutes; more does no harm. A nice flavor can be given to wheat-germ porridge by adding a tablespoon of grape-



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Superfluous Hair

Moles, Warts, Ruptured Veins, etc., always permanently eradicated by our method of Electrolysis. Satisfaction guaranteed. Our scientific treatment for Pimples, Blackheads and Blisters always cures. Send stamp for booklet "F."

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Established 15 years.

CHEAP FENCING

Farmers, now is the time to buy yourselves rich.

The Oshawa Wire Fence Co.'s
Factory will be sold in June, and I must clean out all Wire Fencing and Gates now in stock. Wire fencing is much dearer than for some years past, and yet ours is cheaper.

WIRE FENCING.

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| 9-49 Standard | 35c. per rod. |
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| 3-48 Plain Gate | \$1 80 |
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While the stock lasts.

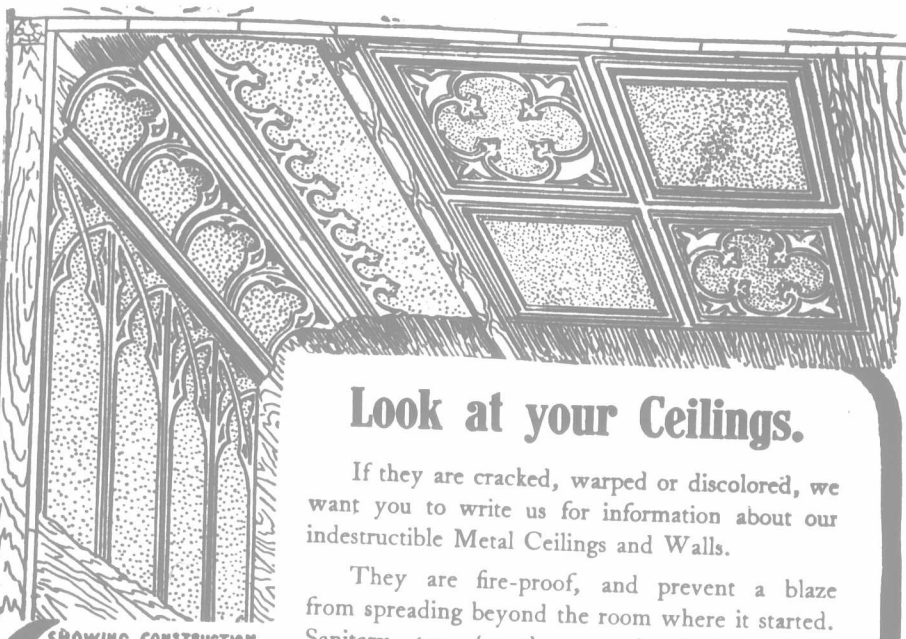
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Catalogues furnished on application, showing style of fencing and gates.



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If they are cracked, warped or discolored, we want you to write us for information about our indestructible Metal Ceilings and Walls.

They are fire-proof, and prevent a blaze from spreading beyond the room where it started. Sanitary, too, for they can be freely washed.

In the rich and harmonious appearance they give to a room, our

Classified Metal Ceilings and Walls

are unsurpassed, and can only be equalled at great expense. The embossed designs lend themselves readily to the most magnificent coloring, or even if plainly painted they are very attractive. They are classified according to prevailing architectural styles, and therefore produce perfect harmony.

Once put on properly, they will last as long as the house itself, and the small expense of repainting every four or five years gives an entirely new and fresh interior finish.

PORT COLBORNE, ONT., Jan. 30th 1906.
I am very much pleased with the Metal Ceiling ordered from you last fall and wish to state in regard to its merits, that for durability, richness of finish and cleanliness, I consider it far ahead of plaster, wood or any such finish for the interior of buildings.

EDWARD A. DAVIDSON.

We supply complete designs with accurate working plans so that the ceilings and walls are easily put up. The first cost is very moderate, and is soon covered by the reduction in insurance premiums if they are used throughout the house.

Write for our catalogue showing many handsome designs. Sent free if you mention this paper.

Metal Shingle and Siding Co., Limited,
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POTASH
FOR FIELD, GARDEN AND ORCHARD

This important plant food may be obtained from all leading fertilizer dealers in the highly-concentrated forms of

MURIATE OF POTASH AND SULPHATE OF POTASH.

On account of the increased demand for these fertilizers throughout Canada this year farmers ought to order at once to prevent disappointment.

The judicious use of Potash in conjunction with phosphatic and nitrogenous fertilizers cannot, and does not, fail to bring satisfactory results. Testimony to this effect is becoming more frequently heard each day.

Write at once for our FREE publications, treating of the fertilization and cultivation of various crops, as well as of the results of fertilizer experiments in Canada and elsewhere.

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

At the dispersion sale of the Holstein herd of W. B. Smith & Son, Columbus, Ohio, on April 3rd, the 90 animals brought an average of \$205. The highest price was \$555 for the five-year-old cow W. 61239, taken by H. C. Harten-

bach, of Pennsylvania. The highest for a bull was \$460, for the nine-year-old Never Again 46593, purchased by Geo. J. Schuste, of Wisconsin. Mr. Geo. Rice, Tillsonburg, Ont., secured the yearling bull, Bonheur Statesman 41605, at \$305.

nuts to each cup of meal. Cook with the meal.

Flake wheat must also be put into boiling water, and in the same proportions as for wheat germ. This also requires 20 to 30 minutes.

Graham flour is liked by some as porridge. This is made just the same as wheat-germ porridge, but is much improved by three or four hours' cooking.

Hominy is not as much used in Canada as in the South, but is an excellent material for porridge. It is made from the hulled corn. Stir one cupful into one quart of boiling water, add one teaspoon salt, and cook one hour. Wash the hominy as you would rice.

Rice makes a nice breakfast dish if one cupful is thrown into three pints of madly-boiling salted water. Be sure it never stops boiling, and when a grain fished out with a fork is quite soft, drain through a hot colander, then set the colander in the oven to dry the rice; toss it about a little, and when the steam is dry, serve. Never use a spoon, as it breaks the grain. It will take about twenty minutes to cook rice this way.

Barley is not used so commonly as the other grains, but it is cheap, wholesome and palatable. Soak one cup of pearl barley in a quart of cold, salted water, then boil for three or four hours.

Cream and sugar are most commonly served with porridge, but maple syrup, butter, gravy, jelly, and almost all varieties of fruit may be used for a change. GRETCHEN.

RECIPES.

Corn Muffins.—1 cup corn meal, ½ cup Five Roses flour, 1 tablespoon sugar, 1½ teaspoons baking powder, 1 beaten egg, 1½ cups sweet milk, pinch salt.

Brown Biscuit.—Set a dough over night of 2 cups graham flour, 1 cup Five Roses flour, 1 cup milk, 2 tablespoons brown sugar, 1 teaspoon salt, 4 tablespoons yeast. In the morning knead, adding 1 large tablespoon melted butter, ½ teaspoon soda dissolved in hot water. Keep moderately warm. An hour before lunch roll out ½ inch thick, cut into cakes, glaze the tops with melted butter; let rise until light, and bake.

GOSSIP.

The Pierce Land and Stock Company, of San Francisco, California, at their recent sale of 72 head of Holsteins, held in Chicago, realized an average price for that number of \$227; the highest price being \$1,350, for the cow, Alcartra Polkadot, whose daughter, a calf, sold for \$530. Included in this statement was a bull that was crippled en route, and several young calves born on the way from San Francisco to Chicago.

The auction sale of Clydesdales belonging to Mr. J. L. Clark, Norval, Ont., on April 17th, was most successful. One pair of Canadian-bred mares, matched, sold for \$801; two pairs of two-year-olds sold for \$600 each; one pair of yearlings past, brought the handsome figure of \$535, and all the rest of the horses sold for good prices. The cattle also sold well. The proceeds of the sale totaled over \$6,000.

THE GREAT IRRIGATION AREA.—The announcements now running through "The Farmer's Advocate" by the Canadian Pacific Irrigation Co., Calgary, Alberta, refer to what is said to be the greatest individual block of irrigation land on the continent, being 40 miles wide by 150 long, from Medicine Hat to Calgary, the main line of the C. P. R. extending through the tract, which comprises some 3,000,000 acres. All together there are 967 miles of main-water channels, exclusive of farm laterals. The natural fertility of the soil, when supplemented by water under the magnificent irrigation system, the main canal of which heads in the Bow River, will make it wonderfully productive, and the whole irrigated district is bound to become a great agricultural and probably horticultural region. Write the C. P. R. Irrigation Co., Calgary, Alta., for a copy of their free illustrated booklet describing the lands. Please mention "The Farmer's Advocate."

Sick Headache and Biliousness

Only Come When the Liver Becomes Torpid and Sluggish—Dr. Chase's Kidney-Liver Pills Cured This Case.

Sickness is to some extent a habit. This is especially true of biliousness and constipation. So long as you neglect treatment or merely use medicines to move the bowels, the old trouble returns.

Isn't it worth while to follow up a treatment that has positively cured these ailments in thousands of cases?

Mrs. James Monteith, Saurin, Simcoe Co., Ont., writes:—"I have used Dr. Chase's Kidney-Liver Pills for liver complaint, biliousness and terrible sick headaches, and have found that they are more effective than any treatment I ever tried. They cleanse the system thoroughly, remove the cause of pains and aches, and make you feel fresh and strong again. Dr. Chase's Kidney-Liver Pills are also excellent for stomach troubles."

Biliousness, liver complaint, constipation, indigestion, kidney disease and backache readily yield to the influence of this great family medicine. Dr. Chase's Kidney-Liver Pills, one pill a dose, 25 cents a box, at all dealers or Edmanson, Bates & Co., Toronto.



When a Horse Gets Hurt USE Fellows' Leeming's Essence

But don't wait until an animal is injured. GET IT NOW—and you have the remedy that CURES all lameness in horses.

If your dealer does not handle it, send 50c. to National Drug & Chemical Co., Limited, MONTREAL.

Glenhodson Yorkshires.

Bows bred or ready to breed. Young pigs from three to six months old. Pairs not akin. Satisfaction guaranteed.

GLENHODSON COMPANY, Myrtle Station, Ont. Long-distance phone at farm. Lorne Foster, Mgr.

Alberta Lands

IN THE FAMOUS STETTLER DISTRICT Improved and unimproved farms. Prices right. Crop payment. Terms to suit. Write for particulars.

W. E. Foore and J. P. Grigg, Stettler P. O., Alta. Red Willow Land and Investment Co.

According to Sports of the Times, at the time of the death of the great trotting-bred stallion, Hambletonian, the books showed that during his life of 25 years as a sire his service fees amounted to \$385,600, and that he had served 2,065 mares. No parallel is found in turf history.

BARGAIN DAY IN FENCING.—The Oshawa Wire Fence Co. advertise, elsewhere in this issue, wire fencing and gates at specially low rates in order to clear out their stock. Catalogues describing the different styles may be secured on application. The factory is to be sold in June.

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.

ASAP—Choice Single-combed White Leghorn eggs; 18, 75c; 30, \$1.50; 100, \$4. Geo. Easton, Jr., Whitney, Ont.

AT Valley Mills Poultry Ranch—Fertile eggs from Single-comb White Leghorns, Buff Orpingtons, \$1 per setting. \$4.50 per hundred. Mottled Anconas, settings only, \$1. No better winter layers. Free circular. Edmund C. Apps, Box 224, Brantford, Ont.

BARRED ROCK eggs from very choice matings. \$1 and \$2 per 15. Satisfaction guaranteed. Write for mating list. W. W. Dods, Alton, Ont.

BARRED ROCKS—Pen headed by second-prize cockerel, Toronto, 1905. Eggs, \$2 per 15. A. L. Ormiston, Columbus, Ontario

BUFF ORPINGTONS—Yards 3 and 4—Headed by males whose grandams had records of from 240 to 282 eggs in one year. Eggs, \$1.25 per 15; \$5 per 100. Circulars. C. Everard Brown, Haysville, Ont.

BARRED ROCKS—Choice stock. Eggs dollar per setting. Miss Emily Spillbury, Colborne, Ont.

BUFF ORPINGTON eggs for hatching from extra heavy layers \$1 per 15, \$5 per 100. Good hatch guaranteed. Hugh A. Scott, Caladonia, Ont.

BLACK Minorcas; White, Brown, Black, Buff, White Rocks; White Wyandottes; Silver Hamburgs; Pekin ducks. Eggs from winners, \$1 per setting. B. Lurie, Drumbo

BARRED Rock eggs, from 'a pen of the "National strain," selected for their choice barring and persistent laying of large perfect colored eggs, and mated with two prize cockerels, vigoous, blocky, barred to the skin. Price, \$1 per 15, or \$2 per 40. W. C. Shearer, Bright, Ont.

BARRED Rock eggs for sale, 100 for \$3; 15 for 75c. Glenair Kennels and Poultry Yards, West Lorne, Ont.

CANADA'S best Single-comb and Rose-comb Black Minorcas; great layers winter and summer; single comb eggs, \$1.50 per 15; Rose-comb eggs, \$2.50 per 15. T. A. Faulds, 11 Victor St., London, Ont.

CLOVER LEAF POULTRY YARDS—Barred Rock eggs for sale. Pen No. 1, \$1.50 for 15 eggs; pen No. 2, 75c. per setting or \$3 per 100. Extra heavy laying strain. D. Carmichael, Jr., proprietor, West Lorne, Ont.

EGGS for hatching from S.-C. Buff Orpingtons and Pekin ducks. Write for prices. Elma Poultry Yards, Trowbridge, Ont.

EGGS—Brown Leghorns. Choice stock. Dollar per fifteen. Fertility guaranteed. R. Gardner, Britannia, Ont., Peel Co.

EGGS FOR SALE—From White Wyandottes and Buff Orpingtons. Prizewinning stock. George W. Clarkson, Summerville, Ont.

EGGS—White Wyandottes (McKellar strain), Barred Rocks (Thompson strain). Per two settings one dollar. W. Bryant Cairngorm, Ont.

EGGS—Buff Orpington, White Wyandottes (Duster strain), B. Rocks. Bred for winter laying. \$1 per 15; \$4 per hundred. J. H. Fordon, Beachville.

EGGS for hatching from McCormack's prizewinning White Leghorns at \$1 per 15 upwards. Send for mating list. Jas. L. McCormack, Brantford, Ont.

EGGS FOR SALE—My birds won at the Ontario, Hamilton, Owea Sound and Meaford, and seven fall shows, over 300 first prizes. Barred and White Rocks, White and Silver Wyandottes, Brown and White Leghorns, Buff and Black Orpingtons, Black Javas, \$1 per fifteen or \$5 per 100. Blue Anconas and Rhode Island Reds, \$1.50 per fifteen. F. W. Krouse, Guelph

EGGS—Special y-mated Wyandottes, Rocks Orpingtons Leghorns, 50, \$2 Pekin, Rouen duck eggs, 50, \$3. Mammoth Bronze turkey, Toulouse, Embden, African geese eggs, settings, \$3; two settings, \$5. Wade & Son, Sarnia, Ont.

FIFTEEN Barred Rock eggs \$1. Extra good stock. Entire satis action guaranteed. A. S. Warden, Apsley Farm, Bethel, Ont.

IF YOU want Al Barred rocks try me. Eggs, \$1 per 15; \$1.50 per 30. W. E. Potts, 311 Gray St., London.

INGLENOOK Poultry Farm offers eggs from selected pens of choicest laying strains of White and Brown Leghorns, Black Minorcas and Buff Orpingtons, also a select pen of White Wyandottes for show birds, but not tested for laying quality. Eggs either separate or assorted, \$1 per 15; \$5 per 100. W. H. Smith, 41 Spruce St., Toronto.

MAMMOTH Bronze Turkeys, Silver-Gray Dorkings, Barred Rocks, from prizewinners. Pairs not akin. Alfred E. Shore, White Oak, Ont.

PINE HILL POULTRY FARM offers eggs for hatching from selected pens of choicest laying strains of Barred Rocks and White Leghorns. \$1 per 15. John Cowan, Box 233, Galt, Ont.

RHODE Island Reds—Rose-comb (exclusively). Bred eight years from carefully-selected heavy winter layers; large, brown eggs; \$1.50 per 15. Good hatch guaranteed. Jno. Luscombe, Merton, Ont.

SELECTED LAYERS—Barred Rocks (Hawkin's mating, Boyce's), \$1, fifteen; \$5 per 108. J. F. Roth, Haysville, Ont.

THOROUGHbred White Rocks, exclusively. Eggs from pen No. 1 (Fisher strain), \$1.25 per 15; incubator eggs, \$5 per 100. All infertile eggs replaced free. Dan H. Otto, Stratford, Ont.

WHITE Wyandotte eggs one dollar. Prizewinners in breeding pen. W.D. Monkman, Bond Head, Ont.

WHITE ROCKS—Eggs from my prizewinners at \$1.50 per 15, \$6 per 100. Geo. R. A. Miller, Vallentine, Ont.

20 EGGS, \$1.75, from Silver-headed Wyandottes. Prizewinners in pens. Try us. Bertel & Bagues, Hanover, Ont.

237-EGG Strain Barred Rocks for particulars, write for circular. J. R. Henry Waterdown.

MAMMOTH BRONZE TURKEYS—Sired by imported prizewinning tom. A few young toms left, weighing from twenty eight to thirty one pounds, and some heavy weight pullets. Turkey eggs in season. W. E. WRIGHT, Ganworth.

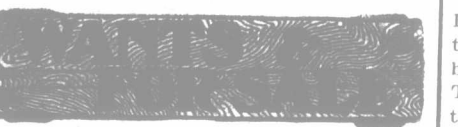
Eggs for Hatching

White Wyandotte.....\$1 00 per setting
Barred Rock.....1 00 " "
Buff Orpington.....1 00 " "
Special mating Buff Orpington. 2 00 " "

The Glenhodson Co., Myrtle Station and P.O., Ont.
LORNE FOSTER, MANAGER.

