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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE
SUCCEED
FOUNDED 1866

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

PUBLISHED AT TORONTO, ONTARIO, CANADA. REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875. PUBLISHED AT WINNIPEG, MANITOBA, CANADA. No. 614

Bicycles

direct from factory. Save agents', dealers' and travelers' expenses. Get you wheels at first cost. We have been established 15 years. Have a first-class line of bicycles, and you can have one or more

at factory cost.

Let us hear from you. We can save you money. Say what style of a wheel you want and we can fill your order.

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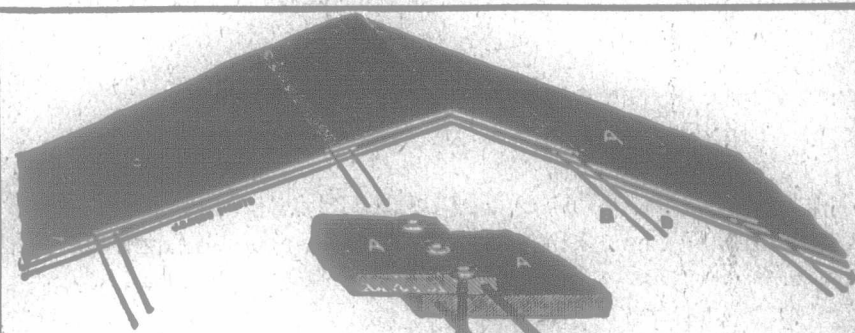
What shrank your woolsens?
Why did holes wear so soon?
You used common soap.

SUNLIGHT SOAP

REDUCES EXPENSE

Ask for the Colgate Brand.

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A shows method of laying Red Star Brand Wire-edged Ready Roofing, with 2-inch laps secured by nailing two inches apart. B shows wires running through the edges of the roofing, giving it great strength at the joints or laps—a very desirable feature, especially in localities where high winds prevail.

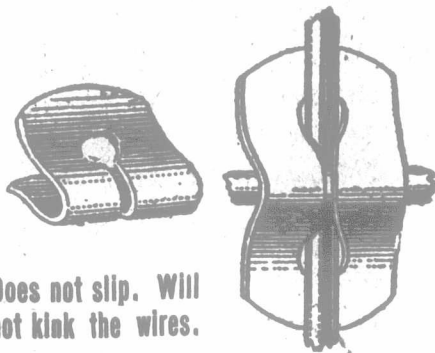
We offer you a durable fireproof roofing material for less money than you would pay for the poorest quality of shingles.

Wire-edged Ready Roofing is made in Canada by a responsible Canadian company, who make their business reputation on the quality of the material they manufacture. For over 20 years our roofing has successfully stood the severe test of the variable climate of Canada, and our annual sales are now fully 100,000 rolls.

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TORONTO and MONTREAL.

New Samson Lock.



Does not slip. Will not kink the wires.

SAMSON LOCK WIRE FENCE

Strong, durable, substantial; positively the cheapest in the end. Its construction: Laterals all No. 9 Hard Coiled Spring Wire; stays, No. 7 and No. 9 HARD STEEL wire. Stays immovably united to lateral wires with the NEW SAMSON Lock—the lock that will not slip up, down or sideways. Samson Lock Fences are "far and away the best." It's the Lock that does it.

We also make a splendid line of ORNAMENTAL FENCES and GATES.

Send for catalogue. Agents wanted.

The LOCKED WIRE FENCE CO., London, Ont. Ltd.

2 IN 1 SHOE POLISH HAS NO EQUAL

TABLE OF CONTENTS.—The list of Contents in this issue of the "Farmer's Advocate" will be found on the page preceding the Home Magazine department.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

The EMPIRE Cream Separator

though not the oldest, is the most popular separator in the world to-day.

Why? Simply because it is doing better work and giving greater satisfaction than any other can. That's why so many farmers have discarded all others.

It will save you to get the best. Send for our free books on the "Empire Way" of dairying. There's good sense in them. Empire Cream Separator Co., 25-30 Wellington St., West, Toronto, Ontario.

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Winnipeg	\$30.00	Regina	\$33.75
Mowbray		Moose Jaw	
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Elgin		Red Deer	39.50
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Binacarth	32.25		
Moosomin			
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Yorkton	33.00		

Going JUNE 28th and JULY 16th. Returning until Aug. 29th and Sept. 20th, respectively. Tickets are not good on "Imperial Limited." Pamphlets and full particulars from any Canadian Pacific Agent, or A. H. Norman, Toronto.

MONEY

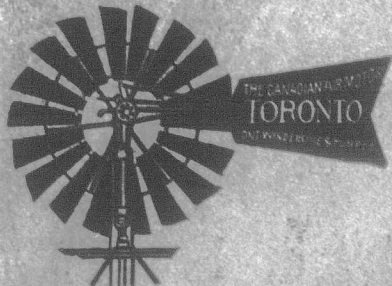
Won't buy it, but we will send "FREE" to any address our "Farm Pamphlet" which contains valuable information regarding

British Columbia Farm Lands
in the far-famed LOWER FRASER VALLEY, "THE GARDEN SPOT OF CANADA."

F. J. HART & CO.,
Real Estate Agents,
NEW WESTMINSTER, B. C.

HAY FEVER Prompt relief. Cause removed. Symptoms never return. A complete and permanent constitutional CURE. Book 57¢ FREE. Write at once for it to P. HAROLD HAYES, BUFFALO, N. Y.

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THE CANADIAN AIRMOTOR
on the farm is better
THAN A HIRED MAN.

Never Tires. Never Sleeps.

Will Save You

MANY A DOLLAR,
LIFT,
HALF DAY.

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The best and cheapest

FOR HOUSE, BARN
AND SILO WALLS,
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Send for our NEW ILLUSTRATED CATALOGUE - it tells all. Prices and estimates cheerfully given. Write to

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Write for descriptive pamphlet and maps

ALGOMA, THUNDER BAY,
RAINY RIVER,
NIPISSING, TEMISKAMING,

HON. E. J. DAVIS,

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**EXCELSIOR LIFE
INSURANCE COMPANY.**

HEAD OFFICE, TORONTO.

ASSETS, ONE MILLION DOLLARS
Insurance in force over \$6,000,000

A Company with an unparalleled low death rate, low expense rate, and earning over 6 per cent, on assets, is a desirable Company to insure in and a good Company to represent. Agents wanted. Liberal contracts offered good producers.

E. MARSHALL, Sec. D. FASKEN, Pres.

**BUCHANAN'S
UNLOADING OUTFIT**



Works well both on stacks and in barns, unloads all kinds of hay and grain either loose or in sheaves.

Send for catalogue to
M. T. BUCHANAN & CO., Ingersoll, Ont.

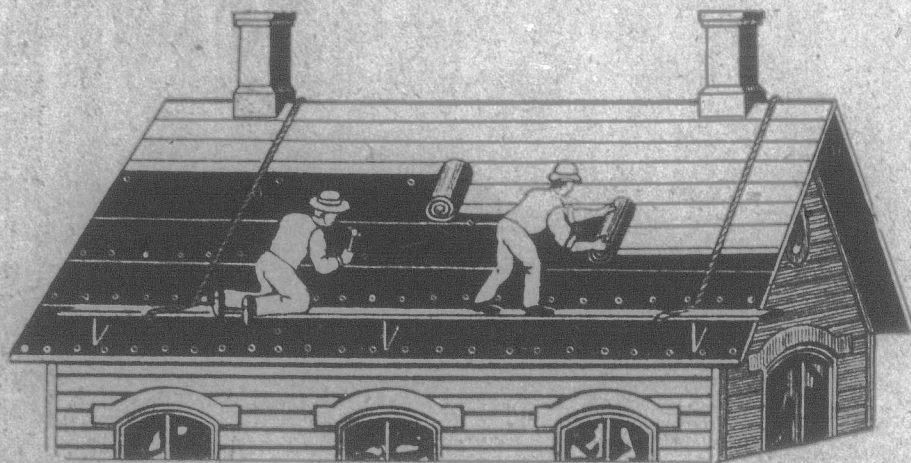
A larger advertisement appeared last week and another will appear next week.

**TORONTO
ENGRAVING CO.**
92 BAY ST
CUTS BY ALL PROCESSES
LIVE STOCK A SPECIALTY

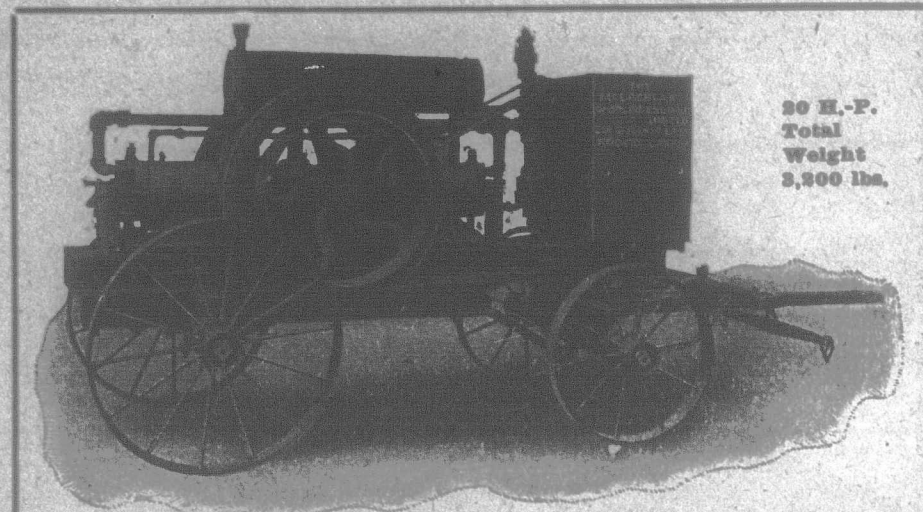
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USE MICA ROOFING

For Flat or Steep Roofs. It is Waterproof, Fireproof, quickly and very easily laid, and cheaper than other roofing. Send stamp for sample.



HAMILTON MICA ROOFING CO'Y,
60 CATHERINE STREET NORTH, HAMILTON, CANADA.



30 H.P.
Total
Weight
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Patented and Pending. Our **Gasoline Threshing Engine.** Write for prices, etc., to
The McLachlan Gasoline Engine Co., Ltd., 201 Queen St. E., Toronto,
or to **W. C. WILCOX & CO.,** Winnipeg, agents for Manitoba and Northwest.

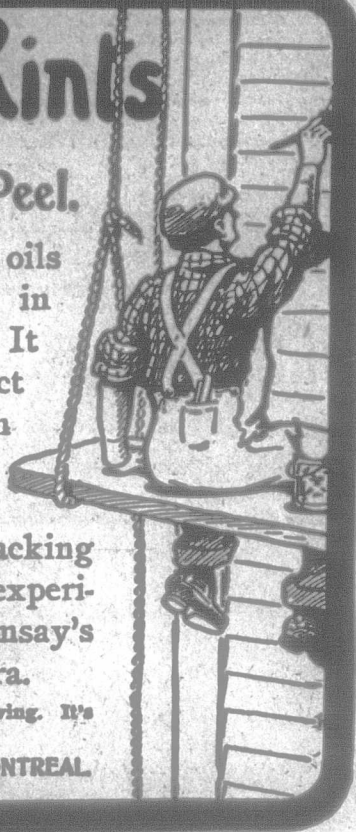
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Won't Fade—Crack—or Peel.

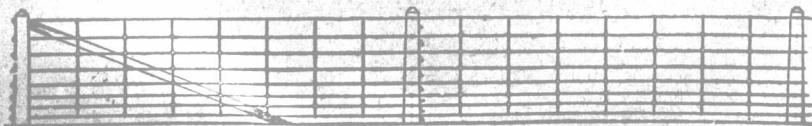
Ramsay's Paints are the best oils and purest pigments, mixed in just the correct proportions. It has taken us 62 years to perfect Ramsay's Paints—to mix each shade so that it paints easily and smoothly—holds its fresh, bright color without fading, cracking or peeling. This 62 years' experience goes with every can of Ramsay's Paints—and costs nothing extra.

Our booklet tells some paint facts worth knowing. It's free. Drop postal for a copy.

A. RAMSAY & SON, Paint Makers since 1842, MONTREAL.



THE ANCHOR WIRE FENCE



For Farm and Ornamental Fence and Gates, and all Kinds of Fencing Wire, write

ESPLEN, FRAME & CO.,

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Agents Wanted.
Send for Catalogue.

Of course you want the
Cream Separator

that will do the best work with the least labor. The

"PRINCESS"

fills the bill, and you will find it the best value for your money. Made in Seven different sizes. Send for particulars to

CAMPBELL ARNOTT & CO.,
114 VICTORIA STREET, TORONTO.

Agents wanted in unrepresented districts.

Hello!

Have you heard of the **New Century Ball Bearing Washing Machine?**
If you use it once you would ring this in on all your friends. It is the acme of perfection—you sit when using it—no handling of the clothes necessary to clean them perfectly—five minutes does a tubful. Costs only \$8.50.
Your dealer can procure them. We will send a descriptive booklet on application.
THE DOWSWELL MFG. CO. LTD.
HAMILTON, CANADA

RUPTURE Have you a rupture that all the specialists have failed to hold or to cure? Have you wasted money in a vain pursuit for relief? If so, write me, and I will tell you how to cure yourself. If you have a very bad case, it's for you particularly. Full information free.

F. H. Weese, Specialist, Toronto, Ontario.

Canadian Dairying,
BY PROFESSOR HENRY H. DEAN,
of the Ontario Agricultural College. A thoroughly practical book, illustrated; price, \$1.00, postpaid.
William Briggs, 29-33 Richmond St. West, Toronto.

**WHEN YOU BUILD
A NEW BARN**

Roof it with Corrugated Galvanized Steel Sheets, in 8 ft. lengths. They are applied over sheathing or direct to rafters, making a light strong covering. Very lasting; lightning and fire proof.

Ask for our Free catalogue and send rafter and ridge lengths. For estimates

The Metal Shingle & Siding Co., Limited
PRESTON, ONT.

SAVE THE CHICKS.
The world's record in chick raising—the most and the best—is held by **Puritan Chick Food.**
Costs nothing if not the best in the world. Try it free. Send for catalogue today.
Puritan Poultry Farms & Mfg. Co., Stamford, Conn.
A. J. BORDMAN, London, Ont., Sole Distributor for Canada.

\$3 a Day Sure Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write to **ONE IMPERIAL SILVERWARE CO., Box 606, WINDSOR, ONT.**

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Best and cheapest. Send for catalogue.
DOOMER & BOSCHERT PRESS CO.,
608 West Water St., SYRACUSE, N. Y.

DeLOACH PAT.

TRIPLEX HAY BALER, SELF-FEEDER, LOW IN PRICE.
For Hand, Horse or Belt Power. Leverage 40 to 1.
Bales quicker, easier and more solid than any other. Also Grinding Mills, Water Wheels, Saw Mills, etc. Catalogue free.
DE LOACH MILL MFG. CO.,
NEW YORK Box 932, Atlanta, Ga. ST. LOUIS

GOSSIP.

According to The Albany Argus, twelve species of insects do an estimated damage of \$363,000,000 a year to American farm products. The chinch bug heads the list, with \$100,000,000 a year; the grasshopper, \$90,000,000; the Hessian fly, \$50,000,000; the cotton worm and boll worm, \$25,000,000 apiece; the cotton boll weevil, \$20,000,000; the San Jose scale, grain weevil, apple worm and army worm, \$10,000,000 apiece; the potato bug, \$8,000,000, and the cabbage worm, \$5,000,000.

DAY OF BIG RANCHES PASSING.

Western Texas has suffered last spring from the severest drought in many years. Hundreds of cattle died on the ranches for want of water and grass.

The ranching business in that vast region is declining anyway, and the present losses of the cattle-raisers will probably accelerate the cutting up of the ranches into small holdings. This process has been going on for several years.

Perhaps in no other part of the world is so much land in big estates owned by individual property holders. In Texas there are ranches of more than 1,000,000 acres each, which are the property of the individuals utilizing them.

A New Yorker was travelling on horseback last summer over the prairies of north-western Texas when he came to a wire fence that stretched away as far as he could see. The road had led him to a gateway in this fence and on it was a sign, reading "Eighty miles from this gate to headquarters."

The horseman passed through the gate, and in a little more than two days' travelling over the grassy plain reached headquarters. That wire fence enclosed 1,500,000 acres of grazing land.

It is known as the J. A. Ranch, and the sole owner is Mrs. C. Adair, who lives in a fashionable part of London, England, and for ten years has made an annual profit from her ranch of more than \$100,000. Last fall there were 33,000 head of fine cattle on the ranch and 6,000 head of steers are shipped on an average every year.

Twenty-eight years ago this vast area was purchased by the late Mr. Adair for 20 cents an acre. It is now valued at from \$4 to \$7 an acre.

There are four ranches in Texas with an area of over 1,000,000 acres apiece; and there are a large number of ranches with areas of 500,000 acres or a little less. But the days of great Texas ranches are about over, and the reason is that more and more farmers are looking in this direction for tillable lands.

They find that the larger part of the lands which have been used for nothing but grazing have abundant fertility and water enough, as a rule, to insure good crops. They are buying hundreds of thousands of acres at \$5 to \$7 an acre.

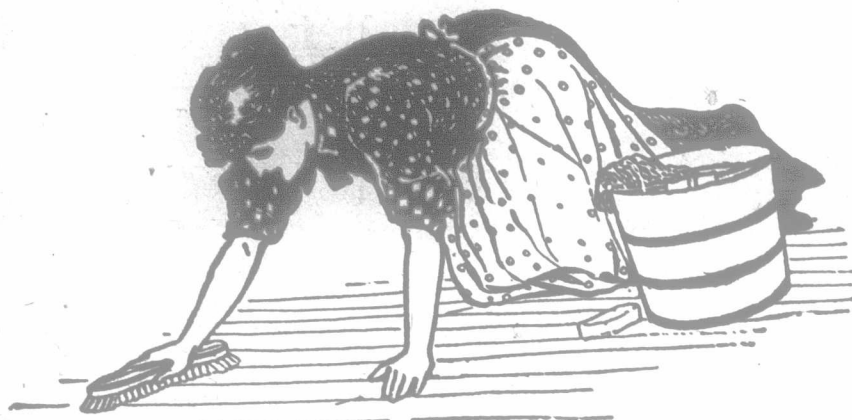
It takes from ten to twenty acres of these range lands to fatten a single steer. If the ranchmen can get \$5 an acre or more for their land they can lend the money in that country at 8 per cent. and make more than they do in cattle-raising.

So the ranches are being continually whittled down to make farms, and last year over 1,000,000 acres of ranch property were purchased by settlers from the North and East, and the plow was set at work turning the sod under.—[Thresher World.]

TRADE TOPIC.

BRUSHES.—In dealing with a well-known firm one always feels a certain security not always experienced in conducting transactions with people with whom one is not familiar. The same thing is true of household articles. When one has tried a brush or broom and found it all right, we are satisfied until we know of something better. If it is a "Boeckh," we know there are none better; if it is not a "Boeckh," well there is one better. Boeckh brushes and brooms are the most popular to-day, because they have always given satisfaction. Try one, and you will want another.

CLEAN, SANITARY HOMES



Are the houses that are well swept and well scrubbed, not only in the summer time, but all the time. The greatest cleaning helps in the world are

Boeckh's Brushes and Brooms,

the goods always sought for by wise housekeepers, because they are absolutely the best made. The name "BOECKH" is stamped on every brush and broom. Sold by all reliable grocers.

IF YOU WANT TO MAKE A SALE

Of a farm, of stock, or of any other article, we can inform the PURCHASING public of the fact every week in the year. Our ads. are read by business men and are published in order to bring buyer and seller together.

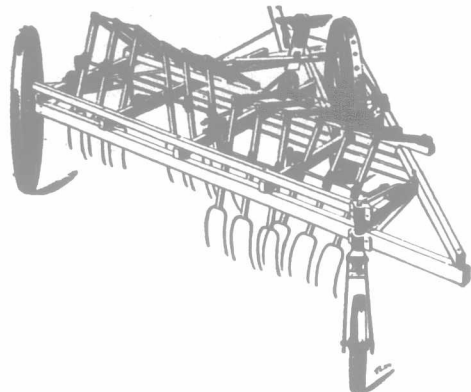
ADVERTISE FOR RESULTS IN THE

FARMER'S ADVOCATE

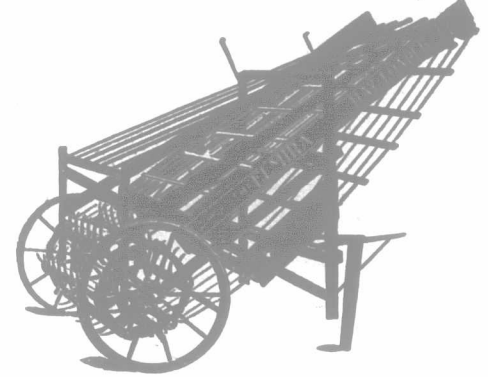
The William Weld Co., Limited.

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ELMIRA HAY-MAKING MACHINERY.



THE SIDE-DELIVERY HAY RAKE and HAY LOADER are the Greatest Time and Labor-saving Implements of the day. They will repay for their cost in a short time by curing and saving the hay properly, and in saving of extra labor.



Substantially built. Will last a lifetime. Write for circulars, prices and terms.

THE ELMIRA AGRICULTURAL WORKS CO., LTD., ELMIRA, ONTARIO.

CANADIAN CORDAGE AND MFG. CO. Limited

1904

PETERBOROUGH

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WINNIPEG

1904

Lowest Prices on ROYAL Binder Twine

Royal Standard, 500 feet to the pound,	11½c.
Royal Manilla, 550 feet to the pound,	12¼c.
Royal Manilla, 600 feet to the pound,	13¼c.
Royal Manilla, 650 feet to the pound,	14¼c.

Free on board cars at Winnipeg, Peterborough, Montreal. Twine comes in 50 pound flat bales, containing 10 balls. Money order or bank draft payable to the order of the Canadian Cordage and Mfg. Co., Limited, must accompany order and be sent to Canadian Cordage Company, Winnipeg, Man. Send your order in early and avoid disappointment.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Sharple's Tubular SEPARATORS

The Only Modern Separator Bowl

Why buy a separator filled with bottomless cake pans, punched and bent sections of stove pipe, or other complicated parts?

The only modern bowl has no contraptions; is as simple, light and easily handled as any woman could wish. The illustration shows it.

Write for catalog K-193 and learn about the best and most attractive separator ever built—the Tubular.

Canadian Transfer Pointers
Winnipeg, Toronto, Quebec,
St. John, N. B., Calgary, Alberta. Address

The Sharple Co.
Chicago, Ill.

P. H. Sharple
West Chester, Pa.

WHEN YOU BUILD A NEW HOUSE

Roof it with our Galvanized Steel Shingles. They are lasting and ornamental; lightning and fire proof, and keep out the weather.

Send careful dimensions of roof for free estimate and free catalogue.

The Metal Shingle & Siding Co., Limited
PRESTON, ONT.

VIRGINIA The best low-priced lands; no HOMES, stones; best trucking, fruit, stock and poultry section; good water. FINEST CLIMATE TO BE FOUND ANYWHERE; very healthy. Fine shipping point. Write H. V. WEISS, Manager of Immigration, Emporia, Va.

The
Farmer's Advocate
and Home Magazine.

"PERSEVERE AND SUCCEED"

ESTABLISHED 1866.

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VOL. XXXIX.

LONDON, ONT., AND WINNIPEG, MAN., JUNE 30, 1904.

No. 614

EDITORIAL.

Influence of Example.

A good example in life and conduct along moral lines has greater influence upon others than is generally acknowledged, and, in like manner, the example of the man who farms well or introduces improvements has an influence upon his neighbors that, though not always admitted, is often apparent in their adoption of his more advanced and improved methods. We have in mind a man who, many years ago, when farmers generally were recklessly destroying as much as possible of the woods on their farms, placed a fence around a generous portion of his wood land to protect and preserve it, with the result that he has now a wood-lot that is a source of pleasure as well as of profit to him, and is admired by all who see it in its summer dress. Although few followed his example in that matter, and many now regret they did not, he did another thing along the same line that many have copied, to their great satisfaction. He planted young maples, elms and basswoods at intervals along the front of his farm, by the roadside, and on both sides of the lane to the homestead, and a shelter-belt of spruces and pines on the north side of his buildings and orchard, and on the grounds in front of his house, all of which have grown into beauty and blessing. His neighbors, for miles in either direction, one after another, began to plant trees by the roadside in front of their farms, until now a drive over that road in summer is a pleasure, the homes beautified and farm life made more attractive, and when for any reason a farm in that district is offered for sale no one will deny that this planting enhances its selling value much beyond the cost of these improvements.

We know a man who took an interest in improving the public road in front of his place, and when the regularly appointed roadmaster refused to deepen a ditch to quickly carry off surplus water from a piece of road that was notoriously bad at certain seasons, with his own men and teams he did the necessary work in a day, greatly improving the road, and, at the same time, the condition of his own fields, portions of which were often water-soaked from the same cause. Encouraged by this experience, he prevailed upon a few of his neighbors to join him in hauling gravel in winter to further improve that piece of road, with the gratifying result that the roadmaking policy of that division was radically changed and most of the statute labor devoted to drawing gravel until that became the best piece of road in the township, and the good work was in time extended to most of the roads of the municipality, to the great satisfaction of all concerned.

The benefit to his crops from the deepening of the roadside ditch led this same farmer to consider the advantage of drainage, and by using the plow and road-scraper to deepen the surface ditches leading from certain slack places in his fields, his crops being greatly improved in those portions, ripening more uniformly, so that harvest could commence earlier, no part of the crop being allowed to get overripe before being cut. He found that by cutting the grain before it was dead ripe there was less waste from shelling, while the straw made much better feed for stock. This experience led him to make a study of systematic underdraining, and, preparing a map of his farm, he, by degrees, as he could spare the time, first laid down suitable tile for main drains, to which

laterals in the most needy places were laid, and, later, additional ones, until his whole farm is now thoroughly underdrained, the advantage from which has been noticed by his neighbors, and tile draining in that district has been generally adopted, and is acknowledged to be a profitable investment, the improvement in the crops paying for its whole cost in two or three years; while the work, if well done, is practically permanent.

These are cited as examples, which might be greatly multiplied, of the influence for good of men who do things, instead of merely talking of what might be done and what should or could be done. We might, did space permit, present in contrast the record of the man who made the longest and loudest speech at the Farmers' Institute, who had the history of agriculture from the days of Noah on the end of his tongue, who could expatiate at length upon scientific theories, and whose life was soured by the failure of his neighbors to appreciate his qualifications for office in the county council or the Legislature, but whose farm was a striking illustration of how not to do it, his fields an exhibition of the "yellow peril" and kindred weeds, his implements stored under the canopy of the blue at the back of the barn, and his stock the scrubbiest of the scrubs, but we trust we have written enough to set someone thinking of some things that may be done by any farmer without taxing unduly his time or his pocket to improve his own condition and prospects, and, at the same time, by his example to encourage others to go and do likewise.

Agriculture in the Canadian Parliament.

Listening to debates on subjects relating to agriculture in the House of Commons at Ottawa, it must be reluctantly confessed that one is not impressed with the dignity of Parliament nor its businesslike character. When measures are under consideration for the advancement of the agricultural interests of the country, a great deal of the criticism is destructive rather than constructive. Too many men seem to deal with propositions before the House from the view-point of party rather than what will promote the well-being of the farmer. In so far as the farmer is concerned, partyism is the bane of Parliament, and we believe there is a growing sentiment abroad that does not approve the consideration of the agricultural estimates in the light of a huge joke or as a party football.

Here is a specimen press-gallery paragraph from one of the big party dailies, in which a speech by a member of the House is burlesqued: "Mr. Speaker," he said, "the records of the Agricultural Committee will show that I am first in every practical movement to advance this fair Canada of ours. From time to time, my voice has been raised in behalf of progress and reform. It was I who suggested that potato bugs should be provided with burglar alarms. It was I who brought to the attention of the farming community a new rotation of crops which would relieve the exhausted soil and turn a blight into a blessing. I allude, sir, to my famous theory that wild mustard should alternate with ham sandwiches in the fields of the grand old Province of Ontario. Who was it that took hold of a waste product like campaign literature and by using it as manure saved this country thousands of dollars? Who was it induced pumpkin pies to grow on bushes, and so avoid the pastry cook and the middleman? Who was it encouraged hens to lay hard-boiled eggs and build up the

picnic industry of this broad Dominion? Who was it discovered that dairy farms should be sown with buttercups, and that windmills should be run with speeches from Hansard? Who was it solved the problem of irrigation by planting the side lines with water lilies? Who was it advocated that there should be Government ownership of air? Who was it protested, day in and day out, against the scandalous and extravagant practice of equipping railways with Ascot ties? Who was it, when there was a new idea to boost or an old foible to knock—who was it, I repeat, was in the van and over the touch-line? Who but the member who now addresses the House?"

Fortunately, there is a saving remnant of members, not confined altogether to one side of the Speaker's chair, who take a more serious and sensible view of their duties than mere fault-finders or burlesque actors.

Let us keep first things first. Our agricultural exports (including animals and their products) are more than double our exports of manufactures, and nearly one-half the total exports of the country. During the writer's presence at several sittings of the Ottawa House, recently, we saw the seats of scores of M. P.'s empty when agriculture was under debate, some of those who were there asleep, and others who had no practical knowledge of farming wasting hours asking ridiculous questions for the purpose of badgering the studiously courteous Minister of Agriculture. One hon. gentleman struck a snag in the Central Farm estimates, and was bound to commit Mr. Fisher to some particular form of fastening for cattle, and when the Minister would only say how his own beloved Guernseys were tied, the irrepressible M. P. wanted to know, with all the gravity of an owl, whether cows would sleep as soundly in swinging stanchions as in chains? Another hon. gentleman slashed right and left, alternately knocking the unhappy experimental stockman, the beekeeper and the poultry manager, proceeding upon the theory that if the Farm, apart from the plots, did not show an actual cash profit, then all was loss and the people's money was being wasted. Apart altogether from the merits of what is being done or attempted at the Dominion experimental farms, this unique theory of the purpose of investigation is one to which the intelligent farmers of Canada do not subscribe. A given experiment may even demonstrate a loss, but the knowledge so gained may be worth thousands to the country. Does any dairyman begrudge the years of time and sums expended before Dr. Babcock discovered his butter-fat test? The utility of experimental work depends upon the men who plan and carry it out. A great deal of it may be no more than an accurate scientific check upon what some individual feeder or grain-grower has learned by private enterprise and effort, knowledge of which thereby becomes more widely diffused. Members of Parliament, as representatives of the people, are quite within their rights in discussing the conduct of the experimental farms and in seeing that the statement of accounts given in the farm report and in the report of the Auditor-General correspond, but it is also desirable that those entrusted with the management of these farms should have advice and counsel from time to time, as well as criticism once a year. On the other hand, the officers, as servants of the people, do well to keep in close touch with the man on the farm and in the market, and with open minds be ready for suggestions from any quarter, so that their investigations will have a direct bearing upon present-day problems.

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The Seed-growers' Organization.

Primarily, the success of the newly-organized Canadian Seed-growers' Association in improving the yield and quality of the field crops of Canada will depend: First, upon its chief officers—the President (Prof. J. W. Robertson, Agricultural Commissioner), the Secretary (Mr. G. H. Clark, Chief of the Seed Division), and the Executive; second, upon the four superintendents of districts into which the Dominion is divided; third, upon those who undertake to make seed-growing a specialty; and fourth, upon the general farmer, whose sympathy and co-operation is to be enlisted. The report of the inaugural gathering at Ottawa, given in last week's "Farmer's Advocate," indicates the general scope and plan of the work contemplated. The attainment of the objects in view will depend immediately upon the manner in which principles are applied and plans worked out.

We apprehend, in the first place, that there will be a disposition to work in accordance with the democratic spirit of Canada, and beyond initiative, not to undertake to do for the farmer what he can, as well or better, do for himself; in other words, to recognize that there are limits to what is called paternalism. Everywhere, the educational policy may be safely pursued, but Canada is an assortment of Provinces or communities, of different natural conditions and types of men, so that rules and regulations that might answer well in Quebec would not be applicable in the West or in Ontario. This diversity will be recognized, and hence, as already indicated, much will depend upon the district or Provincial superintendents. It will be necessary for them to be discoverers of men and conditions, and to exercise tact as leaders. There are large numbers of men who successfully grow field crops on an extensive scale who would not care to undertake the minutia of small-plot management and hand selection, but here and there good men of repute can be found adapted to that sort of thing, and

who can be induced to take up seed growing and improvement as a specialty.

The institution of seed fairs, we are satisfied, can be undertaken with advantage in many additional localities, and, in our judgment, another very direct way of accomplishing the objects of the new association will be by taking advantage of the fairs now existing all over Canada, aiming to improve their prize lists and the general management of their exhibits of grain and tubers. Here, too, the war against weeds can take the form of an educational campaign. Speaking generally, comparatively little advantage has yet been taken of this great field for effort in crop improvement.

There is also an extensive and pressing opportunity for determining and diffusing knowledge as to what constitutes ideal types of seed. The largest possible yield of a clean crop produced at a profit is what the farmer is after, but when we come to consider wheat, for example, as a marketable product, and, to a great degree, oats as well, the milling quality is an essential consideration. It is most desirable that we should have clear conceptions of the most desirable type of head and kernel to be secured in conjunction with the maintenance of purity of variety, freedom from weeds, vigor and productivity. It is



G. H. Clark, B. S. A.

Seeds Commissioner, Department of Agriculture, Ottawa, and
Secretary of the Canadian Seed-growers' Association.

undeniable that certain varieties of grain, such as the Banner oat, introduced into Canada through private enterprise years ago, seem to possess outstanding inherent merits that perpetuate themselves, as do the characteristics of certain breeds of live stock, under a great variety of conditions, though the better they are cared for the better the returns. Our attention was recently called to a case where, in one section of the country, a cereal had been grown for over fifteen years in succession without any evidence of deterioration, but, rather, improvement in yield and quality, by means of a system of good cultivation and careful selection and screening of the seed every year.

Starting out with the best available variety of a given grain or potato in a locality, the general theory of this movement, as we understand it, is to fix an ideal, and to reach or improve it by systematic selection of the best and discarding what is inferior, continuing this system from year to year. So important and practicable is this principle regarded in the Western States corn-belt, that associations of seed-corn breeders have been organized for the purpose of ensuring supplies of seed corn, improved, not only in yield, but also in quality (particularly the content of protein). No doubt, many incidental problems of a difficult nature will crop up in the out-

working of the Canada Seed-growers' Association, but its purpose is most commendable and the principle of selection is recognized as both workable and effective.

HORSES.

Raise Good Horses.

Probably never in the history of horse-breeding in America have farmers exploited the industry so vigorously or so intelligently. The cross-road stallions of cheap quality have been eliminated from the problem, and only the best imported or domestic-bred sires are being patronized. Importers are buying the tops for improving the grade of horses in this country, as mediocre animals are a drug on the market.

It costs as much to house, feed, mature and manner an inferior horse as a good one of its class, while the better grade will outsell the inferior animal fully \$100 in the open market. Consider then, that the difference of \$100 per head between the foals of good coach or draft stallion at marketable age would make a difference in the commercial value of the progeny of a good sire over the get of an inferior stallion \$5,000 annually. This is demonstrated every day in the wholesale markets, and also realized by every stock company that has introduced a good stallion into any breeding district. Consider that the farmers of any locality who have access to the service of any good stallion will show a net profit in the year of \$50,000, as compared to patronizing inferior sires. Good stallions give great immediate profit over the services of an inferior sire, and also lay the foundation for further improvement in their best female progeny that are retained for breeding purposes. As the breeding season is at hand, farmers should patronize only the best stallions in their locality, as the commercial demand is for better horses— [Drovers' Journal.]

The French Coach Horse.

Origin.—Since 1870, the French Government has been giving attention to the development of their horse-breeding interests. A Director-General, with qualified assistants, directs the work of the Government studs, and through these Thoroughbred stallions have been imported from England and Arabian stallions from Arabia. In 1883, a studbook was established by royal decree, and in it no stallion is given a registered number unless belonging to a Government stud or haras. Owing to the financial aid which is obtained from the Government, the best stock-getting stallions are prevented from leaving the country, and through this means also the breeding interests follow a definite course in their development. In 1885, a decree was issued excluding from public use all stallions not authorized by the Government. The French Coach is the result of crossing Arabian, Thoroughbred and Hackney stallions on the native mares of France.

Characteristics.—The typical French Coach horse is in all essentials a coach or carriage horse. They stand about 16 hands high and weigh 12 to 14 cwt. The best type is striking in appearance, being upstanding and carrying their head and tail high when in motion. They are smooth and symmetrical, and frequently of fine quality and very graceful in movement, with high knee action and regular hock action. They have intelligent heads, graceful necks, snugly-ribbed bodies, and muscular quarters, and while some are clean-limbed, there are many that are coarse and heavy in these parts. The common colors are bay, brown or black. Considering the mixed breeding of these horses, they are uniform in type, a result likely due to the uniformity in the ideals of the men who have control of the Government breeding operations. In comparison with the Hackney, the French Coach is more rangy in type, the Hackney being stouter. The peculiarities of their action have been encouraged by having the trotting races held on sod instead of tracks, like those in this country. Trotting on sod requires more stamina, the feet must be lifted higher, and a quicker movement of the pasterns takes place as the feet leave the ground. The French Coacher has not been bred for speed, but rather for gracefulness, stamina and beauty of form. The Government established in 1831, the Derby and St. Leger races, which are trotted over from two to three and three-quarter miles on the turf. To prevent sacrifice of size for speed, a law has been enacted excluding from races all horses under 15½ hands high. The trotting Derby for three-year-olds requires all animals to be trotted under the saddle on the sod track, carrying not less than 120 pounds, and the distance is two miles. The St. Leger for three-year-olds includes a distance of two and a half miles on a similar track. In 1891, of the 312 trotters in the official year-book, there were 112 that trotted this distance in 2.45 per mile; 62 of them under 2.40, and 101 of these were three-year-olds. The best time made by three-year-olds was that of Parvenche, the two and a half miles being trotted at the rate of

2.37½ per mile. The best time made by four-year-olds was at the rate of 2.30 12-15 per mile, by Impetuese. The course was 200 yards short of two miles. The best time made by five-year-olds was three and one-eighth miles at the rate of 2.33 3-5 per mile, made by Ismerie. The fastest three and three-fourths miles was made by Hemine, at the rate of 2.35 11-15 per mile, carrying 176 pounds. Sans Vergogne, winner of the French trotting St. Leger, as a three-year-old, trotted two and one-half miles in 6.40. These records are made under saddle for distances varying from two to two and one-half miles, carrying a weight of 120 to 175 pounds.

Utility.—They are best suited for breeding stylish and handsome carriage and coach horses with very graceful and moderately fast action. To produce such horses with any degree of certainty from French Coach sires the mares must possess, to a liberal degree, Coach form and action.

Dietetic Diseases of Horses.

Diabetes insipidus (polyuria) is a disease characterized by great thirst, excessive discharge of urine, rapid emaciation, languor and debility. In the majority of cases, it is caused by food of poor quality, but in some instances it appears to be due to some constitutional cause, produced through derangement of the assimilative functions, either in the digestive canal, the solid organs or the blood. In some instances it results from digestive derangement, and disappears when the digestive apparatus has regained its normal condition. It also, in some cases, accompanies other diseases where digestion is imperfect. The most common cause, however, is found to be in the food which the animal consumes. It has not been shown that it is ever induced by the water it drinks. Dark-colored, heated hay generally causes excessive thirst and diuresis, it probably containing some ingredient which acts as a stimulant to the kidneys, but there is probably no cause so fertile as hay, oats, bran or other food that is musty or that has been musty, even though the appearance of must may have been removed by kiln-drying or other processes. In some seasons following a bad harvest we notice the disease is quite common, and due to the damaged food.

Symptoms.—The diagnostic symptoms are excessive thirst and profuse urination; the urine passed is of a light specific gravity, and almost, if not quite, as clear as water. In addition there is noticed a falling of the appetite; the visible mucous membranes are pale, or sometimes a rusty yellow. The skin is harsh, the coat dry, staring and unhealthy looking; the animal loses life and ambition, becomes debilitated, and loses flesh rapidly. The pulse lacks tone, and is usually infrequent, though sometimes more frequent than normal, but in all cases weak. The mouth has a sour odor. The horse usually has a taste for unclean food and water, and has a tendency to lick the stalls and manger. The symptoms are so plain, especially the excessive thirst and frequent voiding of clear urine, that it is not difficult for any person to diagnose the disease.

Treatment.—As in all diseases where it is possible, of course, the first thing to be done is to remove the cause. The food that the animal is consuming must be carefully examined, and if either the hay or grain be found of inferior quality, especially musty, it must be changed, and that of good quality substituted. In cases where nothing in particular can be found wrong with the food, the whole ration should be changed, as it is possible there may be some deleterious substance in it that cannot be readily detected. In cases when the symptoms are not severe, a change of food is often all that is necessary, and it will soon be followed by a disappearance of the symptoms. In more severe cases, it is well to give a slight purgative, as a pint of raw linseed oil, or five or six drams of aloes and two drams ginger. The diet should be restricted to hay and bran for a few days, and water, to which has been added a tablespoonful of baking soda, should be given in small quantities and often. When the laxative has ceased to operate, iodine should be administered, commencing with two-dram doses twice daily, given either in a pint of cold water as a drench or mixed with bran or rolled oats dampered. The size of the dose should be diminished as the thirst disappears. Iodine may be said to be a specific for this disease. It has the action of arresting thirst quickly, and as the thirst is arrested, a noticeable diminution of the quantity of urine voided will be apparent, the appetite is improved and all other symptoms of the disease disappear as soon as the system becomes charged with the drug. As soon as the acute symptoms, viz., great thirst and excessive urination, disappear, the administration of iodine must be discontinued, else we will produce a condition called iodism. If the appetite should not return, the ordinary tonics, as one dram each of sulphate of iron and gentian, should be given three times daily as long as necessary.

“WHIP.”

STOCK.

Breeding Shorthorns.

In the course of a recent lecture at the Aberdeen University, Mr. John Marr, of Cairnbrogie, a well-known breeder of Shorthorn cattle, said:

“When I left this University about thirty-seven years ago, my father sent me to learn farming with Amos Cruickshank, at Sittyton, and I had the benefit of his wise instruction during a year's residence there. At that time the Cruickshank herd was rather mixed. It was a good herd, but there was not much uniformity of type about it. The individual cows from which it was descended had been purchased here and there throughout the country, and the herd, as a whole, had not then existed for a long enough time to acquire any great family resemblance. The stock bulls had been bought in England or Scotland, wherever a good one could be got. Some of these bulls, though magnificent animals themselves, proved rather disappointing breeders, because they failed to transmit their own excellence to the calves got by them, but yet by their use a pedigree had gradually been built up full of ancestors possessing a high degree of individual merit, and therefore such a pedigree was of the greatest value as a foundation to continue building upon. Amos Cruickshank steadily kept one type of animal in his eye, viz., the thick, blocky sort. This he thought the best, and tried to breed. He would take as much style in a stock bull as he could get, but it was a non-essential as compared with robust constitution and thick, natural flesh. Booth and Bates were very fashionable in those days, but Amos Cruickshank made no account of it. To him a good pedigree was simply a pedigree built up of good individual ancestors. His brother, Anthony, who had a proprietary share of the interest in the herd, laid considerable stress on style—and his influence may have been the means of introducing more of it into the stock than would otherwise have been the case.”

Having mentioned the purchase of Lancaster Comet from Mr. Wilkinson's herd at Lenton, Nottingham, Mr.



Newton and Daisy Kerr.

Scene on the lawn of a farm homestead at Woodburn, Wentworth Co., Ont.

Marr proceeded: “Mr. Cruickshank did not say very much to me about him, except that he was from a very grand herd of Shorthorns, and that he proved a good breeding bull. From other breeders I learned that he was a remarkably thick-fleshed bull, but that he had extraordinary horns, standing up more like the Highland than the Shorthorn breed. I know that some other breeders of Shorthorns used to chaff Mr. Cruickshank about him, but notwithstanding his extraordinary horns, I am sure there never was any reason for doubt about his pedigree being all right—and he was just the kind that Mr. Cruickshank fancied in regard to thick, natural flesh. After being brought north he was turned out to grass along with a number of grand cows which were not settling to his other bulls, but the change to our cold climate and the exposure of going out and in the fields during the fall of the year proved too much for him, and he did not live very long. Fortunately, several of the cows proved in calf to him, and one of the best of these produced the famous Champion of England—a bull which was destined to bring the Cruickshank Shorthorns into world-wide fame. This bull just about filled Amos Cruickshank's ideal. He was a big roan bull, on short legs, with a very masculine head, enormous girth behind the shoulders, and thick flesh all over. I do not think I have ever seen a thicker block of natural flesh. His hind quarters drooped a little, and therefore he was not a particularly stylish bull according to the ideals of style in those days. This may account for a fact which, perhaps, is not very generally known, viz., that having been exhibited at least once at an important show in England, he failed to get into the prize-list. But this did not alter Mr. Cruickshank's opinion of him, nor did it prevent him adopting the policy which was destined to carry him to success—for there were very few stock bulls bought for the Cruickshank herd after the advent of Champion of England. The method which Mr. Cruickshank henceforth pursued and continued to the end was to select his best calf in successive years and use him on those females which were least closely related to him. Thus it came in

time to be that the pedigrees of the different families in the herd were worked pretty much on the principle of a corkscrew. The sires were all descended from Champion of England, but they were worked round on the different families of cows, a bull from one family of cows being used to a different family of cows, and so on. At the same time he kept in view the individual mating of the animals, so as to develop their good points and correct their deficiencies. Champion of England proved a very impressive sire. His stock generally inherited his robust constitution and thick flesh. His sons and grandsons being used on successive generations, soon produced a distinct type throughout the herd. It became filled with the blood of Champion of England, and the family likeness became very strongly marked throughout the whole of it. And not only so, but owing to the strong concentration of his blood in the young bulls which were sold to other breeders of Shorthorns, these young bulls proved very prepotent sires, and left a distinct stamp of the type of the old Champion wherever they were used.”

Mr. Marr went on to speak of inbreeding and its dangers: “It is a fact that those who know best will be the last to deny that Mr. Cruickshank carried on this system almost to the limit of its profitable employment. He knew that he was needing fresh blood introduced into his herd. He saw quite well that his long-continued inbreeding was beginning to tell adversely upon the constitution and fertility of the herd, but being by this time a very old man, he hesitated to make the experiment of bringing in new blood. He therefore chose the other alternative, which was almost the only one open to him, of selling out the entire herd. And a most fortunate thing it was for the Shorthorn interests of this country that financial and other troubles in the Argentine Republic prevented the bulk of it from landing there. I have indicated that Mr. Cruickshank's herd was becoming too closely inbred, and that the introduction of new blood would be something of the nature of an experiment. A radical cross must always be an experiment, because it causes a tendency of the progeny to sport and vary, or revert perhaps to some more remote ancestors, who were probably of a less improved type. And Mr. Cruickshank's herd had become so closely inbred to Champion of England that almost any Shorthorn blood outside his own would have been pretty much in the nature of a radical cross. Had he been 20 years younger, I am sure he would not have hesitated to take the necessary step, but I think no one will blame the old man of about 80 years from shirking the risk of impairing the uniform type of his herd, which it had been his life work to produce. Other breeders had the pull over him in this respect, for they were using his highly inbred young bulls upon cows of more mixed blood; therefore, even when they used Cruickshank bulls in successive generations, they were further away than he was from the dangerous point where inbreeding begins to tell adversely upon the constitution and fertility of a herd. . . . It is a fact that when inbreeding is pursued to the extent of seriously injuring the constitution of a herd there is no more dangerous animal to use than a bull thus affected. It is a mistake to suppose that because such an animal has a grand pedigree, and is come of famous ancestors, he is sure to breed well, even though he is an indifferent specimen himself. The chances are all the other way. The first bad effect of inbreeding is some loss of size in successive generations. Afterwards come impaired constitution and fertility. So long as diminished size is the only bad effect which has resulted from inbreeding, an outside breeder may use a bull from that inbred herd with perfect safety, provided he is healthy, vigorous, and of the proper type. Such a bull on cows of mixed blood will produce stock of increased size and vigor, while his inbreeding rules the type. But suppose an inbred Cruickshank bull is introduced into a herd of cows as strongly inbred, say, on Booths or Bates lines as the bull himself—the results may be anything but uniformity of type. Certainly increased vigor and fertility may be expected, but the type, as the result of a conflict between two strong strains of blood, will probably be the reverse of uniform. This explains why breeders who possess inbred herds are so chary of taking fresh blood into them, much as they may need it. Where inbreeding is accompanied by a concurrent test of muscular vigor and power, it will not be so harmful as where that test is wanting. In the breeding of cattle we work in a direction which is not parallel to natural selection. We certainly want to get vigor of constitution, and this explains the immense importance which breeders rightly attach to the girth behind the shoulder, and the thickness through the heart as a sign of it. But we also want an animal with a placid disposition, inclined to get fat, and carrying a large proportion of flesh on its roasts, rumps and rounds, qualifications exactly the reverse of those which in a state of nature would be advantageous to it. Nature allows a certain amount of latitude in the observances of her laws, but the limit of deviation is soon reached, especially if it be in a direction where it is unchecked by any test similar to that which she imposes.”

Mr. Marr went on to deal in a thoroughly practical way with the work of the breeder: “The various breed societies, by their studbooks and their herdbooks, etc., have accomplished excellent work in the way of improving their respective breeds. They have provided breeders with a knowledge of the material they have got to work upon. Some breeders have used this knowledge to good account, and others have not. It will be generally admitted that the improvement of the several

breeds has been greatest and most rapid during the early years of the existence of their respective breed societies. After a time there has come a difficulty in maintaining the same rate of progress—perhaps it may even be a difficulty in maintaining the former standard of excellence. When this latter stage in the history of a breed is reached, it would seem to be the duty of its supporters to examine the foundations and see whether they be wide enough to carry a structure which is continually increasing in height, with no corresponding or strengthening of the basement whereon it rests. Pedigree registration tends to diminish the foundation area of a breed. A particular family becomes dominant, and everyone runs after it. Sires from this family, although showing very moderate individual merit, are used by all breeders who can get hold of them. Weedy females of the fashionable blood are largely bought up, while other strains are neglected. This discourages breeders who have not got the fancy blood. They see their good cattle sold for perhaps half the price given for fashionable-blooded weeds. They neglect registration, and the consequence is that much useful material gradually drops out of the herdbook, and the basement thus tends to become narrower as time goes on. The word 'pure' has a great fascination for breeders. . . . The Booth and Bates patrons used to sneer at our Scotch Shorthorns, and call them 'crosses,' although they were duly registered in the same herdbook as their linebred families. They could see nothing good outside their own foundations, and they continued to build on them until the deterioration of their cattle was patent even to themselves. Meanwhile, Scotch breeders were pursuing a wiser course, and working upon methods more in accordance with nature's laws; instead of studying chiefly how to breed cattle whose pedigree would make them interesting reading from a genealogical point of view, they were breeding cattle which carried their pedigrees on their backs. . . . The results of this wise policy is now manifested by the world-wide demand which has sprung up for Scotch Shorthorns, and by the fact that they are now being successfully used to reinvigorate the old linebred families throughout England. But there lies a danger ahead of Scotch Shorthorn breeders which should be guarded against. . . . The fascination of the word 'pure' is the danger. We know that 'pure Cruickshank' or 'pure Scotch' pedigrees are highly prized almost everywhere, and the danger is that, in trying to keep them too pure, Scotch breeders may deteriorate their cattle. . . . Advantage should be taken of a timely infusion of fresh blood wherever it is needed, making sure it is accompanied by outstanding merit in the individuals by which it is introduced."

Oxygen Still Effective.

Drs. Tennant and Barnes, of London, Ont., who were the first veterinarians in America to test and adopt the oxygen treatment for milk fever, to which attention had been called by the "Farmer's Advocate," report continued success in practice. Since January 1st of the present year they have treated sixteen additional cases, without a single failure, and have heard of many gratifying results from other practitioners who have adopted it.

American agricultural and stock papers have been singularly slow in placing before their readers this simple and sure remedy, repeatedly referred to in the "Farmer's Advocate" for more than a year. Even so generally up-to-date a paper as the Jersey Bulletin quite recently "hastens" to acquaint its readers with the discovery of the air treatment, when some seventy cases had been reported by this paper as having been successfully treated by one firm in Ontario within the past twelve months, and with only one failure.

Keeping Sheep Pays.

Not many farms are either so large or so small that a flock of sheep cannot be profitably kept on them. The size of the flock can readily be gauged to suit the conditions of the farm. If many cattle and horses are kept, a small flock of sheep may be kept; if a small number of cattle are kept, a larger flock of sheep may be maintained. Sheep require less labor in their care than any other farm stock. Fed twice or three times a day in winter, and bedded once a month, with no daily tying or untying, and no cleaning of stables, and allowed the run of the shortest pasture on the farm in summer, they thrive while clearing the farm of weeds, and declare double dividends annually, in the form of a fleece and lamb from each of the ewe flock, or semi-annual returns if cull ewes and wethers are marketed each year. It requires less feed to produce a pound of flesh on a lamb than on a steer, and sheep can be fattened in less time than cattle, and on cheaper food. Sheep return more fertility to the land, in proportion to the food consumed, than any other farm stock. If, as is sometimes claimed, it does not pay to raise sheep on high-priced land, then it does not pay to raise cattle or hogs on the same land, as it costs no more, but rather less, pound for pound, to raise sheep as compared with the other stock. Fat lambs always find ready sale at good prices, and choice lambs are generally scarce at high prices. If lambs are kept till they grow a fleece, the price of the wool is generally the profit of the sheep over that of the steer or heifer. Sheep are the friends of the small farmer who

has not much money and cannot afford to go into cattle. He can found a flock at very little cost, and will scarcely miss the feed they consume. It is not necessary that he go into pure-breeds; a few good grade ewes may be bought cheaply, and a pure-bred ram lamb for a very moderate price, and by continuing to use a pure-bred ram of the same breed, selling the wethers and old ewes, and retaining the young ewes, he will in a few years have a uniform flock, showing all the character and quality of pure-breeds. To the man, however, whose fancy leads him to prefer a registered flock, the present affords the chance of a lifetime to procure foundation stock at moderate prices, and the indications all point to rising values in the near future.

Success in Pig Raising.

Successful pig-raising depends largely on the early treatment of the youngsters in giving them a good start without overdoing it. Many a promising litter has been ruined by too heavy feeding of the sow the first week after the birth of the pigs, causing overheating of her blood and inflammation, drying up her milk and starving the young pigs, if it does not result in the death of the sow as well. Light feeding of kitchen swill and bran is sufficient for the first few days, and heavier feeding should be gradually introduced until the sow is being liberally fed, but care should be observed that both sow and litter have liberty to run out upon the ground, and in a grass plot if possible, from the time the pigs are a week old. If exercise be not given, and enforced if need be, and the sow liberally fed, the pigs become too fat, and are liable to contract thumps from too much blood, and to droop and die, while if they escape this trouble the tendency to develop an excess of fat instead of lean meat is established, and their flesh will not be of the quality that brings the best price, nor their type such as to please the critical buyer. When the pigs are weaned, which should be done at about eight weeks old, after being fed warm sweet milk for a few days, in the pen separate from the sow, they should have the run of a clover, alfalfa or vetches pasture-plot near their pen if possible, which will hasten their growth and keep them thrifty, the supply of milk or whey being continued as long as is practicable, with a little shorts or a mixture of shorts and ground oats or barley added, the object being to keep them growing and thrifty from the first. For a later pasture, rape may be sown any time in the first weeks of July on well-prepared ground, and will in six to eight weeks make healthful and fattening forage, lasting into the late fall months. When the pigs are about six months old, or about six weeks before they are to be marketed, their grain or meal rations should be increased to nearly the full capacity of the animals, in order to fit them for the market, care being taken to avoid getting them too fat or too heavy for the packer's use, pigs weighing from 200 to 220 pounds alive being the most desirable, but they must not be thin, and their skins wrinkled, but rather full of flesh, and having a full and finished appearance.

The Embargo.

The Staffordshire (Eng.) Chamber of Agriculture has unanimously resolved that they "regard the proposal for the alteration of the Diseases of Animals Act of 1896 so as to admit the importation of live Canadian cattle as likely to be injurious to agriculture as a whole, being of opinion that the advantage to a section would be quite inadequate to compensate for the risk of importation of disease."

The old bogey of the risk of importing into Britain what does not exist in Canada has done service so long that it should be discarded for something new. Why not give the real reason at once, and have done with it?

In the Same Boat.

Alex. T. Reed, Simcoe, Ont.—"We are like all the others: once a subscriber to your most excellent paper, we cannot get along without it."

Richard Bailey, Hastings, Ont.—"Your paper is the best of its kind, and I cannot be without it."

Sidney Ecker, Wentworth, Ont.—"I like the 'Farmer's Advocate' splendidly, and I wish you success."

Andrew Weir, Bruce Co., Ont.—"Would like to say that we are well pleased with the 'Farmer's Advocate' and Home Magazine," and think it an up-to-date paper."

Several readers who have lately sent in questions to be answered in the Farmer's Advocate forgot to comply with our rule which requires the full name and P. O. address to be given in every instance. We can pay no attention to anonymous communications or enquiries. Please read and observe the rules of the "Questions and Answers" Department.

FARM.

Problems of the Soil.—X.: The Cereal Class in the Rotation.

The grains, wheat, oats, barley, etc., are an absolute necessity to the world, as food for both man and beast, and their production must always be a very important branch of agriculture. We may pass from an exclusively grain-growing stage to one of live-stock production, but still we must continue to produce grain, both for sale and for purposes of stock-feeding. A careful study of the needs of this class of plants, and their effect on the fertility of the land, is therefore a necessity.

This class, which we shall call, for convenience, the cereal class, comprises all the white-strawed grains—wheat, oats, etc.—and the grasses—timothy, orchard grass, etc. These plants, while they differ greatly among themselves, have in common certain characteristics of food requirements which place them by themselves, and make them different from all other plants. These plants are generally held to be hard on the land, and to greatly decrease its fertility by their growth, and the observed fact that where land has been devoted to grain for long periods, without the introduction of other crops, its fertility has been greatly decreased, bears this out. Yet it is a fact that these plants remove less of the fertilizing elements of the soil than any other class of plants. A glance at the following table, copied from a recent English work on agriculture, will show this. This table shows, in pounds, the amounts of fertilizing elements contained in various crops:

Crop.	Amount in pounds of		
	Nitro- gen.	Phosphoric Acid.	Potash.
Mangels (22 tons per acre).....	87	36.4	222.8
Swede turnips (14 tons).....	70	16.9	63.3
Peas (30 bushels)	77	22.8	24.8
Straw	29	6.3	42.8
Red clover hay (2 tons)	102	24.9	83.4
Wheat (30 bushels)	30	16.0	9.8
Straw	15	4.7	25.9
Oats (45 bushels)	38	13	9.1
Straw	17	6.4	37
Barley (30 bushels)	35	16	9.8
Straw	13	4.7	25.9
Grass hay (1½ tons)	49	12.3	50.9

Here it will be seen that the cereal class is the lightest feeder, and that the other two classes, roots and the legumes, remove very much greater quantities of plant-food than it does. How is it, then, that land devoted to grain-growing becomes poor, while, by growing all three classes of crops, fertility may be maintained and even increased?

The most obvious reason is that grain is generally sold off the farm, while other crops are fed and the manure returned, and it may be urged that a farm's fertility could be maintained, even under constant grain-growing, were all the grain fed on the farm. But the facts do not bear this out. The decrease in fertility would be greatly retarded in this way, but it would be none the less sure. There are other and greater reasons why these plants, light feeders though they are, reduce fertility. In the first place, these plants are all shallow rooted, draw their food from the upper layers of soil, and soon leave it exhausted and poor, while other plants, such as the clovers, can reach far down into the subsoil for their supplies of food, and actually increase the surface fertility, by bringing food from below to the top. Then, the amount of stubble, roots, etc., left in the land by them is small, not enough to keep up the supply of humus in the soil, and lacking this, the soil loses its physical condition, and its fertility is reduced in this way. Here again the clovers differ from the grains, by leaving an abundant supply of roots to increase the humus of the soil. These two facts have an important effect in reducing soil fertility under constant grain-growing. The most important fact of all is, however, this: These plants draw their supplies of nitrogen entirely from the soil, and they lack the ability to use this element, even when it is present in the soil, unless it is in a very available form. Thus the growth of the cereals is largely a matter of the supply of nitrogen in the soil. Where this is abundant and available they will, as a general rule, grow well, but where it is deficient they will not do well. Since their supply is taken entirely from the soil, their continued growth reduces the supply, and the crop is lessened. Here again the legumes, clover and peas, differ from them by their power to assimilate this element in large quantities, and to take it from the air. The effect on the land of continued growth of the cereal class is, then: (1) To exhaust the surface layers of soil; (2) to reduce the humus of the soil; and (3) to reduce the supply of soil-nitrogen to an amount insufficient for their needs. These are the conditions which, as a rule, are found in land which has long been devoted to grain-growing.

Yet it must not be supposed that these plants are more exhausting on the soil than other crops. Where they are grown continuously for long periods they do certainly exhaust it, but they can be grown in this way for longer periods than other plants. A second crop

of roots, without liberal manuring, would find the land too poor for it. A second crop of clover, unless a dressing of land-plaster is given, to set free potash in the soil, is rarely a success, because the first crop has too greatly reduced the available potash in the soil. So far then from always reducing fertility, the cereal class may be used to increase it, and are a necessity in every rotation. Continuous growth of roots and clover would as surely ruin a farm as continuous growth of grain. A grain crop, because it is a light feeder on potash and phosphoric acid, which, as we have said in previous articles, is always being set free in the soil, allows these elements to accumulate for the use of the peas or clover which follows it, and in this way prepares the soil for them.

The main points to remember in connection with the cereal class are these: (1) That their continuous growth robs the surface layers of soil, reduces humus, and lessens the supply of available nitrogen; (2) that for successful growth they must have abundance of available nitrogen; (3) that so far from being an evil in the rotation, they are a benefit, in preparing the land for the legumes, peas and clover. These crops are not harmful to the land. The harm lies in the fact that the land is often continuously cropped with them. Used properly in a rotation, they not only supply a very valuable crop, but contribute to fertility by preparing the land for other crops.

Once More the Hired Man.

To the Editor "Farmer's Advocate":

Sir,—I have read with interest the letters written by "Alick" and "Sandy," the latter to whom might well be applied the quotation in this week's columns, viz.: "It is with narrow-souled people as with narrow-necked bottles, the less they have in them, the more noise they make pouring it out." I should like to put "Sandy" one or two questions: 1st,—Has he ever hired a first-class Englishman, who has required a horse and buggy kept for him? 2nd,—Has he ever paid a man \$240 per year, with board and washing? As from the letter, I should take him to be one of the class of Canadian farmers who is often to be found, that hires a man at about \$14 a month, and expects him to know the way to do everything as well as the man next door that is getting \$20 or \$22 per month. I have only had 15 months' Canadian experience, but have already come across this type. I agree entirely with "Alick," and I believe most of the best class of farmers do also, that the best way to treat the objectionable (though necessary) hired man, is to get him by right treatment to take an interest in his work, and not as a mere machine for getting rid of his supply of rusty bacon and doing his rough work for him. I am, of course, taking it for granted that "Sandy" is alluding to Englishmen in his letter, and I can assure him that when I came to this country first the farmer I hired with informed me that he preferred Englishmen to Canadians, as they could be trusted not to skulk directly he left them to themselves.

AN ENGLISHMAN.

A Ditching Machine.

To the Editor "Farmer's Advocate":

Sir,—I have read with interest the different articles on drainage, but is it not time we had got at something with which we can make better use of our time in opening ditches than with the spade and shovel? Are there not some of your readers who have had experience with Sawyer & Massey's road-graders for ditching? In parts of Huron County, I understand they have had good success with them, and that three or four teams and three men will open out about two hundred rods of ditch in ten hours. This, of course, applies only to fields already cleared and free from stumps and stones, where fences can be opened, so as to save turning too much with the grader. I should like to hear from farmers who have had experience with graders for this purpose.

S. Wellington Co.

Agriculturists for South Africa.

The Government of Orange River Colony has secured the services of two Canadians, Mr. E. J. McMillan and Stewart Galbraith, to look after the experimental work with field crops in that colony. Both are graduates of the O. A. C. Mr. McMillan has been for several years Secretary of the Department of Agriculture of Prince Edward Island. He will now have charge of the Experimental Farm of the Orange River Colony. Mr. Galbraith graduated at the O. A. C. this year. He will superintend the Orange River field plot experiments. Both men are well qualified for the positions in South Africa. They have gone to St. Louis to attend the exhibition as the representatives of the Orange River Colony, with a view to gathering new ideas that may be of advantage to them in organizing the work that has been placed in their hands. They will sail from New York early in July.

Mr. W. J. Palmer, B.S.A., late of Toronto, now Director of Agriculture for the Orange River Colony, South Africa, has by Imperial order been appointed a member of the Joint Legislative Council of the Orange River and Transvaal Colonies.

Buying or Renting a Farm.