Now is the Time to Ship Butter, Eggs & Poultry.

Prices good. Returns quick.
QUEEN CITY PRODUCE COMPANY, LTD.
100 Front St. E., TORONTO.
WM. AGAR, MANAGER.



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

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.

BUY rich farming and grazing lands in the Edmonton District, the most fertile district of Alberta. Pendleton Co., Lamont, Alta.

CUB BEAR wanted—Write to Mr. John F. Drury, care of Mr. Hugh Hall, Linton, Ont.

FOR SALE CHEAP—The following Clydesdale Stud volumes: No. 17, 18, 30, 21, 22, 23, 24, 26. W. H. Millman, 27 Front St., East, Toronto.

FOR SALE—Pet donkey: \$75 will buy cart, harness and beautiful pet donkey. No bad habits. Address: Box 798, Berlin, Ont.

FOR SALE—25,000 acres; wild lands; by 4, 3 or full section. Adjoining homesteads in Eagle Lake District. Also improved farms. J. M. Thomsen, Neal Estate, Indian H. ad.

FORTY leading varieties of strawberry and cane berry plants. Seven varieties of seed potatoes. Catalogue free. Jno. Downham Stathroy, Ont.

FARM lands of all description in Manitoba, Saskatchewan and Alberta. Some excellent propositions in improved farms with small cash payment, balance in half crop. Write for particulars to Western Canada Realty Co., Souris, Man.

FARMS for Sale—In and adjoining the village of Appleton, Ont. East 2, 4, 5 and 6 in 9th con. and pt. west 1, 4, in 10th con. of Ramsay, Co. Lanark, about 360 acres in all; about 40 or 45 acres high land, splendid soil; about 150 acres bush; balance pasture land. Mississippi River runs through it, and also splendid well hard water. One first-class dwelling; and wood tenement houses, all with kitchens and wood sheds attached, and all in good repair. Two fine barns (one a bank barn) with stable, cow type, silo; hen and root houses; water tank; sheds and implement houses; work shops; carriage house; all in good repair. Appleton is a very healthy and pleasant village to live in, four miles from Carleton Place and six from Almonte. For further particulars apply to the proprietor on the premises. J. A. Teskey, Appleton, Ont.

FOR SALE—Cranberry sets; price, \$2 per barrel. S. C. Parker, Berwick, Nova Scotia.

NEW JERSEY FARMS—5 acres good, high, dry land near Atlantic City, N. J., for \$100 to \$5 down, \$5 monthly. Excellent soil and climate for raising early fruit, berries, truck, squabs and poultry. Good markets close by. Two rail roads. Near large manufacturing city. Free air and water. Title perfect. Booklet free. Daniel Prazier Co., 728 Bailey Building, Philadelphia, Pa.

WANTED—Ladies in rural districts desirous of earning in profitable business will do well to write the Robinson Corset & Costume Co., London, Ont.

WANTED—Persons to grow mushrooms for us in their own homes. Waste space in cellar, garden or barn can be made to earn \$15 to \$25 per week. Send stamp for illustrated booklet and full particulars. Montreal Supply Co., Montreal.

320 ACRES; fine wheat farm; 190 acres under cultivation. Good buildings. \$23 per acre. Easy terms. 640 acres prairie land. Good location. \$13 per acre. Regina city property. 100 other good propositions. Sebolt & Froom, Regina, Sask.

GOSSIP.

GLENORO SHORTHORNS AND LINCOLNS.

Glenoro Stock Farm, near Rodney, in Elgin County, Ont., the home of Mr. A. D. McGugan is one of the best-appointed stock farms in that part of the Province, and is particularly interesting to admirers of Shorthorn cattle and Lincoln sheep. Some of the very best specimens of these two popular breeds are to be seen at "Glenoro," and here one sees the result of starting right. In both Shorthorns and Lincolns Mr. McGugan, in laying the foundation of his herd and flock, bought the best in individuality and breeding, regardless of cost. The purchase of a dozen in-lamb ewes from the world's greatest Lincoln breeder, Henry Dudding, Ribby Grove, England, marked the establishment of this fine flock of Lincolns. These ewes were personally selected by Mr. McGugan for their uniformity of type, size and wealth of fine, lustrous wool, and the wisdom of such a selection is amply demonstrated in the grand flock of Lincolns at Glenoro. One of the largest handlers of long-wool sheep in America told the writer "that for breed type and quality of fleece" this flock was unsurpassed on the continent. For many years none but the very best Dudding-bred rams have been used, and to-day the flock is as strong in Dudding blood as can be found at Ribby Grove. The sheep are in grand breeding condition, and at the time of writing there are seventy-five lambs gambolling in the paddocks. There are 25 yearling ewes and 30 two-year-old ewes that would be difficult to duplicate anywhere, and with the great crop of lambs now coming on Mr. McGugan should be well prepared to meet the wants of his customers this season. With the almost prohibitory prices at which Lincolns are now held in England and with the certainty that for years high prices will prevail in Canada and the United States, any young farmer who contemplates starting in pure-bred sheep should not hesitate to buy a few of this grand breed.

In the breeding of Shorthorns the same policy has been pursued—starting right and continuing right. There are at present forty head of choicely-bred Scotch cattle on the farm, a business lot combining size, smoothness and splendid dairy qualities. The "bull end" of this herd has never been neglected. Nothing but high-class Scotch bulls have been in service since the herd was founded. Among these was Abbotsford, the champion and sire of champions, who headed the herd for four years. He was followed by that choice quality bull Aberdeen Hero, Imp., and by Royal Champion. All these were show bulls, and sires of great merit, but the present stock bull, Nonpareil Count, is, we believe, the peer of them all. This bull has during the past year made wonderful growth—weighing at three years twenty-two hundred pounds and carrying his weight of flesh like a yearling. And what is most important, he is a great sire. We have never seen a more uniform lot than the present crop of calves,—in color, smoothness and quality they are all that could be desired. The fifteen breeding cows are just the kind of matrons that should, with a great sire, produce gilt-edged stuff, and the remarkable udder development of many of these cows would indicate that, besides being massive and thick-fleshed, they are unusually heavy milkers. In the herd are cows that have gone the rounds of all the leading fairs in S.-W. Ontario without meeting defeat, and others that were winners at Toronto and London from the calf class to the aged class. The families represented are: Imp. Marr Roan Ladies, Misses, Ulys and Ramsdens. There are four very choice young bulls from ten to fourteen months, that at the prices asked should not long be wanting buyers. There is a beautiful red from the prizewinning heifer Lady Hope, fit to head any herd, a dark roan from the fine breeding cow Lady Ramsden, and two from remarkable milking dams. Anyone wanting good bulls at rock bottom prices should write Mr. McGugan at once.



Look for Lice

Very likely the cause of all your trouble is the big gray body louse that sucks the blood from hen and chick alike—checks growth and production, and robs you of well-earned dollars.

INSTANT LOUSE KILLER

will rid every fowl of these costly pests and restore happy contentment to the whole hen colony. It kills lice on poultry, horses, cattle, ticks on sheep, bugs on cucumbers, squash and melon vines, cabbage worms, slugs on rose bushes, etc. Also a reliable disinfectant and deodorizer. Sold on a written guarantee. Perfectly harmless. In shaker-top can—convenient to use either winter or summer. Be sure the can bears the word "INSTANT," else it is not genuine.

1 lb. 35 cts. 3 lbs 85 cts.

If your dealer cannot supply you, send your order to us.
Manufactured by
DR. HESS & CLARK,
Ashland, Ohio, U.S.A.

QUESTIONS AND ANSWERS: Miscellaneous.

DESTROYING WOODCHUCKS.

Is there any method of drugging or fuming woodchucks in their holes? H. S.

Ans.—Pour about an ounce of bisulphide of carbon on a piece of cotton rag and ram it into the woodchuck's burrow as far as possible, then pack the entrance solidly with earth. When there are two holes leading to the surface one should be closed before the operation begins. In cases of doubt fumigate from both ends. In handling this gas remember that it is very explosive and should not be used near a fire or light.

DUCKS LAY SOFT-SHELLED EGGS.

1. I have five ducks mated with one drake, which are not laying satisfactorily. One is laying a soft-shelled egg each morning, and some mornings I get a thin, rough-shelled egg too. They have plenty of water and are in a healthy condition, apparently. They have been fed on corn, and since they began to lay I have given them barley. They have their liberty to go where they wish.

2. What does the word "Limited" mean after a company's name? D. A. A.

Ans.—1. The presence of the male has nothing to do, one way or another, with the number of eggs laid by the females, nor with the nature of the shells. The trouble is with the feed. Corn is too fattening to be used to any extent as a poultry ration in spring. Barley is not much better. What the ducks need is a ration containing not too much fattening food, but plenty of protein and also plenty of lime. Reduce the barley ration or take it away altogether and substitute oats, a little wheat, with table scraps, and skim milk. If they could have access to a nearby alfalfa pasture it would do them no end of good. Provide grit in the form of oyster shells.

2. A "Limited" company is a public company whose members are individually liable for the company's debts only to a certain specified amount, often not exceeding the amount of stock that each one holds.



A Remarkable Invention FOR THE CULTURE OF HAIR.

THE EVANS VACUUM CAP is a practical invention constructed on scientific and hygienic principles, by the simple means of which a free and normal circulation is restored throughout the scalp. The minute blood vessels are gently stimulated to activity, thus allowing the food supply which can only be derived from the blood, to be carried to the hair roots, the effects of which are quickly seen in a healthy, vigorous growth of hair. There is no rubbing, and as no drugs or chemicals of whatsoever kind are employed, there is nothing to cause irritation. It is only necessary to wear the Cap three or four minutes daily.

60 DAYS' FREE TRIAL! The Company's Guarantee.

An EVANS VACUUM CAP will be sent you for sixty days' free trial. If you do not see a gradual development of a new growth of hair, you are at liberty to return the Cap, with no expense whatever to yourself. It is requested, as an evidence of good faith, that the price of the Cap be deposited with the Chancery Lane Safe Deposit Company of London, the largest financial and business institution of the kind in the world, who will issue a receipt guaranteeing that the money will be returned in full, on demand, without questions or comment, at any time during the trial period.

The eminent Dr. I. N. LOVE, in his address to the Medical Board on the subject of Alopecia (loss of hair) stated that if a means could be devised to bring nutrition to the hair follicles (hair roots), without resorting to any irritating process, the problem of hair growth would be solved. Later on, when the EVANS VACUUM CAP was submitted to him for inspection, he remarked that the Cap would fulfill and confirm in practice the observations he had previously made before the Medical Board.

Dr. W. MOORE, referring to the invention, says that the principle upon which the Evans Vacuum Cap is founded is absolutely correct and indisputable.

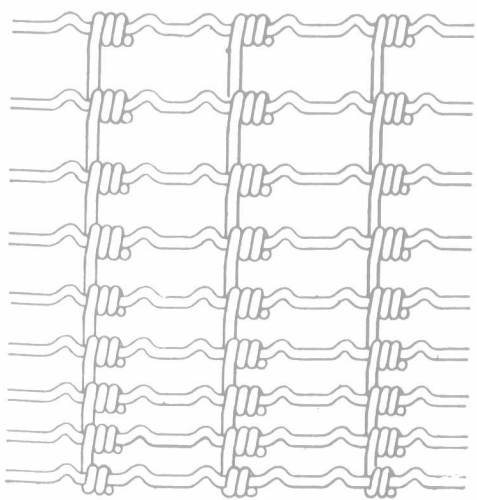
An illustrated and descriptive book of the Evans Vacuum Cap will be sent, post free, on application.

THE SECRETARY, EVANS VACUUM CAP CO., LTD., REGENT HOUSE, Regent St., London, Eng.

AMERICAN FIELD FENCE

All No. 9 Galvanized Wire

Made for All Purposes



Note the hinge joint makes the "American" fit the hills and hollows, the tension curve provides expansion and contraction.

Consider Quality When Buying.

Special steel, hard, stiff, springy wire used in the

"American" Woven Wire Fence.

MANUFACTURED BY

The Canadian Steel & Wire Co. Limited.
HAMILTON, CANADA.

The only medium which conveys weekly to the farmers of Canada, the advertiser's place of business, 52 times a year, is THE FARMER'S ADVOCATE AND HOME MAGAZINE. Subscription, \$1.50.

QUESTIONS AND ANSWERS. Miscellaneous.

A STREET-CAR JOB.

To whom should a person apply, to get on as conductor or motorman on the electric railroad in Toronto or Hamilton?

A CONSTANT READER.

Ans.—Address Superintendent Street Railway, Toronto or Hamilton, as the case may be, and your letter will reach the proper man in due course.

RIGHT TO CROWBAR.

A has mud-digger. Gives B use of digger to lift what mud A can haul, and B can sell to others between times. C goes for load, puts horse on capstan, B works fork. Fork comes up and brings up crowbar that has been lost some years ago. Now, if owner can not be found, who does bar belong to, A, B or C?

SUBSCRIBER.

P. E. I.

Ans.—Apparently B has the right to retain possession of it as against everybody save the owner. It is a case where possession is the most important point.

STAVE SILOS WANTED.

Please let us know through your columns makers of silos and which one is the best.

J. G. G.

Ans.—We have not heard of any firms advertising silos in Canada, although in the United States there are companies which will ship stave silos to order all ready to set up, and we are not sure but they erect them as well. Canadian firms might take up this line, or if any are already in, they should advertise. If any reader knows of one we will thank him to acquaint us with its address.

ROTATION—HOE CROP.

I have a hundred-acre farm in South Simcoe, Ont.; land partly stiff clay and partly clay loam. Any of the different kinds of grain do well on it. I plant some corn and various kinds of roots for feeding; but these occupy only about 4 acres, and I would like to fill out a field of 5 to 12 acres with hoe crop, if it could be done to advantage. Beans have been grown to some extent lately, but the last year or two it has been rather too wet and backward for them. Potatoes have been a poor crop, owing to the rot. Our worst weeds are sow thistle, wild oats and ragweed. Help is none too plentiful.

1. Prescribe a good rotation.
2. What hoe crop would you advise to fill out field of corn and roots?

SUBSCRIBER.

Ans.—1. Unless there is some strong local reason to the contrary, we would adopt a three-year or four-year rotation, depending somewhat upon the amount of hay it was desired to grow. The three-year rotation would be wheat and spring grain seeded to clover with a few pounds of timothy as a safeguard against clover failure. Take one crop of hay or pasture and plow for corn, roots, potatoes, beans, rape, or whatever other cultivated crop we might see fit to grow. Fill out the area with peas, or, if the bug is still feared, with barley. Sow wheat on the pea or barley stubble and oats or mixed spring grain on the land that had been in hoed crop. If more hay, and pasture is desired than would be thus afforded, make the rotation a four-course one by simply leaving the land two years in clover and grass. Either of these two systems will do wonders in ten years at building up a farm, as hundreds and thousands of the best Ontario farmers have proved. Whatever rotation is adopted, never lose a chance to seed down with wheat, especially fall wheat.

2. Double the corn acreage at least. Grow potatoes, and spray them according to directions in our "Spray Calendar" (issue of March 28th), with poisoned Bordeaux mixture for bugs, blight or rot. The late blight fungus is the most prolific cause of rot, and can be prevented by spraying with Bordeaux. Of course, there are forms of rot due to other causes than the blight fungus, but we surmise that is the trouble in this case. As for other hoe crops, we can not advise without knowing more about markets for various products. In some cases, growing turnips for the American trade is very profitable, though it removes a good deal of fertility from the land.

Tuttle's Elixir



Well nigh infallible cure for colic, curb, splint, spavin and other common horse ailments. Our long-time standing offer of

\$100 Reward

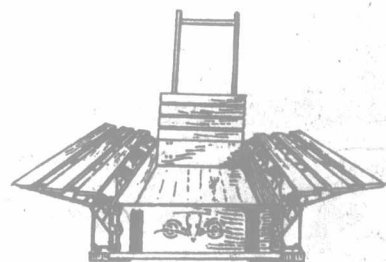
for failure, where we say it will cure, has never been claimed. All druggists sell it.

Tuttle's Family Elixir, the great household remedy. Tuttle's American Worm Powder cures. American Condition Powders, White Star and Red Ointment 100 page book "Veterinary Experience," free. Be your own horse doctor. Makes plain the symptoms, gives treatment. Send for a copy.

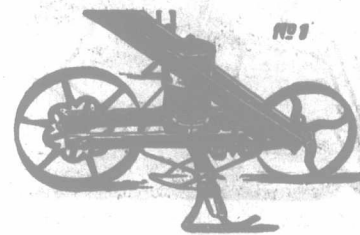
TUTTLE'S ELIXIR CO.,

66 Beverly Street, Boston, Mass.
Canadian Branch, 32 St. Charles St., Montreal, Quebec

"TRUE" Combination Wagon-box and Rack



It is the one article that no farmer can afford to be without. When once on the wagon he has a perfect wagon box, hay, stock or wood rack. Do not confound the "TRUE" with other makes.



We manufacture a full line of Combination Wagon-boxes and Racks, Root-Outters, Combination Anvils, the "Racon" Garden Drill and Cultivator, Grass Seeders, Liquid and Dry Powder Sprayers, Corn and Potato Planters, Hoes, Rakes, etc. Write for our catalogue, which explains all. Correspondence with the trade solicited.

THE EUREKA PLANTER CO., LIMITED, Woodstock, Ont.

FREE to RUPTURED A QUICK NEW CURE

I have made new and important discoveries in the cure of Rupture, and for the next thirty days will give every ruptured person who follows these directions a chance to try this remarkable home cure. FREE. Mark on the picture the location of your Rupture, answer the questions, and mail this to DR. W. S. RICE, 96 Church St., Block 808, Toronto, Ont.