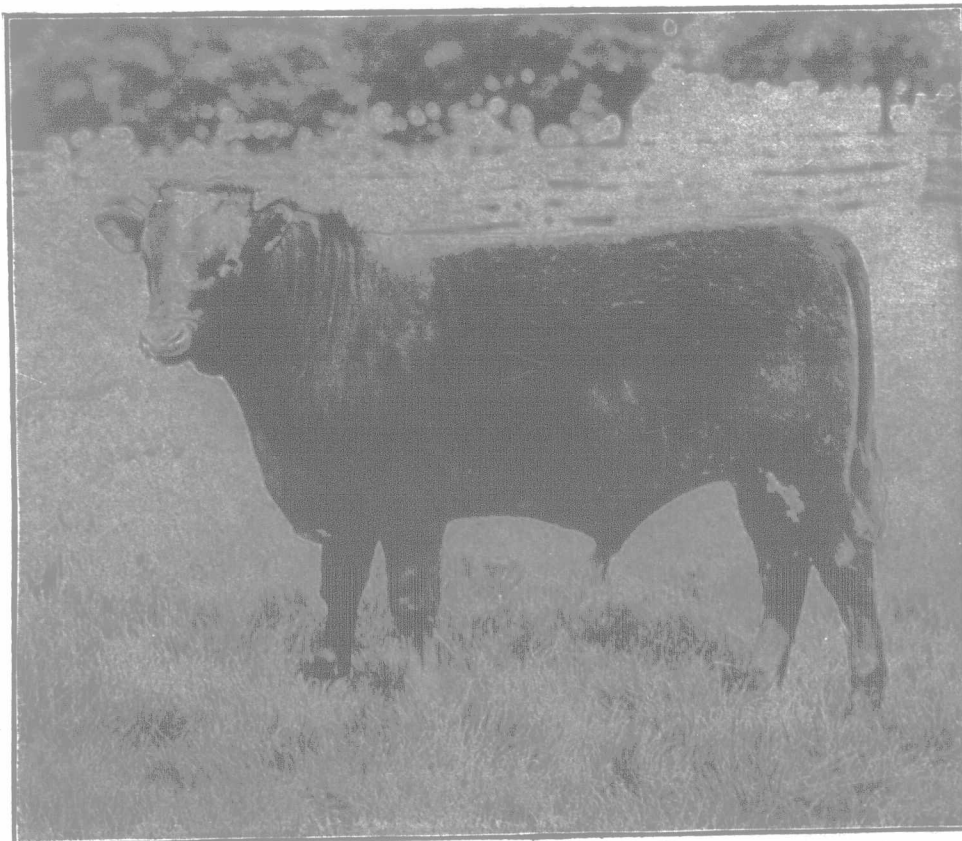
A correspondent asks the question: Which is more profitable, to buy or to rent a farm? In nothing, perhaps, is there greater difference between the practices which prevail in the Old Country and those which obtain here than in the matter of farmers owning or renting the farms on which they make their living. Over the water, the great majority of farmers are but tenants, the land being owned by comparatively few people, who are mostly rich and not under the necessity of working for a living. The farmers, in spite of the loud grumbling of the past few years, are many of them well-to-do also, but no matter what they may be prepared to pay for land, and the land hunger is very keen, it is next to impossible to buy any land is not for sale. In this country conditions are about exactly the reverse. Some farms are rented certainly, but they are the exception. By far the greater proportion of farms are owned, at least nominally, by those who live on them and work them, and a reference to newspaper advertisements will show that there are many more chances of buying a farm than of renting one. There are some renters, however, and their number is on the increase, we think, and likely in the future to increase still more. Years ago, when raising grain to sell was the rule, there were good reasons why a farm owner should object to renting his place. The depreciation in value which might be expected through soil impoverishment would sometimes

will find out by a term on a rented farm how he is likely to do in business for himself, how he might expect to get along if he bought a farm of his own. Instances are not wanting of men who after renting a farm for a few years have afterwards bought it, and later have added farm to farm.

On the other side, it may be said that a tenant lacks incentive to improve a place he does not own. Tree-planting, building, even draining, soil enrichment, and such like, except as they give immediate returns, are not for him. He has no settled abiding place. He may have to move when it is not convenient, and every move involves loss—"three are as bad as a fire." He has not the subtle but solid delight which comes from ownership of even a small part of the earth's surface.

In favor of buying a place in preference to renting, besides what has been incidentally hinted at, it may be mentioned that an owner naturally looks more to the future. He is on the watch against little leaks or breaks which mean loss in time to come, but which may easily be prevented or mended. He sees also little things that may be attended to, which by and by bring increased returns. Buildings are kept up, fences are repaired or replaced, draining done, trees planted, new methods adopted, etc., etc. Thus, there is constant improvement and, consequently, greater profits and growing value. Again, a tenant, especially if he does not aspire to be anything

else, is apt to be content with a hand-to-mouth existence; while one who has bought a farm is not likely to rest content until it is at least all paid for, thus being led to make better provision for his family or for old age. We remember an old man—a carpenter by trade—saying that if he had stuck to his trade all his life he would have had nothing over in the end, but having, with very little capital, bought a farm, which he managed to pay for, and which greatly increased in value, in his old age he was comfortably well off. There is nothing safer in which to invest labor and savings than in farm property. Further, there is the delightful home feeling, the attachment to a place, not only where you have lived, but which has long been your own, for the improvement of which you have labored, and whose every hill and hollow you know.



Archer's Last.

Shorthorn bull calf, eight months old. Bred by John Dryden & Son, Brooklin, Ont., and sold to A. D. Patterson, Ladner, B. C.

amount to as much as the rent received. The rather common practice of a renter was to skin the farm, to sell from it as much grain, hay, and even straw, as possible. Since the change to stock-raising and dairying has come conditions have improved, at least from the owner's standpoint, for he may have his farm returned to him as fertile as before; while a tenant, if his term is not too short, can also do better by keeping stock than by grain-selling. Where practicable, the Old Country system of long leases and binding conditions would be an advantage all round.

The question which comes up to a young farmer just starting for himself is whether it is best for him to rent or buy. Opinions differ. Some say, unhesitatingly, buy—buy, if it is only a few acres; while others are just as positive that it pays better to rent. More depends on the man himself, probably, than on any other factor, but as to which course is wisest would depend a good deal on the amount of his capital and what help he has in his family. The following reasons can be urged in favor of renting: First.—Less capital is required to start farming as a renter than as an owner. In buying a farm a certain amount, say, at least, twenty-five per cent., has to be paid down before a mortgage will be accepted for the balance. A tenant needs but his stock and implements. Second.—As a rule, we think the rental of a farm is less than the interest of purchase money, which gives so much of a better chance to clear money. Third.—If for any reason a farmer does not much more than make ends meet, he is, if a renter, free from the awful load which a heavy unpaid mortgage becomes, and by which many a man has become utterly discouraged and unfitted to do his best. Fourth.—A man

which has long been your own, for the improvement of which you have labored, and whose every hill and hollow you know.

Road Improvement.

The meeting of the National and International Good-roads Association, recently held in St. Louis, was the largest ever held in America in the interests of road improvement. The information collected, the advice given, and the work done at the conference, will have a decidedly stimulating effect upon the agitation which has been going on in America for the last few years, and the reports of this meeting will undoubtedly create a new interest and spread information on the question of roadmaking and road administration that will have a good effect upon those charged with the important work of bettering our roads.

That the question of the improvement of our ordinary roads is attracting genuine interest, can no more be doubted, and that the subject is receiving much more careful thought and study than in the past cannot be questioned. It is an unfortunate thing that in past years the question of rural roadmaking was looked upon as being of very commonplace importance in many sections, consequently drifted into careless and indifferent work.

The good-roads agitation, however, is rectifying this to a large extent, and people are now devoting more time to the preparation of proper plans and specifications for such work, and are employing more competent persons to direct the operation and placing in the hands of the people suitable material and proper implements with which to do the work efficiently and economically.

About 300 delegates were present, and the meetings continued throughout the week. Nearly every phase of

The question was taken up, and handled by men having a special knowledge of the particular branch.

Thirty-seven States of the Union were represented some by very large delegations. Delegates were chiefly municipal councillors, and many very distinguished statesmen were present. Some twenty-five prepared addresses by prominent, practical business men and experts were delivered, including one by Hon. Jas. Wilson, U. S. Secretary of Agriculture, on "Good roads necessary to agricultural development," and one by Mr. A. W. Campbell, Highways Commissioner, Ontario, on the "Science of road-building." Every phase of the subject of improved roadmaking was thoroughly discussed.

The question of State and national aid for the improvement of roads occupied a large portion of the time, and seemed to be unanimously favored by the meeting; that this should be true indicates very clearly the comprehensive manner in which the subject is now being taken up, and points to the conclusion that as in older countries, taxation for road purposes must be of a universal character, and supports the contention that every citizen in the community is benefited by the road, and, consequently, should contribute his portion of the taxes.

Senator Latimer, member of the U. S. Congress, who is sponsor for a measure now before the National Government, for the appropriation of \$24,000,000, to be divided up among the different States, was present, and went very fully into the question of taxation for road purposes, and cleared up many of the objections which were being popularly urged against national taxation for such purposes.

The following is a summary of the resolutions which the convention adopted:

Resolved,—That this convention heartily endorses the proposition for Federal aid for the construction of public roads in the United States, to the extent of one-half of the cost of same, and that each delegate in this convention pledges himself to use all honorable means to secure the support of our respective delegations in Congress of this principle.

Resolved,—That, believing as we do that the road question is a paramount one now before the American people, we urge that in the election of all public officers they be required to stand for Federal aid for road improvement generally.

Resolved,—That this convention unanimously endorses the proposition of county, state, and national aid.

Resolved,—That we heartily approve and commend the work of the office of Public Road Inquiries of the United States Department of Agriculture in collecting and disseminating information, and co-operating with communities in object lesson and experimental work. We believe that its practice of road-building has been far-reaching, and will prove of immeasurable value to the people. The demand for better methods and greater light is insistent in general throughout the country. While the office has accomplished a prodigious amount with the limited means available, it has not been able to respond to more than an insignificant fraction of the demand. It is a kind of knowledge that all people want, and it is pre-eminently proper that the Government should furnish it.

We, therefore, earnestly demand, on behalf of the people, that Congress at its next session appropriate not less than one hundred and fifty thousand dollars for this office, in order that it may be able at once to increase its facilities for its vitally important educational work.

Resolved,—That we recommend that the office of Public Road Inquiries should be advanced to a bureau, to be known as the Bureau of Public Roads, and that an increase in the appropriation of money applicable should be made commensurate with the demand of this office.

Resolved,—That it is the sense of this convention that all convicts and vagrants shall be employed in work upon public roads and highways, and not in competition with honest labor, as at present.

Resolved,—That the delegates appointed to the convention be appointed by this convention, a committee to organize in the different States and Territories, not already organized, county and state organizations as the primary organizations to this body.

Best on the Market.

W. H. Gregg, Huron Co., Ont.—"We think the 'Farmer's Advocate' the best paper on the market for the practical farmer, and wish you great success in your new venture, viz.: weekly."

John Kirkconnell, Huron, Ont.—"I think the 'Farmer's Advocate and Home Magazine' has greatly improved since it became a weekly, and that it should be read by every farmer."

J. W. Tilson, Algoma, Ont.—"I like the 'Farmer's Advocate' much better since it comes weekly, and would not do without it at twice the money. It is full of valuable information."

Jas. Bebee, Wright, Que.—"I am much pleased with the change in the 'Farmer's Advocate,' and wish you every success."

Thos. P. McDonald, Bruce, Ont.—"I should not like to miss a single issue of the 'Farmer's Advocate and Home Magazine.' The nights are long without it."

POULTRY.

Henhouse Plan.

A correspondent says: "I would like some suggestions for the building of a neat and practical henhouse for the accommodation of one hundred hens."

Discussing houses, Prof. W. R. Graham, Guelph, says: One of the best houses for our conditions is illustrated by Mr. L. H. Baldwin's (Toronto) plan. His henhouse is a frame building, 72 feet long and 10 feet deep, and is divided equally into four scratching-sheds and four henhouses proper. Our correspondent would require one half as long again. The sills are 4x4 cedars, resting on large stones. The end sill rests on stone, and the sill running the length of the building rests on top of the end sill. The studding used is 2x4 hemlock. The top of the sill is one foot above the surface of the ground, and a baseboard is fastened on the inside of the sill, and the floor of the henhouse is filled with sand to the top of the baseboard. The building is banked up on the outside to the same level. The north wall is four feet high from the top of the sill, and the south wall seven feet high. In the north wall, the studding is placed at each corner of the henhouse proper, and an additional one in each center; also at the corner of each scratching-shed, and an additional one in the center. In the south wall the studding is placed in the same way, excepting the one in the center of the henhouse, which is placed so as to accommodate the window. At the east end, an extra stud stands as a doorpost, and one at the west end in the center. On the outside of the studding and rafters is used the most ordinary lumber, running the boards lengthwise. The ends of the building, the north wall and the south fronts of the henhouse proper are covered with a two-ply and for the roof he used three-ply roofing material. A scantling 2x4 reaches from the north sill to the south sill at the base of each division between scratching pens and henhouses proper, and between the henhouses. The division wall between the scratching-shed and the henhouse is made of rough lumber on the scratching-shed side, with a lining of tar felt nailed on the interior of these boards, and battened closely with laths, to make the joints of the tar felt complete. The division wall between the henhouses proper is made of 1-inch tongued and grooved flooring, and the other interior walls of the henhouses proper—that is, the walls against the scratching-sheds and the north and south walls—are lined with 1-inch tongued and grooved dressed material. The ceiling is also completed in the same way. But before the putting on of this dressed material, a second layer of tar felt was placed between the sheathing and rafters, so that there is a dead-air space. The large doors between the scratching-sheds and the henhouses proper are about three inches thick, made of two thicknesses of 1-inch tongued and grooved dressed material, with a space of one inch between, and lined with tar felt on the inside of each thickness. These doors are raised a foot above the level of the sills, and in this space near the south wall is cut small doors for the poultry, 10 inches wide, made to slide.

INTERIOR ARRANGEMENTS.

The plan provides for two houses together, and a scratching-shed on opposite sides. The dropping-board is three feet wide, and 18 inches above the level of the top of the sills. Two roosts, each 2x3 inches, are placed on the flat side, fastened together by a cross strip, which is hinged to the north wall. Two legs support the roosts on the outer side. The roosts being hinged, they can be lifted up and fastened to the roof, so as to leave a clear space when making the daily cleaning. The roosts come short of each pen by about two inches. Three nests are allowed to each pen. These are each 18 inches square, having the ends solid. The nests are placed under the dropping-board facing the north wall, rest on the sand, and can be taken out for cleaning. The back of the nest is made in two pieces. The upper part is fastened to the lower board by spring hinges, which enables one in collecting eggs to reach the nest conveniently, and the spring hinges make the top board fly back into place. Against the inside division, between the henhouses proper, a 12-inch board extends on the level of the dropping-board to within 12 inches of the door, and an upright 12-inch board is fastened to the end of this and runs up to the ceiling. To correspond with it, a board is placed against the opposite wall, and a cotton curtain, on a two-inch roller, is fastened to the ceiling. When this curtain is down it comes to the bottom of the two last-mentioned upright boards—that is, to about two inches below the level of the dropping-board. The purpose of this curtain is to protect the fowls on very cold nights. Mr. Baldwin has found that it is not necessary to use it when the pens contain over 15 birds; but if the number is reduced, and the thermometer drops to the neighborhood of zero, it is well to let it down. In winter about 18 hens are kept in each pen.

PLENTY OF LIGHT.

The windows in front, south side, of the henhouses proper are each three feet wide and two feet six inches high, containing six panes, 10x12 inches each. The windows are placed high in the front wall, and slide to the right and left. The windows being placed high up, the sun in winter, when it is low in the heavens, shines on to the roost and dropping-board. The door between the henhouses proper, which is also a foot above the level of the sills, is a simple door of 1-inch stuff, the upper half being made of wire netting. The

front of each scratching shed is divided in two by the center studding, on each side of which there are cotton screens hinged at the top, and reaching down to within one foot of the top of the sill; and, when down, close upon top of a rainboard which slopes to the outside, so that rain beating against the cotton screen is carried outside, and this keeps the interior dry. These screens swing up to the roof, and are there caught by hooks from the rafters. The front of each scratching-shed is closed with two-inch mesh wire netting. (One-inch mesh should have been used to keep out the sparrows, which now get in and run off with a lot of grain.) An eavestrough runs the length of the building, distributing the water east and west. Drinking fountains are placed on the end of the board that runs out from the dropping-board, and on the wall opposite thereto the boxes for grit and oyster shells are hung.

SANITARY PRECAUTIONS.

The interior of the henhouses and the scratching-sheds is filled with sand to the level of the top of the sill; and on top of this a plentiful supply of loose straw is kept, to encourage the birds to scratch and thereby get exercise. In August the straw is all cleaned out; and the sand, so far as it appears to be soiled, say to a depth of four or five inches, is all taken out, and fresh sand put in its place. It is advisable to do this in August, so that the sand may become perfectly dry before the winter sets in. No straw is placed on top of the sand until the time comes to close the birds up for the winter. The windows of the henhouse proper are open every day. Of course, when the weather is stormy or bitterly cold, they are open only for 15 minutes or half an hour in the middle of the day. When the sun is shining brightly they may be left open for some hours. This thoroughly ventilates the henhouses, dries up all moisture, and keeps the place clean and sweet. The screen in front of the scratching-shed is let down only on very cold days, and when the weather is cold and stormy, the idea being to keep the open shed dry where the birds take exercise in the open air.

This method of housing poultry keeps the stock in the most vigorous health. From the practical experience of six years' use of the building, Mr. Baldwin's opinion is that it is well adapted in this section of the country for keeping breeding stock and maintaining it in most vigorous health, which is the foundation of success. Mr. Baldwin believes that many who have adopted the scratching-shed henhouse have adjusted windows to the front of the scratching-shed in place of the screen; and this might be an advantage, especially in sections of the country where the weather is more severe than in Toronto.

GARDEN AND ORCHARD.

Cover Crops for Orchards.

Mr. W. T. Macoun, Horticulturist, Central Experimental Farm.

The main uses of the cover crop are: To hold the snow in winter, and thus protect the roots of the trees; to furnish vegetable matter to plow under in the spring for the purpose of obtaining humus and nitrogen; and to act as a catch crop in autumn to prevent leaching of plant food made available during the summer. The best general practice for growers is cultivating the soil until near or about the middle of July, when the trees have made most of their growth and do not need so much moisture, and then seeding down to common or Mammoth Red clover, sown broadcast at the rate of twelve pounds per acre, or with hairy vetch at the rate of thirty to forty pounds per acre. Sown at that time, these plants usually make a good cover by autumn. At the Central Experimental Farm hairy vetch was sown on June 18th, 1903, in drills twenty-eight inches apart, at the rate of twenty pounds per acre. These received two cultivations, and by the end of the first week of August the plants were meeting between the rows. By sowing earlier, as in this case, a better stand may be obtained, and by cultivation moisture is conserved while the plants are getting established. Twenty pounds per acre sown in drills in this way were found quite sufficient to make a good cover. There was practically no injury from mice where cover crops were used, as their depredations were prevented by using either ordinary building paper or wood veneers. No fruit-grower should neglect having a cover crop, as a fine bearing orchard in bare soil might be destroyed which would have been saved had there been a cover crop. The seed for the cover crop should be sown, if possible, when the ground is moist, as in the summer the seed will germinate quickly if there is moisture. After the seed is sown, the land should be rolled, as this will bring the moisture to the surface and about the seed and hasten germination. It is important to get growth started in good time, as there is sometimes a protracted drought in July and August, which prevents germination and spoils the prospect for a good cover crop. In districts where the conservation of moisture is important, the cover crop should be turned under as soon as possible in the spring, and in some parts plants which are killed by winter are preferred, as there

is no loss of moisture through them in spring. Leguminous plants are, on the whole, best for cover crops, as they take nitrogen from the air, but often oats and rape are used to good advantage.

Arrangements are being made for the Provincial Fruit, Flower and Honey Show in Toronto during the second week in November, in the two big rinks on Church Street. The fruit and honey exhibits will be shown in one rink, while the flowers will be on view in the second. A display of machinery and implements used in the cultivation of fruit and flowers will be made in an open piece of land between the two rinks. The prizes offered for the floral section amount to over \$1,200. The fruit-growers will expend over \$1,000 in their part of the show. The Fruit-growers' Association will hold its annual convention, as will also the Beekeepers' Association. There will also be a meeting of delegates from the Horticultural Societies in the Province, as a result of which it is expected that a Provincial Horticultural Association will be formed. The management of this show will be largely in the hands of H. B. Cowan, of Toronto, Provincial Superintendent of Agricultural Societies, to whom any requests for information may be sent.

DAIRY.

An English Agricultural College.

Reading College and British Dairy Institute—Excellent Home Dairy Training.

(Special correspondence to the "Farmer's Advocate.")

On my way to London, I stopped off at Reading, Berkshire County, to inspect the Agricultural Department of the University College located there. It was an interesting visit. To one who had received the major portion of instruction at Ontario's most excellent institution, who has also spent six years as a student and instructor in two of the best agricultural colleges in the United States, nothing could be more interesting than an insight of the methods and work of an English institution.

England has something in the neighborhood of a dozen colleges or institutes where agriculture and its kindred branches are demonstrated in a more or less scientific and practical manner to the youth. All of these colleges or institutes are, in a measure, supported and directed by the Royal Agricultural Society. The remainder of the support is derived from tuition fees, and fees obtained for work of a scientific nature. The majority of the colleges have been established in connection with some college or university, or, at least, affiliated with one in some way. In this respect many of them are not very much different from the so-called agricultural colleges connected with the State Universities of several of the States of the Union.

The institution at Reading was founded in June, 1892, with the co-operation of the House of Christ Church, Oxford University. It was incorporated in 1896. By authority of decrees of the University of Oxford, a joint committee, consisting of representatives of the Oxford delegacy for extension teaching, of University College, Reading, and the Royal Agricultural Society, supervises the instruction and examinations in agriculture, horticulture and aviculture, and awards diplomas and certificates.

The college at Reading is affiliated with the University of Oxford, and consists of five distinct departments—letters and science, music, fine arts, agriculture and horticulture. Most fortunate for the college, and for the institute also, is the fact that the British Dairy Institute is located in part of the same building. This affords excellent facilities for practical instruction along dairy lines. In all the departments of the institution there are something in the neighborhood of one thousand students. Only a small portion of these, some one hundred and fifty, are enrolled in the Department of Agriculture. In this connection I shall confine myself to the work of the Department of Agriculture and the British Dairy Institute, which might quite properly be termed a division of the Agricultural Department. This work is new and meager, when compared with similar branches in the leading American institutions. At the present time, three quite distinct lines are being drawn: First, the division of practical agriculture, which includes live stock, field crops and grasses; second, the division of dairying, which includes the manufacture of butter and cheese, the care of milk, and the feeding, breeding and care and management of the dairy herd; third, the division of poultry, which includes the breeding, feeding and marketing of the various classes of poultry.

THE AGRICULTURAL DEPARTMENT

is under the supervision of Professor John Percival, whose college title is that of Agriculture and Agricultural Botany. He is a very pleasing gentleman, and has a very fine knowledge of botany. The more practical side of the agricultural work is conducted by Prof. John O. Peet. He seems to be in sympathy with his work, thus should do much good. These two gentlemen teach the botany, field crops, and the live-stock work. Up to the present time they have been very much handicapped in their work, due to the fact that the college did not have enough land at its command. This objection will be removed in the near future, as

they have just purchased a new farm. This will provide grounds for field crop experiments, also an opportunity of carrying some live stock, a privilege which they have in the past been denied.

Three courses are open to the agricultural student: First, a course leading to the degree of Bachelor of Science. This requires three years of regular prescribed college work, largely taken from the science course. There is hardly enough agriculture in this course to distinguish it from a science course. This course is intended for those who hope to become teachers in agriculture, specialist farmers, or estate agents.

The second course leads to the diploma in agricul-

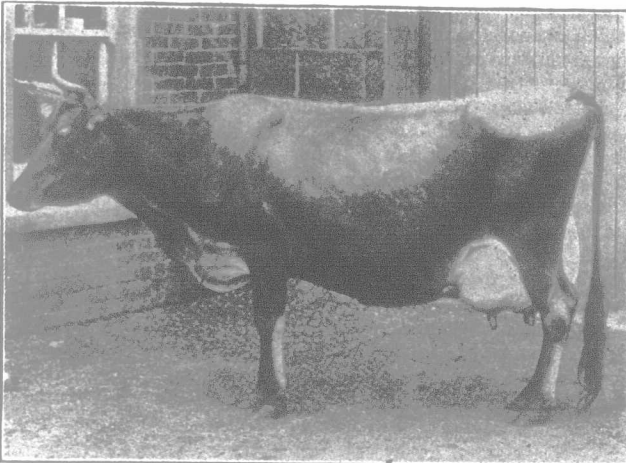
ture, and the youth with terms which he has never heard of before, but history shows that it will not attract him as would a course where science and practice are always combined.

LIVE-STOCK DEPARTMENT.

It is impossible to teach the judging, breeding, feeding and management of animals in a recitation room from lectures, no matter how well they may be prepared. It is absolutely necessary to have the animals before the class. They must examine the animals, pass their judgment upon them, and receive corrections when necessary. Continuous work of this kind will make a stock judge. No other method, in which the animal is omitted, is of any use. In the study of the breeds the same thing is true. The student who has seen a Tamworth pig will always remember the same as being red in color, having a long nose, and other characteristics of the breed. He will be able ever afterwards to pick one out at a moment's glance. No teacher, without the animal, could stamp so firmly upon the mind of the student the characteristics of the breed. Then, too, in the study of animal breeding, animals are necessary to illustrate such terms as masculinity, femininity, and other terms which are indispensable. It is also impossible for a man who has not or is not in direct charge of the feeding and management of animals, to teach these subjects in a useful manner. He may have a knowledge of the chemistry of feedstuffs, but that is just one of the necessary things with which the teacher must be perfectly familiar. The cost of feedstuffs, their palatability, and the different methods of preparation and combination can be best learned in the feed lot.

THE POULTRY DEPARTMENT

is under the management of Mr. Edward Brown, Secretary of the National Poultry Organization Society, London, who is ably assisted by his two sons, Messrs. E. T. and W. Brown. The work in this department is of a different nature to that just described. It is taken up from both the theoretical and practical side. It is a most useful work, and will be of great value to the poultry interests of England. The practical work is given on the college poultry farm, which is located a few miles from the college. It is the intention of those in charge to have students desiring work remain during the vacation periods, and spend the entire time on the farm. Some four different courses are offered in this department. The first, a ten-weeks' course, given from April 21st to June 29th, at the college and on the farm; second, a five-weeks' course, at the college and on the farm; the third, a twelve-weeks' course, the first seven of which must be taken at the farm, and the last five at the college; the fourth course provides for practical work only for periods of three or six months, to be taken at the college poultry farm, by special arrangement as vacancies occur. Examinations are held and certificates granted for courses one and two. The work is well outlined, and takes up in a systematic manner the study of the breeds, the feeding and management of the different classes of poultry, the houses, egg production, preparation and dressing of fowls for market, poultry diseases, and almost every detail of the work which would in any way be helpful to poultry raisers. True it is that some of our American colleges have given attention to poultry; the great majority, for some reason or other, have neglected this valuable enterprise. It would mean millions of dollars to our people if each and every Province in Canada, and each and every State in the Union, had such a



Jersey Cow, Blue Bell, Imp.

Aged 14 years. Photographed six months after calving. Sold for \$3,600 at the T. S. Cooper sale, Coopersburg, Pa., May 30, 1904.

ture, awarded at the end of a two years' course in scientific and practical agriculture, and designed for students who hereafter may become tenant farmers, farm managers and land agents, landlords, or be engaged in occupations connected with agriculture.

The third course leads to a certificate in agriculture, awarded at the end of a six-months' course (October to March) in strictly agricultural study. It is designed for students who will hereafter be practical farmers, and who are unable to take the two-year or diploma course.

The work given in these courses would not prove very attractive in an American institution. From all appearances it is not any too popular here. The field crop work is very largely studied and taught from a botanical point of view. The really practical application, which is so attractive and eminently useful, is in a large measure lost sight of. Perhaps the lack of a college farm might in a large measure be responsible for the existing conditions. In this respect this college is in very much the same position as were many of the American colleges a few years ago; in fact, some of them are not very far removed from it at present. They apparently believed that a course in agriculture should consist of those branches of study which are furthest removed from the actual life and environments of the boy who comes from the farm. Perhaps it may indicate learnedness on the part of the Professor, to as-



British Dairymaids in Training at the British Dairy Institute, Reading, England.

poultry school and farm as the one connected with the Reading college.

A GREAT DAIRY INSTITUTE.

Last, but by no means least in importance, is the British Dairy Institute and its work. In the line of work which it aims to do, few if any colleges on the American continent are doing as thorough and beneficial work. It is very ably managed by Professor Miles Benson and his able corps of assistants. The work is confined strictly to the farm or home dairy. No factory work is attempted. Those desiring such training must serve an apprenticeship in some creamery or factory after they have learned the home dairy methods. This is by all odds the most popular division of the agricultural work. During the past year over eighty students were enrolled in all of the courses. These students come from practically all parts of the globe, except the North American continent. They come to learn the British methods of butter and cheese making. More than two-thirds of the students enrolled at the present time are ladies. They are always in the majority, so I am informed. Some are preparing for teachers, others for farm dairy work, and others for dairy farming. The cheese interests receive the most attention; only a small amount of butter being made. What is manufactured is prepared in a most attractive form for market purposes—cheese of all shapes, makes and names are manufactured. The building was erected a few years ago at a cost of some thirty-five thousand dollars when equipped. It is very convenient, and kept scrupulously clean and sweet. The curing-rooms for cheese are well ventilated, and are constructed so as to control the temperature. Laboratories are equipped for the teaching of dairy chemistry and bacteriology. The churns, separators and testers are all run by hand. This is done for the purpose of giving the student an abundance of actual practical work in the running and manipulating of all kinds of machinery. The Babcock tester is not used, being considered too complicated, also requiring too much labor and time. The Guber test is the favorite, and several simple-looking English inventions are used to some extent. In separators, the De Laval and Sharples are both present, and very popular. Taking the work in all of its details, it is doubtful if there is a better equipped and managed home dairy school anywhere in the world. Some co-operative tests are being conducted on practical dairy farms. To a certain extent co-operation work has been conducted on farms by the other departments.

W. J. KENNEDY.

Reading, England, June 9th, 1904.

Western Fair Dairy Building.

We are pleased to note that the London, Ont., City Council have taken a more reasonable view of the question of extending the lease of the Western Fair grounds, which at one time threatened to block the erection of the proposed new \$10,000 dairy hall this year. They have agreed to an extension for fifteen years from the termination of the present lease, making eighteen years in all. Plans have been adopted and tenders called for the erection of the structure. It will resemble in some respects the Toronto dairy pavilion.

EVENTS OF THE WORLD.

Dr. George F. Lee, of Philadelphia, claims to have discovered an electro-chemical process by which radium may be manufactured for less than \$500,000 per pound. The present value is \$16,000,000 per pound.

The death list of the disaster to the General Slocum, which was burned near North Brother Island, New York City, is now placed at over 1,000, but many more may have met death. The captain of the vessel is severely censured for the manner in which he handled her after the fire broke out.

A despatch from the British camp near Gyantse says that a lama recently captured and brought into camp has given information that Gyantse is held by 7,000 men, armed with 600 rifles of European pattern, and 30 jingals. It was also learned from the lama that all the jongs on the road to Lhasa are held by strong forces, and that the apparent intention of the Thibetans is to appeal to China for help.

On June 16th General Bobrikoff, Governor-General of Finland, was shot and mortally wounded when entering the Finnish Senate Chamber at Helsingfors. The assassin, who was a son of Senator Schaumann, immediately committed suicide. The motive of the murder is believed to be objection to the Russification of Finland, of which Bobrikoff was a promoter. Upon hearing of the death of the latter, the Governor-General of Warsaw was at once stricken with paralysis, and will die.

The unprecedented demands of the bandit Raisuli in regard to ransom for Messrs. Perdicaris and Varley have been conceded by the Sultan. These demands are as follows: (1) Dismissal of the Governor of Tangier. (2) The disbanding of the northern army. (3) The payment of £11,000 ransom. (4) The release of all tribesmen in prison. (5) The arrest and imprisonment of certain Government sheiks. (6) The absolute jurisdiction of four Moorish Provinces. It is expected that

negotiations for the release of the kidnapped men will be speedily concluded.

The approach of the rainy season will probably have the effect of hastening decisive events in Manchuria. Although Kuropatkin is steadily withdrawing his outposts toward Liaoyang, with the evident intention of avoiding conflict as long as possible, it seems evident that a great battle cannot be long delayed, if, indeed, it has not already taken place, for there are repeated rumors of an engagement at Simen Ting on June 23rd, in which, so it is stated, the Russians lost 16,000 men. Whether this be true or not, it is not hazarding too much to say that the encounter, when it comes, will be in favor of the Japanese. Generals Kuroki and Oku are steadily closing in on Kuropatkin with forces which when combined will total 150,000 men. They have, moreover, a great number of guns, having lost none so far in the war, and are so situated that ammunition can be forwarded them according as required, while the Russians are under the disadvantage of being thousands of miles away from their base of supplies. It is not known how many men Kuropatkin has at present, but it is evident that his force has not yet recovered from the blow at Telissu. From the town of Port Arthur there is no news. On June 23rd, however, an engagement took place outside the harbor between a number of the Russian vessels and Admiral Togo's main fleet. As usual during the war, the score was in favor of the Japanese, who succeeded in sinking one battleship and in seriously disabling another and a cruiser. The series of disasters is said to be completely disheartening the Russians.

NOTES AND NEWS.

A serious outbreak of smallpox is reported from the Temiskaming district, New Ontario.

It is stated that Sir Thomas Lipton will challenge the New York Yacht Club again for the cup for 1905.

The British Admiralty has sent to the Canadian Department of Agriculture forms of tender for supplies of beef for the Government institutions at Malta.

The total number of bodies recovered since the General Slocum disaster at New York now amounts to 883.

Hon. Edward Blake, M.P., has been nominated to represent the Irish party on the new Privileges Committee, of which Premier Balfour is chairman.

One thousand five hundred immigrants, of whom nearly three hundred were Russian Jews and Arabians, arrived at Quebec on June 17th.

At Medicine Hat recently a tremendous flow of natural gas was struck, at the depth of one thousand feet. It is estimated that the well is flowing at the rate of a million and a half cubic feet per day.

Armies of the tent caterpillar have been ravaging the vicinity of Seattle and Tacoma, and are threatening the gardens of Vancouver and other parts of Southern British Columbia.

A unique convention, that of the Ontario Deaf Mutes Association, met in Hamilton, Ont., on June 18th. All the business was transacted by signs, the hymns also being sung by signs during the Sunday sessions.

It has been found out that tramps have been sleeping in the Isolation Hospital at Hamilton, and that they have stolen some of the furnishings and sold them to second-hand dealers. It is feared that some articles infected with smallpox may have been thus disposed of.

By the clauses of the Preferential and Reciprocal Trade Act, recently adopted by the Parliament of New Zealand, Canadian industry will be benefited in several lines, notably that of cement, in which our manufacturers are given an advantage of 48 cents a barrel over American manufacturers.

The citizens of Brandon, determined to avoid the devastation wrought by floods in the future, have passed a by-law authorizing the expenditure of \$90,000 for the removal of the pumping station to higher ground, and the extension of the waterworks plant. Brandon will this year expend \$150,000 in public works.

The new Minister of Defence of the Australian Commonwealth favors the abolition of the General Officer Commanding, the post held by General Sir E. T. H. Hutton, and the appointment of an Australian officer, with the title of Inspector-General. This is practically the proposal now before the Dominion Parliament for the command of the Canadian militia.

Mulch the Trees.

Trees planted in spots where regular cultivation cannot be given should be covered with a mulch of straw or rotted manure before the scorching summer sun of July and August is afforded an opportunity of absorbing the moisture from the soil. It takes but little time to supply a mulch, and it may mean the life of the trees. If straw or rotted manure be not handy, grass may be had. Even a few pieces of short boards or stones placed around the root of the tree in the absence of anything else will be a benefit. A mulch around young trees should extend nearly two feet from the trunk, and when properly attended to the trees are able to get benefit of rain for a long time after it has fallen, and make rapid growth, instead of, perhaps, dying.

Notes from Ottawa.

THE SEED BILL.

The clause in the new Seed Control Act relating to penalties is considered by seed men and others to be too severe. Mr. Fisher, Minister of Agriculture, has expressed himself willing to consider a modification of the law in connection with the fines. As the bill stands the law in connection with the fines. As the bill stands a fine, not exceeding five dollars, and not less than one dollar, for the first offence, and between five dollars and twenty-five dollars for subsequent offences, is imposed on violators of the law. The amounts would be levied for each parcel from which seed would be taken. There would, consequently, be an enormous fine on a shipper who sent out a carload of seed that did not come up to requirements. The fourth clause of the bill, specifying that No. 1 grade shall contain seeds of which not less than ninety-nine out of one hundred shall be the kind represented, has been criticised as too severe by members of the Commons. The bill states that of these, ninety seeds must be germinable, which is also regarded as too stringent a regulation.

COST OF EXPERIMENTAL FARMS.

In addition to the main estimate of \$100,000 for Experimental Farms, there will be a supplementary vote of \$10,000 asked. On account of increases in salaries on all the farms, the main vote this year was increased to \$100,000, compared with \$90,000 last year. The appropriation last year did not cover all the outlay, and some of the expenses have to be paid out of the present grant. Wages are being increased twenty-five per cent., on account of a general advance in wages throughout the country. At Nappan and Ottawa ordinary labor will now be from \$1.40 to \$1.60 a day. The rates will be slightly higher on the Western branch farms.

The Chief of the Seed Division.

Mr. G. H. Clark, Chief of the Seed Division, Department of Agriculture, Ottawa, whose portrait appears on page 914 of this issue, was born and brought up on his father's farm, in the County of Brant, five miles east of Brantford, Ont. He received his early education in the country school and Brantford high school. For three years he had charge of the home farm. He entered the Agricultural College at Guelph in February, 1896, and graduated in May, 1898. During his graduating year he took up some special investigation work, re the milling qualities of Ontario fall wheat, the results of which were published in the "Farmer's Advocate" in 1900. In June, 1898, he was appointed to the experimental staff, as assistant to Mr. Zavitz, with whom he remained until April, 1900, when he was given direct charge of the work in connection with the Macdonald Seed-grain Competition, with headquarters at Ottawa. He was appointed Chief of the Seed Division in January, 1902, his first work being to establish a well-equipped seed-testing station in Ottawa, after the plan of the one at Washington, D. C., and those in various European countries. The work that has been done in the seed laboratory has been directed largely from an educational standpoint. Information obtained from laboratory work was placed before the people as promptly as possible, through the medium of the Provincial Farmers' Institute systems and the press. He has managed to spend about half the time during the summer months studying the conditions and needs of agriculture in all parts of Canada. He visited nearly all of the men who are making a specialty of seed-growing as members of the Canadian Seed-growers' Association.

Maritime Stock Breeders Meet.

The annual meeting of the Maritime Stock-breeders' Association was held in Amherst, N.S., on June 14th, Honorary President F. W. Hodson in the chair.

After the reading of the minutes, and the Secretary-Treasurer's and President's reports, the management of the Maritime Winter Fair was discussed, and it was decided to employ a stenographer and have a full report of the doings and addresses of the Winter Fair published in connection with the reports of the several departments of agriculture. It was also resolved to compile and print in pamphlet form the past minutes of the association, so that they may be conveniently referred to when desired.

The date of holding the Winter Fair was discussed. Some claimed that the show should be held a week or two earlier than it had been, so that the beef could have time to ripen before the Christmas trade; others, while regretting the difficulty, considered it unwise and discourteous to clash with the Guelph Fair. It was, on motion, resolved to hold the Fair the second week of December, beginning Monday, December 12th.

The consolidation of live-stock registers was considered, and a resolution passed recommending the establishment of one record for each breed of horses, cattle, sheep or swine for the whole Dominion.

The following directors were appointed: For Nova Scotia: W. W. Black, Amherst; C. A. Archibald, Truro; F. L. Fuller, Truro; R. S. Starr, Starr's Point. For New Brunswick: Col. H. M. Campbell, Sussex; M. H. Parlee, Sussex; B. M. Fawcett, Sackville; and C. W. Rogers. For P. E. Island, Rev. Father Burke, John Richards, J. W. Callbeck, and F. L. Hazzard.

The officers elected were as follows: President, E. B. Elderkin. Vice-Pres. for N. S., C. A. Archibald; for N. B., Col. H. M. Campbell; for P. E. I., F. L. Hazzard. Managing Director of Winter Fair, E. B. Elderkin. Sec.-Treas., Miss Sadie Elderkin.

On motion it was resolved to have a room set apart

and time stated when said room can be used by each of the three divisions, Fruit, Apiary and Poultry, and the President be requested to consult with the Presidents of each division and arrange a programme, so that a meeting of one of the above Associations may be in progress in one part of the building, and a live stock meeting in another part. All of the Maritime Provinces were represented at the meeting, and the business was conducted with despatch and the best of good-feeling.

Sale of Clydesdale Fillies.

It was bargain-day for the buyers of Clydesdale fillies on Thursday last, when Graham Bros., Claremont, sold fifty newly-imported females at Grand's Repository, Toronto. The sale was well advertised, a large crowd was present, and the stock was personally selected by Mr. Tom Graham, and is just the class that horse-breeders require in Canada to-day. There were six three-year-olds in the lot, 22 two-year-olds, and 22 yearlings, the three-year-olds and two-year-olds being all bred to highly reputed sires before being shipped. The fillies were brought into the ring in rather low condition of flesh after their voyage, but there was no lack of quality and promise in the whole lot. Everything about the sale was satisfactory in the highest degree, except the prices. Buyers had no hesitation in bidding up to what such stock without registry ordinarily sells for, but there seemed to be a lack of appreciation of the value of pedigree, and the difficulty of securing registered females of such high quality. Messrs. Graham, however, realize the value of the introduction of high quality breeding mares, and are satisfied that subsequent efforts to stock the farms with brood mares will meet with more liberal response. The initial ventures in this line, however, are rather a severe strain on one's finances, but it is hoped that it is but the beginning of a more profitable trade. The prices for the entire lot averaged \$315, and the total amounted to \$15,755. Donna Roma, a Woodend Gartly two-year-old, got the highest bid, \$700, from Hodgkinson & Tisdale, and Baron's Lily, a Baron's Pride two-year-old, made second at \$675, from C. R. Bennett, of Russellton, Ont. The others found buyers at figures as far below this as \$175. Below is the full list of individuals, their sires, purchasers, and prices:

THREE-YEAR-OLDS.

Lady Campbell, by William the Conqueror; G. W. Fowler, Sussex, N.B.	\$385
Lady Roxburgh, by Prince of Roxburgh; T. A. Cox, Brantford, Ont.	435
Lady MacRaith, by MacRaith; Wm. Edwards, Balsam, Ont.	410
Lady Anderson, by Up-to-Time; W. A. Dynis, Amaranth, Ont.	335
Lady Lively, by Graphic; A. G. Derrick, Cotswood, Ont.	260
Charming Lady, by The Charming Prince; G. W. Fowler	320

TWO-YEAR-OLDS.

Lady Sceptre, by Woodend Gartly; Hodgkinson & Tisdale, Beaverton, Ont.	\$360
Golden Queen, by Gold Mine; G. W. Fowler	300
Veronica, by Woodend Gartly; J. M. Gardhouse, Weston, Ont.	300
Lady Phillips, by Peerless; W. A. Bradshaw, Uxbridge, Ont.	300
Baron's Lily, by Baron's Pride; C. R. Bennett, Barrie, Ont.	675
Fair Lady, by Gold Mine; G. W. Fowler	300
Miss Chamberlain, by Woodend Gartly; R. Davies, Toronto, Ont.	430
Lady Concord, by Concord; Nelson Wagg, Claremont, Ont.	225
Gay Empress, by Emperor of Bomble; R. A. Struthers, Milverton, Ont.	350
Mona's Queen, by Up-to-Time; J. W. Widdifield, Uxbridge, Ont.	275
Lady Nellie, by Peerless; Wm. Parrott, Columbus, Ont.	265
Donna Roma, by Woodend Gartly; Hodgkinson & Tisdale	700
Lady Valentine, by Up-to-Time; G. W. Fowler, Sussex, N. B.	230
Jean Crawford, by King Crawford; John McBride, Cheltenham, Ont.	255
Dorothea, by Up-to-Time; O. Sorby, Guelph, Ont.	285
Lady Crosbie, by Gallant Burnhead; John Palmer, Richmond Hill, Ont.	235
Black Beauty, by Pride of Blacon; Geo. W. Fowler	305
Maid of Airliland, by Woodend Gartly; R. Wilkin, Harriston, Ont.	380
Trinket, by Ornament; J. M. Gardhouse	425
Miss Roumanla, by Gallant Burnhead; G. W. Fowler	325
Ruby, by Boy in Blue; G. W. Fowler	405
Gartly's Princess, by Woodend Gartly; H. McGowan, Marsville, Ont.	310

ONE-YEAR-OLDS.

Jean IV., by Woodend Gartly; R. Davies	210
Golden Princess, by Golden Prince; Nelson Wagg	215
Lovelight, by King of the Roses; R. Davies	500
Miss Hood, by King of the Roses; Nelson Wagg	185
Dromore Princess, by Peerless; F. M. Chapman, Pickering, Ont.	180
Mary, by Woodend Gartly; C. R. Bennett	345
Grace, by King of the Roses; G. W. Fowler	215
Fair Fortune, by Elator; H. Storey, Picton, Ont.	200

Rosie, by King of the Roses; Thos. Mickleson, Bradford, Ont.	\$220
Lovely Fashion, by Fickle Fashion; L. Johnston, Brougham, Ont.	205
Lenora, by Elator; W. G. Barnes, Green River, Ont.	300
May Fashion, by Fickle Fashion; G. W. Fowler	175
Bessie, by King of the Roses; G. W. Fowler	200
Lady Murray, by Fickle Fashion; John Lowrey, Markham, Ont.	205
Lady Fashion, by Fickle Fashion; Nelson Wagg	180
Lady Palmer, by King of the Roses; N. Burkholler, Cherrywood, Ont.	300
Fashion Belle, by Locomotion; J. Carmichel, Myrtle	335
Lady Peerless, by Peerless; A. Aitchison, Guelph	215
Rosarene, by King of the Roses; G. W. Fowler	300
Border Jess, by Border Mac; W. H. Banks, Pickering	305
Lady Irving, by Baron Briton; A. Park, Hereward	390
Kelton Lady, by Rozelle; G. W. Fowler	400

The Railway Commission Hears Farmers' Case.

The Railway Commission last week entered upon an enquiry into the question of discrimination in freight rates on roads running through Ontario carrying freight from or to points in this Province. This is really the most important and difficult task the commission has yet undertaken, to regulate freight rates. Specific complaints were prepared by the different farmers' organizations, and by the Canadian Manufacturers' Association. Instances of discrimination which the commission was appointed to adjust were given at the first session of the commission in Toronto by D. A. Gordon, President of the Sydenham Glass Company, Wallaceburg, some of which are:

The rate from Detroit to Montreal is 23½ cents, but the rate from Wallaceburg, 80 miles shorter, is 25 cents. The rate from Gas City, Indiana, 553 miles, to Hamilton; 536 miles, to Berlin; 592 miles, to Toronto, is 17½ cents. The rate from Chicago to Toronto, about 500 miles, is 25 cents; from Pittsburg to Hamilton, 341 miles; Toronto, 380 miles; Berlin, 374 miles—all 18 cents; whereas the rate from Wallaceburg to Toronto, 199 miles, is 18 cents, and to Hamilton, 189 miles, and Berlin, 170 miles, 19 cents.

The complaints of the farmers, fruit-growers and cattle dealers were presented by Mr. W. D. Gregory, barrister, Toronto; W. H. Bunting, President of the Fruit-growers' Association; E. D. Smith, Winona; R. J. Graham, Belleville, an apple shipper; J. Lockie Wilson, President Farmers' Association, and E. Snell, President Dominion Cattle-dealers' Association. The complaints of the fruit-growers, as presented by Mr. Bunting, covered most of the grievances of the shippers of farm produce. The case was unusually well put by Mr. Bunting, who was afterwards congratulated by the commission for his concise arguments and clear statements of the case of the shippers. The specific requests of the fruit-growers are as follows:

1st.—That fresh fruit mixed in baskets be changed in classification from class one to class three for less than a carload, and from class three to class five for carload lots. This from Niagara to Montreal would be a reduction from 44 cents to 33 cents per 100 pounds on less than carloads, and on carloads from 33 cents to 22 cents per hundred pounds, or a reduction from \$66 to \$44 per car. From Niagara to Winnipeg it would be a reduction from \$1.25 to 82 cents per hundred pounds on less than carloads, and from 82 cents to 53 cents per hundred pounds on car lots. The reduction to Winnipeg would be \$10.60 per ton by carload, or half a cent per pound. The average cost of production is from one cent to one and a half cents per pound.

2nd.—That apples and pears in boxes and barrels be put in the same class.

3rd.—That the minimum for carload of fresh fruit be not raised over 20,000 pounds. It frequently happened that owing to the scarcity of cars they were obliged to load much more, and the fruit suffered from want of ventilation and crowding.

4th.—That a reduction be made in the cost of icing, more particularly to Winnipeg. There is now a flat rate of \$16 per car for icing to Winnipeg, whereas formerly the actual rate was from \$3 to \$7, according to quantity. Mr. Bunting thought that it was intended that the flat rate of \$16 should include the initial icing, to which the companies would not agree. Mr. Bunting, in conclusion, wished that someone more competent than himself had been chosen to represent the fruit-growers.

Mr. Blair said that there was no occasion for apologies or excuses. He had rarely heard a matter presented more clearly, more tersely, more modestly, and with finer spirit. It was a pleasure for the commission to listen to the presentation of the case.

Mr. E. D. Smith, who ships extensively, followed Mr. Bunting, and laid before the commission additional complaints and requests for redress. Many cases of slow transportation and lack of equipment were cited, but the greatest grievance of the speaker was the moving of small lots of fruit, with which there seemed to be no system whatever.

The railway officials followed the farmers' representatives before the commission, and while acknowledging a few faults in detail, claimed that the service in general is quite satisfactory and reasonable. They asked for time to prepare a specific reply to specific charges. When this is done the farmers' representa-

tives will be given an opportunity to reply, and the commissioners will ask a few questions. From all appearances it looks as if the commission would give some redress to the shippers of produce, but it is important that they move quickly, as the season of small fruit shipping is already upon us.

Pointer for the Dominion Department of Agriculture.

A pressing need of the western portion of the Northwest Territories, and the upper mainland of British Columbia, is the want of experimental farms or stations. In the Territories, as people living there know, the experimental farm at Indian Head is located at the eastern portion of the N.-W. T., hundreds of miles from the vast arable area in Alberta, where different climatic conditions are experienced, and although the work is in capable hands at Indian Head, we do not think the superintendent there would claim that the results of his experiments are capable of being made use of as fully as is desirable in the Alberta section of the Territories. What applies in the case of Alberta, applies equally in the case of the upper country of B. C., although, in the latter case, a less extensive establishment would do. Any person who has travelled the Coast Province, and who has gathered information on its agriculture, will know that the varieties of fruit suited to the Okanagan are different to those on the lower mainland. In the former district, the climate is dry and irrigation is depended upon largely; in the latter, the precipitation is quite heavy, and as the Coast Province is destined, we believe, to be the locality in which, in the immediate future, the fruit required by Western Canada will be largely grown, it is no more than justice that the Dominion Department of Agriculture should establish an experimental station for the upper country of B. C. at an early date. Some years ago, the cry arose that there was need for another experimental farm in Manitoba. The Agricultural College farm will meet that need. In Minnesota, sub-stations have been started, and in a country of such large extent as the Canadian West, three experimental farms are only half enough. The others that should be established might be termed sub-stations. The name would not necessarily affect the quality of the work done. The rapidly increasing population in the districts mentioned, a population that is investing its all, in time, money and work, warrants the establishment by the Government of two or three branch experimental farms without delay. The Minister of Agriculture would do well to give this important and urgent matter his prompt and careful attention, for even if the people's elected representatives overlook this great need, it is no excuse for the Department, which is supposed to get its information as to the needs of the country from outside, and more reliable sources than the politicians.

Some Coal-tar Dips Undergo a Scientific Test.

The Oklahoma Experiment Station Veterinarian and Bacteriologist, Dr. L. L. Lewis, reports in a bulletin his investigations as to the disinfecting power of the coal-tar dips. Several dips were tested, including Chloro-naphtholeum and Zenoleum. The resisting power of the germs of the following diseases, hog cholera, swine plague, pus, hay fever and anthrax, was tested by the use of the dips mentioned above.

The following is the summary of the bulletin: "When the various coal-tar dips were used in a one per cent. solution, they were effective disinfectants in laboratory experiments, but in practical experiments at least a two per cent. solution should be used. They were equally good, and in some of the tests proved to be better disinfectants than carbolic acid when used in the same strength. The coal-tar dips are non-poisonous, and are not irritating to the skin, or when used in wounds. As compared to carbolic acid, they were certainly as effective, are cheaper, and not so dangerous to use. The coal-tar preparations tested are not only good disinfectants, but are also good deodorizers." The Oklahoma Station may be in an out-of-the-way part, but its men seem to be working along practical lines.

Quick Dishwashing.

Have ready a large, deep dishpan. Pile plates, saucers, etc., neatly according to size. Then pour boiling water over and through them, letting them stand for a few minutes while attending to some other matters. Then take out the water which has removed all the grease, and, as you will find, nearly everything adhering to them. Then wash in lukewarm water with nice soap, and rinse with boiling water. Done in this manner, dish-washing is no drudgery, but nearly as pleasant as any other work. Pour boiling water into kettles, spiders, dripping pans, etc., add a little ammonia, and they are nearly clean at once. This method also saves the hands, and if we can keep our hands from becoming red and swollen and having a parboiled appearance, we certainly have a right to do so. Try it and I am sure you will not regret it.—[Farm and Home]

MARKETS.

The market situation has been quiet the past week. Grains of all kinds are steady; live hogs remain unchanged; cattle receipts are falling off a little, and dealers complain that butchers' are too high in the country. Cheese has suffered a temporary slump, while butter remains steady.

LIVE STOCK. Toronto Prices.

Exporters—Choice, well-finished, heavy exporters, \$5.50 to \$5.65 per cwt.; medium, \$5 to \$5.25. Export bulls—\$4.25 to \$4.40; medium, \$3.75 to \$4. Export cows—Prices range from \$4 to \$4.25 per cwt. Butchers—Picked lots of butchers', equal in quality to best exporters, 1,100 to 1,200 lbs. each, \$5 to \$5.25; loads of good, \$4.45 to \$4.80; medium, \$4.20 to \$4.40; common, \$3.50 to \$4; rough and inferior, \$2.90 to \$3.25 per cwt. Feeders—Short-keep feeders, 1,100 to 1,200 pounds each, \$5 to \$5.25; those weighing from 950 to 1,050, of good quality, \$4.25 to \$4.50 per cwt. Stockers—Choice yearling calves, \$3.75 to \$4.10; poorer grades and off-colors, \$2.75 to \$3.50, according to quality. Milch cows—Milch cows and springers, \$30 to \$50 each. Sheep—Export ewes, \$3.85 to \$4.10; export bucks, \$3 to \$3.25. Spring lambs—Prices range from \$2.50 to \$4.25 each. Hogs—Straight loads, fed and watered, \$5.10 per cwt., and \$4.85 for lights and fats.

GRAIN AND PRODUCE.

Toronto Wholesale Prices.

Wheat—There is a little more inquiry, and the market is steadier at 88c. for No. 2 red and white, west and east. Goose is steady at 77c. for No. 2 east; spring, 88c. for No. 2 east. Manitoba wheat, 91c. for No. 1 hard, 90c. for No. 1 northern, 87c. for No. 2 northern, and 84c. for No. 3 northern, at Georgian Bay ports, and 6c. more grinding in transit. Flour—The market is steady. Cars of 90 per cent. patents are quoted at \$3.65 in buyers' bags, middle freights. Choice brands are held 15c. to 20c. higher. Manitoba flour is steady at \$4.80 for cars of Hungarian patents, \$4.50 for second patents, and \$4.40 for strong bakers', in car lots, bags included, on the track, Toronto. Millfeed is steady at \$16.50 to \$17.00 for cars of shorts, and \$15.00 for bran in bulk, west or east. Manitoba millfeed: \$19 for cars of shorts, and \$18 for bran, sacks included, Toronto freights. Barley—41c. for No. 2, 39c. for No. 3 extra, and 37c. for No. 3, west or east. Buckwheat—45c. Rye—57c. to 56c. Corn—45c. to 46c. for Canada west. American, 58c. for No. 2 yellow; 57c. for No. 3 yellow, and 56c. for No. 3 mixed, in car lots on track, Toronto. Oats—No. 1 white are quoted at 32c. east, and No. 2 white at 31c. west, 31c. east. Peas—61c. to 62c. for No. 2 west or east, and milling peas are worth 3c. more. Potatoes—Firm in tone, and quoted at a slight advance, 85c. to 95c. for cars on track here, and \$1.05 to \$1.15 for out of store stock. Baled Hay—Continues easy in tone at \$8.50 to \$9 per ton for car lots on track here. Baled Straw—The market is fairly steady. Car lots on track here are quoted at \$5 to \$5.50 per ton. Butter—Receipts are still large in all lines, while the demand is only for the better stock. Creamery, prints, 17c. to 18c.; creamery, solids, 15c. to 16c.; dairy pound rolls, good to choice, 11c. to 13c. Cheese—The markets at outside points continue easy in tone, but trade here has not yet been affected. Quotations are 9c. for new large, and 9c. for twins. Some old large is still selling at 10c. Montreal Wholesale Prices. Trade in grain continues to be very quiet, and there

is no change in the condition of the market. Oats, No. 3 stock, around 36c. store; No. 2 oats could probably be sold at 37c., as 38c. is being demanded. Peas—About steady, at 71c. afloat, Montreal; No. 2 barley, 50c.; No. 3 extra, 69c., and No. 2 rye, 62c. Flour—Demand not very active for local account; a fair demand for export. Manitoba patents, \$4.90; strong bakers', \$4.60; winter wheat patents, \$4.80 to \$5; straight rollers, \$4.60 to \$4.70; straight rollers, in bags, \$2.20 to \$2.25. Feed—Demand for bran dull. Manitoba bran, in bags, \$18; shorts, bags, \$19 per ton; Ontario bran, in bulk, \$17 to \$18; shorts, \$18 to \$19; mouille, \$26 to \$28 per ton, as to quality. Hay—The market shows a further decline, offerings being too large for demand. No. 1, \$10 to \$10.50 per ton on track; No. 2, \$9 to \$9.50; clover, mixed, \$7.50 to \$8, and clover, \$7 to \$7.50. Cheese—The bottom seems to have dropped out of the local market. Stocks are rapidly accumulating here, and there is absolutely no encouragement offered from advices received over the cable. Ontario makes could be easily secured lately at 7c., townships at 7c., and eastern at 7c. to 7c. Butter—Local market exceedingly dull, and the actual position as regards quotations is purely nominal. Finest creamery butter offered at 17c. to 17c. without buyers.



Activity.

Yearling bull. Recently imported from Aberdeenshire by John Graham, Carberry, Man.

Retail Prices, Toronto Street Market.

Table listing various agricultural products and their prices. Items include Wheat (white, red, spring), Oats, Barley, Rye, Peas, Hay, Straw, Dressed hogs, Butter, Eggs, Fall chickens, Spring chickens, Spring ducks, Apples, and Potatoes.

Buffalo Markets.

East Buffalo.—Cattle—Prime steers, \$6 to \$6.40; shipping, \$5.35 to \$5.90; butchers', \$4.65 to \$5.75. Veals—\$4.75 to \$6.00. Hogs—Heavy, \$5.55 to \$5.60; mixed, \$5.50 to \$5.55. Sheep and lambs—Lambs, \$5 to \$7.50; yearlings, \$6.25 to \$6.50; wethers, \$5.25 to \$5.50; ewes, \$4 to \$4.25; sheep, mixed, \$2.50 to \$5.

Cheese Markets.

Sherbrooke, Que., June 20.—Sales of cheese, 7c. white; butter, 18c. saltless, 17c. salt. Peterboro', June 22.—At the cheese board to-day 5,600 boxes were boarded, all colored. About 3,600 were sold at 7c. Picton, June 22.—1,030 boxes boarded, all colored. Highest bid, 7c.; no sales. Stirling, June 22.—To-day 960 cheese were boarded. Sales: 575 at 7 11-16c.; 230 at 7 11-16c.; balance refused at 7c. Woodstock, June 22.—At the cheese board to-day, 22 factories offered 41 boxes. The highest bid was 7c.; no sales. Sellers held out for 8c. Brockville, June 23.—Over 4,000 boxes of cheese were boarded, but none were sold. The price bid was 7c. Madoc, June 23.—1,330 boxes of cheese were boarded; 1,080 sold at 7 11-16c.; balance unsold. Kingston, June 23.—1,428 boxes boarded, of which 880 were colored and 548 white; highest bid, 7c., at which price 150 were sold. Tweed, June 23.—820 boxes boarded; 600 sold at 7c.; balance unsold. Winchester, June 23.—372 colored and 1,410 white registered; the price bid was 7c.; no sales on board. Vankleek Hill, June 23.—1,846 boxes of white and 240 colored cheese boarded here to-night; 1,018 boxes were sold at 7c. Perth, June 24.—2,470 cheese were boarded to-day; 1,855 white, 615 colored. All sold; ruling price, 7c. Iroquois, June 24.—1,189 colored and 30 white cheese were boarded here to-day; 7c. was the highest bid, two lots selling at this price. Other salesmen unloaded on curb at board price. Farnham, Que., June 24.—Eleven factories offered 87 packages of butter and 705 boxes of cheese. Butter sold at 17c., and cheese at 7c.; unsold, 37 packages butter and 80 boxes of cheese. Napanee, June 24.—There were 1,855 cheese boarded; 7c. bid; no sales. Ottawa, June 24.—There were 1,567 white and 836 colored cheese boarded at Ottawa to-day. Only 135 boxes sold at 7c., bidding being slow. Some sales, it is said, were made on the curb. Listowel, June 24.—Twelve factories boarded 1,909 boxes, 1,659 white and 250 colored. The best bid on the board was 7c.; afterwards 7c. was offered, but factorymen wanted 7c. and 8c. It is said that a few lots were sold at 7 11-16c., but not much business was done. Kemptville, June 24.—1,663 cheese offered, of which 1,528 were colored. Only one price bid, which was 7c. for both white and colored. At this figure nearly all the cheese was sold on the board.

Horse Markets.

Business in working horses at Grand's Repository is not active. The next six weeks is the off season for horse dealing, and Mr. Smith advises consignors to withhold shipments. Last week the sale of Clydesdale fillies was the feature event. After this sale a few good draft mares were sold at fair prices. A Suffolk-Punch stallion, four-year-old, also changed hands at \$275. He looked to be a good "spec."

Wools.

The market continues generally steady. Receipts are still light, and quotations are unchanged at 17c. for washed, 13c. for rejections, and 10c. to 11c. for unwashed.

Chicago Markets.

Chicago.—Cattle—Good to prime steers, \$5.50 to \$6.50; poor to medium, \$4.50 to \$5.50; stockers and feeders, \$2.50 to \$4.50. Hogs—Mixed and butchers', \$5.20 to \$5.40; good to choice, heavy, \$5.35 to \$5.45. Sheep—Good to choice wethers, \$4.50 to \$5; fair to choice mixed, \$3.75 to \$4.50; spring lambs, \$4 to \$7.

British Cattle Markets.

London.—Canadian cattle are steady at 11c. to 12c. per pound; refrigerator beef, 9c. to 10c. per pound. Sheep, steady, 12c. to 14c. per pound; yearlings, 15c.

ILLUSTRATIONS.

Table listing various articles and their page numbers under the 'ILLUSTRATIONS' section, including 'G. H. Clark, B. S. A.', 'Newton and Daisy Kerr', 'Archer's Last', etc.

CONTENTS OF THIS ISSUE.

Main table of contents listing various sections and their page numbers, including 'STOCK', 'POULTRY', 'GARDEN AND ORCHARD', 'DAIRY', 'NOTES AND NEWS', 'SOCIETIES OWNING STOCK', 'MARKETS', 'HOME MAGAZINE', 'QUESTIONS AND ANSWERS', 'VETERINARY', and 'MISCELLANEOUS'.

Table of contents for the 'QUESTIONS AND ANSWERS' section, listing various topics like 'Sale of Clydesdale Fillies', 'The Railway Commission Hears Farmers' Case', etc., with their respective page numbers.



HOME MAGAZINE

"The lily has an air,
And the snowdrop a grace,
And the sweet-pea a way,
And the heart's-ease a face—
Yet there's nothing like the rose
When she blows."
—Christina G. Rossetti.

A Matchmaker.

"Dear Brother Jim: This is a very nice place, and I am enjoyin' it accordingly. We are about a mile from the village and the road is good and Miss Laura and I drive over twice a day. Miss Laura lets me drive sumtimes, but she's afraid I'll get the horse—his name is The Dook—out of the stile of driving that women prefer. And when I titen up on the lines and The Dook strikes a lively clipp, she says 'Steddy, Tommy,' and then I have to pull him in.... But she is a nice girl notwithstandin'. She has the prettiest brown hair, and such depe darke eyes, and such a sweet way of speekin'. And they have a beautiful home. It's on a hill and you can see miles around it. From my window, I can catch site of the lake thru a gap in the hills. It's a very nice lake, tho not depe enuff to drown me—and Laura's father owns it. They say he is pritty rich. Mr. Rummidge—he sells books in the vilage and lets you borrow them for too cents a day—says Laura's father is a vilage Creeses. It tells about Creeses somewhere in a book and he was the richest man in the state, but I think he is dead now. I gess you must have heard about him. He was a hystorykal caracker. I wish you was here, Brother Jim. We'd have great times. Laura's most as good as a boy for havin' fun. There I heer her callin'. The Dook is a champin on his bit and waitin' impashent at the cassel gait. That's the way Laura talks. She's most as good as a play actor. Aunt Emmeline says Laura's romantick. So I must close. Write just as soon as you hear from papa and mamma. From your loving brother.