Age..... Time Ruptured.....
Does Rupture pain?.....
Do you wear a Truss?.....
Name.....
Address.....

We Offer a Limited Quantity of Pure

Pea Meal \$26 PER TON, IN BAGS

F. O. B. London.

Samples cheerfully mailed on application.

Walter Thomson & Son, LIMITED, LONDON, ONT.

It's a great disappointment for some folks dat, after climbin' ter de tip-top er de mountain, dey looks so small de worl' can't see um!

Tudhope Carriages

are light running, comfortable and stylish—and so strong that they will stand the roughest driving over bad roads.

The Tudhopes have been making carriages for over 56 years. They personally superintend every detail of the business—from the selection of the materials to the finishing touches. Knowing Tudhope Carriages to be as perfect as money and skill can make them, they unhesitatingly guarantee every one.

The best materials—the most careful workmanship—are combined with that painstaking attention to the thousand little things that mean so much in the perfect results.

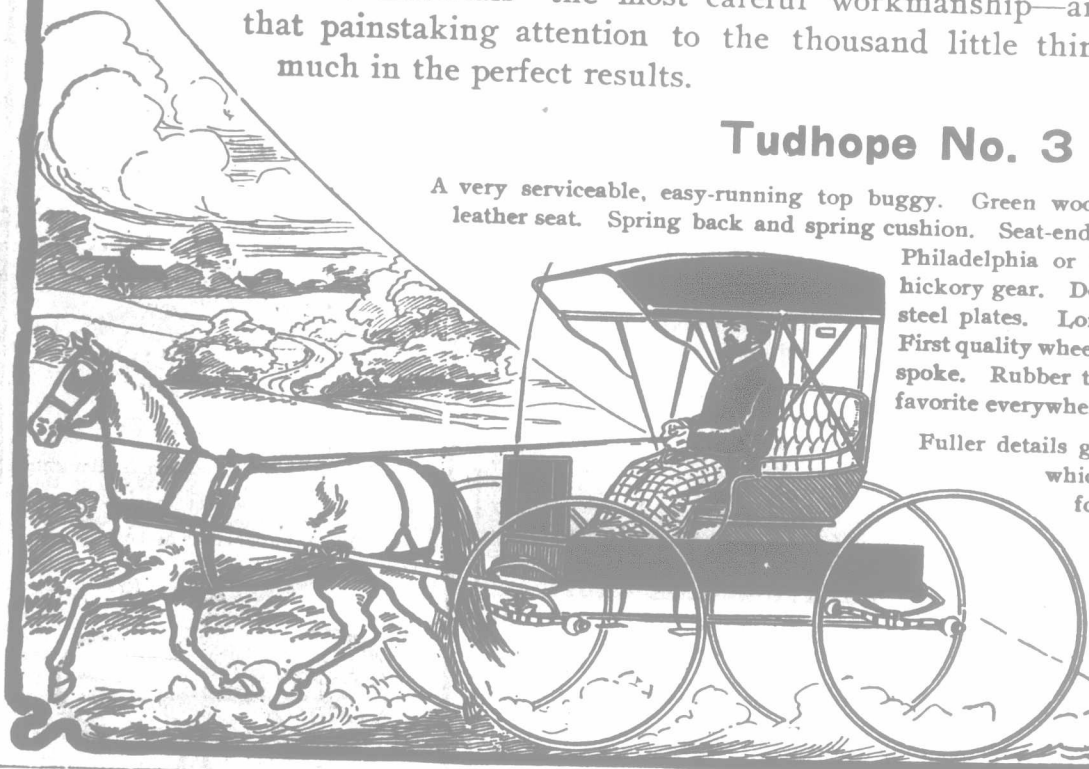
Tudhope No. 3

A very serviceable, easy-running top buggy. Green wool cloth or hand-buffed leather seat. Spring back and spring cushion. Seat-ends padded. Lined 4-bow Philadelphia or Crandal top. Selected hickory gear. Double reach, full length steel plates. Long distance steel axles. First quality wheels, bolted between every spoke. Rubber tires if desired. It is a favorite everywhere.

Fuller details given in our catalogue, which we send free. Write for it to-day.

The
Tudhope Carriage
Co. Limited
ORILLIA, Ont.

32



QUESTIONS AND ANSWERS. Miscellaneous.

ORIGIN OF MILKING SHORTHORNS.

How did the milking Shorthorn, gray in color, originate? Were they derived from the white Ayrshire or not? Kindly explain from what source they were derived. AN OLD SUBSCRIBER.

Ans.—There is no data known to us to support the idea that they were derived from the Ayrshire; indeed, it is only in the last 25 years that light-colored Ayrshires have become common. They were formerly mainly of dark brown color. The milking Shorthorn, so far as we can learn, had the same origin as the beef-type Shorthorn, the difference discernible now being due to the latter being bred more especially for early maturity and beef production.

ITCHINESS OF PIGS.

A litter of pigs—9—five weeks old, confined in a basement stable, cement floor, with plank sleeping platform, two or three weeks ago commenced to rub and scratch themselves a great deal. I examined for lice but found none, but their skin is red and covered with a pimply rash in places. I washed them with a strong solution of Sheep Dip, but they seem as itchy as ever. They seem to get about all they want from the sow as they do not eat much beside. They are thriving fairly well. Sow is fed a mixture of equal parts by measure of bran, shorts and chop, mostly oats. She also gets a good deal of sweet skim milk and some mangels. A. E. R.

Ans.—We would try rubbing them with a mixture of melted lard or raw linseed oil and coal oil, applied with a rag, and would give them liberty to run out on the ground and grass on warm days. Your feeding of the sow could not well be improved upon.

CEMENT - CONCRETE CATECHISM.

Below will be found a contribution of information about concrete, by a noted Chicago authority, who chooses this form in which to express the points he wishes to bring out:

What is the compressive strength of concrete blocks?

This depends on the richness of the mixture. Blocks recently tested at the Case School of Science, Cleveland, O., made 8x8x9 inches, the hollow space being about one-third of the cubic area of the block, showed a compressive strength of 1,500 to 2,000 lbs. per square inch (blocks being 10 weeks old). Two blocks, 22 months old, 6x8x9 inches, showed a strength of over 2,500 lbs. per square inch. The proportions used were 1:6:6; a 1:5 mixture should show about 1,000 lbs. strength in one month and 2,000 lbs. in one year.

What is the best material for concrete?

High-grade Portland cement, clean, sharp sand and broken stone or gravel, properly mixed, the mixture used being dependent upon the class of work for which the concrete is to be used. If gravel is used it should be thoroughly cleaned and free from dirt. With broken stone, some contractors do not seem to be as particular as others in regard to the material being washed, but it is best in all cases with broken stone to see that there is as little as possible of the fine dust clinging to the particles of stone.

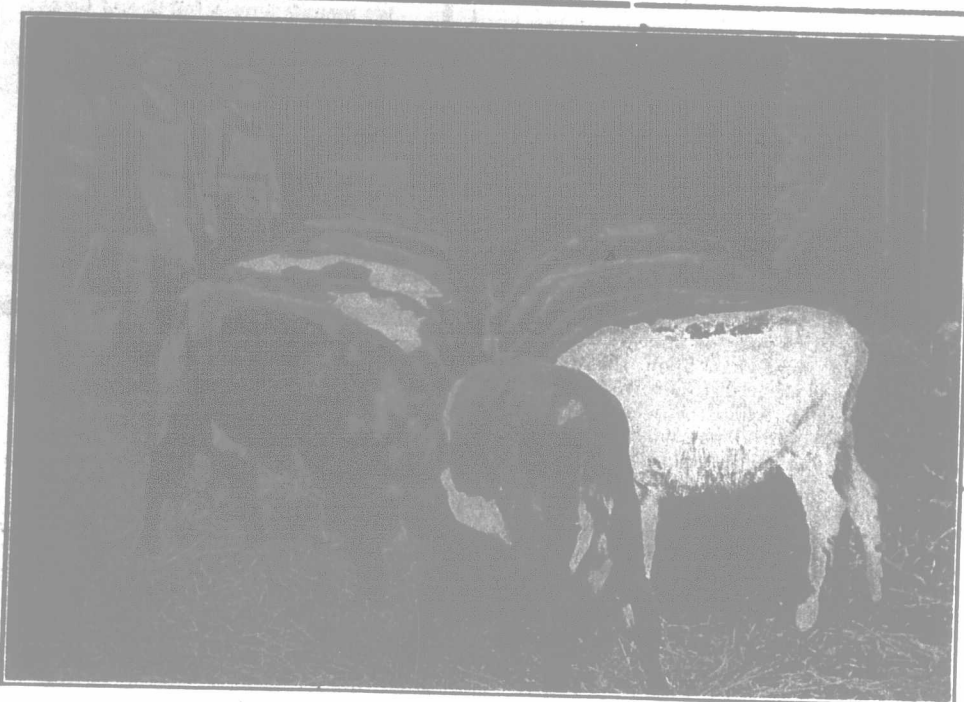
I find that my cement sidewalk, constructed last fall, soon became covered with fine cracks. What was the trouble? And is there any danger of the walk breaking up and wearing out immediately?

The fine cracks, commonly called hair cracks, are due to over-troweling or too much neat cement on the surface. Over-troweling brings the water to the surface, and with it particles of pure cement. In drying, the neat cement contracts and forms the fine cracks, which are largely a surface matter only.

Can a concrete floor in a cellar that has cracked be permanently repaired?

The best way to patch a cracked floor or walk is to cut the crack into a dove-tailed groove and trowel in a mixture of equal parts of cement and clean, sharp sand. Such patching, when properly done, will be permanent.

E. C. S.



Reproduced from a photograph of part of a herd of 150 calves fed entirely on Bibby's "Cream Equivalent," without milk, since they were 14 days old.

Calf Rearing Without Milk

If you are short of milk, or have only separated milk for your calves, use Bibby's

"CREAM EQUIVALENT"

Calf Meal. All dependable dealers stock it.

Calves reared on "Cream Equivalent," even without milk, always make well-grown heifers, with nice loose skins and plenty of good hair.

If interested, write us for a free copy of "How to Rear Calves for the Dairy." A postal will do.

WM. RENNIE CO.,
LIMITED,

Toronto, Ont.

36th Annual Fair

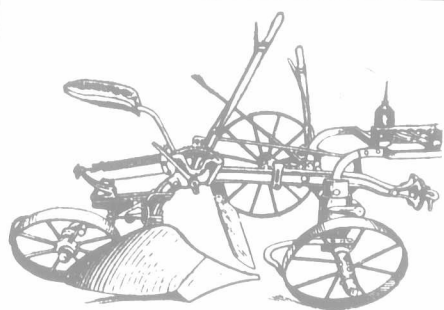
and Horse Show of the Oswegatchie Agricultural Society, will be held in Ogdensburg, N. Y., Tues., Wed., Thurs. and Fri., September 24, 25, 26 and 27, 1907. Arrangements have been made with the Customs Department for the admission of articles and animals from Dominion of Canada for exhibition without expense to exhibitor. WM. H. DANIELS, Pres., Ogdensburg, N. Y., U. S. A.

Saskatchewan

Wheat land. Easy terms.
\$10.00 to \$25.00 per acre.
Money making. City property.

The Minton Mansell Co.,
SASKATOON.

Advertise in the Advocate



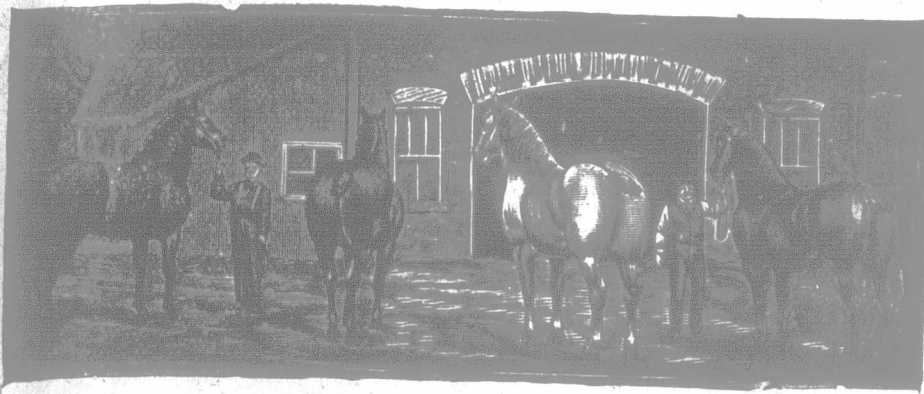
A Superior Class of Plows

Our plows are distinctly superior to the usual run of plows. They are made of the best materials. Made better, more carefully, too.

For instance, the moldboards are tempered by refrigerating process, which makes them of uniform hardness. Scour well. Free from "soft" spots—the grievous fault of common moldboards.

Further information in our free booklet. Write for it.

PARIS PLOW COMPANY, LTD., PARIS, ONT.



30 PERCHERONS

Also Shires, Hackneys and Clydes, have just arrived with our new importation from Scotland, England and France, of high-class stallions and mares. Many of them prizewinners in their native lands. Bred by the best breeders. Percherons, blacks and grays, weighing 1,500 to 2,000 pounds. Shires at two years old weighing 1,700 pounds. Clydes, bays and blacks, 4 and 5 years old, weighing 1,800 to 2,000 pounds, bred by the best in Scotland. Our Hackneys are bays and chestnuts, combining size, quality and breeding that cannot be beaten. We have a few first-class young stallions that we will sell at cost, to make room for our next importation; and all for sale at reasonable prices.

HAMILTON & HAWTHORNE, Simcoe, Ont.
88 miles south-west of Toronto on the G. T. R.



The La Fayette Stock Farm

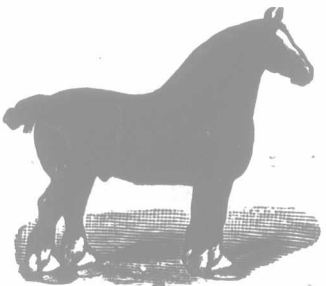
J. Crouch & Sons, Props., La Fayette, Ind.
Largest importers in America of German Coach, Percheron and Belgian stallions. Over 300 head on hand at all times. All have the best of bone, style and action, and on which we will put a gilt-edged guarantee they must be satisfactory, sure breeders. Won more prizes in the American showing in 1906 than all other importers combined. Our guarantee is the best. Terms to suit buyers. Importations arriving every few weeks insure prospective buyers a large selection from which to make a purchase.
J. CROUCH & SON, La Fayette, Ind.
La Fayette is but six hours' ride from Detroit via Wabash Railroad.
Just got in 100 head of Percheron and Belgian stallions and Percheron and Belgian mares.



Clydesdales, Percherons and Hackneys

I have still on hand 13 Clydesdale stallions, 4 Clydesdale fillies, all imported; Scotland and Canadian prizewinners; 3 years old, that will make \$100-lb. horses of choice, quality and richest breeding; 4 black Percheron stallions, 3 years old, big, flashy, quality horses, and 6 Hackney stallions, 1st-prize and championship sires among them. Will sell reasonable and on terms to suit.

DR. T. H. HASSARD, Millbrook P.O. and Stn.



GRAHAM BROS.

"Calmbrogie," CLAREMONT,
IMPORTERS OF
HACKNEYS and CLYDESDALES

Established 80 years, and winners at all large shows in Canada and United States. Best of stock always on hand for sale. New importation of Royal winners just arrived.

W. C. KIDD, LISTOWEL, ONT.

Importer of Clydesdales, Shires, Percherons, Belgians, Hackneys, Standard-breds and Thoroughbreds

of highest possible quality and richest breeding. Have sold as many stallions the last year as any man in the business, with complete satisfaction in every case. I have always a large number of high-class horses on hand. My motto: "None but the best, and a straight deal." Will be pleased to hear from any one wanting a rare good one. Terms to suit. Long-distance phone. LISTOWEL P.O. AND STATION.

SMITH & RICHARDSON, COLUMBUS, ONT.,

have now on hand a choice selection of Clydesdale Stallions, combining size and quality with straight, true action. Breeding unsurpassed. Individuality unexcelled. Scotland prizewinners. Also a few Canadian-bred stallions, and Imp. and Canadian-bred fillies.
Long-distance Phone Myrtle Station, C. P. R.
Brooklin or Oshawa, G. T. R.

Imported Clydesdale Stallions and Fillies.

Having sold most of my last importation of CLYDESDALES, I am leaving for Scotland for another importation of stallions and mares, the arrival of which will be announced in this space in the columns of "The Farmer's Advocate." Come and see me on my return.

Andrew Aitchison, - Guelph, Ontario.

When Writing Please Mention Advocate

GOSSIP.

C. CURRIE'S YORKSHIRES AND TAMWORTHS.

In the village of Morrision, one and one-half miles from Schaw Station (C. P. R.), and nine miles from Guelph, is the home of Mr. C. Currie, one of Wellington's leading farmers and breeders of Yorkshire and Tamworth swine. Mr. Currie enjoys a splendid trade in his pure-bred pigs, which is easily accounted for, as they are the kind the trade demands. The Tamworth stock boar is the massive 800-pounder, Cold-spring Victor, a hog of grand type, strong bone, smooth and even, and a capital sire. Second in service is Newcastle Choice, champion boar at Guelph three years in succession, all breeds competing, sired by Red Tom, dam Newcastle Queen, winner of Silver medal at Toronto for three years. As might be expected from such rich show-ring breeding, this hog shows a wonderfully perfect form, and is full of quality. Among the brood sows is the extra choice one, Thrifty Pink, champion sow at Guelph last fall, all breeds competing, sired by Royal Conqueror. Also in breeding are three of her daughters, second- and third-prize winners; among them, a trio of mighty sweet sows. Another of the extra good brood sows is the 600-lb. Morrision Molly, a sow not only of great scale, but of wonderful smoothness and evenness throughout. In younger ones are several sows ready to breed, and a number of others not quite so old, every one of them a choice individual. There are also a few young boars left. The Yorkshires are of equally as high a standard. The stock boar is Imp. S. H. Charm 2nd, a boar of splendid proportions, on strong bone, and with well-rounded quarters. Among the dozen or more brood sows are three imported ones that are hard to equal in any herd, as they have great size, even quarters and a good depth of side. Several of the others are the get of S. H. Jubilee. For sale are sows bred and ready to breed, and younger ones, and boars all ages. Mr. Currie reports trade as continually increasing, and sales numerous and satisfactory. Pairs and trios of either breed can be supplied not akin. Write him to Morrision P. O., Ont.