"TOM."

James Thornton, rising young attorney, smiled over this epistle and laid it away carefully in a pigeonhole of his desk, whence it would be taken and inclosed with his next letter to the absent parents across the sea.

There was a long gap between brother Jim, aged twenty-seven, and brother Tom, aged twelve, and this gap had seemingly drawn them closer together. To brother Jim, brother Tom had never seemed the aggravated nuisance that little brothers usually appear in the eyes of older brothers. Jim had looked with amused tolerance on Tom's wildest pranks, and as for Tom—well, there were few heroes of childish romance that did not suggest his clever big brother. And Tom had been left in Jim's care while the father and not overstrong mother went abroad for the latter's health. It was a hot summer, and Tom was convalescing from a severe case of measles, and so Jim thought it wise to pack him off to a little vilage that nestled in the woods of the upper Hudson, where he was sure to receive the best of care at the home of a superannuated bookkeeper of the firm of which John Thornton was the newly-admitted junior member. And it was from Bookkeeper Barclay's home that Miss Laura Garman had fairly kidnapped him. True, she wrote a model letter to Jim, in which she requested the loan of his young kinsman, but before his answer could be received she had him installed at Greycrag, and in a position to add his petition to hers.

He was such a delightful boy, she wrote, and he would make the hours at

Greycrag seem so much less lonesome. Saving for the presence of a maiden aunt she was quite alone there, her father and mother having gone to California to take an invalid sister of the latter. Besides, she was sure the altitude of Greycrag was quite certain to hasten the return of Tommy's strength. She hoped this was not taking a liberty, but she had never seen a boy who charmed her quite as much—perhaps because he reminded her of a little brother who had passed away in his seventh year.

What could Brother Jim do? He wrote a qualified acceptance of this letter of invitation. She must promptly return Tom when she tired of him. She mustn't tolerate him if he proved to be rude or unmanageable. And he would ask it as a particular favor if she would at once communicate to him any infraction of conduct of which Tom might be guilty. "Bein' so very much the youngest of the family," he wrote, in conclusion, "I fear that we fail to realize how thoroughly he is spoiled. No doubt you will find this out very soon. The moment you do, kindly return him to Mr. Barclay, to be left until called for."

Miss Laura Garman briefly acknowledged Brother Jim's letters, promising to faithfully abide by all its conditions, and thanking Jim for acceding to her request.

So Brother Tom was ensconced in the Garman household, and, as his many letters set forth, was having the time of his life. At least half of each epistle was given up to this theme, while the other half was devoted to the charms of Miss Laura.

"She's just the one girl for you, Jim," he wrote in one of his daily screeds, for Tom had become quite a letter writer. It may have been brought about by his weakened health and possibly took the place of some more boyish occupation, but it was true that he had Brother Jim hustling in the endeavor to keep up with his busy correspondent. "You'd make a stunnin' couple. Don't think I'm foolin'. Laura likes me so well that I'm pretty sure she would like you too. On my account, of course. Cant you come down for a day or two?"

And Brother Jim, greatly amused, would thank Brother Tom for his kind wishes for his matrimonial welfare, and assure him that it would be quite impossible for him to get away just at present.

And then one day the letter with the familiar handwriting was a little bulkier than usual. When he opened the envelope a photograph dropped out. It was a portrait of an unusually pretty girl. Of course, this must be Laura Garman. Brother Jim looked at the portrait long and earnestly. Brother Tom wasn't so far wrong when he praised this gentle-faced girl. Brother Jim placed the photograph on the desk where he could use it as confirmation of Brother Tom's praises, and then picked up the letter.

"I've bin fishing for bullheads in the pool," Brother Tom began, "and cot two—and one cot me. It didn't hurt mutch and Laura tied it up with her handkerchief. Ide know about bullheads horns next time. I am sending you Laura's picture. She don't know it. I begged it from her yesterday. I want you to get it framed up nice and charge it to pa. Then when she says, 'What did you do with my picthoor, Tommy?' He say I'm gettin' it framed. Can't you come up and see a fellow, Brother Jim? N. B.—It don't flatter her."

But Brother Jim seemed in no hurry

to have the framing contract carried out. The picture lingered on his desk just where he could catch sight of it whenever he chose to look up.

"Dear Brother Tom," he wrote in reply. "I am sorry the bullhead horned you. No doubt if you were a bullhead you would have done the same. I remember having some experience with bullheads myself, but there was no charming young woman's handkerchief to bind my wounds. By the way, that portrait you sent to have framed reflects credit on your taste. Miss Laura deserves all your praise. She is a beautiful girl—and I am sure she is as good as she is beautiful."

Two days later Brother Tom's reply was received. It was unusually brief, but to the point.

"Brother Jim," he wrote. "I showed your letter to Miss Laura. My, how she blushed. Say, can't you come up next week. There's going to be a big church picnic. Come sure."

Brother Jim scowled darkly. Then he chuckled. What a boy! The idea of his showing the letter. What must the girl think of the liberty he took? Still, there wasn't anything really rude about it. But he must be more careful when he wrote hereafter.

Then he sent Tom a short note, in which he said it would be impossible for him to attend the church picnic.

A few days later Brother Tom wrote in a somewhat melancholy tone. He wasn't feeling quite so well, he guessed he missed his mother—and his father, too, and maybe he was homesick. He wanted to see Brother Jim so much. But if Brother Jim couldn't come, would he send his photograph. It would be some comfort, anyway.

Brother Jim was considerably alarmed over this epistle. This precious young brother mustn't have a relapse. That would never do. So he hastily wrote an encouraging note to Brother Tom, in which Brother Tom was advised to cheer up and be a man—and with the note he forwarded his photograph.

The answer came back promptly, and it was again to the point.

"I shode your picthoor to Miss Laura and she liked it. She made me mad tho when she said you was better looking than me. N. B.—I told her it flattered you. Can't you come up Saturday?"

Brother Jim scowled again and laughed again. Really, this scallawag of a youngster wasn't to be trusted with anything. Still, if Miss Garman had any sense of humor she must find him amusing. Then he looked up suddenly at Miss Garman's portrait, and it seemed as if a smile was hovering about the pretty mouth.

And then came another disquieting letter from Brother Tom.

"There's a fellow hanging round here that I don't like," Tom wrote. "It seems Miss Laura met him somewhere and he came to see her cos he found out her father was away. That's the way it seems to me. He's got snaky eyes and a little black mustash and he laffs a grate deal. I don't rely think that Miss Laura likes him much. But he's got such a way of smilin' and sayin' soft things. I'll bet he is no good. He called me a cub the other day and Miss Laura didnt like it. Im going to look after her the best I kno how, but I wish I was a little older."

Two days later another disquieting letter reached Brother Jim.

"That felow is comin' more than ever," Tom informed Jim. "I think there must be sumthin' fascinatin' about him, cause Miss Laura don't seem able to tell him he ain't wanted here. He is

in a awful hurry, too. I gess he is afraid her father will come home unexpectked. He bet my life he is no good. I wish I could talk to sumboddy. But there's no use speaking to Miss Laura's Aunt. All she thinks about is housekeepin' and hired girls. N. B.—He called me a cub twice agane."

The very next day brought the third disquieting letter.

"We were out riding to-day," Brother Tom explained, "and I was gettin' in the little seat behind and I gess he didn't kno how sharp my ears is. Its like that with measles sumtimes I spose. Annyway I heard a lot that he said and what do you think? He wants Miss Laura to run away and marry him. You ought to have heard him beg her. Ain't it a shalm? Sutch a nice girl and nobody to sho her what a mistake she is making. Annyway I know the felow is afraid of her father, cos he said as mutch—and somebody ought to find out about him rite away cos its Friday nite he wants her to go."

Brother Jim looked at the letter long and earnestly and the frown on his handsome face deepened. Then he pulled a pad of blank telegraph messages from a drawer.

They are waiting for him at the vilage station, Miss Laura in the pony phaeton and Brother Tom on the platform.

And Brother Tom grabbed him and drew him to the phaeton.

"This is my big brother, Miss Laura," he cried with a tremor of pride, and Brother Jim found himself bundled in beside the pretty girl, while Brother Tom sat up on the little seat behind.

"We have been expecting you so long and so anxiously—at least one of us has," said the pretty girl with a quick blush, "that it seems quite impossible that you are really here—doem't it, Tommy?"

"He looks real to me," replied the smiling Brother Tom, as he landed a heavy thump on Brother Jim's broad shoulder.

And how delightfully pleased this pretty girl seemed! Was it an assumed delight? He looked around at Tommy and caught him grinning.

And what a charming little feast they had, and what a delightful little mistress of the household the fair girl made.

And after dinner Brother Tom drew Brother Jim away from the lovely presence and took him for a stroll to the little lake.

"Well?" said Brother Tom, as they trudged down the shadowy pathway between the trees.

"Well?" echoed Brother Jim.

"Nice, isn't she?"

"Very nice."

"Did I make it too strong about her?"

"Is this a confidential conversation?"

inquired Brother Jim with a short laugh.

"It is," Brother Tom replied.

"And not a word to be repeated to any third party?"

"Not a word."

"Well, then," said Brother Jim, "you didn't make it strong enough."

Whereat Brother Tom landed a heavy blow from a puny fist in the midst of Brother Jim's waistcoat.

"Good old Jimmy!" he cried.

And then it was that Brother Jim put a heavy hand on Brother Tom's shoulder.

"See here," he gruffly said, "where is that black-mustashed fellow with the snaky eyes?"

"Oh, I just made him up," said Brother Tom.

And Brother Jim suddenly laughed.—W. R. Rose, in Cleveland Plain Dealer.

Another Occasional Paper

Containing Some Replies to Questions Regarding Women's Share in Industrial Development.

As the writer of the Occasional Paper, asking for information from farmers' wives upon the above topics, I desire to thank those correspondents whose replies came addressed to myself, and some of which, being so direct and to the point, I insert, partly as an invitation to others to follow this good example. Many have probably written to Mrs. Clare Fitzgibbon, the Convener of the Standing Committee on Agriculture, and their facts and opinions will probably, on her return from the International Council at Berlin, be embodied in her report to the National Council of Women of Canada, to be submitted to its annual meeting at Winnipeg in September. Mrs. B., one correspondent, first says how glad she is that the Women's Institutes have united forces with the National Council, and then comments upon the very real value of these Women's Institutes to the home life upon our Canadian farms. "They have," she writes, "accomplished much good in this vicinity; indeed, there are homes they have completely revolutionized. We are starting a library this summer in connection with our Institute, and we would like to know of any books which could be recommended for our perusal. We have found the 'Farmer's Advocate' very helpful in suggesting topics for discussion." I will once more insert the questions previously asked, that Mrs. B.'s replies for her own section may be the more clearly understood:

1. "Has the establishment of dairies and cheese factories, egg and poultry collectors, affected the pocket money of the farmers' wives and daughters?"

Reply: "Yes, considerably; more particularly the poultry and egg collectors. The butter and cheese factories not so much so, as the cheques are generally drawn in the name of the 'man of the house.' In this neighborhood I only know of one case in which the cheque is drawn in the wife's name."

2. "On how many of the twenty farms have the daughters remained to share the labor with the mothers?"

Reply: "On eight; in the remaining twelve there seems to be a dearth of daughters, seven having no daughters, and five only one each."

3. "On how many of the twenty farms is the milking done by women?"

Reply: "The women assist with the milking in the summer, but in the winter it is almost exclusively done by men and boys."

4. "What are the occupations of the daughters who have left the farms to seek occupation elsewhere?"

Reply: "Servants in the city, teachers principally, and one or two typewriters."

5. "What is the average acreage of each of the twenty farms? How much help is employed? On how many of the farms is good health enjoyed, and if there is illness, what is its cause and nature?"

Reply: "One hundred and fifty acres. One hired man generally, where the boys are small. A very few have servant girls. The health is good in nearly every case, but when the young girls undertake study or dressmaking they do not appear to have as good health as when working on the farm."

It would be very helpful to receive from other farmers' wives, not only answers to the above questions, but also any information along similar lines, which, being the result of their own experience, may be of use to others. Everyone attending a meeting of a Women's Institute should carry her notebook, and return to her home with several valuable hints for its increased comfort and, perhaps, beauty; whilst she herself may be in a position also to give valuable hints equally worthy of a place in the notebooks of other members.

H. A. B.

(To be continued.)



Does it Cost You Nothing?

"Tired! well, what of that? Didst fancy life was spent on beds of ease, Fluttering the rose leaves scattered by the breeze? Come, rouse thee! work while it is called to-day; Coward, arise! go forth upon thy way!"

To-day I wish to speak especially to those who have decided to follow in the steps of the Great Master, to those who say, as a would-be disciple did once, "Lord, I will follow Thee whithersoever Thou goest." To you I would say: "Have you counted the cost? Are you determined to obtain the pearl of great price, even though it may cost all that you have?" The man who offered to follow Christ was warned that it was no easy thing, and we are not told whether he was turned from his purpose by the warning words: "The Son of Man hath not where to lay His head." Our Lord's solemn words, addressed to all who wish to follow Him, still hold good: "If any man will come after Me, let him deny himself, and take up his cross daily, and follow Me." This is a luxurious and self-indulgent age, and we are apt to make our Christianity one of our luxuries, forgetting that good soldiers must now, as ever, be prepared and willing to "endure hardness." David scorned to present to God offerings which cost him nothing. Do our offerings cost anything? We are in danger of becoming mere carpet-knights in these days when everybody tries to make our road easy. Instead of being called on to give to God, we plan and contrive ways and means of raising money for church purposes without cost to the congregations, by bazaars, strawberry festivals, concerts, etc. St. Paul was drawn after Christ, not by being told how easy

ways and means of working up a harvest thanksgiving service, and are dreadfully afraid of boring the congregation. One psalm, one collect, a hymn and anthem, and a lesson of only two verses, are as much as they dare inflict on the audience—people who do not come to pray, but to listen. The sermon, if it is advisable to have one at all, must only last five minutes. The curate remarks that there was a young man at church last Sunday, and he yawned. The horrified rector exclaims: "Yawned; that must not occur again! We must leave out a collect or something. What can we do to amuse him? When I was a curate, the banjo was one great means of obtaining influence in the parish, but even now the infant-school refuses to listen to it."

Then they talk about the difficulty of getting hold of the young men, saying that billiards and bi-weekly dances have lost their novelty, but a balloon club might attract a few. The choir have grown discontented because they were only treated to an excursion to the West Indies, while another choir went to Khiva. The women belonging to the Clothing Club will not wear dresses that are not imported from Paris. In fact, the condition of affairs is very sad, and the rector says, despairingly: "I don't see how Bible truths are to be brought home to them. If they will not be taught dramatically or operatically, or even by the oxyhydrogen light, I don't see what is to become of the Church." The curate hesitatingly suggests, as a last resource, "Might it not, as an experiment, be worth while to try a little religion on them?" Of course, this is intended as a parody on the modern methods of filling the churches by making the services novel and entertaining, but are we not drifting in

tured himself by living for about 30 years on a pillar 60 feet high, as a Syrian monk of the fifth century did, he would not win the almost adoring admiration of crowds of people. Instead of wishing to copy him, the authorities would probably lock him up in a lunatic asylum. But we are all attracted by self-sacrifice for the sake of others, and we all wish we could muster courage to follow in the steps of earth's heroes.

Once a terrible plague raged in France, and the doctors could do nothing to stop it, because they did not understand the disease. Then, Dr. Guyon, who was a celebrated man in the prime of life, deliberately chose to walk in the footsteps of Christ, and lay down his life to save others. To dissect the corpse of one who had died of the plague seemed the only plan of finding out the nature of the disease, and to do that meant certain death. Dr. Guyon said, "I devote my life to the safety of my country." He then dissected a corpse, wrote out the result of his investigations, putting the paper into a disinfecting preparation so that it might not harm anyone who read it, and died in twelve hours. One act of genuine self-denial, for the sake of God or man, will lift human nature higher than any amount of listening to entertaining services, and it will bring more genuine joy with it, too. Men soon get bored when they are only seeking amusement, but one who is really a disciple of Christ, really offering every day a service which costs something, never gets bored. Let no one think that he must give up happiness if he chooses to follow Christ. We never lose by giving to a real king, and our King will not fail to make a quick and a grand return for all gifts laid at his feet. As a worker among the poor in Chicago said a few years ago: "It seems to me that I have never been able to make a sacrifice for Jesus' sake, because, whenever I have thought I was doing so, straightway He has sent me such a blessing that there was no sacrifice."

Carlyle says that it is only with renunciation that life, properly speaking, can be said to begin. If we are to obey orders and take up the cross "daily," then it is time we set about it. Opportunities for great sacrifices do not come every day, so it is plain that what God asks from us most of the time are little sacrifices, the opportunities for which meet us in every home. Selfishness can only be kept down by constant watchfulness and prayer. Charity "seeketh not her own," is eager to make others happy, regardless of little personal inconveniences and discomforts. One who leads an unselfish life will be sure to find that it costs something. Well, do you want to slide easily through life, winning no victories, because you find that fighting is hard work?

Oh, yes, I know as well as you do that it is easy for me to talk, but while I show my faith by my words, you are probably doing the far harder and grander thing—showing your faith by your works.

"Then rise, and in His strengthening might
The narrow path pursue,
There wait, or watch, or rest, or fight,
Whate'er is duty, do." HOPE.

How it Happened.

"Neath an old umbrella, tho' covered with patches,
Is not a bad place for the making of matches."

That, translated into Italian, is what the repairer of umbrellas is gaily trilling to the dark-eyed maiden who has tried to tell the story of how her umbrella got broken at the fete of yesterday. "Antonio says he did not do it, and you say you did not do it, so perhaps you did the mischief between you. I can mend your broken whalebones, but when it comes to the breaking of hearts—well, who breaks, pays." H. A. B.



(Zernutti.)

How It Happened.

His service was, but rather by being told of its difficulty: "I will show him how great things he must suffer for My name's sake." God knows men too well to try to win them at little or no cost to themselves. Sugar-coated religion is worth very little, and is despised by those who will respond gladly when called to face a danger or difficulty. The modern idea of making our Sunday services popular and entertaining has been shown up by a clever satire in an English paper:

A rector and curate are discussing

that direction? How different is St. Peter's plan for attracting disciples: "For even hereunto were ye called, because Christ also suffered for us, leaving us an example that ye should follow His steps." When our Great Example undertook to help the world He walked steadily along a difficult path which led straight to the Cross. Shall we, who wish to follow His steps, think that all is well with us if our religion costs us nothing? Useless sacrifice is repugnant to the common sense of men in this 20th century. If a man tor-



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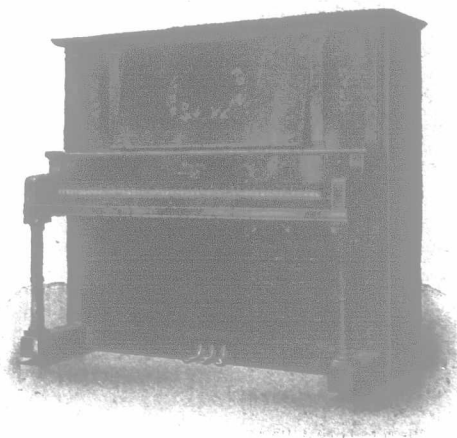


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HEALTH IN THE HOME.

By a Trained Nurse

Consumption, an Infectious and Preventable Disease.

Consumption and tuberculosis are the same thing, consumption being the name popularly applied to pulmonary tuberculosis, or tuberculosis of the lungs. It is caused by a well-known organism, is extremely infectious, and communicated from one person to another through the sputum (spit). This contains immense numbers of the organism, and if it were in all cases properly disposed of, it would be possible to do away with consumption altogether. As it is, an immense proportion of the total number of deaths is due to consumption, and this again to the fact that people persist in spitting on the floors in all places where the law does not interfere, and are often absolutely careless in their homes and at their work, not realizing that they are making themselves as dangerous to the community as a man with smallpox. There is a chance of infection through the discharges from the bowels, since a certain amount of what is coughed up is liable to be swallowed, but the great and positive source of danger is the sputum. So long as it is wet it does no particular harm, because it is not scattered, but so soon as it dries into powder it is blown about, inhaled into the lungs of other people, and carries infection wherever it goes. For this reason, and because the disease is often neglected and not recognized until far advanced, apart from the fact that it is unsightly and disgusting, the practice of spitting everywhere, and on all occasions, and especially in public places, should be ruled out. When it is necessary to spit, a proper receptacle containing a strong disinfectant solution should be used (corrosive sublimate tablets, three to one pint of water), or falling that, the fire. Persons who are in bed and weak, so that the exertion of frequently changing position to use a basin containing solution tires them very much, can use rags, but if so, they must be placed in the solution, or burned immediately. There is no fear of infection, except through neglecting to properly and immediately destroy the sputum. The greatest care should be exercised about cups, glasses, spoons, etc., in case some sputum may have been deposited upon them. It must be remembered that these things are not necessarily clean because they appear to be so. It is well to keep a special set of dishes, etc., for the patient's use. These precautions, in conjunction with thorough ventilation at all times, are adequate protection for those who live in the house with a consumptive. Special sputum cups are made for patients to carry about with them. They are small, of suitable shape, and can be concealed in a handkerchief, and should be always carried and carefully used. When a clean handkerchief is taken, which should be frequently, the soiled one should be put right into water, or some disinfecting solution, and boiled for half an hour before it is handled in washing.

CONSUMPTION CAN BE CURED IF RECOGNIZED IN TIME.

Therefore, anyone who has a persistent cough, especially if accompanied by yellow sputum, should take pains to find out what the trouble is, and when he goes to a physician for this purpose, take with him a fresh sample of sputum in a small bottle for examination. After the sputum is in the bottle, cork it tightly, and stand it, so that it is completely covered, in a basin of disinfectant solution for an hour (corrosive sublimate or carbolic acid, 5%). This makes the handling of the bottle safe. Those who live so far from a physician that they have to wait some time for an opportunity to go, can begin at once to observe as many as possible of the rules

laid down in institutions for the care and cure of consumption, of which the following are the most essential: Mr. Irving Fisher, in the "Outlook," recently summed up the procedures for the cure of consumption under four heads: Air cure, rest cure, food cure, and mind cure. Absolutely the most essential thing is unlimited fresh air. Stay out in it all day, and sleep out of doors at night whenever possible. The weather is a small consideration, unless the conditions are very unusual. You will be breathing the air that goes with the weather in any case, indoors or out, except that out of doors you get it absolutely pure, and indoors you do not. To sleep out of doors in cold or damp weather the individual must be well protected. He should have loose, warm clothing, and a great deal under him, in the way of mattresses and bedding, and a few blankets over him, not enough to weigh upon him. The head, neck, ears and face can be protected by a hood when necessary, the only part that needs to be uncovered being the nostrils.

BREATHING THROUGH THE NOSE IS ESSENTIAL.

Patients have been known frequently to sleep out with the thermometer 80° below zero in the Adirondacks, and though some climates are more favorable than others, so long as they are well protected there is no reason why the greatest benefit should not be derived from sleeping out of doors habitually almost everywhere; not, of course, in malarial districts.

The daily cool bath for cleanliness is also very important. It should be taken in a comfortably warm room. Profuse perspiration at any time should be followed by a thorough sponge bath in tepid water, and a rub with alcohol is very refreshing. Rest is of great importance. If the patient is strong enough to walk or drive it is well to do it, but he should stop the instant he becomes fatigued. It is better to stop well short of doing all that he feels equal to.

FOOD SHOULD BE TAKEN EVERY TWO HOURS.

Meat—that is, beef and lamb, preferably beef, and that rare—as much milk and as many eggs as possible. They are best taken raw. Break into a glass, add some salt and swallow whole. Cereals and all the dishes made with eggs and milk are good, also ice cream; in fact, plain good food, well cooked. Everything should be done to keep the patient in a cheerful frame of mind. Do not talk to him about his illness, and he should try not to think of it himself—simply attend to all the things that can help him, and when they are done, forget them until it is time to do them again. A resolute determination not to worry, combined with absolute cleanliness, and as much as possible of rest, food and fresh air, will create the best possible condition to aid whatever treatment is prescribed by the physician. Let those who are well, and wish to remain so, avoid drinking out of cups used by the public on trains, at drinking fountains, etc. Never stay in a place where people are spitting on the floor, and keep their skirts off the ground in such places, and out of doors. It is well to do so indoors too, unless you are sure that the floor is clean. Pull up the shades and let in sunlight, and keep the house thoroughly ventilated night and day.

Alice G. Owen.

He who would be a great soul in future, must be a great soul now.—R. W. Emerson.

Henry extended the tip only of his tongue to the doctor, when asked to put it out.

"Put it all out," said the doctor. "Can't," rejoined the little chap, "the other end's fast in me neck."

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

With the Flowers

Notes.

Roses intended for winter blooming should be repotted now, and the pots plunged to the brim out of doors in a flower-bed somewhere. Give plenty of water, and sprinkle the foliage well very frequently. Do not neglect to shower fuchsias very often and very thoroughly.

Don't forget to stir the surface of the flowerbeds, especially during dry weather. A mulch placed about rose bushes, sweet peas and dahlias will be found to be of great value during this season. A little wood ashes worked in about the sweet peas occasionally is also beneficial.

You may still plant gladiolus bulbs, and have a good showing if you take good care of them.

Geraniums intended for winter blooming should not be permitted to flower during the summer. Pinch off all buds according as they form.

Pinch back the stems of chrysanthemums now, in order to induce bushy growth, otherwise you will have long, straggling stalks and fewer flowers when December comes.

Keep the seed from forming on your sweet peas, pansies, aquilegia, poppies and nasturtiums, if you wish to prolong their flowering season. Remember the more of these flowers you cut, the more you will have. Let them go to seed, and the beauty of the plants will be over in a short time.

If you need leaf-mould to mix in your garden or with soil for potting plants, and cannot get hardwood leaf-mould conveniently, begin a compact heap now and have a supply ready for use next spring. In some out-of-the-way corner, throw old sods, weeds which have been pulled from the garden, parings of apples, potatoes, turnips, etc.; in fact, any kind of vegetable matter which will decay and form the humus which is to gladden the hearts of your flowers next year. Keep adding to the heap all through the summer, pouring on dish-water, slops, etc., often enough to keep the heap fairly well saturated. Turn the heap once or twice, and let it stand over winter. In the spring, the greater part of it will be found to consist of a fine black mould, equal in every way to the genuine leaf article of the "hardwood bush."

Some Reasons for Daily Exercise.

Any man who does not take time for exercise will probably have to make time to be ill.

Exercise gradually increases the physical powers, and gives more strength to resist sickness.

Exercise will do for your body what intellectual training will do for your mind—educate and strengthen it.

Plato called a man lame because he exercised the mind while the body was allowed to suffer.

A sound body lies at the foundation of all that goes to make life a success. Exercise will help to give it.

Varied, light and brisk exercises, next to sleep, will rest the tired brain better than anything else.

A man "too busy" to take care of his health is like a workman too busy to sharpen his tools.

Humorous.

Teacher—"I don't see why you can't understand this rule in arithmetic, Johnny. It didn't take me five minutes to understand it when it was first explained to me." Johnny—"Perhaps your teacher explained it to you better."

Factor—"I am afraid, Murphy, I'll have to raise your rent." Murphy—"Faith, I'm glad of that, sir." Factor—"Glad! You're the first I've ever heard say that." Murphy—"Begorra, I'm glad, because it gives me great trouble to raise it meself."

Even the horse that breaks a record still has it.

The tips we get for nothing are usually dear at the price.



"Just My Luck."

Gretchen and Hans are two little German children who came out to Manitoba a few years ago. They left a dear old grandmother at home in Germany, and one day they decided to write her a letter. This was soon scribbled with a lead pencil, but the children thought the address should be written with pen and ink. The small ink bottle was empty, so Hans climbed to a high shelf in the pantry and got a large one. Then he began to fill the small bottle; but, being in a hurry, as usual, most of the ink was spilled on the letter—as you see in the picture.

"Just my luck!" exclaimed Hans, dolefully, while Gretchen, who knew it was no use crying over spilt ink, tried to repair the damage with blotting paper. What black paws they had when they got through, to be sure! Hans said: "I read the other day that if inky fingers were dipped in water, and then rubbed with the sulphur end of a match, all the black marks would come off." They tried that plan, but I can't tell you whether it did much good. You can try it some day when you have inky fingers. You know the old superstition about it being lucky to find a horseshoe, or a four-leafed clover. Well, I don't think you will have much luck in your life if you spend your time in hunting for such things, but luck always comes in good time to the people who deserve it.

"A little maid in a gingham gown
Went hunting the meadows over:
Till the birds were tired, and the sun
Went down,
She sought for a four-leaf clover!"



"Just My Luck."

"For four-leaf clovers bring luck, they say;
And patchwork "stint" and dishes
Were tiresome duties of every day:
She wanted some fairy wishes!"

"With dishes unwashed and "stint" undone,
She tramped back home in the gloaming;
No four-leaf clover—no, never a one—
Was there to be had for her roaming!"

"A little maid in a gingham gown
Had washed all the dinner dishes;
Had finished her "stint" ere the sun
Went down,
Undreaming of fairy wishes.

"When just at her feet, as she raced in play
The blossoming meadows over,
She found what the other had sought
All day,—
She found, yes, a four-leaf clover!"

An American once put up a notice in his office window: "Boy wanted. Call here to-morrow morning."

Next morning a crowd of boys waited outside, and it was hard to make a choice among so many. At last the gentleman drove a nail into a tree and told the boys to stand some distance off and fire at it with a stick. He said that the boy who hit the nail after three trials should have the place. When they all failed they were told to try again next morning. Next day they went at it again with fresh energy, and one boy succeeded in hitting the nail every time, and it wasn't by good luck either. When asked the secret of his wonderful success he said that he was very anxious to get the place, as his father was dead and his mother was poor, so he had driven a nail into the barn at home and had practised nearly ever since. Of course he got the place, and as he always encouraged his luck by steady, patient perseverance, he was a very prosperous man—as he deserved to be. I don't care what your work is, luck will be on your side if you put heart into everything you do.

A girl in a departmental store soon worked her way up to the head of her department. The secret of her good luck was that she never grudged any

dry it before you come back." She did this, giving up a little of her precious leisure time for the sake of obligeing a poor country customer. And as she was always ready to oblige people in every way she could, her employers soon found out her value. Indeed the manager said she put as much life into her work as ten other women.

So if you are looking for good luck be sure and seek in the right place, and don't expect it to drop into your arms from the good-luck tree—for it doesn't grow on trees, but is manufactured by hand. If things seem to be going against you, don't make up your mind that you are born to be unlucky, as a boy once did who said:

"My name is Simpkins primus, I'm a most unlucky lad,
I sit by Brown secundus, who's a dreadful little cad;
He ran a needle in my calves, and when I gave a yell,
The master—that's old Boggles—said sarcastically: "Well,
My dear friend, Simpkins primus (he knows that makes me sour),
'Your voice is very beautiful, but stay in for half an hour.'"

"Bother Boggles" is my motto, for he loves to wear a frown
Like a cheerful little thundercloud that's always dropping down
With "Simpkins, I am certain I distinctly heard you wink;
Do you think that it is right to polish up your nose with ink?"

In wiping all my tears away I hadn't time to think,
But used a duster just employed for mopping up some ink!

My back is very tender, and I felt the brutal cane,
For, as the poet somewhere says, "the blows came down like rain."
I frolicked round about the room in ecstasy of woe,
And when at length my much-respected master let me go,

"Take you head, sir, to the housemaid,
'twill be handy as a mop,
If you wear such lovely collars you'll be taken for a fop."

Now tell me what on earth could be more innocent than peas?
But just because friend Boggles saw me with them, if you please,
He turned my pockets inside out and confiscated, then,
A knife, a comb, a button-hook, some toffee, and a pen,
Three peppermints, an apple-tart, and what has made me sad,
A sketch with an inscription, saying:
"Boggles is a cad."
COUSIN DOROTHY.

Gems of Thought.

In the depths of the sea the water is still; the heaviest grief is that borne in silence; the deepest love flows through the eye and touch; the purest joy is unspeakable; the most impressive preacher at a funeral is the silent one whose lips are closed.

Each man has an aptitude born with him to do easily some feat impossible to any other. Do your work.—Emerson.

THE CHEERFUL SUNBEAM.

One day a sunbeam met a cloud;
"Twas in the month of May,
Frowning, the cloud said, angrily,
"You're always in the way!"

The sunbeam smiled, and said, "My dear,
Why can't we work together?
The flowers need us both, you know,
Sunshine and rainy weather."

There has never yet been a cloud in this world that was not cleared away by sunshine.

A pleasant word is quickly spoken, but not quickly forgotten.

Godliness with contentment is great gain.

Whoever has a good temper will be sure to have many other good things.

The truest happiness comes from giving and sharing—not from possessing and hoarding.

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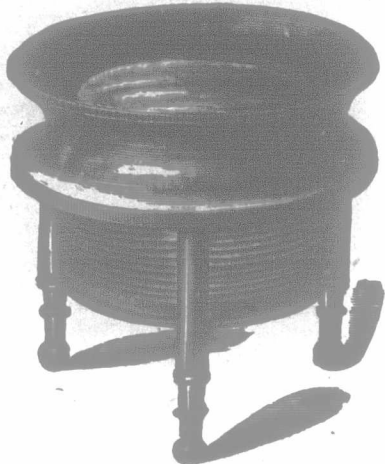
HOW MANY WOMEN HAVE TO DO THIS FROM DAY TO DAY?

MILBURN'S HEART AND NERVE PILLS are a blessing to women in this condition. They cure Nervousness, Sleeplessness, Palpitation of the Heart, Faint and Dizzy Spells, Weakness, Listlessness, and all troubles peculiar to the female sex.

Mrs. James Taylor, Salisbury, N.B., in recommending them says: "About eight months ago I was very badly run down, was troubled greatly with palpitation of the heart and would get so dizzy I would have to leave my work and sit down. I seemed to be getting worse all the time, until a friend advised me to try MILBURN'S HEART AND NERVE PILLS. I can truthfully say that they do all you claim for them, and I can recommend them to all run-down women."

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A MICROSCOPE



suitable for examining insects, weed seeds and the many tiny wonders of nature, will be given to anyone securing one new yearly subscriber to the Farmer's Advocate and Home Magazine at \$1.50 per annum. This is the cheapest and best weekly magazine available. It costs less than three cents per week. It is invaluable on the farm and in the home. Idle moments are well improved by showing this journal to neighbors unacquainted with its merits. We reward such services. Address

The Farmer's Advocate and Home Magazine,

LONDON, ONTARIO.

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We have for sale a very large and complete list of selected dairy farms, orchards, poultry ranches and suburban homes, in the valley of the celebrated Lower Fraser and adjacent islands on the coast. All in the neighborhood of Vancouver. Send for our pamphlet giving weather statistics and market prices of 27 different kinds of farm produce.

The Settlers' Association, 322 Cambie St., P. O. Box 329, Vancouver, B.C.

STAMMERERS

THE ARNOTT INSTITUTE, BERLIN, CANADA, for the treatment of all forms of SPEECH DEFECTS. Dr. W. J. Arnett, Superintendent. We treat the cause, not simply the habit, and therefore produce natural speech. Write for particulars.

OILS. We sell Cylinder Oils, 650 fire test, made from Pennsylvania stock, dark or amber color, as follows: 4-gallon jacketed can, \$2.50; 8-gallon jacketed can, \$4.00; half-barrel (25 gallons), \$10.50; barrel (50 gallons), \$18.00. We guarantee satisfaction. Anyone not pleased may return oil at our expense and we will return pay for unused portion. Our catalogue on application. Windsor Supply Co., Windsor, Ont.

WEDDING INVITATIONS ANNOUNCEMENTS AT HOME CARDS VISITING CARDS

All the latest specialties and up-to-date styles. Write us. THE LONDON PTG. & LITHO. CO. London, Ontario.



Unquestionably this is a season of work for almost every woman and girl who lives on a farm. Up in the morning before the first flush has gone out of the east, then go, go, until the stars above, if not "through the roof,"—isn't this the story for a great many? Sometimes, of course, one gets sick of it, and feels tempted to wish one were in town where women have comparatively so little to do. Yet, after all, one must remember that there are compensations. You have heard the story—have you not?—of the pilgrims, who were each compelled to carry a burden to a certain shrine. On the way this one grumbled and that one grumbled,—if only he had someone else's burden, how much easier it would be! And so, the story goes, because of their grumbling they were permitted to exchange burdens. Again they trudged on; but, behold, before many miles had been passed, each was anxious to have his own back again!

There are two compensations at least in regard to farm work which must appeal even to those who find no "pleasure in the pathless woods," no rapture on the lonely shore, and, presumably, there are a few such starvelings,—in the first place there is variety in it, and to a certain extent freedom; in the second, it does not worry. Only last week a young farmer's wife, who was once a teacher, in full possession of all the "short" hours and long holidays which are supposed to make the teacher's lot an easy one, said: "In a way I have more work to do now than ever in my life before, but I don't seem to mind it. It is different, you know. I am never worried now." It was the old question of work versus worry, and one more had spoken to bear witness to the truth, that it is worry, not work, that kills.

Of course, there is a very easy possibility of working too hard. One may keep at it, and at it, until one goes like a machine, early and late, with never a pause or bit of recreation; and, presently, the body, like any other machine, gives out. One gets into the chronically tired state, too tired to work as one "used to," too tired to read, or to enjoy one's self, almost too tired to think, a host of signs which proclaim the worn-out body, the necessity for recuperation and for turning a right-about-face in the way of living which demands so constant a strain on one's bodily powers. There is much truth in Thoreau's philosophy: "In short, I am convinced, both by faith and experience, that to maintain one's self on this earth is not a hardship, but a pastime, if we will live simply and wisely." In this matter of simplifying life and lessening work each must be her own architect. Each knows her own circumstances, and she must be a stupid woman indeed who cannot plan some little drudgery lessener if she applies her mind to the problem rightly.

When every device has been made use of there will still be plenty to do—that goes without saying—and for some people a great deal. In such cases, where there is positively little time for rest during "daylight," proper attention to the very prosaic matter of eating and sleeping will do much to keep up energy and do away with weariness. There is nothing that will make one feel more thoroughly miserable and "out" with everything and everybody than a diseased stomach, and there is nothing in the world that will put a stomach out of order more quickly than the habit of eating quickly and taking "a sup with every bite." Again, the constant worker must have sufficient sleep. While we sleep the work of repair goes on, and if we do not give it sufficient time to accomplish this we must suffer the consequences.

So much for work; now for worry. It is a fact that one day's worry is harder on one than seven days' work. Can you remember a day upon which you were given over to it? How did you feel? Perhaps the sun shone, the birds sang, and all the earth was glad and green—

but you didn't enjoy it a bit, did you? You felt how very true were the poet's words:

"Ah, lady, we receive but what we give, And in our life alone does nature live; Ours is her wedding-garment, ours her shroud! And would we aught behold of higher worth, Than that inanimate cold world allowed To the poor loveless, ever-anxious crowd. Ah! from the soul itself must issue forth A light, a glory, a fair luminous cloud Enveloping the earth."

And so you moped, and were neither a pleasure to yourself nor to anyone else. Your appetite failed; you could not sleep, and all the time you were conscious of that dull pain about your heart somewhere, which shows how surely the condition of the mind reacts upon that of the body. . . . And all this misery?—possibly about some little thing which vanished into thin air, and came to nothing. Now, when you look into it, isn't that usually the way? Do not many of the things about which we pine and fret come out all right in the end? Then why go more than half way to meet the trouble? Great calamities come to us comparatively seldom, and yet some of us are always anticipating them. Now all this is very foolish. The habit of worry can never do us or anyone else good, but only harm. It renders us incapable of working or thinking properly, makes us peevish, and wrinkled, and thoroughly uninteresting. We should fight it off, and if we will only try we will find out how easily this may often be done. Sometimes merely engaging in some interesting bit of work, going out to see a friend, or reading a very interesting book will work wonders for us in, tiding over the mood until all the world begins to look bright again. Above all, let us simply trust that all will be well, and then shall we forget to worry. Surely our faith may be as great as that of the grand old Stoic Epictetus, who said: "It is enough for me . . . to look up to heaven as a friend of God and fear nothing that can happen."

In conclusion may I add a few quotations from one and another who have written upon this subject? They are well worth reading:

"They are all discoverers that think there is no land when they can see nothing but sea."—Bacon.

"If I were you I would not worry. Just make up your mind to do better when you get another chance, and be content with that."—Beatrice Harraden.

"If we would only take the burden appointed for each day, we might easily manage it; but we choose to increase our trouble by carrying yesterday's over till to-day, and adding to our tomorrow's burden before we are required to bear it."—John Newton.

DAME DURDEN, "Farmer's Advocate" Office, London, Ont.

I am sure you will all be glad to welcome Katharine Blinkbonny, and invite her to our corner again. So you liked our last year's Ingle heading better, Katharine. There seemed to be more of it then—still we have our grate yet, and our rocker waiting for guests, and our cat. Sometimes I wish it were a real live cat, which might rub its nose on my face to let me know it was a friend. I love cats, don't you?

A PRACTICAL LETTER.

Dear Dame Durden,—May I come into your interesting corner again? The home-like "fireplace" is restful to weary eyes, and also to eyes which are not weary, although in last year's "Farmer's Advocate" it looked much more real and cosy.

Your "spring article" was not out of season after all, for the weather was quite spring-like when most of us read

it. Spring was late, but God's promises never fall (Genesis 8, 22).

The fresh cool breezes, how exhilarating; and the sunshine and shadow is all given us in love. "Shunshine and shadow!" How incomplete life would be without its shadows. All sunshine might cause us to wither and die. The shadows sometimes give us time to reflect to see where we stand in God's sight.

Does anyone ever have trouble softening hard or frozen butter in winter time? This would have been more useful last December, but there are cold days yet to come. Before washing the dishes, it is a good plan to have the butter cut and placed on a clean plate for the next meal; cover the butter on the clean plate with a glass cover (one off a fruit bowl will do), and keep in a cool or cold place; then the butter is ready at a moment's notice. In cold weather bring it to a warm place an hour or two before meal time, and it softens gradually, the glass in some way drawing the heat, yet preventing the butter from becoming greasy. It also prevents the particles of salt from rising on top, as it sometimes does when exposed to the air and heat.

When cleaning lamps, trim the wicks and always turn them down on a level with the brass parts which hold them. This is a good guide to have the wick trimmed evenly, and, as a result, you have a well-shaped blaze. Then by leaving it there until time to light the lamp, the oil does not trickle over the burner making such a disagreeable odor. Soft, soapy water, with a rinsing water and plenty of good, clean drying cloths, make clear glasses, but takes a long time if done every day; so, as a daily cleaning, we find that by moistening newspaper, rubbing them with it, then polishing with two cloths, they are quite clear.

"Amelia" speaks of corn meal improving pancakes. A cupful of graham flour or all graham flour makes them delicious. Towels will last longer if a loop of tape or cord is fastened in the end of the hem at each end. This allows the towel to be changed about as desired, and also gives it a good chance to dry.

Now is the time when mosquitoes and flies begin to enjoy coming in the house. If one cannot have good wire screens, the cotton netting does very well, and by careful handling may last two or even three years. When fastening on the window, cut it the required size, then cut thin strips of cedar, or some easily-cut wood, about half an inch in width; tack the cedar over the netting on the lower part of the upper sash and around on the frame. The wooden strips prevent the netting from tearing. If the window opens from the top, the netting may be fastened all around the frame in the same way. If it is an upstairs window, the screen can be put on from the inside by removing the sash.

I am pleased to know you take such a sensible and practical stand regarding "fashion," Dame Durden.

If it is in accordance with the rules of "Ingle Nook" to seek information, I should like to know what will remove stains which have been on table linen for a long time, also what will remove a coal-oil stain from a soft wood floor?

KATHARINE BLINKBONNY.

Can any of our readers answer these questions? If so, we shall be very glad, shan't we, Katharine? D. D.

The Rainbow.

There are seven sisters that live all day In a wonderful house of light; And they sail away in the twilight gray, Out on the sea of night. And never till morn are these sisters seen, For they stay in bed, they stay in bed— Violet, Indigo, Blue, Green, Yellow, Orange and Red.

But when it is day once more, once more, They rouse themselves from sleep; If the rain begins to pour and pour, It will soon be time to play bo-peep. But they wait till the clouds have almost fled; Then we say there's a rainbow overhead. It is only the seven sisters seen In the house of light at the open door— Violet, Indigo, Blue, Green, Yellow, Orange and Red. —St. Nicholas.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Fashion Notes.

No dress is so becoming to women as the light, airy attire suited to the summer weather, and she who is wise will avail herself of the privilege of looking, these hot summer days, just as charming as she can. Never, perhaps, was a wider margin given in the line of dress materials; it's enough to make one cool just to go into the stores and look at them, organdies, mulls, Swiss muslins, French chambrays, foulards, summer silks, prints, gingham, linens, ducks, crepe-de-chines, voiles and challies, piled up in billowy masses—enough to make one green with envy, and ready to buy a dozen on the spot, unless, unless—but let that pass. All the materials mentioned above are very fashionable this year, and are worn by old and young alike. Most of them are in the most delightfully soft colors, this being decidedly a season of half tones. Striking or decided shades are seldom seen, but dove grays, light champagnes, the palest of blues, greens and pinks, are in evidence everywhere, with black and heliotrope for the older folk. Even in the flowered goods, the soft coloring prevails, the pattern running as a suggestion rather than a bold announcement of design or tint. White materials are very much liked, and are always dainty and appropriate. Lace and insertion are the universal trimmings provided for these charming fabrics, with soft silk for the wide girdles, now so much worn with the flimsiest gowns. As a rule, these girdles are made quite deep, pointed at the back, and boned into place with featherbone. The silk then passes in soft folds to the front, where it is caught down by one of the pretty enamelled or dull silver buckles, which may be bought for thirty cents and upward. . . . Just a word before leaving the "coolth," as Kipling says, of these materials: If you are buying a summer dress and the clerk tries to press upon you some thick-looking material in a bright color or decided pattern, don't let yourself be persuaded into taking it. The chances are that he is trying to work off on you some old stock. Insist on having the daintiest, coolest-looking thing that you can find, and you will not be sorry for it.

A TALE WITH A MORAL.

The other day it was scorching hot down town—everywhere else, probably, but we are concerned with "down town"—the sun beat upon the pavement and was reflected back from the brick walls with a white shimmer. Into the midst of the shimmer, presently, meandered a girl who wore a bright red silk waist, and a hat covered with red poppies. She looked like a bit of the Torrid Zone, and one had an irresistible desire to look anywhere else but at her. Then there appeared another girl, whose dress had cost, probably, not more than half as much as that worn by the first damsel. It was the coolest of blue chambray, made in a simple shirt-waist suit, the waist laid in wide vertical tucks, the skirt in similar ones at the seams, ending at about eight inches above the hem. With this suit, she wore a white "corset-lace" belt with a silver buckle, a white collar with tabs, and a white ready-to-wear hat, trimmed with a few bands and bows of rather narrow black velvet ribbon. . . . After the scarlet lassie, this girl came like a refreshing breeze. One thought of a trillium in a shady wood, of a violet beside a cool, deep spring, of songs of vesper sparrows, and—but isn't the moral easy to read?

MAKING UP THIN MATERIALS.

In making up these thin fabrics, the style must be guided by the material. Ducks, chambrays, gingham, linens, crashes, and prints are almost invariably made with tuckings or plaits. Sometimes these run vertically as described above, sometimes horizontally around the dress. A cool green linen recently seen had a pointed yoke and cuffs of white, all-over embroidery. Below the yoke, the linen was gathered to form a slight blouse, with two tucks about an inch wide running around it. The skirt was made with a panel down the front, and from the panel, groups of similar tucks ran quite around the skirt, one pair

about the hips, another half way down, with three about the bottom of the skirt, which was cut with a pretty flare.

The organdies, mulls, Swisses, etc., look better frilled. Most of the skirts in these gauzy materials are made with a plain front gore, and slightly full the rest of the way around. The lower part may be trimmed with narrow, lace-edged ruffles, or with a deep frill "cut on the straight," from eleven to fifteen inches deep, according to the height of the wearer, which may be trimmed at the bottom with several rows of narrow tucks, and may have a heading of the goods or a band of insertion. In consideration of the laundering, the waist should not be too fussy, yet an airy effect should be aimed at. This may be attained by a yoke of lace or insertion, about which depends a berth edged with lace. Sleeves are still made close at the shoulder and full at the wrist, although a perceptible lengthening in the cuffs seems to point to the raising of the fullness to a higher position on the arm. When the yoke is of lace, the cuff should be made of the same material.

MADAME MODE.

Domestic Economy.

OUR HOME COOK.

She boasts of no great learning, she has no extensive yearning
For the knowledge gained at college or the higher sort of schools;
She does not show a passion ('tis the twentieth century fashion)
For the mystic, cabalistic fads and isms pushed by fools.

But ah, just keep a-looking at the maiden sweet a-cooking,

How she bakes the bread and cakes—the sight will fill you with surprise;

And, oh, the joy emphatic, oh, the pleasure most ecstatic,

In you resting when you're testing her fine puddings and her pies!

When bread is taken from the oven it should be exposed to pure air until perfectly cool before being wrapped in a bread blanket or put into a bread box. A bread box should always be perforated, so the air can have access to the bread. When bread is shut in an air-tight box it becomes moist and grows moldy. A good plan for keeping bread fresh is to put it in a large delft crock, with a loose-fitting lid. It retains its own moisture, is kept at a proper temperature, and is very easily cleaned.

Sometimes pieces of stale bread are used up in griddle cake making, even when sweet milk is the foundation. For one pint of milk, one cupful of bread crumbs may be used. Stir these together until quite smooth, then add one teaspoonful of melted butter and two well-beaten eggs. Add one-half teaspoonful of salt and a little flour. These are good when not too thick. A very little more milk must sometimes be added. The eggs are sufficient to make the cakes light, although usually baking powder should be sifted in with the flour in the sweet-milk cake. As when sour milk is used, the plain cake that uses no eggs is fully as good as the extravagant sort, and, of course, baking powder must be used with the sweet milk to take the place of the eggs.

A novel dish is a savory bread-and-butter pudding, and here is an opportunity of using up stale bread. This can be baked, steamed or boiled, the two latter methods being far preferable. Butter a pudding basin, or use clarified fat instead, put a layer of thin slices of bread and butter, then some slices of meat, or it may be cut up, if preferred, a sprinkling of chopped onion and parsley, some pepper and salt, and another layer of bread and butter until the basin is full, making the bread the last layer. Have a good teacupful of gravy ready; and if very thin thicken it with a little flour, beat up an egg and add to the gravy, pour the whole into the basin, and let it stand for ten minutes or so. Steam for two hours, or boil one and one-half hours.—[Ladies' Home Journal.

GOSSIP.

The Sunnyside herd of imported and home-bred Hereford cattle, one of the largest and best in Ontario, the property of O'Neil Bros., Southgate, Ont., some 15 miles from the city of London, and 4 miles from Lucan, on the main line of the G. T. R., were recently seen by a representative of the "Farmer's Advocate" peacefully grazing on the fertile fields of the beautiful farms of their owners, or comfortably housed in the spacious and well-appointed barns, as were the bulls and the younger calves. The splendid condition of the cows and heifers in the pastures fully sustains the reputation of the breed as ranking in the forefront of all the bovines as par excellence beef producers on grass alone. A prettier picture in rural life is seldom seen than that of a group of these white-faced beauties silhouetted on the rich green background of a sloping hillside pasture on a June day. And here at Sunnyside are to be seen scions galore of the aristocracy of the breed, modestly carrying the blood of a long list of prize-winners and champions of the Royal and International show-yards of two continents; the blood lines of which, as portrayed in their extended pedigrees the enterprising owners have an intelligent understanding and a fertile gift of expressing. At the head of the herd stands the peerless and prepotent sire, Imp. Onward, in his three-year-old form, a worthy son of the great March On, abundantly proving in his individuality as in his lineage, the well-worn aphorism, "blood will tell;" his sons and daughters being uniformly true to type and strong in the indications of breed character, and the inherent power to produce and perpetuate the class of cattle yielding the largest percentage of high-priced cuts of beef at the minimum of cost and the maximum of profit to the breeder and feeder and of satisfaction to the buyer and consumer. Space limits forbid individual mention of the sixty or seventy females in the herd, of varying ages; suffice it to say that one type runs through the herd, the type that characterizes the breed, and has made it popular with feeders, grazers and dealers the world over, while the capacious udders of many of the cows and the fine condition of the calves belie the impression entertained by some that they are indifferent milkers, and the young things bred in the herd are equal to if not better than their imported ancestors, showing that the owners have the genius and intuition at once of breeders and judges, as well as handlers of their favorite breed of cattle. It is pleasing to note the increasing demand for these excellent cattle, not only for the ranching country of the West, but also throughout Ontario and the Maritime Provinces, where the Messrs. O'Neil have made many sales during the last year. Two or three young bulls fit for service are yet for sale, and should be quickly taken, while the crop of bull calves and heifer calves is superb, and will meet the requirements of the most critical of buyers.

HACKNEYS FOR CANADA.

Mr. Robert Beith, M. P., of Bowmanville, Ont., has purchased in England the following Hackney stallions and mares: From Mr. Burkett, Pocklington, chestnut mare, Blamire Princess, sire Prince Henry III. From Mr. Petch, Smylett Hall, bay yearling colt Smylett Swell, sire Royal Denmark; chestnut mare, Smylett Duchess, sire His Majesty (this mare won several prizes last year, including first at Pocklington and Escrik). From Mr. Ford, Garton, the two-year-old stallion, St. David, sire President Roosevelt (this colt took second prize at the late Otley Show). From Mr. Holdridge, Cliffe, his two-year-old stallion, Cliffe Rosador, sire Rosador (he was commended at the Otley Show). From Mr. Toder, Meltonby, his bay yearling colt, Lord Meltonby, sire Royal Denmark (as a foal he had an unbroken record, and took second prize at the late London Hackney Show and second at Otley, in May). Mr. Beith purchased from Mr. Jebson, Pocklington, a three-year-old stallion, Wadworth Squire, sire Garton Duke, and a four-year-old riding cob, Smylett Model, sire Chocolate Junior (this cob is to carry one of the Canadian Senators).

GOSSIP.

A thing that is for you to do nobody else can do.
Undone by you, it lacks just that which you only can put into it.

Conceal all thou can'st of things unsightly;
Compare thine own lot with those who have less;
Think of thyself seldom and lightly;
Live that thy life some others may bless.

Messrs. Hamilton & Hawthorne, of Simcoe, Norfolk Co., Ont., importers and breeders of Percheron horses, sail to-day for France, for a number of Percheron stallions, and expect to be back about the last of August, with a carefully selected consignment.

Mr. George D. Fletcher, Binkham, Ont., in ordering a change of advertisement, writes as follows: "I have had ready sale this spring for my young bulls, which I had advertised in your paper, and may say I have never had a better trade than during the past season. My young stock are coming along nicely, and are a promising lot. My present calves are sired by Spicy Robin =28259=, Crimson Ribbon, by Imp. Blue Ribbon, dam Crimson Fuchsia 12th, and Imp. Joy of Morning. My cows are now almost all either bred to or have calves at foot by Joy of Morning."

At this season of the year there is apt to be a craving for variety. The warm weather suggests garden vegetables which are not yet attainable, except at exorbitant prices, and the prudent housekeeper is likely to fall back on that popular substitute—canned goods. Now the canned goods are all right—sometimes. They would be all right, I might almost say all the time, if proper care were taken about opening the cans. With tomatoes, especially, it is necessary to empty the can immediately it is opened. The air attacks the acid in the tomatoes, that in its turn attacks the tin, and you have a poisonous, disagreeable salt. People are often stricken with a serious and sometimes fatal illness on this account. More frequently the attack is not so severe, and is never credited to the innocent-looking tomato can.

SUFFOLK STALLION, ONTARIO.

Mr. J. R. Johnson, Springford, Oxford County, Ontario, writes the "Farmer's Advocate" as follows: "In your issue of June 9th I see an enquiry about the Suffolk stallion, Ontario, asking his age and former owner. I owned him three years previous to last April. He was foaled in 1891, and was bred by Joseph Beck, of Thorndale, Ont., who imported his sire and dam from England. Ontario is recorded in England, in the Suffolk Punch Studbook. I will gladly answer any enquiries about this horse, having had him three years in succession on same route, and I have reason to believe if he were here again he would have more than he could do, having proven himself a very successful sire."

QUEER EPITAPHS.

"Here lies the body of Jonathan Round,
Who was lost at sea and never found."

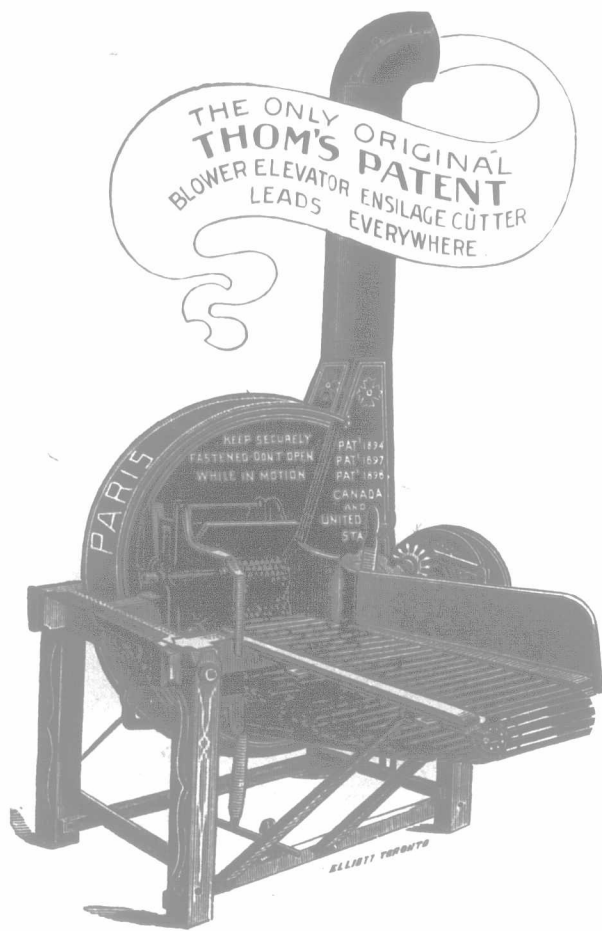
"Here lie the bodies of two sisters dear,
One is buried in Ireland, and the other is buried here."

Near by, in the same cemetery, is the joint tomb of three wives of a farmer who formerly resided at that place. His first wife was originally buried in the neighboring village of Palmer, and during the removal of her remains a portion was lost. The bereaved husband, being a very exact and accurate man, would permit no deception, even in an epitaph, so after the stone was erected, he had carved upon it the following:

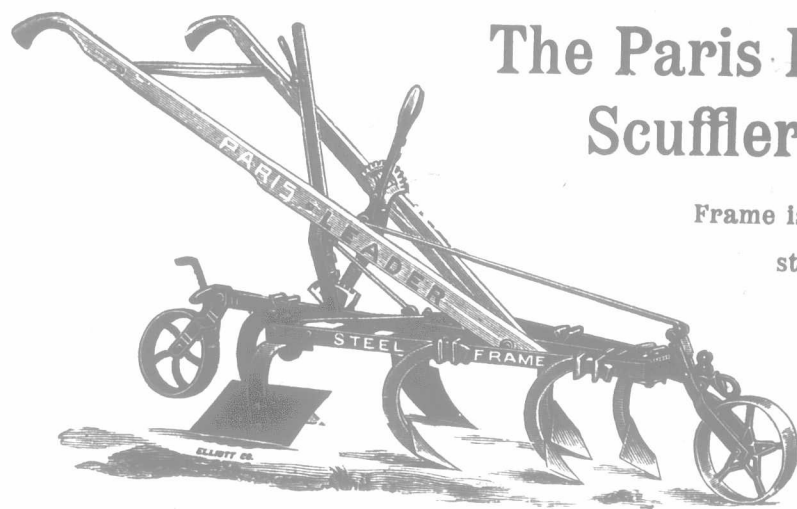
"Here lies the dust
Of the second and third wives of
William Blount
And part of his first."

Another:
"Here lies the body of Susan Jones,
Who lost her life on a heap of stones;
Her name was Smith, it was not Jones,
But Jones is put to rhyme with stones."

Paris Implements Are Second to None



Represents No. 13B, 16A or 16 B, with Large Feed Rolls.



The Paris Leader Scuffler Still Leads

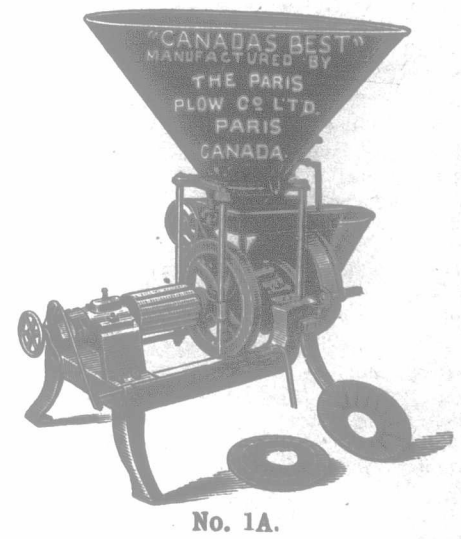
Frame is made of Steel and is very strong and rigid.

Can fill orders Promptly

Blowers and Grinders For All Kinds of Power

SEND FOR LARGE ILLUSTRATED CATALOGUE OF Walking and Riding Plows, Scufflers, Drag and Disc Harrows, Manure Spreaders and other implements

A Thoroughly Up-to-date Line Manufactured by



No. 1A.

Paris Plow Co., Limited, Paris, Canada

GOSSIP.

PROMISCUOUS BREEDING OF CATTLE

The above definition is applicable to the methods of cattle breeding too much in practice. Time and experience have proved to me that the best way to obtain the class of cattle one requires is not to cross at all, but to improve the individual breed considered most suitable for one's object. Everyone who resorts to crossing takes a step in the dark. The first cross of two breeds may happen to produce what the breeder aims at, either to improve the milking propensity or increase the size of the carcass, and an aptitude to fatten where beef is required. But after the first cross comes the difficulty, and as a rule each subsequent cross will prove disappointing, until the original qualities of each breed are quite lost sight of.

Some years ago a herd of cross-breeds were found on a prize farm, which were much praised by the judges and commented upon in the press, but in a few years' after, when the herd was dispersed, they had degenerated into a most ordinary herd, to use the mildest term possible. Many farmers and small breeders detest the word pedigree, but it is the abuse and not the use of the pedigree animal that has caused the prejudice. It is an old saying, "The bull is half the herd," and so it would prove under reasonable circumstances; it is the way the bull is chosen and treated that often renders the old adage untrue.

Our large shows and sales of pedigree bulls are said to be conducted for the benefit of farmers and other breeders, and a nominal reserve only is allowed in some cases to further this object, but it is the way the bulls are compelled to be fed to render them free from ridicule at such exhibitions that is at fault on the one hand, and the irrational after-treatment on the other, that causes so

WHITMAN'S "WORLD'S" VICTORIOUS IN USE STANDARD "BALING PRESSES" LINE IN AMERICA. HAVE NO EQUAL AGRICULTURAL MACHINERY CATALOGUE ST. LOUIS MO.

LARGEST & MOST PERFECT GUARANTEED TO ALSO LARGE LINE FIRST CLASS SEND FOR WHITMAN AGRIC. CO.



You might as well turn your labor into money as lose it.

Do you know that three barrels of Bordeaux mixture, costing 26c., and 8c. worth of Paris Green, at a total cost of 34c. each barrel, through a SPRAMOTOR, will prevent both the blight and bugs, and change your yield from practically nothing in a bad year to 400 bushels per acre? Full particulars free.

SPRAMOTOR CO.,
68-70 King St., London, Ont.

much prejudice against pedigree. The bulls are mostly reared on new milk and other forcing foods up to the day of show and sale, and have probably never been used. This may be looked over to a certain degree where his progeny is required for breeding purposes only, as it shows his aptitude for laying on flesh, but where milking properties are required careful breeders will never think of buying a bull before seeing his dam, and satisfying themselves that he is descended from a type of good milkers with well-shaped udders.

Now, after the pampered bull is bought, what too often happens? He is tied by the neck and gets no exercise except when required out for work, and is often fed on what the cows or other cattle leave, or some rough food, and expected to serve all cows as they come in season, and possibly those of one or two neighbors. The consequence is he sinks in condition and has a dejected appearance, which the owner attributes to pedigree,

saying a "cross-bred would feed where he would starve," and who can be surprised if the calves sired by him are weak and puny, and cast a lasting stigma on pedigree, whilst it is the fore and after treatment (the two extremes) that is at fault? I do not know which is most to blame—the breeder or purchaser. Possibly the latter, for if he would only buy animals in good store condition the breeder would cater to his requirements, and if the purchased bull was properly fed and exercised and used judiciously, the result would be sound, robust progeny that would satisfy the ideal of each breeder and render crossing unnecessary. If proof is needed of what I have said, take the improvement in the classes for "pedigree milking Short-horns" since Mr. R. Stratton first moved in the matter, also see to what perfection the Shire horse has attained, and all has been done by pedigree and not crossing.—[Herdsmen, in the Live-stock Journal (British).

Concerning the Suffolk Punch horse, Ontario, Mr. Thos. Early, V. S., of Tillsonburg, writes: "I have known him for years. It would be an easy matter for parties concerned to come to Oxford and inspect his stock. He has served more mares than any other stallion that ever was here, and as a heavy sire, his equal has never been here. Parties wishing to see his colts should come to Tillsonburg, and it will be a pleasure to me to show them."