A. DUNCAN & SONS' SHORTHORNS.

One of the nicest little herds of Shorthorns in the country is that owned by Messrs. A. Duncan & Sons, of Carluke, Ont., about midway between Caledonia and Hamilton. About midsummer, the Hamilton-Ancaster and Brantford electric road will pass within 2 1/2 miles of the farm, which will make it more convenient for visitors to the farm. At present, in their splendid stables are about 20 head of really high-class Shorthorns—the low-down, thick-fleshed, early-maturing and good-doing sort, representing the Marr Roan Duchess and Bracelet families, and others tracing to Imp. Beauty, by Snowball. The bulk of the older ones are the get of Imp. Major Alpine; those two years and under, the get of Imp. Greengill Archer, an Orange Blossom-bred son of Archer's Heir, dam Imp. Cranberry 4th. This bull is a massive, even, extra-doing roan, and left a heap of grand good stuff for Mr. Duncan. Lately, as a herd-header, was purchased a roan yearling Claret-bred son of that great show bull, Mildred's Royal, one of the very best sons of that sire of champions, Imp. Royal Sailor, dam Imp. Crocus. This youngster bids fair to eclipse his great sire as a show bull of a high order. All the heifers are being bred to him, among which are an exceptionally good, thick pair of two-year-olds; one a Roan Duchess, the other a Bracelet, a pair hard to turn down in any show-ring. Another is a three-year-old roan, a daughter of Imp. Major Alpine. She, too, is comely to look upon. A coming show heifer, fit to enter any ring, is a red five-months-old, by Greengill Archer, and out of a Roan Duchess dam. And another that impressed us, a superior youngster, is a roan three-months-old heifer calf, a Bracelet, by Greengill Archer. In young bulls, there is only one left, a roan four-months-old, out of a Roan Duchess cow, and by the same sire. This calf looks like a show model of a high order, and should make something extra good. Anything in the herd is for sale, and the stuff is No. 1. Write the Messrs. Duncan, to Carluke P. O., Ont.

HORSE OWNERS! USE



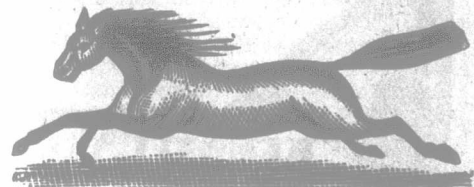
CAUSTIC BALSAM.

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, Canada

The Repository

BURNS & SHEPPARD, Props.



Gen. Simcoe and Nelson Sts., Toronto

Auction Sales of

Horses, Carriages, Buggies, Harness, etc., every Tuesday and Friday, at 11 o'clock.

Special Sales of Thoroughbred Stock conducted

Consignments solicited. Correspondence will receive prompt attention.

This is the best market in Canada for either buyer or seller. Nearly two hundred horses sold each week.

Dr. Page's English Spavin Cure.

For the cure of Spavin, Ringbone, Curbs, Splints, Windgalls, Capped Hock, 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. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: J. A. JOHNSTON & CO., Druggists, 171 King St. E., Toronto, Ont.

SHOE BOILS

Are Hard to Cure, yet

ABSORBINE

will remove them and leave no blemish. Does not blister or remove the hair. Cures any puff or swelling. Horse can be worked \$2.00 per bottle, delivered. Book 50 Free. ABSORBINE, J.E., for man and horse, \$1.00 per bottle. Cures Boils, Bruises, Old Sores, Swellings, Varicose Veins, Varicocele, Hydrocele. Allays Pain

W. F. Young, P. O. F., 75 Monmouth St., Springfield, Mass. Canadian Agents, Lyman, Sons & Co., Montreal.

Imp. Clydesdale Fillies!

Have now on hand about a dozen, nearly all imported. A high-class lot and very richly bred. Combine size and quality, and all in foal. Also one-year-old stallion. Write me, or come and see them.

Nelson Wagg, Claremont P.O. Ont.

Imported Clydesdales

Two 4-year-old and two 2-year-old stallions; one 2-year-old and two 1-year-old fillies; positively the best bunch I ever imported; richly bred, full of quality, abundance of size, and nice, true actors. Will sell them right. Terms to suit.

Telephone con. Geo. G. Stewart, Newick, Que.

For Sale: A Registered Clydesdale Stallion First-class, coming 3 years. Color, rich brown; small stripe and little white on two feet. Sired by Imp. Pioneer (1118) (8974), of Darnley breeding. Dam out of the imp. prizewinner, Culmain Lass (1918), and granddaughter of old Prince of Wales (673), sired by Imp. Queen's Own (7176) (1708), winner of several gold medals in Canada. A promising colt, of the very choicest combination of breeding, with near ancestors leading winners in keenest competitions. Price very moderate for quick sale. JOHN CAMPBELL, Fairview Farm, Woodville, Ont.

Please Mention this Paper

LAMENESS

Whether it is a fresh Bruise, Cut or Strain—or an old Spavin, Splint, Ringbone or Swelling—you can cure your horse with

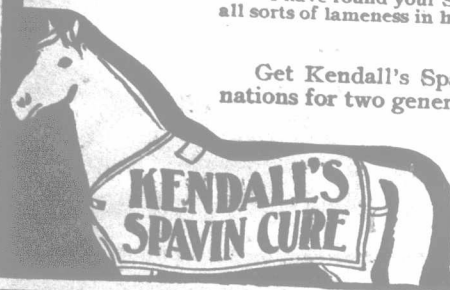
Kendall's Spavin Cure

Thos. Castles, of Newark, N.J., bought a horse—lamed with a Jack Spavin—for \$100. He cured every sign of lameness with Kendall's Spavin Cure—won five races with the horse—then sold the animal to his former owner for \$1,000.00.

WELLINGTON, N.Z., Nov. 2nd, '05.
"I have found your Spavin Cure a very fine remedy for all sorts of lameness in horses and I am never without it."
E. J. WISBEY.

Get Kendall's Spavin Cure—the remedy used by two nations for two generations. \$1. a bottle—6 for \$5. Our book—"Treatise On The Horse"—will save you many a dollar if carefully read and acted upon. Write today for a free copy.

DR. B. J. KENDALL CO., 27
ENOSBURG FALLS, VERMONT, U.S.A.

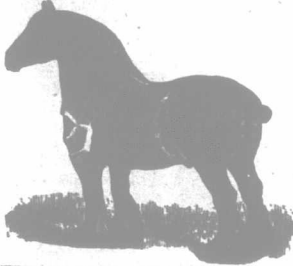
**THOS. IRVING**

Winchester, Ont.

Established for over 30 years.
Importer and exporter of

HACKNEY, CLYDESDALE and SHIRE STALLIONS and MARES.

New importation of winners just arrived. 90 miles west of Montreal on C. P. R.

HODGKINSON & TISDALE,
BEAVERTON, ONT.

Importers and Breeders of Clydesdale and Hackney Horses. We have on hand at present the choicest specimens of Clydesdale fillies in Canada, also a few extra fashionably-bred young Clyde stallions. People wanting good ones should see these before buying. Our farm, "Simcoe Lodge," is situated near Beaverton, on James Bay and G. T. Railways. Long-distance phone No. 18. Visitors will be met at Beaverton on notification.

40 WAVERLY HACKNEYS 40

Imported Stallions and Fillies.



Every one a high-class actor and a show animal. Splendidly-matched pairs and singles. Positively the highest class lot of Hackneys to be found on any one farm in America. All ages. Also 4 imported Clydesdale fillies. A big flashy lot, full of style and quality.

ROBERT BEITH,
Bowmanville P. O. and Station.
Long-distance Phone.

Clydesdale Stallions!

I have on hand for sale another choice lot of Clydesdale stallions, newly imported, ranging in age from two to six, with plenty of size, style and good true action. Also one first-class Hackney. **Wm. Colquhoun, Mitchell, Ont.**
Phone to residence.

**Graham & Renfrew's**
CLYDESDALES and HACKNEYS

Our Clydes now on hand are all prizewinners, their breeding is glit-tered. 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 4483.

GRAHAM & RENFREW, BEDFORD PARK, ONT.

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 good as the best. Long-distance telephone.

ROBT. NESS & SON, Howick, Quebec.

OAK PARK STOCK FARM CO., LTD.
BRANTFORD, ONTARIO.

Breeders and Importers of Hackneys, Clydesdales, Shropshire Sheep, Berkshire Pigs and Scotch Collie Dogs.

2 Choice Hackney Stallions for Sale.

Hackney fillies and mares for sale. The yearling Berkshire sows in farrow for sale. We are booking orders for March and April by Domesfield Donovan and from our imp. sows. We have a beautiful litter of puppies, two weeks old for sale, from Hollyrod Rose, sired by Niwara. Also a beautiful puppy half grown.
T. A. COX, Manager.

GOSSIP.

Mr. Alex. Hume, Menie, Ont., writes: "Through the advertisement in your valuable paper, we have sold our grand Ayrshire aged bull, Lessnessock Royal Star (imp.), to F. G. Edwards, Beachville. We have several young calves to offer of dairy breeding at reasonable prices, also a few young cows and heifers. We are importing several head from Scotland of different ages and both sexes, which we expect to land the first week in May. Our Mr. John Retson has already selected the second- and third-prize winners as dry two-year-olds, first for pair of two-year-olds, first for best animal bred and owned by exhibitor in 1905; in 1906, first and second in the Derby for three-year-olds in calf or milk, first and second for three-year-olds in milk, first for pair, first and second for best animals reared by exhibitor, first and second in the milk test, official milk record by the Highland Society, the first one giving 710 gallons, testing 4.2 butter-fat, 39 weeks, and since adding 100 gallons for the season's yield. These will have calves at foot, as they are due to calve in April. This is the sort he is selecting of all ages—animals of good type and extra dairy breeding. He will bring out several head to sell, so anyone in need of a young bull or heifer of such breeding should write us. We have a few of the best February Yorkshire pigs we have ever offered now ready to ship. A few September boars and young sows just bred, and are taking orders for April or May pigs."

Mr. J. C. Ross, Jarvis, Ont., writes: "Our Cotswold and Hampshire sheep have come through the winter in fine shape. Lambs are coming large and strong and plentiful. We have had a remarkably good year in our sheep business, having sold ourselves rather short, which will necessitate making a trip to England again this summer to replenish our stock, and to fill orders for our many customers, and will be pleased to fulfill any orders from friends who would like a few sheep of good quality from any of the mutton breeds on commission. We find no trouble in selling good stock, when we get a purchaser to come and inspect our stock. We have just completed a sale with Messrs. Docker & Blott, of Dunnville, for the three-year-old Clydesdale stallion, Prince Alexander, at a price with four figures in it. He is a colt of our own breeding, weighing 1,700 lbs., with grand feet and bone, and a very fine mover, sired by Alexander's Heir (imp.), grandsire Prince Alexander, a Cawdor-cup winner in Scotland. On delivery of this colt at Dunnville, on April 10th, the buyers were more than delighted with their bargain, as most all the horsemen that saw him on his arrival pronounced him a very fine colt."

QUESTIONS AND ANSWERS.
Miscellaneous.**APOPLEXY—BROWN LEGHORN EGGS FOR HATCHING.**

1. My hens seem to be all right at night, and go on their roosts; but I find them dead in the morning.
2. Let me know where to send for a setting of Brown Leghorns, and what price I should pay per setting?

READER.

Ans.—It is probably apoplexy or vertigo, a not uncommon disease among poultry that is kept closely confined and liberally fed. It is ascribed to congestion of the brain. Examine the birds to see whether they are over-fat. Reduce the feed, especially of fattening grains like corn, and allow, or take measures to induce freer exercise. Bleeding, either on the comb by means of a needle, or by cutting off a nail of each foot near its base, is recommended as a remedy.

2. Consult our "Poultry and Eggs" column. In the April 11th issue, no fewer than four advertisers offered Brown Leghorn eggs. Those who specified the prices, asked \$1 per dozen. For good stock, this is very reasonable indeed.

Driver or Worker

To do his best, a horse needs the whole food value of his ration. To produce flesh and milk this is also true. In a heavy fed animal only about half of the food is usually digested, in an unthrifty animal it is less.

Dr. Hess Stock Food the prescription of Dr. Hess (M. D., D. V. E.) increases the powers of digestion and assimilation and makes every pound of grain yield a larger amount of profit than is possible without it, besides curing the minor stock ailments. When we remember it is not the food consumed but the food digested that produces the profit, we comprehend the necessity for tonics. Professors Guitman, Winslow, Finlay Dun and all the leading medical authorities recommend the bitter tonics in

DR HESS STOCK FOOD

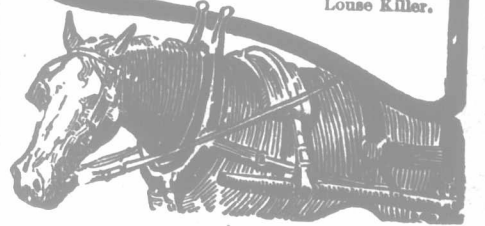
for improving digestion, iron for the blood, nitrates for expelling poisonous material from the system and besides it is Sold on a Written Guarantee.

100 lbs. \$7.00 25 lb. Pail, \$2.00
Smaller quantities at a slight advance. Duty paid.

Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves to be the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal tonic and this paper is back of the guarantee.

If your dealer cannot supply you, we will.

DR. HESS & CLARK, Ashland, Ohio, U.S.A.
Also Manufacturers of Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer.

**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. Durable bound, indexed and illustrated.
FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario

FOR SALE
IMPORTED SHIRE STALLION

Foaled 1899. Registered in Studbooks of Great Britain and Ireland also in American Shire Book as No 7117. This horse is a grand individual and leaves extra good stock. Stock can be seen in neighborhood. Pedigree and any information furnished by addressing
BOX 64, Harrietsville, Ont.

SHETLAND PONIES!

P. McCullough & Son, Breeders and Importers of Shetland ponies, Markdale, Ont. We showed 8 ponies at Toronto Exhibition in 1906, and got 8 prizes: 3 firsts, 4 seconds and 1 third. All our ponies are imported. Our stallion, Foxglove, took first prize at Toronto. Our mare, Bessie, took first prize, and their foal, Bruce, took first prize also. Good accommodation for mares sent from a distance to breed. Ponies for sale. Our address: **Markdale P. O., Ont.**

FOR SALE!
Hackney Stallion, Calvin
A. H. S. B. 306,

By the champion Matchless of Londesboro, and out of champion mare, Dignar, by Denmark. For particulars address: **SHELburne FARM, Shelburne, Vt., U. S. A.**

REGISTERED CLYDESDALES for sale. One four-year-old, one three-year-old, and two two-year-old stallions, and one three-year mare. All bred from first-class imported stock, with good style and action. Prices reasonable. **McDougal Bros., Tatehurst, Que.**

INTERESTING!

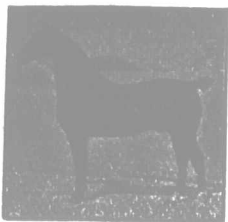
320 Acres, near Souris.

2½ miles from C. P. R. and G. N. R. sidings; 125 acres cultivated, 125 more can be cultivated, balance pasture and wood; fair buildings. Price for farm and implements, \$7,000; a cash payment of \$2,000; balance arranged.

THE BUSINESS AGENCY,
P. O. Box 431. Winnipeg, Man.

CARNEFAC

GROWS IN FAVOR

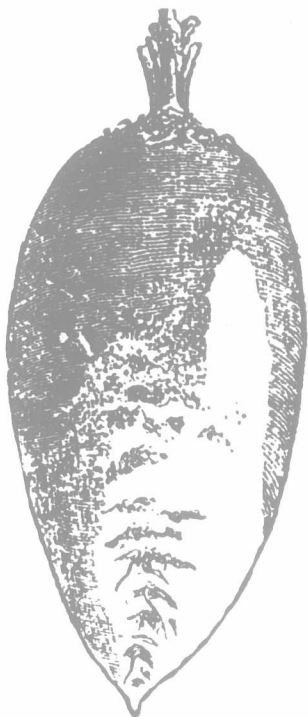


The best substitute for new milk. It is an absolutely sure preventive and cure for indigestion or scours in **Calves or Young Pigs**, and many of the best stockmen grow better calves with **CARNEFAC** than with whole milk.

It costs but a trifle, is a convenient tonic, and never fails to give satisfaction.

Positively no substitute will do its work. If your dealer has not Carnefac, write us direct at once.

Carnefac Stock Food Company
TORONTO, ONTARIO.



Distanced all Competitors

The past season the Caledonia Agricultural Society offered three prizes for the best acre of Sugar Beets for feeding and Mangels, open to their district. All three prizes were won by farmers with the product of **Bruce's Giant White Feeding Beet**, with yields of 1,663, 1,557 and 1,343 bushels per acre respectively.

BRUCE'S GIANT FEEDING SUGAR BEET

These grand Feeding Beets introduced by us lately, combine the fine rich qualities of the sugar beet with the long keeping, large size and heavy cropping qualities of the mangel. The roots are clean and tops small, white flesh, solid, tender and very sweet, and on account of the bigger part of length growing out of the ground they are easily harvested. They will easily outyield all the other kinds of sugar beets and mangels.

The roots are the largest, handsomest, most uniform and cleanest of all sugar beets, and this, combined with their great richness and easy harvesting quality, makes them the "beau ideal" of a root for the farm.

We offer in two colors, White and Rose, each, ½ lb., 10c.; ¼ lb., 5c.; 1 lb., 25c.; 4 lbs., 30c. Postage extra 5c. lb. to Canadian points, and 16c. lb. to United States and Newfoundland.

Send for our 96-page Catalogue of Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc. FREE.

JOHN A. BRUCE & CO., Established 1850
Hamilton, Ontario.

High-class Shorthorns—Just now we are offering a few choice heifers of show-ring form, pure Scotch, the get of Imp. Major Alpine and Imp. Greengill Archer, and one of Roan Duchess and Bracelet dams; also one 5-mos.-old bull calf, a rare good one.
A. DUNCAN & SON, Carlisle P.O., Ont.
11 miles from Hamilton.

Maple Leaf Shorthorns
Chancellor's Model heads the herd. Some good cows and heifers and prizewinning Berkshire pigs for sale. Terms reasonable. **ISRAEL GROFF, Alma P.O. & Stn., G. T. R.**

For Sale REGISTERED GLYDESDALE STALLION, Wild America (4183); foaled June 10th, 1903. Full particulars will be given upon writing to **A. GRADY, CASTLEMORE, ONT.**

When Writing Please Mention this Paper

Glencro Shorthorns and Lincolns
Imp. Marr Roan Ladys, Missies, Miss Ramsdens and Urys. Strictly high-class in quality and breeding. Winners at Canada's leading fairs. Five grand young bulls, from 9 to 12 months old. Two from great milking dams (over 50 lbs. per day). Prices right. Come and see them, and you will buy. One hundred head of Dudding bred Lincolns. Grand crop of lambs from imp. sires and dams.
A. D. MCGUGAN, Rodney, Ont.

J. BRYDONE,
Breeder of pure Scotch Shorthorns. Breeding females imported. Headed by the pure Cruickshank (Duthie-bred) bull, Sittytion Victor (Imp. =50033—(87397)). Young stock from imp. dams for sale. Prices reasonable. Telegraph, Telephone, R. R. Sta. and P. O., Milverton.

QUESTIONS AND ANSWERS. Miscellaneous

JERUSALEM ARTICHOKE.

Where could I get some Jerusalem artichokes for planting? I have tried my seed dealer, and he hasn't them. He has an artichoke, but it is entirely different from the Jerusalem artichoke.

R. B.

Ans.—Write any of the leading firms of seedsmen who have been advertising in "The Farmer's Advocate" this spring.

AUCTION SALES.

1. If a sale is advertised as unreserved, can auctioneer refuse to knock down the article to highest bidder, if there have been several bids?

2. Can owner of goods, at unreserved sale, withdraw goods after several bids have been made?

3. Is it punishable (to either or both parties) to have men bidding-in articles or stock that have been advertised?

4. If grain is sold for seed by sample, and then when purchaser goes for it, several miles, and finds screenings have been emptied on it, and is told he can take it as he finds it, or leave it, is it punishable by law, and how?

5. State penalty, if any, to puffer (or one employed to bid-in articles)? Ontario.

SUBSCRIBER.

Ans.—1 and 2. Generally speaking, no, assuming, of course, that the bidding is bona-fide.

3 and 5. Ordinarily, it is not, but under some circumstances it might give occasion for an action for damages.

4. It would probably amount to a breach of contract, in respect of which damages might be recovered.

LIVER TROUBLE.

Flock of hens are looking good and laying well, but every night or two I find one or two unable to get on the roost. We put them up, and in the morning they seem all right. They continue that way about three days, and then die, some dying on the nest. Are fed good clean grain, and allowed plenty of exercise. Then seem to be free of lice, but before they die their combs and gills turn dark.

W. A. N.

Ans.—Your description of the disease is hardly full enough to give a decided answer. The symptoms, however, point to liver trouble. Over-fat fowl are particularly subject to it. Feeding too much fatty or starchy foods, stimulants and condition powders also have a tendency to affect the liver. The symptoms are not easily noticed, and the bird may be nearly dead before noticed; they are: a loose, watery diarrhoea, muzzled feathers, bird moping about, dark comb. Give good clean food, plenty of exercise, no starchy foods, or stimulants, plenty of pure food and some cooked meat. When individual cases are noticed, give one of Carter's little liver pills.

J. C. E.

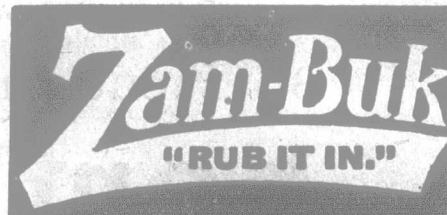
Veterinary.

LUMP JAW.

Two yearlings have a lump on the lower jaw. The lump is hard, like bone, and as large as a small egg. I have been giving — stock food, and rubbing the lumps with soft soap and lime mixed, but they are no smaller. Do you think it is lump jaw? What would you advise me to do? One had it a month before the other. They are standing together. Is it contagious?

A SUBSCRIBER.

Ans.—This is probably lump jaw. It is not generally considered infectious, unless it is discharging and the matter drops on the feed of others; but it may be, and probably is hereditary. The potassium treatment has been successful in many cases, if used before the disease becomes malignant. Give iodide of potassium, three times daily, in feed, or as a drench, commencing with one-dram doses, twice daily, and gradually increase until twice that amount is given, or until the appetite and desire for water fails, tears run from the eyes and saliva from the mouth. When any of these symptoms appear, discontinue the drug. Repeat in six weeks, if necessary. Two weeks is the usual period set for a cure from this treatment.



Zam-Buk is compounded from pure herbal extracts, is highly antiseptic and applied to a wound or sore kills all bacilli and disease germs which otherwise set up festering, blood poison, etc. It heals cuts, burns, scalds, bruises; and cures eczema, prairie itch, salt rheum, poisoned wounds, ulcers, etc. All stores and druggists sell at 50c. per box, or post free from Zam-Buk Co., Toronto, for price. 6 boxes for \$2.50. Send 1c. stamp for trial box.

Ingleside Herefords.

FOR SALE { COWS, HEIFERS and CALVES.

Over 70 Head to Select From.

Best of breeding. True to type. Show-yard quality. Visitors welcome.

H. D. Smith, Hamilton, Ont.

The Sunnyside Herefords.

To make room for my new importation, I will sell four cows with heifer calves by side, two yearling heifers, one yearling bull and two bull calves at a 20% reduction if taken in the next 30 days. The best of breeding and individual merit. Herd is headed by a son of the grand champion, Prime Lad. Address: **M. H. O'NEIL, Southgate, Ont.**

Broxwood Herefords

Cows, heifers and calves

For Sale.

R. J. PENHALL, Nover, Ont.

FOREST VIEW FARM HEREFORDS
Four bulls from 8 to 18 months old; prizewinning and from prizewinning stock. Several heifers bred on the same lines; choice individuals for sale. **JOHN A. GOVENLOCK, Forest Sta. and P.O.**

HEREFORDS—We are now offering a few thick, smooth young bulls and a number of females—a low-down, even, beefy lot. If in want of something extra good, correspond with us. We can please you. **J. A. LOYERING, Coldwater P.O. and Sta.**

Aberdeen-Angus—Our herd in 1906 won all principal prizes at Toronto, London, Dom. Exhibition, Halifax, and Provincial at Charlottetown, Prince Edward Island. Also, we got the largest share in our class at Provincial Winter Fair, Guelph. Stock of all ages for sale. **JAMES BOWMAN, Elm Park, Guelph.**

J. Watt & Son

Are offering about one dozen females (all ages), most of them in calf or calves at foot, including some choice show yearlings and calves. Herd headed by Imp. Pride of Scotland and Heatherman. Prices moderate. Correspondence invited.

SALEM P.O. Elora Stations, G.T.R. and C.P.R.

Shorthorns, Clydesdales and Shropshires.

In Shorthorns we have 100 head to select from, of both sexes and all ages. No fancy prices asked. Several choice young Clyde mares and fillies. 75 Shrop. lambs of both sexes. Small profits and quick returns is our motto.

EDWARD E. PUGH, Clarendon P. O. and Station.

Telephone connection.

Cattle and Sheep Labels
Send your name and address for circular and sample. It costs nothing. Write to-day. Address: **F. G. James, Bowmanville, Ont.**

ARLINGTON SHORTHORNS AND LEICESTERS
Present offering: 3 bulls 8 and 11 months old, by Christopher's Heir 45450; also a few females of different ages, some from imp. sires. No sheep for sale at present. Stock guaranteed as represented. **John Lishman, Waverley P.O. & Sta.**

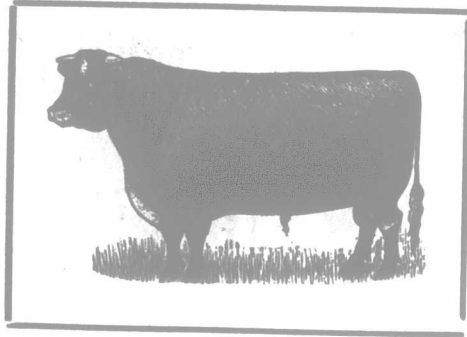
For Sale: Scotch Shorthorn

Young bulls and heifers.
H. K. FAIRBAIRN, THELFORD, ONT.
Rose Cottage Stock Farm

35 Head Imp. Scotch Shorthorns BY AUCTION

At his farm, "Hollymount,"
3½ miles north of Mitchell,
Ontario, on

Thursday, May 9th '07



Mr. W. J. Thompson will sell his entire herd of 35 head of Scotch Shorthorn cattle, including the stock bull, Imp. Rustic Chief, a roan 6-year-old son of Clan Alpine. Sixteen of the cows are imported, the balance sons and daughters of theirs, all got by Rustic Chief. Nearly all the cows have calves at foot, the balance heavy in calf. All are in splendid condition, of modern type and richest breeding. See Gossip.

TERMS—Six months' credit on bankable paper, 5 per cent. per annum off for cash.

Conveyances will meet all morning trains at Mitchell.

CAPT. T. E. ROBSON } Auctioneers. Catalogues on application.
JAMES JONES }

W. J. THOMPSON, Prop., Mitchell, Ont.

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.

Brooklin & Myrtle Sts. W.M. SMITH, Columbus P.O.

MAPLE + GROVE + STOOK + FARM Scotch and Sootch-Topped SHORTHORNS

Present offering: Cows and heifers in calf to Lord Mysie—59627—, Some good young bulls and prizewinning heifers at very reasonable prices. For particulars write to

L. B. POWELL, Wallenstein P. O., Wallenstein Station on the Guelph and Goderich Ry., C. P. R. Farm one-half mile from station.

FOR SALE 8 SCOTCH SHORTHORN BULLS

Aged 6 to 14 months. Marr Beautys, Campbell Claretts, Bessies, Claras and Rosebuds, got by the Broadhooks bull, Broadhooks Prince (imp.) 55003. Also cows and heifers in calf or with calves at foot or being bred to same bull. Prices lowest and terms easy.

DAVID MILNE, Ethel, Ont.

SHORTHORNS AND LEICESTERS

Present offering: 4 choice young bulls from 8 to 12 months old. All sired by Bosicrucian of Dalmeny (imp.) =45290=, and from grand milking dams. Prices away down for quick sale. Also a grand lot of young registered ewes now bred to our stock ram, and a few good rams at reasonable prices. Address:

W. A. DOUGLAS, Caledonia Station, Tuscarora P. O.

RAILWAY VIEW STOCK FARM SHORTHORNS

Herd headed by Lord Lieutenant, imported, =60050=. Present offering: Four young bulls from 6 to 8 months old. Cows and heifers, imported and home-bred. Prices reasonable.

M. C. By., P. M. By. Stations. SCOTT BROS., Highgate P. O., Ont.

Maple Hill Stock Farm Scotch Shorthorns—A special offering of a red bull calf of Missie family, sired by Rustic Chief (imp.) =40419=; also some choice females by Wanderer's Star =48525=, and Lucerne (imp.) =60053=. WM. R. ELLIOTT & SONS, Guelph, Ont.

DOMINION SHORTHORN HERDBOOK WANTED.

The Dominion Shorthorn Breeders' Association will pay \$1 each for the following volumes of their herdbooks: Volumes 8, 9, 13, 14, 15, 16, 17 and 19. Parties having these volumes to part with, write for wrappers and mailing instructions to

W. G. Pettit, Sec.-Treas., Freeman, Ont.

Shorthorns, Cotswolds and Berkshires.

For sale: 9 yearling bulls, cows, heifers and calves. Over 50 head to select from. Nothing to offer in Cotswolds or Berkshires.

CHAS. E. BONNYCASTLE, P. O. and Stn. Campbellford, Ont.

White Hall Shorthorns

Missies, Cecillas, and Lady Victorias. A young bull, 7 heifers, and a few older females. Bred right and will be sold right.

N. A. Steen, Meadowvale P.O. and Station, Peel Co.

WILLOWBANK SHORTHORN HERD

ESTABLISHED 51 YEARS. FOR SALE: Young bulls and heifers from imp. sires and dams, of most fashionable breeding and type; exceedingly choice. Prices to suit the times.

JAMES DOUGLAS, Caledonia P.O. and Sta.

Maple Hill Shorthorns: For immediate sale are two yearling bulls—one a Crimson Fuchsia, the other a Duchess of Gloster; both by Imp. Royal Prince, and both herd headers. Also a number of heifers that are strictly high-class. Send for catalogue.

DAVID BIRRELL, Greenwood P. O., Clarence G. T. R., Claremont, C. P. R.

G. Rankin & Sons, Wyebridge, Ont.

Importers and Breeders of

SHORTHORN CATTLE and DOWN SHEEP.

FOR SALE: Choice red and black bulls, of all ages and from the best families.

GOSSIP.

Mr. John McCallum, Iona Station, Ont., writes: My Shorthorns are doing well. Spectator (imp.) =50094= is improving the herd. All his male calves of breeding age are sold for good prices. Owing to his daughters coming of breeding age I am offering him for sale. He is a red three-year-old, thick-fleshed, mellow-handling sort, fit to head any herd.

Mr. George G. Stewart, Howick, Quebec, a regular shipper for many years, says the Scottish Farmer, had two stallions and two fillies consigned to him last week. These were selected, as usual, by Mr. Thomas R. McLagan, Williams-ton, Crieff, and are capital representatives of the breed. The stallions are Lord Fingask (Vol. XXX.) and Lancer (12634), three and four years old respectively. The former was bred by Mr. James Stark, Coates of Fingask, Perth, and got by Baron Briton, a full brother to Mr. John Crawford's famous Casabianca, out of a mare by Williamwood, winner of first at Glasgow, etc., grand dam by the Glasgow premium winner Gallant Lad. Lancer was bred by Mr. Wm. Anderson, Saphock, Old Meldrum, and got by the 950 gs. Prince Thomas, out of a Montrose mare, whose dam was by the noted Corsewall. The fillies, Hilton Flora and Lady Ritchie, are two and three years old. They are got by the fine breeding horses The Dean and Woodend Garty, from dams by Gold Mine and Prince of Johnstone. They were bred by Mr. Robert Bullions, Hilton of Cowie, Bannockburn, and Mr. Wm. Ritchie, Bridgeton, near Perth. Mr. McLagan has had considerable credit with several of his former selections, and this lot is as good as any he has selected.

A short time ago, when in the vicinity of Listowel, Ont., we imported the opportunity for a call on Mr. W. C. Kidd, the well-known and popular horseman of that place. For many years Mr. Kidd has been one of the leading importers and dealers in high-class horses in Ontario, Clydesdales, Shires, Percherons, Belgians, Hackneys, Standard-bred, Thoroughbreds, high-steppers and high-class saddle and carriage horses, and whose business transactions extend from the Atlantic to the Pacific. Few men in the horse business enjoy a larger amount of public confidence than Mr. Kidd, a man whose word is as good as his bond, and that is gilt-edged. Mr. Kidd is just closing up one of the largest season's business in his experience, having sold a very large number of horses, particularly stallions, and at the time of our visit had only one stallion on hand that was for sale, but that one is a rarely good one. He is Chaplet (imp.), a Clyde, rising 3, by that best of living Scotch sires, Everlasting, dam by Goldenberry, g. d. by Boy in Blue. This colt to a wonderful degree combines size and quality, is smooth to a turn and is one of the truest actioned Clydesdales alive, and the section that gets his services will be lucky indeed. Among other stallions in his stables for service is the mighty Standard-bred Monbars, 2.11½, a horse that is rapidly making a name for himself as a producer of extreme speed; Kid McGregor, 2.12, at 3 years, is a big strong fellow, bred in the purple; and Oliver Wilkes, a horse that has produced more high-steppers and high-class harness horses than any other one horse in Canada. Langdon's Danegait is a Hackney stallion and a noted sire. Besides these there are a number of harness horses and workers on hand, and anyone wanting anything in the horse line is pretty sure to find what he is looking for in Mr. Kidd's stables.

TRADE TOPIC.

AN OIL WITHOUT ODOR.—It will interest our readers to learn that the J. Stevens Arms & Tool Co., of Chicopee Falls, Mass., have perfected a new oil, which is known as "Stevens Odorless Gun Oil." The name is interesting in view of the unwholesome odor that gun oils have had in the past. This oil is a lubricant, rust-preventive, polishing and a cleaning compound. It is adaptable not only to firearms, but also to bicycles, sewing machines, and all mechanisms requiring a high-grade oil.