MORE CLYDESDALES FOR CANADA.

Mr. Robert Ness, Howick, Quebec, has sailed from Glasgow with a carefully-selected lot of thirteen stallions and mares. He had seven Clydesdales, purchased from Messrs. A. & W. Montgomery, Netherhall and Banks, Kirkcubright; two Clydesdale—a four-year-old and a three-year-old stallion—purchased from Mr. James Kilpatrick, Craigie Mains, Kilpatrick; three French coaching horses, purchased in France, and one Hackney mare. Amongst the Clydesdales are two typical bay fillies, got by the Glasgow premium horse, Royal Carrick (10270), which also gained second prize as an aged stallion at the H. & A. S. Show, at Inverness, and several high-class district premium. These are very like mares that would prove highly satisfactory as breeding animals. Amongst the stallions may be specified a three-year-old got by the famous £1,300 yearling, Lord Colin Edwin (9280), afterwards the Glasgow, West Lothian, and other districts premium horse; a big, handsome four-year-old horse, got by the celebrated Ethiopia (5750), so long stud horse at Kerr, out of a mare by that great Cawdor Cup champion, Prince of Caruchan (8151); and a beautiful two-year-old stallion, bred by Mr. Adam Gray, Ingleston, and got by the champion sire, Baron's Pride (9122). Other Clydesdales in the shipment are got by the favorite breeding horse, Up-to-Time (10475), and other noted sires. Mr. Ness is an old hand at the business. He knows what suits his clients, and this time he has a good lot of sound, typical Clydesdales of the best breeding.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Required Help to Move in Bed.

Was a Great Sufferer and Almost in Despair—New Hope and Strength Came With the Use of

DR. CHASE'S NERVE FOOD.

This great food cure is doing wonders for weak, worn-out and discouraged women.

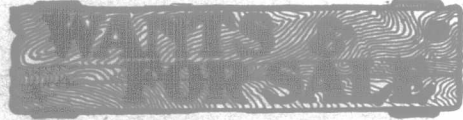
Many medicines which are prescribed in such cases are merely stimulants which give temporary relief and arouse false hope.

Because Dr. Chase's Nerve Food actually forms new, rich blood and increases the vitality of the body, its benefits are thorough and lasting and its cure permanent.

Mrs. M. A. Clock, Meaford, Ont., writes: "Three years ago I became very much run down in health and suffered from weak, tired feelings, indigestion and rheumatism. At times I was so badly used up that I required help to move in bed. While sick and down-hearted I received Dr. Chase's Almanac and sent for some of Dr. Chase's Nerve Food.

"Under this treatment I soon began to improve, and by the time I had used eleven boxes of Dr. Chase's Nerve Food I was happy to find myself strong and well again. I often think of what a lot of money I spent for medicines which did me no good, and believe I owe my life to Dr. Chase's Nerve Food. I hope women who suffer as I did will benefit by my experience and use Dr. Chase's Nerve Food."

Dr. Chase's Nerve Food, 50c. a box, at all dealers, or Edmanson, Bates & Company, Toronto. To protect you against imitations, the portrait and signature of Dr. A. W. Chase, the famous recipe-book author, are on every box.



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

WANTED—Salesmen for Auto-spray—best compressed-air hand sprayer made. Splendid seller. Liberal terms. Owers Bros., Galt, Ont.

A GOOD PLAIN COOK, (female) young or middle-aged. \$20.00 a week, with board. Apply by letter or in person to O. M. Finch, Palace Cafe, London, Ont.

GENUINE
Pratt's Astral Lamp Oil

SOLD IN ALL COUNTRIES,
AND RECOGNIZED AS THE
HIGHEST-GRADE OIL MANU-
FACTURED.

WHOLESALE ONLY.

THE QUEEN CITY OIL CO., Limited,
TORONTO.

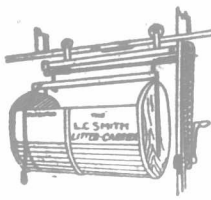
THE L. C. SMITH
FEED LITTER CARRIERS.

Patented June 16th,
1903.

Can be adapted to
any barn or farm
building.

Write us for particulars

LYMAN C. SMITH,
OSHAWA, ONT.



QUESTIONS AND ANSWERS.

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

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

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

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

Veterinary.

NUCKLING.

Colt, now four weeks old, has walked back on the pastern joint of her front feet with toes turned up in front since birth. We were advised to bandage them, which we did. The bandage has now raised sores all around the joint, but has straightened them so that when lying down they are straight, but when she gets up they go back as bad as ever.

J. B.

Ans.—The raw surfaces will make it difficult to treat most effectively. You had better place the joints under a stream of cold water for about one half hour twice a day, and apply a mild lotion of carbolic acid and water once per day to heal the sores. Keep in a clean stall with plenty of soft bedding, and see that the foal gets lots of nourishment.

Miscellaneous.

LINE FENCING.

If A buys a private lot on corner of B's farm has B any right to fence same, or keep fence in repair?

Ont. SUBSCRIBER.

Ans.—Assuming that there is no agreement to the contrary between the parties, B must make, keep up and repair a just proportion of the fence which is to mark the boundary between his land and that of A.

GOOSEBERRY SLUGS.

Within the last few days, our gooseberry bushes, which are loaded with fruit, have become almost covered with worms. Kindly give some way of killing the worms without injury to fruit or bush?

W. M.

Ans.—Spray or sprinkle them with a solution of Paris green, a teaspoonful to a pail of water. The poison will do the fruit no harm. One could not eat enough berries to take harm from the poison on them, and, in any case, they should be washed before using.

CLOVER ENSILAGE.

How would it do to fill a cement silo with clover? Will it keep? How should it be put in?

J. S.

Ans.—Clover is extensively used in some parts for ensilage, but is not always ensiled successfully, probably owing to the faulty construction of the silos. We would not like to advise a person to put a lot of clover into any kind of a silo, unless he had had some successful experience in handling clover this way. The best time to cut it is just when the first early bloom is beginning to wilt. Leave it to dry a few hours until it is lighter to handle, then place in the silo. As it is not as heavy as corn, it should be kept quite level in the silo and well tramped and covered when the crop is all in.

POISON IVY—INJURED SHOULDER.

1. How can I get rid of poison ivy? It grows around a well close to the house, and is spreading rapidly.

2. Have a colt which has been worked with the draft out of place on his shoulders, and one has swollen and is hard.

G. McL.

Ans.—1. When the plant is dormant in winter, cut it entirely out. Handle it with gloves to be safe, and burn it, as it will leaf out in the spring.

2. The shoulder is inflamed, and probably pus is forming. Bathe it with hot water; give rest, and if the part continues hot and hard have a veterinarian examine for pus. Put on a well-fitting collar, and adjust the draft to the proper part.



MANUFACTURERS OF

Farm Wagons and Trucks

COMBINATION RACKS, ETC.

Strictly First-class. Fully Warranted.

ASK YOUR DEALER FOR THEM, OR WRITE TO US DIRECT IF NO AGENT NEAR.

WOMAN'S BEST FRIEND.

Women suffer all about us with headache, backache, loss of energy and spirits, Nervous Dyspepsia and many other ailments which make life almost unbearable. Every woman can be immediately relieved of this suffering if upon the first sign of derangement she would take a dose of

BEECHAM'S PILLS

By following the instructions with each box of pills thousands of women all over the world have saved their lives.

BEECHAM'S PILLS purify the blood, give strength and vigor to the digestive organs, give vim and tone to the nerves and put the whole body in a healthy condition. A box of BEECHAM'S PILLS should always be kept in the house as, like a "stitch in time," they will invariably have the most beneficial effect and save much future worry and anxiety.

Sold by all Druggists in Canada and U. S. America. In boxes, 25 cents.

"RATHBUN'S STAR"

BRAND

The Leading
Canadian
Portland Cement

MANUFACTURED BY

The Canadian Portland Cement Co.

Limited

Capacity of Works - - 500,000 Barrels per Year

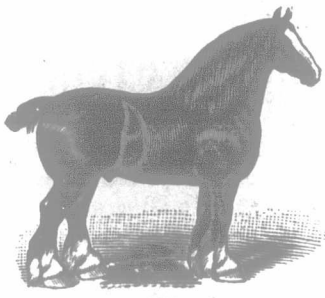
SALES AGENTS:

The Rathbun Company

310-312 Front St. West

TORONTO, ONT.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

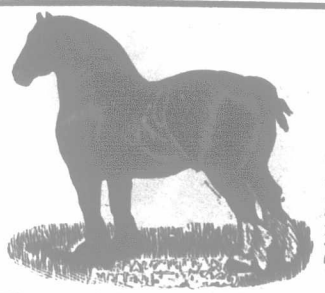


Clydesdales.
We have a number of YOUNG CLYDESDALE MARES AND FILLIES for sale, and any person wanting to purchase a good young brood mare should come and see what we have before buying elsewhere.
HODGKINSON & TISDALE
Beaverton, Ont.
Long-distance 'phone in connection with farm, 70 miles north of Toronto, on Midland Division of G.T.R.

IMPORTED CLYDESDALES

I have just returned from Scotland with a fine lot of Clydesdale stallions of great breeding and individuality. They are indeed a fine lot and just the kind the country needs. Write for prices and description, or, better still, come and see and be convinced of what I say.

WM. COLQUHOUN, om **MITCHELL P. O. AND STATION (G. T. R.), ONT.**



International Importing Barn
J. B. HOGATE, Prop., SARNIA, ONT., IMPORTER OF
CLYDESDALE, SHIRE AND HACKNEY STALLIONS
Last importation Nov. 9th, 1903, consisting of stallions sired by Sir Everard, Hiawatha, Black Prince of Laughton, King of Kyle, Sir Thomas, Royal Carrick, Clan Chattan, Lord Lethian, Balmedie, P. Charming, Prince of Airies, and from noted dams. Several are tried horses. If you want first-class horses at right prices, terms to suit, write for particulars, and come; I will pay one-half railroad fare. Think I can save you money.
H. H. COLISTER, Travelling Salesman.

QUESTIONS AND ANSWERS. Veterinary.

COWS CHEW BOARDS, ETC.

Our cows are always chewing boards, bones, etc.,

Ans.—This is due to a want of phosphates in the system. Give all the salt they will take, and give one ounce phosphate of lime in a pint of cold water as a drench to each night and morning, or give it in a little bran or chop.

SUPPURATION OF LYMPHATICS

Shortly before calving a vein on the inside of my heifer's hind leg dilated, and lumps the size of small marbles formed from the udder to the hock. The inside of the right fore leg is similarly affected. An abscess formed, and is now running, and the leg is swelled.

Ans.—The vessel is a lymphatic vessel, not a vein. The disease is a species of blood poisoning, involving the lymphatics of the limbs. It is probable there will be the formation of more abscesses. I do not consider her milk fit for use, and there is a doubt whether a cure can be effected. If fresh abscesses form, open them, and flush out the cavities three times daily with a five-per-cent. solution of carbolic acid. Give, internally, one ounce hyposulphite of soda three times daily. If appetite fails, give tonics, as dram doses of sulphate of iron, gentian, ginger and nux vomica twice daily.

Miscellaneous.

COW EATING PLACENTA.

Cow calved a few days ago, but unfortunately no attendant being near, she ate the cleaning. Will it injure the milk for use, and if so, for how long? What is best to do in that case?

Ans.—It is the usual practice to remove the placenta when dropped to prevent the cow eating it; but where cows are in a loose box at calving, it often happens that it is eaten, and we have never known any harm to come of it. One of the best English stockmen we ever knew used to say on this point, "Never interfere with nature," and it is quite possible that in many cases it has a good effect on the cow. The milk, in any case, should not be used for anything but calves and pigs before the fifth day.

POULTRY AND EGGS

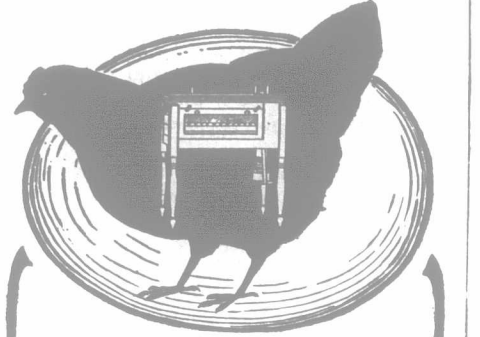
Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred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

POULTRY, cat, dog and bird supplies. Large catalogue free. Morgan's Incubator Works, London, Ont.

BUFF Orpington eggs, \$1 per 15. My own importation. Grand layers. C. E. Brown, Haysville, Ont.

A. E. SHERRINGTON
WALKERTON, ONT.
Importer and breeder of **BARRED P. ROCKS** exclusively. Eggs, \$1.00 and \$1.50 per setting of 13.

EGGS We offer eggs for hatching from Barred Plymouth Rock hens, good in size, shape, color and laying qualities, mated with good cockerels, at \$1 per 15, \$2 per 45 \$4 per 100. Circulars free.
H. GEE & SONS, Selkirk, Ont.



You should own an incubator—the best incubator—the **CHATHAM INCUBATOR**
There is big money in raising poultry with a Chatham Incubator. We are receiving letters every day telling of the successes it is bringing to farmers and poultry raisers all over Canada. We sell the Chatham Incubator on the best terms ever offered. We ship it to you and prepay the freight; we give you three years to pay for it in. Write us for full particulars and catalogue.
THE M. CAMPBELL FANNING MILL CO.
Dept. 301 Chatham, Canada

WHEN YOU BUILD OR REPAIR

We can help you to do it cheaply and permanently with our Sheet Metal building materials. They are ornamental, durable, lightning and fire proof.
Write us about your plans and ask for our free catalogue.
The Metal Shingle & Siding Co., Limited
Preston, Ont.

Advertise in the Farmer's Advocate.

GOSSIP.

Two high-class yearling Shorthorn bulls of notable Scotch-bred families are advertised for sale by Mr. Richard Gibson, of Delaware, near London, Ont., who has also a superior herd of imported and home-bred Yorkshire pigs, and a first-class flock of Shropshire sheep.

Spring lambs sold at the Union Stockyards, Chicago, last week up to \$7.50 per 100 lbs., and yearlings up to \$5.35. The highest price for cattle on the same day in that market was \$6.75 for one carload; price ranging for cattle of medium to good quality from \$5.90 to \$6.65.

The noted Scotch Shorthorn bull, Wanderer's Gift (80211), bred by the late Mr. W. S. Marr, of Uppermill, and for the last three years at the head of the fine herd of Mr. J. L. Reid, Cromleybank, Ellon, has recently been purchased by Mr. C. M. Bruce, The Langcot, Forres, for use in his excellent herd. He is a roan four-year-old son of Wanderer (60138), and of Goldie 37th, by William of Orange.

Within a short distance of Millbrook, Ont., a station on the Port Hope and Midland branch of the G. T. R., is the home of Patterson Bros., importers and breeders of heavy and light horses, and Shorthorn cattle, who have at present five imported Clydesdales on hand—two stallions and three 3-year-old mares. The stallions are at present doing a heavy season in the stud. Sir Hedderwick (10645) is a seal brown, for which this firm refused \$4,000. His sire is Sir Everard 6353; his dam, Nance, by Belted Knight (1395). Sir Hedderwick is thus half-brother to the noted Baron's Pride, being by the same sire. The other horse, Prince Alexander Albert (10840), is a Prince of Fortune, and a grandson of Prince of Wales (673), and his granddam on the sire's side, Lady Bell, was by Darnley (222). Seldom is better breeding found than is combined in the pedigrees of the above-mentioned horses. We had not the privilege of seeing them, as they were away from home, but we were informed by disinterested parties that they are big, good ones, and well patronized. The fillies are as follows: Handsome Lily (5927), Vol. 26, bred by W. Taylor, Park Mains, Renfrew, Scotland, sire Handsome Prince (10356), by Prince of Wales; Miss Mitchell, Vol. 26, dam Lily of Dalwaddy, sire Cannongate [3371] (10521), whose dam was by Prince of Wales; Craigie Lass, Vol. 26, dam Jess of Glenleith, by Royal Reward, sire Monarch of Craigie (14656), by Prince of Kyle. The breeding of these fillies is of the best, as well as their individuality. They have been bred to the best of sires, and are for sale, and the opportunity of getting so much good blood combined is not offered every day.

The Shorthorns number a dozen head, and are headed by the good bull Prince of Albion, of the Stamford family, bred by Shore Bros., White Oak; sire Riverside Stamp =23589; dam Stamford Lucy 5th, by Hopeful, imp., =54551. The females that this sire is being used upon with marked success are of the Duchess, Margold and Gloster families, and are a straight, well-developed, useful lot.

TRADE TOPIC.

CIDER MACHINERY.—The 1904 catalogue of the Boomer & Boschert Press Co., of Syracuse, N. Y., cannot fail to be of interest and value to everyone identified with the cider-making industry. In addition to showing and listing a complete line of the latest and best machinery, a number of pages are devoted to facsimile reproductions of letters from various well-known firms who are landmarks to the trade. This catalogue is free on request to the Boomer & Boschert Press Co., Syracuse, N. Y. Send for it.

\$30.00 to Colorado and Return Via Chicago, Union Pacific & North-Western Line. Chicago to Denver, Colorado Springs, and Pueblo, daily throughout the summer. Correspondingly low rates from all points east. Only one night to Denver from Chicago. Two fast trains daily. B. H. Bennett, 2 East King St., Toronto, Ont.

Lump Jaw
Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use **Fleming's Lump Jaw Cure**
No trouble—rub it on. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free illustrated book on Lump Jaw and other diseases and blemishes of cattle and horses. Write for it today.
FLEMING BROS., Chemists,
45 Front Street West, Toronto, Can.

"THE REPOSITORY"
WALTER HARLAND SMITH, Prpp.



Cor. 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.

Imported Clydes & Shires Shorthorns & Yorkshires

Five Clydesdale Stallions, one Shire Stallion, three Shorthorn Bull Calves, imp. in dam; a few imported Heifers, and imported Yorkshire Hogs. Clydes by such sires as Prince of Carruchan, Prince Stephen, Prince Thomas and Royal Champion.
Write for prices, or come and see.
GEO. ISAAC,
Cobourg Station, G. T. R., COBURG, ONT.

DEATH TO HEAVES
NEWTON'S Heave, Cough, Disemper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can, mail or express paid.
Reveries, Hamocky Co., Toledo, Ohio. Your druggist has it or can get it from any wholesale druggist.

REGISTERED HEREFORDS.
For sale: 5 young bulls, 16 and 17 months old; also some young heifers, 15 to 17 months; all from my stock bull, Prince of Wales 1267.
M. S. LEE, Williamsford P. O., Ont.
Holland Centre Station, C. P. R.

THE SUNNYSIDE HEREFORDS
headed by imp. Onward, by Match On, for sale, 10 choice bulls, imported and home-bred, from 1 to 2 years old; also 1 bull 13 months old, a high-class herd-header. All bulls are of the heavy, low-down, blocky type. We can yet spare a few choice cows and heifers. Inspection invited.
O'NEIL BROS., Southgate, Ont., Lucan Station, G.T.R.; Iderton or Denfield on L.H. & B.

SHORTHORN BULLS FOR SALE.
We have three choice young Shorthorn bulls now on offer, one Cruickshank Mysie, and one Scotch Jessamine, each 12 months old and sired by Spicy Robin; and one Cruickshank Orange Blossom, from imported sire and dam; also females of all ages. Herd headed by imp. Joy of Morning (76829), winner of 1st prize at Toronto Exhibition, 1903; also S.-C. White Leghorn eggs for sale at \$1 per 13.
GEORGE D. FLETCHER, Binkham, Ont.

WANTED: AGENTS
to sell for "Canada's Greatest Nurseries." Bigger and better selection of varieties and specialties than ever. Liberal terms; pay weekly. Exclusive territory. Outfit free. Send 25 ct. for our pocket Microscope. Everyone should have one to examine plants and trees for insects. **STONE & WELLINGTON, Toronto**

RUPTURED Horses, Colts & Calves CURED.
Circulars and Testimonials Free.
MOORE BROS., V. S., Albany, N. Y.

RAISE YOUR CALVES
cheaply and successfully on
Blatchford's Calf Meal
AND SELL THE MILK.
Free Pamphlet - - How to do it.
ADDRESS
CHAS. COWAN, LONDON, ONT.

Good Bulls! Cheap Bulls!
One red, ten months old; one roan, thirty months old; well bred and good individuals I am quoting these at prices that will tempt you to buy. Write at once for description and prices. Grand crop of LAMBS from imported and home-bred ewes.
A. D. McGugan, Rodney, Ont.

First-class Shorthorns—Young cows and heifers of fashionable breeding. Also Shropshires of different ages. Write for prices, etc., to **T. J. T. COLE,** Bowmarville Stn., G. T. R. o Tyrone P. O.

Shorthorns and Yorkshires
Present offerings: Young stock, either sex. For price and description write to **W. J. MITTON** Mapleton Park Farm, THAMESVILLE, ONT.

Shorthorns, either sex; also Oxford rams. For prices and particulars write to **RICHARD WILKIN,** Springfield Stock Farm, o Harriston, Ont.

HIGH-SHORTHORN CATTLE DOW-SHEEP
Present offerings: Young stock, either sex. For prices and particulars write to **JAN TOLTON & SON,** Walkerton, Ont.

For Sale: 3 SHORTHORN BULLS
from 12 to 30 months old, from Scottish Baron -4042- o
H. WOLDING & SONS, Thamesford, Ont.

SHORTHORNS, 8 young bulls, 11 heifer calves, yearlings, two-year-olds and young cows for sale. Several Miss Ramdens and the very best families represented. Prices moderate. **G. A. BEODIE,** Bethesda, Ont. o
Stouffville Station.

SHORTHORNS Present offerings: Roan Robin 29575, a Watt bull; Prince Charlie 5412, a Russell bull. Also a few good females. For price and particulars write to **W. W. WALLACE,** Woodland Farm, Mount Forest, Ont.

High-class Shorthorns—Two bulls ready for service. Also young cows and heifers of different ages, of the Lavinia and Louisa families. For prices and particulars apply to **BROWN BROS.,** Lakeview Farm, Orono P. O. o
Newcastle Station, G. T. R.

SHORTHORNS and SHROPSHIREs.
Present offerings: First-class young Shorthorns, mostly heifers. For price and particulars write to **GEORGE RAIKES, BARRIE, ONT.**

HIGH-CLASS SHORTHORNS.
8 heifers, in calf to an imported Scotch bull; 6 bulls ready for service; about 15 heifer and bull calves, from 2 to 12 months old. Prices very reasonable, considering quality. Inspection invited. **FRANK W. SMITH,** Walnut Farm, Scotland, Ont. o

SHORTHORN AND SHROPSHIREs.
FOR SALE: Young bulls and heifers from best blood. Shearlings and lambs bred from imp. stock on side of sire and dam. Prices reasonable. **E. E. PUGH,** Claremont P. O. o and C. P. R. Sta.

QUEENSTON HEIGHTS Choice Stock of any age.
SHORTHORNS

Write for what you want.
HUDSON USHER, Queenston, Ont.

Carnefac for Turkeys

Almost every feeder in Canada knows that Carnefac Stock Food is the cheapest and best tonic and regulator for Calves and Hogs. But some are not aware that Carnefac Poultry Food is the only thing they can procure to prevent their young Chickens and Turkeys from drooping and dying in this wet weather.

Prof. Graham, of O. A. C., Guelph, will tell you to use it and no other preparation.

Ask your dealer for it, or write us direct.

The Carnefac Stock Food Co.,
WINNIPEG. 65 FRONT ST. EAST, TORONTO.

THOROLD CEMENT
AND
PORTLAND CEMENT

FOR BARN WALLS AND FLOORS, HOUSES, SILOS, PIGPENS, HENHOUSES; AND SEWERS, TILE, ABUTMENTS AND PIERS, FOR BRIDGES, GRANOLITHIC SIDEWALKS; IN FACT, FOR ALL WORK THAT CAN BE DONE WITH CEMENT.

Estate of John Battle THOROLD, ONT.
WHOLESALE IN CAR LOTS ONLY.

H. J. Davis, Woodstock, Ont.
Breeder and Importer of **SHORTHORNS AND YORKSHIRES.**



A fine lot of imported and Canadian-bred heifers, with calves at foot by Bapton Chancellor, imp. for sale at reasonable prices; of the best Scotch families. Also some good yearling heifers, nicely bred.

WE HAVE FOR SALE
7 Shorthorn Bulls

of serviceable age and of present-day type. 1 imp. in dam, 3 from imp. sire and dam, 3 from imp. sire, and from Scotch dams of such noted families as Rosebud, Claret, Missie, Stamford, Augusta and Strawberry, mostly sired by imp. Greengill Victor, a Princess Royal, bred by W. E. Marr, and one of greatest bull-getters living. Also can sell a number of choice Scotch heifers, in calf. If you want a herd header, or cows that will produce them, write us. Herd numbers 75. Bull catalogue on application.

R. MITCHELL & SONS,
Nelson Ont., Burlington Jct. Sta.

HILLHURST FARM
(ESTABLISHED FORTY YEARS.)

SHORTHORN herd numbers 30, with Imp. Scottish Hero (Missie) and Broad Scotch (Sittlyton Butterfly) in service. Some choice young bulls and heifers for sale, by Joy of Morning, Scottish Beau, and Lord Mountstephen, from imported and Canadian-bred dams of 10 Hampshire flock 80 ewes; milk strains. **HAMPSHIRE** 13 lambs all sold **Jas. A. Cochran** Hillhurst P. O., o Compton Co., P. Q.

Family and Stockmen's Recipes
Receive expert attention with us. Send recipe for price, it will be observed as confidential and returned promptly. o
The Worthington Drug Co., Guelph, Ont. Chemists and Manufacturers of Worthington Stock Food.

GOSSIP.
The French horse Gouvernant's position as the favorite for the Derby this year recalled to the London Chronicle Sir William Harcourt's repartee when Gladstone won the race for France in 1865. On that occasion Frenchmen present at Epsom went wild with excitement, shouting, "Waterloo avenged."
"Yes," said Sir William Harcourt, who was standing near, "you ran well both times."

Messrs. John Dryden & Son, Brooklin, Ont., report having made a sale of a young Shorthorn bull to Mr. A. D. Patterson, of Ladner's Landing, B. C., through Mr. Paisley, the Secretary of the Live-stock Associations of that Province. The bull is named Archer's Last, and is about eight months old. He was sired by imp. Collynte Archer, and is the last of his get in Mr. Dryden's herd. A cut of him is shown in another column of this issue. Mr. Dryden reports that he is very loath to part with this young bull, as he is evidently of show-yard material, but Mr. Paisley was so insistent that his offer of \$500 was accepted. He belongs to the Cruickshank Brawith Bud family, and, as the extended pedigree shows, is full of the choicest Cruickshank breeding. He is very deep and blocky, is covered with a magnificent coat of soft, silky hair, and has, as the cut shows, a splendid Shorthorn head. He is good throughout, and has practically no faults that are worth mentioning. We think that Mr. Patterson is to be congratulated on having secured so fine an animal. His appearance indicates that he is to be a bull of considerable character and prepotency.

INCREASING FARM INCOME.

Farmers generally are sound, economical business men. They are cautious in speculative ventures and rely on increasing their income by systematic improvements in farm management. While there is an increase or decrease in the number of failures annually in commercial ventures, it is an anomaly for a farmer to become bankrupt. The few failures reported are generally restricted to speculative investments in high-priced thorough-bred stock, the rise or depreciation of which make or lose fortunes. The aim of the farmer is to so conduct his agricultural operations as to increase the average income per acre of his farm.

The farmer has many advantages over the inhabitants of cities, in that he has no rent to pay for housing his family, and usually his fuel is obtained on the farm. In municipalities one great item of expense is rent, which the farmer obviates by owning his estate. The farmer obtains his milk, butter, vegetables, eggs and poultry on the farm, so that rent and the cost of maintenance of a family is reduced to a minimum, thus the income of the farmer is much larger than generally rated. If the dweller in a city receives a fair salary it is nearly all expended for rent, fuel and table expenses, in which particular he is at a great disadvantage to men who follow agriculture.

The fact that farm lands are increasing in values, particularly in the vicinity of large cities, demonstrates that their income capacity has been augmented. Of course the increased income is largely due to enlarged operations. The farmer is keeping more stock and poultry or is devoting his holdings more to products that command good prices in near-by markets. The farmer is striving to enrich his land, and thus double his income without increasing his holdings. He no longer is satisfied with mediocre in his stock or field crops. If he operates a dairy he aims to keep better than the average cow. If he raises vegetables for market, he selects the best varieties, and by intensive farming offers commodities that always are at a premium with epicures. All his operations are the result of careful calculations, and he aims to work out his plans methodically. By his careful arrangement of work in its season he is always on time in planting his crops and economically utilizing hired help. The farmer with ability to judiciously manage labor so as to make a profit out of his employees is certain to increase the earning capacity of the farm. If a farmer can employ help profitably in his agricultural operations he has solved one of the most difficult problems in increasing the income of the farm.

MAKES MEN SOUND AND STRONG

Detroit Specialist Discovers Something Entirely New for the Cure of Men's Diseases in Their Own Homes.

YOU PAY ONLY IF CURED.

Expects No Money Unless He Cures You—Method and Full Particulars Sent Free—Write for It This Very Day.

A Detroit specialist who has 14 certificates and diplomas from medical colleges and state boards of medical examiners, has perfected a startling method of curing the diseases of men in their own homes; so that there may be no doubt in the mind of any man that he has both the



DR. S. GOLDBERG,
The Possessor of 14 Diplomas and Certificates, Who Wants No Money That He Does Not Earn.

method and the ability to do so as he says. Dr. Goldberg, the discoverer, will send the method entirely free to all men who send him their name and address. He wants to hear from men who have prostate trouble, sexual weakness, varicose, lost manhood, blood-poison, hydrocele, excruciating pain, impotency, etc. His wonderful method not only cures the condition itself, but likewise all the complications, such as rheumatism, bladder or kidney trouble, heart disease, nervous debility, etc. The doctor realizes that it is one thing to make claims and another thing to back them up, so he has made it a rule not to ask for money unless he cures you, and when you are cured he feels sure you will willingly pay him a small fee. It would seem, therefore, that it is to the best interest of every man who suffers in this way to write the doctor confidentially and lay your case before him, and if he accepts your case for treatment it is equivalent to a cure, as he does not under any circumstances accept insurable cases for treatment; and, remember, if he does accept your case you may pay when you are cured. He sends the method, as well as his booklet on the subject, containing the 14 diplomas and certificates, entirely free. - Address him simply **Dr. S. Goldberg, 233 Woodward Ave., Room 146** Detroit, Mich., and it will all immediately be your free.

W. G. PETTIT & SONS
FREEMAN, ONT.,
Importers and Breeders of

Scotch Shorthorns
110 head in the herd, 40 imported and 20 pure Scotch breeding cows. Present offering: 3 imported and 6 pure Scotch from imported sire and dam; 8 Scotch-topped from imported sires; also imported and home-bred cows and heifers of the most popular type and breeding. A few choice show animals will be offered. o
Burlington Jct. Sta. Telegraph & Telephone

IMPORTED SHORTHORNS AND CLYDESDALES
15 imported Scotch Shorthorn heifers, all in calf or calves at foot; 2 imp. bulls; both in pedigree and individually these animals are gilt-edged. Four three year-old imported Clydesdale fillies, very large and A1 quality.

ALEX. ISAAC, o Cobourg P. O. and Station

Scotch Shorthorns & Berkshire Swine
AT VALLEY HOME STOCK FARM.
For Sale—Stock of all ages, of both sexes. Our sort, of choice breeding and quality. Also young Berkshires of A1 breeding. Stations: Meadowvale or Streetsville Junction, C. P. R., and Brampton, G. T. R. Visitors welcomed.
B. J. PEARSON, SON & CO., Meadowvale P. O. and Telegraph.

HIGH-BRED Shorthorn Cattle
AND LEICESTER SHEEP.
Present offerings: Young stock, either sex. For description, etc., write to **WM. MCINTOSH, BURGUYNE P. O.**

Societies Owning Stock.