Suffered Terrible Agony

FROM PAIN ACROSS HIS KIDNEYS.

DOAN'S KIDNEY PILLS CURED HIM.

Read the words of praise, Mr. M. A. Melania, Marion Bridge, N.S., has for Doan's Kidney Pills. (He writes us): "For the past three years I have suffered terrible agony from pain across my kidneys. I was so bad I could not stoop or bend. I consulted and had several doctors treat me, but could get no relief. On the advice of a friend, I procured a box of your valuable, life-giving remedy (Doan's Kidney Pills), and to my surprise and delight, I immediately got better. In my opinion Doan's Kidney Pills have no equal for any form of kidney trouble."

Doan's Kidney Pills are 50 cents per box or three boxes for \$1.25. Can be procured at all dealers or will be mailed direct on receipt of price by The Doan Kidney Pill Co., Toronto, Ont.

Do not accept a spurious substitute but be sure and get "Doan's."



send orders ahead, as they are all picked up as soon as ready. W. J. SHEAN & SON, Box 556, Owen Sound, Ontario.

A. EDWARD MEYER

Box 378, Guelph, Ont., Offers for sale, at prices you can stand, young SHORTHORN BULLS

Four of them from imported sire and dams Several cows with heifer calves at foot by Imp. Scottish Hero, and a few yearling heifers. All are of the choicest Scotch breeding. Write, or better come and look them over. Long-distance phone in house.

MAPLE GROVE SHORTHORNS

My present offering consists of imported and home-bred cows and heifers, also four young bulls bred by Lord Banff's Conqueror. He is one of the best stock bulls of his breed. Terms and prices to suit the times. C. D. WAGAR, Enterprise Stn. & P. O., Addington Co.

Queenston Heights Shorthorns

Show animals in yearling and two-year-old bulls, also bull and heifer calves. Young cows and heifers at very reasonable prices. Canadian and American registration.

Hudson Usher, Queenston, Ontario.

Shorthorns and Clydesdales

I am now offering 6 young bulls from 8 to 20 months old, all Scotch bred, two of them from extra good milking families, and a few registered fillies of good quality.

JOHN MILLER, Brougham, Ont., Claremont Sta., C. P. R.; Pickering, G. T. R.

Pleasant Valley Shorthorns

Herd headed by Imp. Ben Lomond =45160=, assisted by Bud's Emblem, 2nd-prize senior bull at Toronto, 1906, a stock bull from the best son of Old Lancaster 50638. Correspondence solicited. Inspection invited.

GEO. AMOS & SON, Moffat Sta. & P. O., C. P. R., Farm 11 miles east of City of Guelph.

GEORGE D. FLETCHER,

Breeder of Scotch Shorthorns and Yorkshire Pigs Herd is headed by the \$2,000 Duthie-bred bull, Joy of Morning (imp.) =33070=. Choice young bulls from 4 to 9 months old, also females for sale. In Yorkshires are a choice lot of either sex, 7 months old, from imp. sire and dam. Sows bred to imp. hog if desired.

BINKHAM P. O., ONT. ERIN STATION AND TEL.

Spring Valley Shorthorns

Bulls in service are: Bapton Chancellor (imp.) =40359= (78286), Clipper Chief (imp.) =64220=. Stock for sale at all times.

KYLE BROS., Avp. Ontario.

Shorthorns for Sale—Five choice bulls, all from imp. dams; also females of all ages. Scotland's Fame (imp.) at head of herd. ALEX. BURNS, Rockwood P.O. and G. T. R. Sta.

Belmar Parc Shorthorns

WE think we have as great a lot of young show animals as has ever been on one farm in Canada. Our herd is large, the individuals are choice and of the richest Scotch breeding, and our prices are moderate. 15 young bulls, 25 heifers under three years. A splendid group of breeding and show matrons. Mostly in calf to the champion Marigold Sailor =53258= and the prizewinning Nonpareil Archer (imp.) =45202=. Pembroke is on the main line of the C. P. R. and the Canada Atlantic Division of the G. T. R. You can leave Toronto 11 a. m., arrive Pembroke 12.05 p. m., see the herd, and arrive Toronto next morning at 7.20. We prefer you to see the cattle, but if you can't spare the time we take special pride in filling mail orders satisfactorily.

John Douglas, Manager.

PETER WHITE, Pembroke, Ont.

R. A. & J. A. WATT

Offer at reduced prices two highly-bred red SHORTHORN BULL CALVES. They are the last pair they have to offer, and are not the poorest of the great dozen they sold this winter. If you want them, come and see them at once.

AT "MAPLE SHADE"

Our young bulls are the best that our herd has ever produced. We can furnish Cruickshank bulls of high quality to head the best herds, and some that should produce the best prime steers. We have a bull catalogue. Send for one.

JOHN DRYDEN & SON, Brooklin, Ont. Stations: Brooklin, G.T.E. Myrtle, C.P.R. Long-distance telephone.

Valley Home Shorthorns and Berkshires

Special offering at very low prices for immediate sale: Eight young bulls 10 to 15 months old, five cows from 3 to 5 years old, with calves at foot; four 2-year-old heifers in calf to Royal Diamond 2nd =52459=; also eight heifers one year old. The above are straight Scotch and a choice lot; and 10 young Berkshire sows, just bred to Myrtle's Prince (imp.) =14133=, and 30 young pigs of both sexes, from one to two months old. Visitors welcomed for personal inspection.

S. J. PEARSON, SON & COMPANY, Meadowvale, Ontario. Stations: Meadowvale and Streetsville Jct., C.P.R.



Special Offering of Scotch SHORTHORN BULLS

3 just past two years old; 15 just over one year old; 7 just under one year old. The best lot we ever had to offer in individuality and breeding, and prices are right. Catalogue.

John Clancy, Manager. H. GARGILL & SON, Cargill, Ont.

SIX IMPORTED SHORTHORN BULLS

One bred by Duthie, one by Marr, and one by Durno. Show bulls and sires every one. Imported cows and heifers, home bred bulls and heifers, all of high-class. THREE IMPORTED CLYDESDALE MARES, all in foal. Shropshire and Cotswolds in large numbers. Will price anything I have at a living profit. Write me.

ROBERT MILLER, STOUFFVILLE, ONTARIO.

Pure Scotch Shorthorns

19 Bulls. PRESENT OFFERING. 75 Cows and Heifers. 1 imported bull, 3 two-year-olds, and 15 yearlings and calves from 10 to 18 months old—all from imp. sires and choice dams. Cows and heifers all ages, including some show animals. 1 imp. Clydesdale mare four years old, due to foal May 1st. We will book orders for young Yorkshires for May delivery.

W. G. Pettit & Sons, Freeman, Ont. Burlington Jct. Station. Long-distance Telephone.

SHORTHORN BULLS, CLYDESDALE MARES AND BERKSHIRES

Three extra choice bulls, two sired by British Flag (imp.) 50016, and one sired by Hot Scotch 52696. One matched pair of Clydesdale mares rising 3 and 4; also to prevent inbreeding our stock. One Concord Topgallant 14924, bred by Thos. Teasdale. Everything priced low for quick sale.

Elm Park Stock Farm. JOHN M. BECKTON, Glencoe, Ont. G. T. R., C. P. R. and Wabash Railroad.

SHORTHORNS

Six superior yearling bulls, some of them out of great rich cows; heifers of all ages. A lot of very big yearlings and a few heifer calves cheap.

JAS. McARTHUR, Gobles, Ont. JOHN LEE & SONS, Highgate, Ont.

SHORTHORNS & LINCOLNS

The champion herd of Elgin, Kent and Essex counties. For Sale: 6 choice young bulls, 8 reds and 3 roans, of grand type and quality; also good selection of young cows and heifers. Visitors welcome.

Shorthorns Stamford's English Ladies, Mildreds, Marthas, Nonpareils. 3 choice bulls 14 months old. 3 heifers, 9 cows. Breeding unsurpassed. Canadian and American registration. F. W. EWING, Salem P. O., Elora Station.

Clover Lea Stock Farm SCOTCH SHORTHORNS

Superior breeding and individual excellence. For sale: Bulls and heifers—reds and roans, some from imp. sire and dam. Visitors met at Ripley station, G. T. R.

R. H. REID, PINE RIVER, ONTARIO.

STRUAN SHORTHORNS

For sale: Choice young bulls from four to ten months old, sired by Scottish Beau (imp.) (36099); also cows and heifers of different ages. Write for prices, or come and see my herd.

N. S. ROBERTSON, Arnprior, Ontario.

Shorthorn Bull—Prince of Stars =49304=. Rich roan. Sire Chief of Stars (imp.), dam by Blue Ribbon (imp.), g. dam Estelle (imp.). Kind, sure, a good handler. Will sell to avoid inbreeding. Look up this pedigree, and write H. M. YANDERLIP, Cainsville, Ont.

GOSSIP.

THAWTHORNE DAIRY SHORTHORNS.

Established 30 years ago by the purchase of the cow, 2nd Fair Maid of Atha 983, sired by Proud Duke, he, also, being a dairy-bred bull, and her dam tracing to Imp. Princess 419. This far-famed dairy herd, now numbering about 30 head, are all descendants of the above-named cow, and are the property of Mr. Wm. Granger & Son, of Londesboro, Ont., on the London-Wingham branch of the G. T. R. No man or men breeding Shorthorns in Ontario take more pride in the care of their herd than do the Messrs. Granger. The result is that the herd is always in nice, sleek, thriving condition. Probably one of the greatest factors in the notoriety of this herd, as one of the leading dairy Shorthorn herds of the Dominion, was the record of the cow, 2nd Fair Maid of Hullett, which was entered in the dairy test at the World's Fair, Chicago, in 1893, and although she passed through a serious sickness, which put her out of business for several days, she ended up the test in 7th place in a group of 70 cows in the test, showing a milk yield of 54 lbs. a day, and butter-fat of 2.54 lbs. a day. A daughter of hers, World's Fair Maid, has made 16½ lbs. of butter in seven days in a private test at the farm, and many more in the herd to-day are capable of as great a showing, and the Messrs. Granger intend to pay more attention to the records of their herd this year. The herd, as it is constituted at present, are the get of such sires as Beau Ideal 22554, a straight-bred Bessie, got by Imp. Sittytton Stamp, dam Imp. Bessie Lass. He was a massive bull, weighing nearly 3,000 lbs. Next to him came Golden Eagle 30943, an Isabella, by Golden Measure, dam Isabella 14th. Following him was Prince Misty 37864, a grandly-bred Missie, by Imp. Prince Bosquet, dam Imp. Mistletoe 21st. After him, and the present stock bull, is Imp. Aberdeen Hero, a Matilda-bred bull, by Reveller, dam Madge, by Queen's Guard. As to his individuality, we have only to say he was shown 21 times, and won 21 first prizes, and a look over the dozen or more nice smooth heifers by him shows him to be a sire of more than ordinary worth. He is now for sale. The majority of the females of this herd are built on true dairy lines, and, if officially tested, would certainly show wonderful results. There are about a dozen heifers, from 10 months to three years of age, for sale, an exceptionally desirable lot, as they are a thick-fleshed, good-doing lot, and show they will be grand milkers. The bulls for this year are all sold and scattered from Quebec to Alberta. Don't neglect these heifers, if in want of dairy Shorthorns.

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office.

HORSE LITERATURE.

I have looked carefully over "Our Friend, the Horse," by Frank Townsend Barton, F. L. S., M. R. C. V. S., and consider it would make a fairly good addition to a farmer's or stockraiser's library. It deals with the different breeds of horses and ponies, somewhat briefly stating their origin, characteristics, etc., treats of anatomy, diseases and treatment, actions of medicines, and the different modes of administration; gives many useful prescriptions, etc. It also treats of foods and feeding and the general care of the horse. It is published by Dean & Son, Fleet street, London, Eng. "WHIP."

Maple Lodge Stock Farm 1854-1907.

Am now offering a grand lot of young Shorthorn Bulls, several from choice milking strains. Also a few extra good heifers.

A. W. SMITH, MAPLE LODGE, ONT.

Six Red Shorthorn Bulls

13 to 15 months old, got by Proud Gift =60077= (imp.); also cows and heifers, imported and home-bred. Inspection solicited. We think we have as good Shorthorn cattle as we have Lincoln sheep. 14 firsts out of a possible 19, our record at Chicago, 1906.


J. T. GIBSON, Denfield, Ont.

GREENGILL HERD of high-class SHORTHORNS

We offer for sale 8 young bulls, a number of them from imp. sire and dam; also females with calf at foot or bred to our noted herd bull, Imp. Lord Roseberry.

R. MITCHELL & SONS, Walston P. O., Ont.; Burlington Junc. Sta.

T. DOUGLAS & SONS STRATHROY, ONT.



Breeders of Shorthorns and Clydesdales. 15 bulls, 60 cows and heifers, 1 imp. stallion and home-bred allies. Write us what you want or come and see our stock. Farm 1 mile north of town.



John Garthouse & Sons, Importers and breeders of Scotch Shorthorn cattle, Shire and Clydesdale horses and Lincoln sheep. Just now we are offering a few extra choice heifers—show stuff among them; also three rare good young bulls, bred from imp. sire and dam. Highfield P. O., Weston station 3½ miles. Telephone.

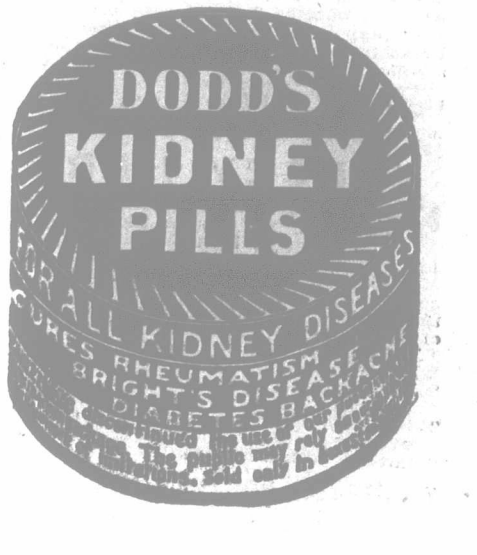
KENWOOD STOCK FARM. SHORTHORNS.

Seeded by (imp.) Jilt Victor =45197=. Offerings are two bull calves, an 11-months Miss Ramden, from imp. sire and dam; a 13-months Missie, by Blythesome Ruler, and other bulls; also heifers of choice breeding. A few choice Berkshires sibs just off the sow.

HUNING BROS., Highgate, Ont. Kent Co.

Brown Lee Shorthorns—Present offering is 8 to 15 months old, a nice straight, good-doing lot, sired by Blenheim Stamp; also females of all ages, daughters of Imp. Sir Christopher and Imp. Beaumont. Prices very reasonable. DOUGLAS SHOWN, Avy P. O. and Station.

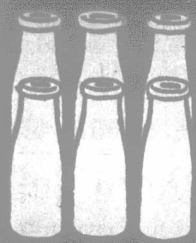
De Style.—Does your motor cover much ground? Gunbusta.—One of them did. Why, parts of it were found in three different counties.





THE OLD PAN WAY

**50%
MORE
CREAM**



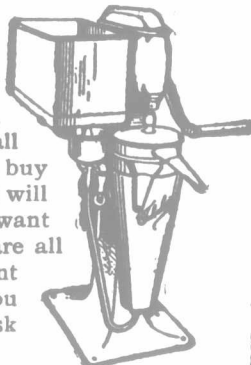
**THE
TUBULAR
WAY**

The old pan way of raising cream don't pay—it's too mussy and fussy—too much work for the women. And it don't pay in dollars and cents because you actually lose 50 per cent of the cream you ought to get. You can increase your cream product about 50 per cent over pan setting; 33 per cent over cans set in cold water; 25 per cent over patent creamers or dilution cans by using the

**DON'T
PAY**

SHARPLES TUBULAR SEPARATOR

Besides you can skim the milk immediately after milking—save the handling and the expense of storage. A good milk-house costs more than a Tubular and isn't half so profitable—even if you already have the milk-house it will pay in labor saved, in crocks and pans saved, and the increase in cream will be all clear profit. Of course, when you buy a separator, you want the one that will get you the most profit—you'll want the Tubular—the reasons why are all given in a book which you will want and which we want to send to you free if you will only write for it, ask for book H. 193



Mr. Mac Tuttle, Danville, Ill., says "The first week we used the Tubular we made a gain of 12 lbs. of butter from five cows."

THE SHARPLES SEPARATOR CO.,
Toronto, Can. WEST CHESTER, PA. Chicago, Ill.



ROCK SALT
for horses and cattle,
in ton and car lots.

**TORONTO
SALT
WORKS
TORONTO**

SHORTHORNS AND BERKSHIRES



Three young bulls fit for service, the right sort at reasonable prices and easy terms. Also heifers and cows with calves at foot by Bando-leer = 40106-. In Berkshires: Sows five months old, and pigs soon ready to wean.

F. Martindale & Son,
Caledonia Sta., York P.O.
Haldimand Co.

GREEN GROVE SHORTHORNS



Fairy Queens, Urys, Floras, Claretts, Isabellas, Rose of Arnumns, Village Girl. Females of all ages 3 choice young bulls. Prices right. Breeding unsurpassed.

W. G. MILSON,
Goring P. O. Markdale Station

SHORTHORN SNAPS

Roan bull, just 3 years old, purchased from Messrs. B. A. & J. A. Watt; also one white bull calf 9 months old, two roan cows, 4 and 5 years, purchased from Messrs. J. Watt & Son; also 3 red heifers, 2 mos., 1 year and 2 years old. Will sell cheap, as I am going out of business. Am also offering two well-bred Ayrshire bulls, 14 mos. and 2 years, the younger is sired by Lessnessock King of Beauty (imp.); also two Ayrshire cows. For particulars and prices write

O. ALLAN BLACK, Kingston, Ontario.

Young Shorthorn Bulls!

Am now offering 3 grand ones from Scottish Peer (imp.). Will make show animals. A few Berkshire boar pigs 3 months old. Also Leicester sheep.

JAS. SNELL, Clinton, Ont.

Porter's Golden Fawn St. Lambert and Golden Lad JERSEY HERD.

I AM now breeding the two most popular and productive families of the Jersey breed known—the St. Lambert and Golden Lad. And what is more, my foundation stock of both families was purchased from the two most noted and best breeders of Jerseys on the continent: The St. L. from the late Wm. Rolph, of "Glen Rouge"; and the Golden Lad from T. S. Cooper, Linden Grove, U.S.A. My St. L's are headed by the little dandy, Porter's St. L. John Bull; and my Golden Lads by Blue Bell's Fox of Linden Grove—a grandson of Mr. T. S. Cooper's high-priced cow, Blue Bell, which was sold at his 1908 sale for \$3,600. I have a few animals of both sexes for sale.

THOMPSON PORTER, Carleton West.

BRAMPTON JERSEYS

Select your stock bull or family cow from Canada's most famous and largest Jersey herd.

B. H. BULL & SON
Brampton, Canada.

ANNANDALE FINE STOCK FARM

TILLSONBURG, ONT.

Premier sire, Prince Posch Calamity, whose dam and sire's dam average in official test 86 lbs. milk in 1 day and 26 lbs. butter in 7 days.

No stock for sale at present.

GEO RICE, Tillsonburg, Ont.

RECORD OF MERIT HOLSTEINS

Herd 110 strong. Over 40 head now in the Record of Merit. Two of the richest bred bulls in Canada at head of the herd. For sale: 18 bulls, from 2 months to 1 year of age, all out of Record of Merit cows and sired by the stock bulls.

P. D. EDE, Oxford Centre P.O., Woodstock Station.

High Grove Jerseys—Choice young bull for sale, 12 months; fit for service; a prizewinner at Toronto last fall, "Bim of High Grove" 73988.

ROBT. TUFTS & SON, Tweed, Ont.

T. E. ROBSON,

Live-stock Auctioneer

2 BECHER ST., LONDON, ONT.

When Writing Please Mention this Paper

GOSSIP.

HAYNE-BARTON SHORTHORNS, BERKSHIRES AND LEICESTERS.

One of the best known breeders of pure-bred stock in Ontario is Mr. James Snell, Clinton, Huron Co., Ont., whose splendid farm, Hayne-Barton, lies a short distance north of Clinton Station (G. T. R.). Twenty-two head totals the number of Shorthorns on hand at the time of a visit of a Farmer's Advocate representative a few days ago, nearly all descendants of Imp. Lady Jane 281, Imp. Rose of Sharon 478, and Imp. Beauty, by Snowball, an array of dairy Shorthorn blood scarcely equalled in any one herd in Canada. The majority of these cows are heavy and persistent milkers, the calves being unable to take nearly all the flow. This, coupled with their splendid up-to-date type and grand individuality, make them doubly attractive on which to lay the foundation of a herd. Among the younger females are some high-class show heifers, as Scotch Maiden, a red two-year-old, by Imp. Scottish Peer. She is a Lady Jane, and has never been beaten in the show-ring. Another equally as choice is the red yearling, Scottish Lass, another Lady Jane, by Imp. Scottish Peer. She is certainly a choice heifer, and the one that beats her next fall will have to be something extra. Another real good one is Bella, a roan yearling, also a Lady Jane, by What's Wanted. These are only representative of a half-dozen or more that are rarely good ones, and strictly dairy bred. In young bulls are four, two of them red yearlings, both sired by Imp. Scottish Peer, and both out of Rose of Sharon dams. Here are a pair of extra good young bulls that have won their spurs in the show-ring and are capable of winning in pretty strong company. They are both in splendid condition and bred on dairy lines. The other two are younger, but bred exactly the same, and will make good ones. Anything in the herd is for sale. The sire of all the younger stuff is Imp. Scottish Peer, by King of Hearts, dam Martha 9th (imp.), by Ruler. He is a show bull of a high order, and, as a sire, has few equals. The present stock bull is Imp. Scottish Volunteer, a Mina, by Golden Prince, dam Imp. Lady Mina, by Belisarius. He is a red, a thick, low-down, even bull, and a splendid doer, and should certainly leave the herd better than he found it. The Berkshires are of Snell and Wilson breeding and strictly up-to-date in type. The breeding stock are Toronto and London winners. For sale are a few choice pigs of both sexes, about four months of age. Mr. Snell's Leicesters are too well known to need any introductory remarks from us, for years carrying off their full quota of honors at the leading fall shows, particularly London, and the quality was never so high as at present. About 75 are in the flock just now, and an additional 27 youngsters brings the total to over a 100. For sale are 5 yearling rams and 6 yearling ewes, and a rarely nice lot they are.

TRADE TOPIC.

Montreal, February 2nd, 1907.

Messrs. The Tuttle Elixir Company,
Montreal, Canada:

Dear Sirs,—It gives me the greatest pleasure to state that I have used Tuttle's Elixir, and I cannot express myself too strongly upon its merits as a curative for lameness in horses. I may state that I had a valuable carriage horse, which the veterinarians pronounced to be spavined, and, upon their advice, I used various spavin cures. The horse was laid up for months, and the application of the spavin cure did him absolutely no good whatever.

I fortunately was induced to try your Elixir. One bottle was applied according to directions, it located the lameness, which proved to be in the stifle, I continued the use of the Elixir for three weeks, and my horse was sound, and has been sound ever since, and that is months ago. Yours truly,

O. FAUCHER.

"But why should I keep books?"
"Well, you would know just where you stood the end of the month."
"But, my dear fellow, why rub it in?"
—[Life.]

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, Curb, 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 inflated. 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**

HOLSTEINS FOR SALE



Four imported and one home-bred bulls, from 8 to 18 months old; also our entire crop of spring bull calves, from week old up.

sired by the grandly-bred imp. bull, Sir Howie B. Pieterje, whose dam record is over 28 lbs. milk in one day, and from great-producing cows of the most fashionable strains. Can spare a few cows and heifers, from one year up; 75 head to select from. Cheese lbs. Don't delay if you want one from this herd.

H. E. GEORGE, Crampton, Ont.

LOOK HERE!

Now is the time to place your order for young stock from choice dams, and sired by a champion of the greatest cow in Canada, Bontaje and Pieterje De Kol (643 lbs. milk in 7 days; 96 lbs. in one day) His sire's dam, Calamity Jane, 25.1 lbs. butter a week; gr-dam, Alta Posch, 27.07 lbs. butter a week. World's record, under 3 years. Write for prices. **FRED ABBOTT, Fairview Stock Farm, Harrietsville, Ont.**

MAPLE HILL HOLSTEIN-FRIESIANS

Korndyke Teake, calved Aug. 16, 1904. Thir nine sires in his pedigree have sired 503 daughters with official seven day butter records. Twenty dams in his pedigree have official butter records averaging 23 lbs. 1 oz. of 85.7 per cent butter in seven days. For extended pedigree, price, etc., write

G. W. CLEMONS, St. George, Ont.

Spring Brook Holsteins and Tamworths

Herd headed by the first-prize bull, Nannet Pieterje Paul, whose dam and sire's dam and g-dam have official butter records averaging over 25 lbs. in 7 days. Females bred and young bulls sired by him for sale. Tamworths of all ages and both sexes. Come and see, or write at once for prices.

A. C. Hallman, Breslau, Ont.

"THE MAPLES" HOLSTEIN HERD

is made up of Record of Merit cows and heifers with large records, and headed by Lord Wayne Meethilde Calamity. Bull calves from one to five months old for sale.

Walburn Rivers, Folden's, Ont.

LYNDALE HERD

Offer a number of young bulls fit for service, out of Record of Merit cows, and sired by Beryl Wayne Paul Concordia, four of whose nearest dams have official records averaging 23 lbs. 11 ozs. each. Eight heifers coming two, and due to calve in spring. Younger stock, either sex.

BROWN BROS., Lyn, Ont.

Imperial Holsteins—An Advanced Registry herd for sale. One-year-old bull, a Toronto champion, four bulls from 6 to 8 months of age. A. R. on both sides. Imp. in dam from the U. S.

W. H. Simmons, New Durham P.O. & Sta.

"GLENARCHY" HOLSTEINS

43 head of big, deep-flanked, heavy-producing Holsteins, many of them milking from 50 to 60 lbs. a day on grass. Young stock of both sexes for sale. A straight, smooth lot

G. MACINTYRE, Renfrew P. O. and Sta.

Holsteins and Yorkshires

R. HONEY, Brickley, Ont., offers a very choice lot of young bulls, also boars and sows fit to mate.

Greenwood Holsteins and Yorkshires

For sale: A few richly-bred bulls from one to eighteen months old. Also a few choice females of all ages. Yorkshires of either sex.

D. Jones, Jr., Caledonia P. O. and Sta.

Grove Hill Holstein Herd

Offers high-class stock at reasonable prices. Only a few youngsters left. Pairs not akin.

F. R. MALLORY, Frankfort, Ontario.

G. T. R. and C. O. Railway connections

QUEEN CITY HOLSTEINS

If you would like to purchase a young Holstein bull whose sire's dam has an official record of 500 pounds of milk and 36 pounds of butter in seven days, write to **R. F. HICKS, Newton Brook P.O., York Co.**

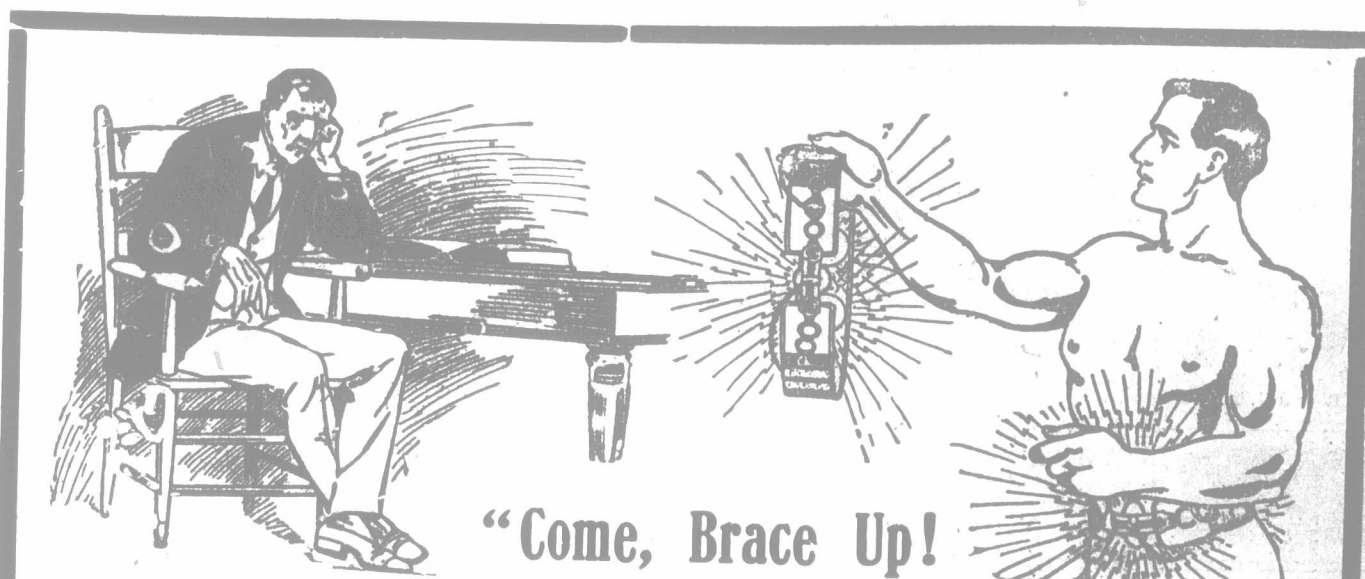
GOSSIP.

A special offering of Shorthorn bulls, Clydesdale mares and Berkshire pigs is advertised in this issue by Mr. John M. Beckton, Glencoe, Ont., on the G. T. R., C. P. R. and Wabash railways. The breeding of this stock is high-class, as the advertisement shows, and we are assured the quality is extra, while the prices are moderate for quick sale.

Messrs. J. Watt & Son, Salem, Ont., write: We sold our last Shorthorn bull calf to Mr. James K. Campbell, of Palmerston. He is sired by Royal Star and out of Roan Lady, by Barmpton Hero, the same dam as Spicy Robin and Star of Morning, both prizewinners. The cows and heifers we are offering are a very choice lot, nearly all are in calf or raising calves. They will be priced right, and will be a good investment for a man wanting a good animal and wanting them cheap. Our calves are coming on well and we don't think we ever had a nicer lot.

W. J. THOMPSON'S SALE OF IMPORTED SHORTHORNS.

Without doubt the Shorthorns to be sold at Mr. W. J. Thompson's sale, at his farm near Mitchell, Ont., on Thursday, May 9th, will be the choicest offering of the year. In all, there are 35 head, 16 being imported, the balance bred from them. They are all of straight Scotch breeding; are all in grand condition, but not overdone. Every one of the cows will either have a calf at foot or be forward in calf. There will also be sold the stock bull, Imp. Rustic Chief, a Matilda-bred bull, sired by Clan Alpine, dam Ruffy 2nd, by Queen's Guard, grandam by Challenger. He is a roan, six years old, safe, sure, active, and fully guaranteed to be right in every particular. The females are: Princess 4th (imp.), by Fortunatus; she is a Clementina, and has an eight-months-old heifer calf, by the stock bull, and is in calf again. Clementina 10th (imp. in dam) is a four-year-old daughter of hers, by King of Fame; she has a five-months-old heifer calf, by the stock bull, and is in calf again. Jessie (imp.) is a Bessie, by Merlin; she has a roan yearling daughter, by the stock bull, and is due again in May. Sally (imp.), by Ivanhoe, has a roan bull calf at foot, and is in calf again. Primrose 2nd (imp.) is a Rosemary, by Hogarth. She has an eight-months-old heifer calf, by the stock bull, and is in calf again. Red Blossom (imp.) is a Bellona, by Sir James; she has a yearling red heifer and a roan heifer calf at foot, both by the stock bull. Beauty 4th (imp.) is a Jenny Lind, by Mercury; she is well gone in calf. Lettice (imp.) is a Lovelace, by Knight of Straithog. Out of her is an eighteen-months-old red bull and an eight-months-old bull calf, both by the stock bull; she, too, is again in calf. Margaret (imp.) is a Jilt, by Royal George; she is due to calve soon. Rose (imp.) is also a Jilt, by Scottish Prince; she has a year-old white bull and a roan heifer calf at foot. Beauty 32nd (imp.), by Count St. Clair, has a one-year-old heifer and a roan bull calf at foot. Poppea (imp.), by Knight of Straithog, has an eighteen-months-old roan bull and a six-months-old heifer calf, and is again in calf to the stock bull. A daughter of hers is Poppea's Bud, a red three-year-old, by Imp. Nonpareil Duke; she has a red heifer calf at foot. Pride (imp.) is a Pride, by Count Joyful; she has a roan heifer calf at foot, by the stock bull. Crimson Ida is a red Canadian-bred Crimson Flower, by Imp. Hopeful; she has a roan bull calf at foot. Then there is a roan heifer calf, six months old, out of Imp. Red Velvet. Bruce Mayflower, and got by the stock bull. In any considerable numbers, this is likely to be the last chance Canadians will have for a long time of getting so choice a lot of imported Scotch Shorthorns at auction in Canada, and should not be missed by anyone at all interested, as every animal to be offered is a choice individual, and bred in the purple. The terms are 6 months' on bankable paper, or 5 per cent. off for cash. Conveyances will meet all morning trains at Mitchell Station. Catalogues may be had on application.



"Come, Brace Up! It Cured Me and It Will Cure You"

Why do you sit there depressed by gloomy thoughts, with that sad, discouraged haggard face, when there is within your grasp the means by which you can regain your strength, energy, ambition and happiness? It is time for you to brace up, be a man, take an interest in the good things of life. Look at me! Wasn't I in the same condition as you? Now I am happy, full of strength, and ready to tackle any obstacle. Yes, I too, tried drugs, but they failed. Electricity will not fail. Dr. McLaughlin's Electric Belt cured me, and it will cure you. No weak man will ever regret a fair trial of this grand Belt—it has brought health and strength to thousands in the past year. Here is one of the many men cured:

Thos. Bridges, Ashdod, Ont., says: "I have been greatly benefitted by the Belt I purchased from you some time ago. My heart is much better and the rheumatism in my arm has all left. I feel improved in every respect. It has done all you claim for it. Thanking you for the interest you have taken in my case."

Isn't this alone evidence enough to convince any man that we tell the truth? Here is another:

James Hatt, Beech Hill, N. S., writes:

"I am glad to tell you that your Belt has proven good. I have never felt as strong and well in my life as I do now. The pains in my chest and back are gone, and I have gained fifteen pounds in weight. I can work every day, and do not feel the first symptoms of pain in my body. It is a pleasure to say that I have at last found a remedy that would cure me of my aches and pains."

Dr. McLaughlin's Electric Belt will make you strong. It will send the warm life blood circulating through your veins. You will feel the cheerful spark warm your frame; a bright flash will come to your eye, and a firm grip to your

hand, and you will be able to grasp your friends and neighbors and feel that what others are capable of doing is not impossible to you.

I want to talk with those who have tried every other known remedy—those who have about given up trying and think that there is no more to be done. Do you think you do justice to yourself to fill your stomach with drugs day after day, when you can't see anything but temporary stimulation in them? (If you want stimulation, take whisky; it is alcohol, like the drugs, and does less harm taken in the same way.) I want to explain how vital power is restored by electricity and I can prove to you that vital power is nothing but electricity. Then you can see that your trouble can be cured by electricity and can understand why drugs don't cure you. Come and let us show you the only road to health, strength and happiness. No healthy person was ever unhappy, because a heart full of vitality is light and joyous and quickly shakes off the gloom and depression which is called grief. Some people are unhappy without cause. That is depression due to weakness.

I have a Special Electric Attachment which I give free to those who wear our Belt. This Attachment carries the current direct to the weak parts and fills them with its warm, vitalizing power; bringing about a sure and lasting cure. Weakness, Rheumatism, Sciatica, Weak Back, Lumbago, Kidney, Liver and Stomach Trouble, Indigestion and Constipation are all quickly cured by this New Method of our of applying "Electricity." Don't put it off any longer. Act to-day. To-morrow may be too late. Here is more proof:

Mr. Gardner Wilcox, Dartmouth, N.S., has this to say:

"I received your letter of enquiry some days since, and I believe beyond a doubt that my cure is permanent, as I have not felt rheumatism or catarrh, my principal ailments, since I got your Belt nearly three years ago. I recommend it at every opportunity, and will continue to do so as long as I live, for I believe it has saved me a world of suffering. I am now 73 years of age, and hale and hearty, thanks to your Electric Belt."

It's easy to be cured my way. You put my Belt on when you go to bed; you feel a glowing warmth passing through your body, and the electric power gives you new life. When you wake up in the morning you feel bright, lively and vigorous, and you wonder where your pains and aches have gone. Our Belt has removed them, and they will never return. That's a better way than making a drug store of your stomach. And who ever saw anybody actually cured by drugs? I tell you drugs don't cure—and if you have tried them, you know it. Nearly all my patients tried drugs first. If you haven't got confidence in my remedy, all I ask is reasonable security and you can pay me after you are cured.

I have a book which every man should read. It tells facts that are of interest to every man who wants to remain young in vitality at any age. Call if you can; if you can't, send coupon for beautiful illustrated 84-page Free Book.

Office hours: 9 a.m., to 6 p.m. Wed. and Sat. to 9 p.m. Sunday, 10 a.m. to 1 p.m.

Dr. M. S. McLaughlin,

112 Yonge Street, Toronto, Ont.

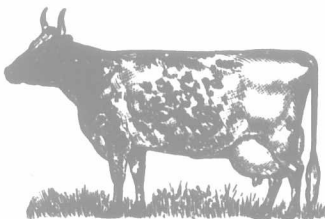
Please send me your book, free.

Name

Address

Write Plain.

AYRSHIRES AND YORKSHIRES



We offer several young calves of either sex, of choice dairy breeding a few young cows and heifers in calf. We are importing several head of both sexes from Scotland. Our John Retson has already selected 1st and 2nd winners of "The Derby," 1906, and 1st and 2nd in the Official Milk Record by Highland and Ayr Society, 1906. He is bringing out young stock of the same stamp and breeding, which will be for sale. Write us if you want something right at a reasonable price. Young boars fit for service. Young sows just bred. Feb. and April pigs for sale.

ALEX. HUME & CO., MENIE, ONT. Long-distance 'phone (Campbellford).

MAPLE GL'N HOLSTEIN HERD

Quality Tops for Sale

In A. R. O. test a Sylvia female has just made 605 1/2 lbs. milk and 26.04 lbs. butter for 7 days. Who wants her son by Sir Alta Posch Beets? Four other of his sons for sale. A sister to his dam has just made over 32 lbs. butter in 7 days. Prices right.

G. A. GILROY, Glen Buell, Ont. Brockville Stn., G.T.R. or C.P.R.

Evergreen Farm Holsteins is headed by Prince Pauline DeKol, which we are offering for sale; sire of 10 daughters in Record of Merit; also a choice lot of young bulls fit for service, from Record of Merit cows with large records.

F. C. PETTIT & SON, Burgessville Ont.

SHANNON BANK STOCK FARM

FOR AYRSHIRES AND YORKSHIRES

Young stock of both sexes for sale from imported stock.

W. H. TRAN, Cedar Grove, Ont.

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.

STOCKWOOD AYRSHIRES FOR SALE

All ages, from imp. and Canadian bred stock. Prices and terms to suit purchaser.

D. M. WATT, St. Louis Sta., Que.

When Writing Please Mention this Paper

Hillview Herd of Prizewinning AYRSHIRE CATTLE.

All animals bred and carefully selected for size, 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, Vernon, Ont. Winchester Station, C. P. R.

SPRINGBURN STOCK FARM, North Williamsburg, Ont., Ayrshires, both sexes and all ages; Berkshires, both sexes and all ages; Oxford Down sheep, a few choice ones left; Buff Orpington fowls, eggs \$1.00 per setting, \$4 per hundred. H. J. Whittaker & Sons, Props.

Ayrshires 3 prizewinning bulls fit for service at reasonable prices, also younger ones for quick buyers. M. DYMONT, Hickory Hill Stock Farm, Dundas Stn. and Tel. Clappison, Ont.

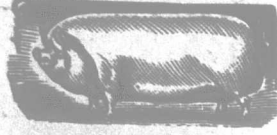
SOUTHDOWNS

AND Scotch Collies.

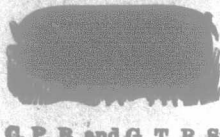
Robt. McEwen, Byron, Ont.

Long-distance 'Phone.

YORKSHIRES of Choicest Type and Breeding.



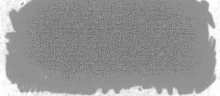
I have on hand 75 brood sows of Princess Fame, Cinderella, Clara, Minnie, Lady Frost and Queen Bess strains. My stock boars are true to type and richest breeding. For sale are a large number of sows bred and ready to breed, boars fit for service, and younger ones of both sexes. Pairs and trios not akin. **J. W. BOYLE, Woodstock, Ont.**



Woodstock Herd of Large English Berkshires

I have for sale pigs of all ages, both sexes, from prizewinning stock. I am booking orders for spring delivery from my Imp. and home-bred sows. Come and see or write for prices. My herd was in the front rank of prizewinners at the leading exhibitions this fall. **DOUGLAS THOMSON, Box 1, Woodstock, Ont.**

G. P. R. and G. T. R. Stations.



Rosebank Berkshires.—Present offering: Sows ready to breed. Choice young stock ready to wean, sired by Maple Lodge Doctor and Sallie's Sambo (Imp.), a Toronto winner.

Lefroy, G.T.R. **JOHN BOYES, JR.,** Churchill, Ont. Long-distance Phone

HILLCREST BERKSHIRES

Stand unrivalled for individual merit in the herd. Our business for 1906 surpasses former years. The enquiry for choice things increases from year to year. Some choice sows for sale due to farrow in the spring. Also a few boars on hand. Vine Sta. G.T.R. near Barrie. **John Lahmer, Vine P.O.**



OAKDALE BERKSHIRES Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prizewinning lines and true to type. Everything guaranteed as represented. Long distance phone. **L. E. MORGAN, Milligan P.O., Co. of York.**

SHIP US YOUR CALFSKINS

Write for our prices. **E. T. CARTER & CO., Toronto, Ont.**

Sheep Breeders' Associations.

American Shropshire Registry Association, the largest live-stock organization in the world. G. Howard Davidson, Pres., Millbrook, N. Y. Address correspondence to MORTIMER LEE BEING, Secretary, Lafayette, Indiana.

Canadian Agents for the Original **McDougal's Sheep Dip & Cattle Dressing** Imported direct. Price: Imperial pint, 50c; imperial half gallon, \$1.25; imperial gallon, \$2.50. Sold by druggists, or charges prepaid on one gallon. **THE WORTHINGTON DRUG CO., Toronto, Ontario.**

SHROPSHIRE

Can sell about 30 Ram Lambs. Mostly by an Imp. Butcher-bred ram. **GEO. HINDMARSH, Ailsa Craig, Ont.**

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs.

Present offering: Lambs of either sex. For prices, etc., write to **John Cousins & Sons, Buena Vista Farm, Harriston, Ont.**

ORCHARD HOME TAMWORTHS

Herd headed by Newcastle Warrior. This hog won first prize and silver medal at Toronto 1905, and defeated his sire, Colwill's Choice (1843) who has won these honors three years in succession. Our brood sows are large and of the same high quality. If you want choice stock, we can satisfy you at a reasonable price. Young boars fit for service; also young pigs now on hand. One good Yorkshire boar one year old. Express prepaid and satisfaction guaranteed. **GRANDALL BROS., Cherry Valley, Ont.**

Newcastle Herd of Tamworths and Shorthorns. We have for quick sale a choice lot of boars and sows from 2 to 6 months old, the produce of sows sired by Colwill's Choice and Newcastle Warrior, both our own breeding, and winners of sweepstakes and silver medal at Toronto, 1901-02-03-05. Several very choice sows due to farrow in March and April. Pedigree furnished with every pig. Several choice heifer calves and heifers in calf to our present stock bull. All of high show quality. Prices right. Daily mail at our door. **COLWILL BROS., Newcastle, Ont.**

Mount Pleasant Tamworths and Holsteins. Herd of **For Sale:** Pigs of either sexes, from 6 weeks to 7 months; pairs not akin; also bull and heifer calves under 5 months. Phone in residence. **BERTRAM HOSKIN, The Gully P. O.**

LARGE ENGLISH BERKSHIRES

Choice young pigs from March and April litters. A few fall pigs and two young Shorthorn Bulls. **JOHN RACEY, Lennoxville, Quebec.**

Yorkshires and Tamworths—Either breed, any age, both sexes; sows bred and ready to breed. Yorkshires bred from Imp. sire and dam. Tamworths from Toronto winners. Pairs not akin. As good as the breeds produce. **CHAS. CURRIE, Schaw Sta., C.P.R. Morrisston P.O.**

For Sale—Ohio Importers' Choice Yorks, the largest strain, and several of registered herd in Canada. Choice young pigs, six weeks old, pairs not akin; express prepaid and safe delivery. **B. D. GEORGE, Petawawa, 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 champion and grand champions. Prices reasonable. **D. O. FLATT & SON, Millgrove, Ont.**

Meadowbrook Yorkshires

Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dalmeny Topman. Everything guaranteed as represented. **J. H. SNELL, HAGERSVILLE P. O. & STATION**

Willowdale Berkshires

Young boars and sows 3 and 6 months of age out of Imp. sows, and sired by Imp. Polgate Doctor, Royal Master piece, a son of the \$3,500 boar, Masterpiece, and some of them Imp. in dam. Satisfaction guaranteed. **J. J. WILSON, Milton P.O. and Sta.**

MAPLE LEAF BERKSHIRES

Now offering King of the Castle sows bred to British Duke (Imp.) also young sows and boars, 9 and 10 weeks old, from British Duke (Imp.). **Joshua Lawrence, Oxford Centre P.O., Woodstock Station.**

PINE GROVE BERKSHIRES

Bred on aristocratic lines and from high-class show stuff, sired by the Toronto winner, Willow Lodge Leader. For sale are young animals of both sexes—4 and 6 months of age—of choice and showing form. **W. W. BROWN, RIDGE, Ashgrove P. O., Milton Sta.**

IMPROVED YORKSHIRES, LARGE

Choice young stock from imported prizewinning stock for sale. **GEO. M. SMITH, HAYSVILLE, ONT.**

Berkshires—Chief herd boars: Compton Duke (Imp.), and Elmhurst Swell (Imp.). For sale: 5 boars, 5 gilts, 1 nine-months' sow, due in May. Pigs ready to wear. Motto: "Goods as represented." Careful selections for mail orders. **H. M. VANDERLIP, Cainsville, Ont.**

Duroc Jerseys—Imported and home-bred sows and boars ready for service. Pigs fit to wean; also Buff Orpingtons and Buff Leghorn cockerels. **MAC CAMPBELL, Harwich, Ont.**

ELMFIELD YORKSHIRES

Have 40 young pigs from 2 to 5 months. Some young boars ready for service; also young sows bred and ready to farrow. Pairs not akin. Prices right. **G. B. MUMA, Ayr, Ont.**

QUESTIONS AND ANSWERS. Miscellaneous

GOITRE IN LAMBS.

Could you please tell me through your paper what is wrong with a lamb that had two large lumps on the glands of the neck, about the size of a hen's egg, and midway up the neck? This lamb was rather dull after born, but with little care soon got on its feet. When the lamb was two days old, it seemed to be in pain, and its breathing was difficult. On the third day it died, and, on opening those lumps, they appeared to be a bloody growth. What could have been used as a remedy? Is it a contagious disease? **A. R. S.**

Ans.—This is goitre, a permanent swelling or enlargement of the thyroid gland. It is supposed, by scientists, to be due to lime in the drinking water of the dam, but this is uncertain. It is also attributed to too liberal feeding of turnips or mangels to the in-lamb ewe, and to lack of exercise of the ewe. The latter is probably the principal cause, though heavy feeding of roots is believed to be an accessory cause. We have never known early lambs so affected, and we attribute this to the abundant exercise the ewes receive on pasture in the early months of pregnancy. Little can be done in the way of treatment for the disease, and if the lambs so affected are not born dead, they generally die in a few hours or days at most, though some pull through. The application of iodine to the gland, outwardly tends to reducing the swelling. Liquid iodine with the color taken out, which is used for the human patient, is most suitable. A course of iodine inwardly, in small doses of half a dram to a sheep, and half as much to a lamb in a little of the dam's milk, may check the disease, but prevention by care of the dam is most important. The disease is not contagious, but may be hereditary.

TO SUPPLEMENT PASTURE — CONDITION POWDER — ZINC OINTMENT.

1. Have field from which we cut a crop of corn last year. We fall plowed it, intending it for oats, but finding we will be short of pasture this season, I would like to seed it with some crop suitable for green pasture. Please state what seeding you would consider best for this purpose.
2. Please reprint prescription for condition powder for a horse, given in a June issue last year; I believe in issue of June 28th, as I seem to have mislaid the issue containing it.
3. Please give directions for preparing the zinc ointment, so frequently recommended in your veterinary columns.

P. E. R.

Ans.—1. As a result of experiments at the Ontario Agricultural College, Prof. C. A. Zavitz has recommended a mixture of: Oats, 1 1/2 bushels; Early Amber sugar cane, 30 pounds, and common red clover, 7 pounds per acre. Sown in spring, this is ready for use about six weeks later. We must confess some doubt whether there would be much use sowing clover for pasturing the same season, on any except very rich soil. We have more faith in a mixture of 2 pecks common vetch, with 1 bushel each of peas and oats. For stock, other than dairy cows, the addition of a pound of rape might be advisable. For sheep, or young cattle, a part of the area might be advantageously reserved until the middle of May, then sown with 2 pounds of rape in drills, or 4 pounds broadcast.

2. We find no recipe for a condition powder in the June, 1906, issues, but the following, which appeared in January of last year, may be the desired formula: Five pounds each of ground corn or shorts, oats and bran, 1 pound oil meal, 2 ounces gentian, 2 ounces iron sulphate, and 1/2 pound salt. Give about a pound at a feed, two or three times a day. The proportion of millfeed and oil cake is rather important, for there is probably as much virtue in these constituents as in the drugs—often more.

3. The zinc ointment consists of one part oxide of zinc mixed with six parts of lard.



Dr. WOOD'S NORWAY PINE SYRUP

Cures COUGHS, COLDS, BRONCHITIS, HOARSENESS and all THROAT AND LUNG TROUBLES. Miss Florence R. Mailman, New Germany, N.S., writes:—I had a cold which left me with a very bad cough. I was afraid I was going into consumption. I was advised to try **DR. WOOD'S NORWAY PINE SYRUP**. I had little faith in it, but before I had taken one bottle I began to feel better, and after the second I felt as well as ever. My cough has completely disappeared.

PRICE 25 CENTS.

MONKLAND Yorkshires

Imported & Canadian-bred

We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Our supply pairs and trios not akin. Quality and type unsurpassed. Prices right.

JAS. WILSON & SONS, FERGUS, ONT.

G. T. R. and C. P. R. Long-distance Phone.



Large White Yorkshires.

A number of excellent sows, direct from imported stock, in pig to Worsley Duke, Imp.; also imported sows of different ages. Young boars and sows can be supplied not akin. Orders taken for young pigs. Write for what you want. **H. J. DAVIS, Woodstock, Ont., Importer and Breeder of Yorkshires and Shorthorns.**

GLENBURN HERD OF YORKSHIRES

Winner of gold medal three years in succession. Offers for sale: 19 young boars, 4 months old; a large number of sows, same age; also 50 suckling pigs, both sexes. Also a grand good Shorthorn bull (roan), 10 months old.

David Barr, Jr., Box 3, Renfrew, Ont.

Maple Grove Yorkshires

are among the leading Canadian herds for size, quality and true-ness to type, and are prizewinners all around. For sale are both sexes. All ages. Bred from Imp. and home-bred stock. There are none better. **H. S. McDIARMID, Fingal P. O., Shelden Station, Breeder and Importer.**

Fairview Berkshires

Are second to none. My herd has won high honors wherever shown. Am now offering sows bred and ready to breed, and younger ones of both sexes, the get of Masterpiece and Just the Thing. An exceptionally choice lot. **JOHN S. COWAN, Donegal P. O., Milverton Sta.**

SUNNYMOUNT BERKSHIRES.

Sunnymount Berkshires are unsurpassed for ideal bacon type and superior breeding. For immediate sale: A few choice boars from 5 mos. up to 15 mos. old. **JOHN McLEOD, Milton P. O. and Sta., C.P.R. & G.T.R.**

Fairview Berkshires

Bred from imported and Canadian-bred sires and dams, and bred on prizewinning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to Imp. boars. **HENRY MASON, SCARBORO P. O., Street cars pass the door.**