Mr. A. M. Stewart, of Dalmeny, Russell County, Ont., secretary of the township of Osgoode Agricultural Society, reports to Mr. H. B. Cowan, Superintendent of Agricultural Societies, that the Society owns three bulls, two of which are Ayrshires and one a Shorthorn, twelve rams and four boars. The sheep are mostly Shropshires, but include two Leicesters and one Oxford Down. The hogs include one animal each of the following breeds: Tamworth, Yorkshire, Berkshire and Chester White. These animals are located in five different sections of the township. Any twelve farmers in the township, who will agree to pay \$2 each for three years and take proper care of the stock, will, on request, be furnished with a pure-bred bull, ram or boar by the Society, or with all three, if they ask for them. Generally only one animal is asked for the first year, more being taken after this subdivision of the main Society has become well established. If the Society has no animals on hand, a committee is appointed to purchase them. Some bulls have cost the Society as high as \$400. Good bulls cost, at least, \$100 laid down at Dalmeny. The Society has purchased bulls that have won the gold medal at such exhibitions as Toronto. "In the past," continued Mr. Stewart, "we have always been able to furnish all the animals asked for. If a local section asks for three animals, the Society loses money; but if they only ask for one animal, we generally make a little. The \$24 received each year from the twelve farmers forming one of these sections, together with the Government grant we receive and a little extra funds which come in in other ways, generally enables us to meet the expense of keeping the animals. Sometimes we have been forced to go into debt, while at other times we have had as much as two or three hundred dollars to the good. At present, we have over \$100 on hand, with the Government grant coming due; our grant is usually about \$63. Some years ago we have had as many as eight bulls, thirteen rams and six boars. At the end of a couple of years, these breeding animals are changed around from division to division to prevent inbreeding. When the breeding stock has passed its usefulness, it is sold to the butcher and the money comes back to the Society. Members have the use of a ram for all their sheep, and of the boar for two animals twice a year. Each member is entitled to breed four cows during the year, and if the bull is not used much, members are allowed to take more cows. The man who keeps the bull has the use of him for all his stock. The same privilege is allowed the man who keeps the ram, and he also gets the ram's fleece extra. Twelve to \$20 a year is allowed the man who keeps the boar. At one time this Society paid members as much as \$10 a month for keeping the bull; members also had the use of the bull free. This was found to be too much of a good thing for the man keeping the bull, and the Society soon got into disrepute and membership fell off, until the Society was partially dead. About ten years ago, we changed this method, and adopted the present system, which has worked admirably. We pay about \$20 for our hogs when they are six months old, and \$20 to \$35 for our rams." Mr. Stewart believes they have done more good by keeping pure-bred stock than they could have done by holding a meeting yearly. Any man who keeps any of the stock, must do so subject to inspection by some member or members appointed for that purpose. There have been occasions where it has been found necessary to take animals away from members, but not of late years.

Drummond Agricultural Society, in Lanark County, owns two bulls, a Shorthorn and an Ayrshire, also boars and rams. The bulls are boarded around at the rate of \$3 a week during June and July, and for \$3 a month during the rest of the year. The keep of these animals thus costs the Society about \$54 each per year. The men boarding the animals have the use of them for their stock. The bulls are kept at three different places in the township, and about every three weeks they are moved around to suit the convenience of the members. Members are charged \$1 each

(Continued on next page.)



SCIENTIFIC SUMMER FEEDING

INTERNATIONAL STOCK FOOD CO.
 DEAR SIR:—About Feb. 4th I received a 50 cent package of "International Stock Food" from you. I commenced feeding it about Feb. 10th to two Durham calves. I put in their middlings (dry) twice per day. In reference to it I can say "International Stock Food" will make calves great feeders. It gives them a better appetite; it will prevent and cure scours in calves; it will make calves grow very, very rapidly; it makes them very active and bright. Calves call for it as a calf does for its milk. There is something in "International Stock Food" that calves like very much. My calves did better while feeding it than they had been doing before, and got the same feed as they did before feeding "International Stock Food." I think "International Stock Food" is just the thing. Yours respectfully, **FRED. M. DICKEY.**

Beware of imitations and substitutes. We have thousands of testimonials like this on file in our office, and we will pay you \$1000 cash if they are not genuine.

"INTERNATIONAL STOCK FOOD"—3 FEEDS FOR ONE CENT—is a purely medicinal, vegetable preparation, composed of roots, herbs, seeds, barks, etc., and is fed to stock in small quantities, in addition to the regular grain feed, for the purpose of aiding digestion and insuring perfect assimilation. It is entirely harmless, even if taken into the human system, and is prepared by a practical stockman, who is a thorough master of scientific stock feeding.

Extra Profits are made by feeding "INTERNATIONAL STOCK FOOD" to Colts, Calves and Pigs during the Summer Season.

You can secure a greater growth of your pigs, colts and calves in warm weather than any other time, and the use of "International Stock Food" will make you a large extra profit during the Summer season.

It will make your young stock grow rapidly and keep them healthy and vigorous.

A \$3000.00 STOCK BOOK FREE

It Contains 183 Large Engravings.

The cover of this book is a beautiful live stock picture printed in six brilliant colors and without any advertising on it. The book is 6 1/2 inches wide by 8 1/2 inches long, and cost our engraving department over \$3000 to produce. It gives history, illustrations and descriptions of the various breeds of horses, sheep, cattle, hogs, goats and poultry. It contains an UP-TO-DATE VETERINARY DEPARTMENT, which treats of the ordinary diseases to which stock are subject, and tells you how to cure them. This department alone will save you hundreds of dollars.

We will mail you this book, absolutely free, postage prepaid, together with a large colored lithograph of DAN PATCH.

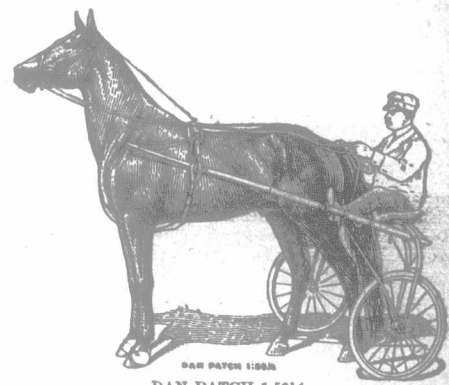
This Dan Patch lithograph is printed in six brilliant colors, and is worthy of a place in any home.

Write us at once and answer the following questions:

1. WHERE DID YOU READ THIS ADVERTISEMENT?
2. HOW MANY HEAD OF STOCK HAVE YOU?

INTERNATIONAL STOCK FOOD CO., TORONTO, CAN.

Capital paid in, \$2,000,000. Largest Stock Food Factories in the world.



DAN PATCH 1884. World's Champion Harness Horse. Eats "International Stock Food" every day.

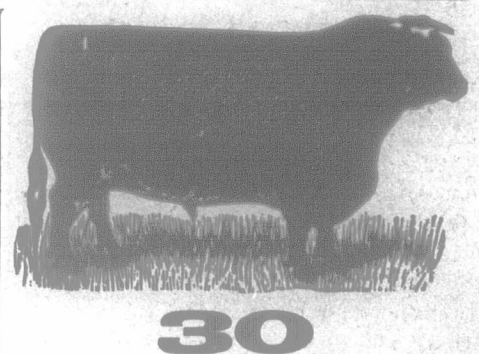


TROUT CREEK SHORTHORNS

SPECIAL OFFERING:

Two imp. bulls with superior breeding and individual merit. Also a few imported Scotch heifers and home-bred bulls and heifers. Send for Catalogue.

JAMES SMITH, W. D. FLATT,
 om Manager. Hamilton, Ont.



First-class Shorthorn Heifers For Sale

9 imported heifers. 21 home-bred heifers. These heifers are Scotch, many of them in calf. Prices moderate. om

ARTHUR JOHNSTON, Greenwood, Ontario

Sunnyside Stock Farm. **JAMES GIBB, Brookdale, Ontario.** Breeder of high-class SHORTHORN CATTLE (imp.) "Brave Ythan" at head of herd. Stock for sale. om

MAPLE LODGE STOCK FARM, 1854

Am offering a very superior lot of Shorthorn Bulls and Heifers as well as something VERY attractive in Leicesters.

Choice ewes got by imported "Stanley" and bred to imported "Winchester." Excellent type and quality. om **A. W. SMITH, MAPLE LODGE, ONT.**

SHORTHORNS

Some extra good young bulls for sale. Catalogue.

JOHN CLANCY, Manager. om

H. OARGILL & SON, OARGILL, ONTARIO.

T. DOUGLAS & SONS,

STRATHROY STATION & P. O., BREEDERS OF Shorthorns and Clydesdales

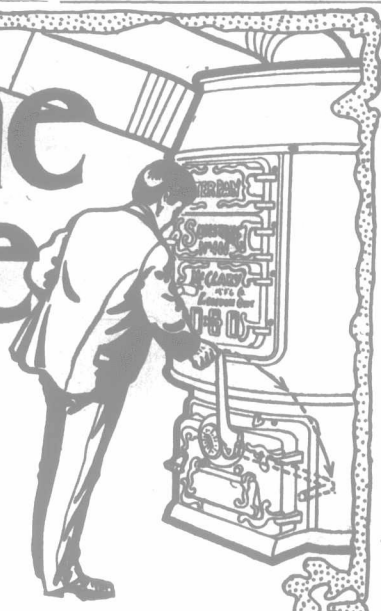
85 Shorthorns to select from. Present offering: 14 young bulls of splendid quality and serviceable age, and cows and heifers of all ages. Also one (imp.) stallion and two brood mares. om Farm 1 mile north of town.

CHAS. RANKIN, WYEBRIDGE, ONT.

IMPORTER AND BREEDER OF SHORTHORN CATTLE and OXFORD DOWN SHEEP.

Herd headed by Pride of Scotland (imp.). FOR SALE—Females and bulls of all ages, from noted Scotch families.

Sunshine Furnace



Easy to Shake.

More than half the drudgery of tending a furnace is in the shaking down. Enough to break a man's back, and certainly no work for a woman, is the job of shaking down some furnaces.

With a Sunshine Furnace you stand up and oscillate a gently working lever that a child could handle. It's so easy you won't believe it, if you've been used to the common back-breakers.

And the Sunshine is a hygienic, coal-saving, practical housewarmer in every way that a good furnace ought to be.

Sold by all Enterprising Dealers. Write for booklet.

McClary's

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

JERSEY CATTLE & Reg'd COTSWOLD SHREP
Some very fine heifers, all ages; 2 bull calves, 18 months and 8 months. Also some very fine ewes. **WILLIAM WILLIS & SON,** om Pine Ridge Farm, Newmarket, Ont.

JERSEYS For quick buyers, we are going to sell 15 bulls and 25 females. Owing to the natural increase of our herd and so many heifers coming into milk, we make the above offer. Stock of all ages. State what you want and write to-day to **B. H. BULL & SON,** om O. P. E. and G. T. R., Brampton, Ont.

Special Offering in **JERSEYS**
1 cow, Zinka Nuna, 8 years old, fresh; 1 cow, Mid-day, 3 years old, fresh; 1 cow, Miss Midget, 3 years old, in calf; 1 bull not akin to cows, 18 months old; 1 bull, not akin to cows, 16 months old. Special prices if taken at once, either one or more. For particulars write

W. W. EVBRIIT
Box 552, Chatham, Ont.

Riverside Holsteins

30 head to select from. Young bulls whose dams have official weekly records of from 17 to 21 lbs. of butter, sired by Victor De Kol Pieterse and Johanna Rue 4th Lad. Write for prices.

Matt Richardson & Son, Caledonia P.O. and Station.

FOR SALE—Sir Pieterse Josephine Keyes, No. 2095, Vol. 5, H. F. Assn. of Canada; calving April 12, 1901. His dam, Maggie Keyes, 26½ lbs. butter in 7 days, 19,434½ lbs. milk in a year as a 3-year-old, the largest ever made at that age except by her own dam—82½ lbs. milk in a day. Maggie Keyes was by Keyes 6th, and out of Koningin Van Friesland 5th. Also a few bull calves sired by the above bull.

J. A. OASKEY, Madoc, Ont.

HOLSTEINS, TAMWORTHS, COTSWOLDS
Present offering: Bull calf, 8 mos., won 4 first prizes Litter 8-months old pigs, and younger ones; choice animals. Ram and ewe lambs and two 2-shear rams; perfect covering. **E. O. MORROW,** Hilton, Ont., Brighton Sta., G. T. R.

SPECIAL OFFER—BULL CALVES out of such dams as Cherry of Hair-look and Morjorie, one of the best Silver King cows in herd. These calves will be sold at very low prices, quality considered.

ISALHIGH GRANGE FARM, J. N. Greenshields, Prop., Danville, P. Q.

BARGAINS IN FASHIONABLE AYRSHIRES.

Three 2-year heifers, in calf, at \$40 each; three 1-year heifers, from \$25 to \$40. One 1-year bull, a Cherub, at \$45; one 10-month bull calf, full brother, \$30. The above stock is well grown, and would be in the game in any competition, and from stock of heavy milkers, with grand udders and quarters. **O. H. SNIDER,** Attarcliffe P. O., Can ship via M. C. R. or G. T. R., at Danville, or C. P. R., Smithville.

SPRING BURNSTOCK FARM.

H. J. WHITTEKEE & SON, PROPS, Breeders of Ayrshire cattle, Oxford Down sheep, Berkshire pigs, Toulouse geese and Buff Orpington fowls. Prices reasonable.

HIGH-CLASS AYRSHIRE CATTLE
For Sale: Both sexes; bulls and heifer calves from 2 to 9 months old; cows and heifers all ages. Famous prizewinners bred from this herd, including Tom Brown and White Floss, sweepstakes prizewinners at Chicago. **DAVID BENNING & SON,** "Glenhurst," Williamstown, Ont.

AYRSHIRES FOR SALE.

Four yearling bulls and 6 heifers, and spring calves of both sexes, all sired by Minto (10490) B ed by A. Hume, Menie P. O., Ont. **F. W. TAYLOR,** Wellman's Corners, Ont.

AYRSHIRES

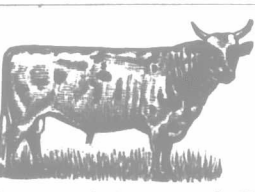
From winners in the dairy test five years in succession. Dairyman of Glenora, bred from Imp. sire and dam, at head of herd. Young bulls fit for service and bull calves and females for sale.

O. N. DYMENT, CLAPPISON, ONT.

SPRING BROOK AYRSHIRES are bred for profit. Heavy milkers, high testers, have good udders and large teats. Orders booked for bull calves. **W. F. STEPHEN,** Spring Brook Farm Trout River, Que. Carr's Crossing, G. T. R., 1 mile; Huntingdon, N. Y. C., 5 miles.

ABORTION RETENTION OF PLACENTA and Failure to Breed

Kellogg's Condition Powder is a positive cure for these diseases. Prevents scours in calves and garlic in milk. Indorsed by the Iowa Agricultural College, Ames, Ia., and hundreds of the most prominent breeders. Write for booklet giving full information, price list and testimonials. Address **H. W. Kellogg Company, Dept. Y, St. Paul, Minn.**



Ogilvie's Ayrshires

A herd of 85 head, composed of cows and heifers, prizewinners at the leading shows. The cows are imported from the best Scottish herds. Imported Douglasdale, champion at the Pan-American Exhibition, and imported Black Prince, champion at Toronto and Ottawa, 1903, head the herd. Choice stock of both sexes for sale.

Robert Hunter, Manager, Lachine Rapids, Que.
Farm near Montreal. One mile from electric cars.

Oak Lodge YORKSHIRES

are the recognized type of the ideal bacon hog, and are the profitable kind from a feeder's standpoint. A large number of pigs at different ages now on hand for sale. We can supply high-class exhibition stock. Write for prices.

J. E. BRETHOUR, BURFORD, ONT.

ZENOLEUM
Famous **COAL-TAR** Carbolic Dip.
For general use on live-stock. Send for "Piggies' Troubles" and "Zenoleum Veterinary Advisor" and learn its uses and what prominent stockmen say about it. Books mailed free. All druggists, or one gal., express paid, \$1.50; 5 gal., freight paid, \$6.25. **ZENNER DISINFECTANT CO., 115 Bates St., Detroit, Mich.**

BARREN COW CURE

makes any animal under 10 years old breed, or refund money. Given in feed twice a day. Particulars from **L. F. BELLFOK,** Morrisburg, 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.

The Burford Flock of Shropshires won eleven prizes at the International. Choice yearlings and lambs, both sexes, by the famous Mansell ram, or lambs by Silver Medal ram at Toronto. 100 ewes bred to the above rams. **LLOYD-JONES BROS., Burford, Ont.**

FARNHAM OXFORDS

We had the champion flock of Oxfords in 1903. Importations annually. Animals of all ages and sexes, both imported and Canadian-bred, for sale at all times at reasonable prices.

HENRY ARKELL & SON
ARKELL, ONTARIO.

"MODEL FARM" SHROPSHIRE

Do you want an imported ram or a home-bred one to improve your flock? Our offerings will please you. 10 imported rams and many home-bred ones (from imported stock) to choose from—massive fellows, all wool and mutton and the type that pleases. Stock of all ages for sale. Prices consistent with quality. Long-distance phone No. 94. **W. S. CARPENTER, Prop., SIMCOE, ONT.**

I Will Import:

Show or breeding rams or ewes, bulls or heifers, horses or pigs, of the improved breeds. Send orders soon to me:

ROBERT MILLER, Care of **ALFRED MANSELL & CO.,** Live stock Exporters, Shrewsbury, Eng.

TAMWORTHS—DORSET HORN SHEEP.

Choice boars and sows of different ages at very reasonable prices. Also a few Dorset Horn rams from first-class stock. **JAMES DICKSON,** Crono, Ont. "Glenairn Farm."

GLENHOLM HERD OF TAMWORTHS

We are now booking orders for spring litters. Have 5 boars and 5 sows, 6 months old, left, and a fine lot of younger ones. **F. O. SARGENT,** Eddystone, Grafton Sta., G. T. R.

Newcastle Herd of Tamworths & Shorthorns

We have for quick sale a lot of choice Boars and Sows, Oct. and Nov. litters, the produce of our Toronto Sweepstakes Stock and the undefeated Boar, "Colwill's Choice" 1343. We are also booking orders for March and April Pigs, the choicest of breeding. We also offer for quick sale 2 or 3 choice Shorthorn Heifers, 12 to 15 months old; also one 2-year-old in calf; all first-class stock, got by bull weighing 2,600 lbs. Write quick if you want something good at moderate prices. **COLWILL BROS., NEWCASTLE, ONT.**

TAMWORTHS

30 head from 2 to 5 mos. old, registered. Write for particulars and prices. **D. J. GIBSON,** Newcastle, Ontario.

TAMWORTHS AND HOLSTEINS

One bull calf sired by an imported bull. Boars fit for service. Sows bred and ready to breed. 50 boars and sows from 2 to 5 months old. Pairs not akin. **BERTRAM HOSKIN,** Grafton Sta., G. T. R. The Gully P. O.

Socializing Stock—Continued.

to join, for which fee they are permitted to breed two cows to one bull, or four altogether. For four more cattle, an extra dollar is charged. The Society has a membership of 67, and receives a Government grant of about \$67, as well as a county grant of \$30. For their dollar, members can take a sow to each boar. Members holding stock can collect membership fees. The parties keeping the rams are allowed to charge members 12½ cents a week for each ewe which is kept at their place. No member can take more than two ewes to a ram. In this way members of the Society for their membership fee are allowed to breed four cows, four ewes and two sows, all for \$1. Boars are kept at a cost to the Society of \$10 for the season.

In other localities, farmers prefer to own pure-bred males themselves, rather than drive their females long distances to males, whether owned by private individuals or the societies.



To the Weary Dyspeptic. We Ask this Question:

Why don't you remove that weight at the pit of the Stomach?

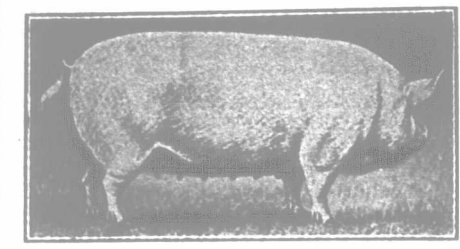
Why don't you regulate that variable appetite, and condition the digestive organs so that it will not be necessary to starve the stomach to avoid distress after eating.

The first step is to regulate the bowels.

For this purpose **Burdock Blood Bitters** has no Equal.

It acts promptly and effectually and permanently cures all derangements of digestion. It cures Dyspepsia and the primary causes leading to it.

Improved Yorkshires



Over three hundred for sale. The last three years our herd has won ninety per cent. of the first prizes at the leading shows, competing against American and Canadian breeders. We have more imported animals in our herd than all other breeders combined in Canada. We have the best blood from the leading herds in England and Scotland. Prices reasonable. **D. O. FLATT & SON, MILLAROV, ONT.**

YORKSHIRES FOR SALE

From the pioneer herd of the Province of Quebec. Both sexes and all ages. Satisfaction guaranteed on all mail orders. Also Pekin Duck Eggs for sale. \$1.00 a setting, or \$1.75 for two settings. Address **A. GILMORE & SONS, Athelstan, Que.**

Railroad stations: Athelstan, N. Y. C.; Huntingdon, G. T. R.

PINE GROVE FARM HERD OF LARGE ENGLISH YORKSHIRES.

The oldest established registered herd in America. Having sold all boars and sows that were fit for breeding, we are now booking orders for spring pigs. Having a good number of imported sows and boars, also several choice home-bred sows, we are able to mate pairs and trios not akin. Satisfaction guaranteed in all mail orders. **Joseph Featherston & Son, Streetsville P. O., Ont. C. P. R. station, Streetsville; G. T. R. station, Clarkson.**

FOR SALE—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; choice young pigs, six weeks to six months old; pairs not akin; express charges prepaid; pedigrees and safe delivery guaranteed. Address **E. D. GEORGE,** Putnam, Ont.

LARGE YORKSHIRES

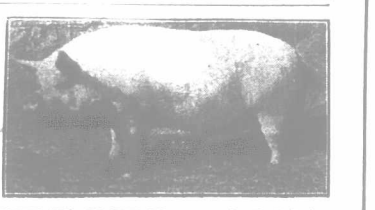
GLENBURN HERD—upwards of 100 fine spring pigs, sired by imported Holywell Hewson. Also a few 6 month s'boars. Prices reasonable. **DAVID BARR, JR., RENFREW, ONT.**

YORKSHIRES AND BERKSHIRES.

FOR SALE—Sows safe in pig and ready to breed. Boars 2 to 5 months old, of the long, deep-sided type. At bargain prices if taken soon. Write **C & J. CARUTHERS,** Cobourg Ont.

MAPLE GROVE YORKSHIRES

Six May litters from show sows, five of them Toronto winners, pairs not akin. Also young sows in farrow. Dalmey Cavalier (imported) and Maple Grove Vanguard at head of herd. **T. J. COLE,** Box 188, Bowmanville, Ont.



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THERE'S NOTHING HANDSOMER

Woodwork is costly and mural decorations far beyond the average purse.

Pedlar Metal Ceilings

are both economical and artistic. For churches, halls and other places of public gathering they are indispensable. Easily put up, possess excellent acoustic powers, and are attractive to the most critical eye.

They answer far better than any other form of interior decoration.

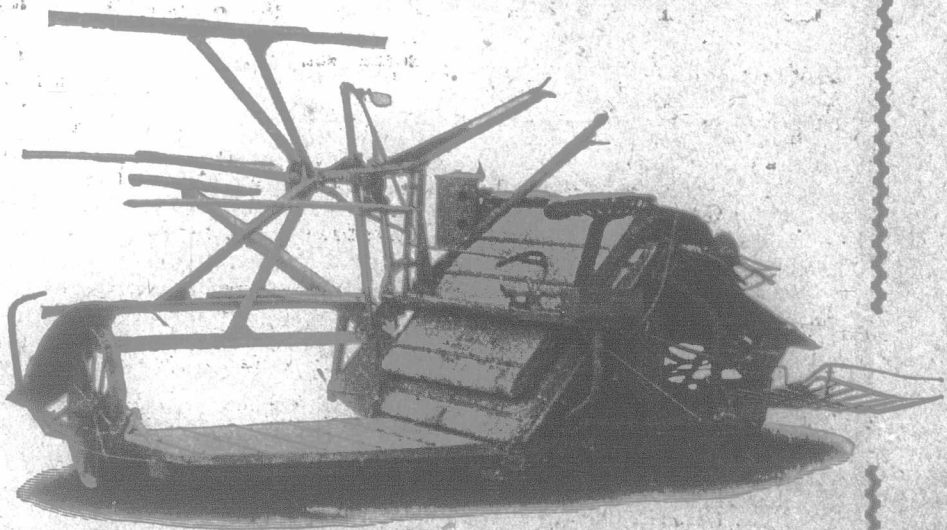
They are practically indestructible. Complete catalogue will be sent on request.

THE PEDLAR PEOPLE,
OSHAWA, ONTARIO.



The Noxon No. 9 Binder

IS ACKNOWLEDGED BY PRACTICAL FARMERS TO BE THE BEST.



SOME SPECIAL FEATURES:

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|----------------------------|----------------------------------|
| Built of Steel Throughout. | The Lightest Made. |
| Open Back. | A Pair of Ponies Can Handle It. |
| Removable Dividers. | Runs Without Noise. |
| Telescopic Packer Shaft. | Always Reliable. |
| Three Packers. | No Neckweight. |
| Weight Trip. | Handles Tangled Grain Perfectly. |

Our No. 3 Mower and Buffalo Steel Rake are the best in the market.

THE NOXON CO., Ltd., INGERSOLL, ONT.

We Solicit Your Order.

Men, Why Be Weak?



Why will you be weak? Why do you go on from day to day when you know you are losing your nerve force—when you see a cure within your grasp? Do not delay a matter which is the key to your future happiness. Whatever your condition to-day, you will not improve as you grow older. Age calls for greater vital force, and the older you get the more pronounced will be your weakness.

I have the grandest invention of the age for weak men; the surest and easiest cure for all nervous and chronic diseases. Its wonderful power is directed to the seat of the nervous system, through which its vitalized strength penetrates into all parts of the body, carrying new life to every function which has been weakened by disease or dissipation, restoring energy to the brain and power to the system. No weak man, no sickly or delicate woman, will ever regret a fair trial of my

tem, through which its vitalized strength penetrates into all parts of the body, carrying new life to every function which has been weakened by disease or dissipation, restoring energy to the brain and power to the system. No weak man, no sickly or delicate woman, will ever regret a fair trial of my

Dr. McLaughlin's Electric Belt

It will make you strong. It will send the life blood dancing through your veins, you will feel the exhilarating spark warm your frame, the bright flash will come to your eye, and a firm grip to your hand, and you will be able to grasp your fellow-man and feel that what others are capable of doing is not impossible to you. This grand appliance has brought strength, ambition and happiness to ten thousand men in the past year.

It is the one sure remedy for the cure of Rheumatism, Weak Back, Weak Kidneys, Weak Stomach, Varicocele, Loss of Strength in young or old, and similar ailments, as well as Dyspepsia, Constipation, etc. How can anyone remain in doubt as to the value of this grand remedy when they see so many cures by it.

Made Strong, Well and Hearty.

Dr. McLAUGHLIN,
Dear Sir: I am glad to be able to give you a good report of your Belt. It has done good work for me. I am a stronger man to-day than for over a year back. I am well satisfied with it. I only wish your work "Godspeed," as I am well, strong and hearty. I have been speaking to my friends of the good qualities and the real worth of your Belt. Wishing you all success in your work, I am, yours very truly, A. SMITH, Allandale, Ont.

If you are a sick man and discouraged with drugging your system in search for relief with no result, try my Belt. If it fails to cure you, it costs you nothing. Reasonable security is all I ask. Remember my terms are

PAY WHEN CURED

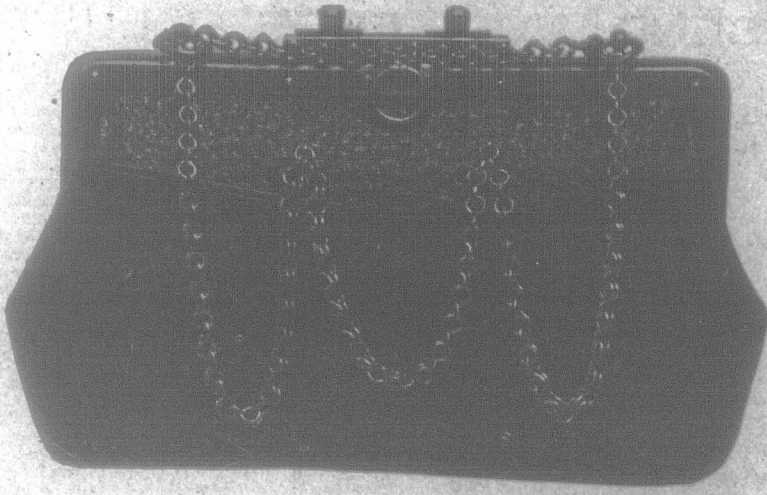
Isn't that fair? You have nothing to lose and everything to gain by accepting my liberal offer.

CALL TO-DAY I will be glad to give you a free test, if you will call. Or I will send you my FREE BOOK, with full information, sealed, free. Consultation free.

Office Hours—9 a.m. to 8 p.m. Wednesday and Saturday till 9.30 p.m.
DR. M. S. McLAUGHLIN 130 Yonge St., TORONTO.

Ladies!

If you know of 2 neighbors who have not already subscribed to the Farmer's Advocate secure their subscriptions now at \$1.50 per year, and this elegant leather-lined nickel silver mounted wrist-bag is yours.



Our readers everywhere are helping us swell the circulation of the Farmer's Advocate. They know it is top value for their money, and they want their neighbors to receive its suggestions. By helping your neighbors you will be helping yourself secure this wrist-bag. It is much admired, and an invaluable adjunct at this season of the year. Address

THE FARMER'S ADVOCATE, LONDON, ONTARIO.



Varicocele Hydrocele

Cured to Stay Cured in 8 Days

No Cutting or Pain. Guaranteed Cure. Money Refunded.

VARICOCELE Under my treatment this insidious disease rapidly disappears. Pain ceases almost instantly. The stagnant blood is driven from the dilated veins and all varicose veins and swelling subside. Every indication of Varicocele vanishes and in its stead comes the pleasure of perfect health.

I cure to stay cured. Contagious Blood Poison, Kidney and Bladder Troubles, Nervous Debility, and allied troubles. My methods of treatment and cure are original with me and cannot be obtained elsewhere. I make no experiments. All cases I take I cure.

Certainty of Cure is what you want. I give a Legal Guarantee to cure you or refund your money. What I have done for others I can do for you. My charge for a permanent cure will be reasonable and no more than you will be willing to pay for benefits conferred. I CAN CURE YOU at Home.

Correspondence Confidential Write me your condition fully and you will receive in plain envelope a scientific and honest opinion of your case. FREE of Charge. My home treatment is successful. My books and testimonials FREE upon application.

J. J. TILTON, M. D., 255 Tiltons Building, 54 Dearborn Street, CHICAGO.

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When You Buy a

BERLINER GRAM-O-PHONE



You buy an instrument that is guaranteed for five years; that is made in Canada, but has the seal of approval of the whole world as the only successful invention of its kind. Berliner Gram-o-phones are the only perfect reproducers of sound—vocal and instrumental. All other so-called "phones" are worthless imitations, generally offered "free," or as a part of some "scheme." Berliner Gram-o-phones have the "dog on the back" and are "maroon colored." Berliner Gram-o-phones are sold on an easier payment plan than any of the imitations—less than seven cents a day. Fill out Coupon and send it to us with one dollar, and you can get a Gram-o-phone and three Records of your own choice, and judge for yourself.

Cash Prices for Berliner Gram-o-phones, \$15 to \$45. These prices include 3 seven-inch Records of purchaser's choice. Full catalogue of Gram-o-phones and list of over 2,000 Records sent free on request.

Any style of Gram-o-phone sold on the Easy-payment Plan at a slight advance over cash prices, with option of paying in full at end of 30 days for spot cash price. Out out Coupon and mail it to us.

The BERLINER GRAM-O-PHONE RECORDS (don't forget the dog on the back) are made specially for it by musicians who are masters of their instruments: Band and Orchestral selections, Choral Pieces by full choirs, including the famous Papal Choir. The Band selections have been made specially for the Gram-o-phone by the Coldstream Guards, the Grenadier Guards, Godfrey's, Sousa's (plays only for the Gram-o-phone), and other famous American and European Bands, Civil and Military, Instrumental Solos on Piano, Violin, Banjo, Mandolin, Cornet, Trombone, Bagpipes, Clarinet, Piccolo, Flute, etc. The latest Songs, as well as the old-time Favorites, Religious, Patriotic and Sentimental airs, as well as Coon Songs, Minstrel and Comic Ditties. Plays, Waltzes, Polkas, Two Step, Schottische, Quadrille, Lancers, Jigs and Reels, for dancing—Never tires.

Manufactured only by

The Berliner Gram-o-phone Co.

of Canada, Limited,

2315 St. Catherine Street,

MONTREAL.

Name.....

P. O. Address..... Province.....

Express Office..... Occupation.....

F. A. L.

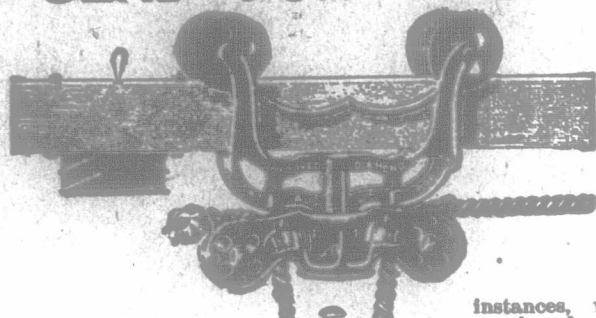
Also send free of charge the following three Records:

SEND COUPON 'D' TO-DAY

The Berliner Gram-o-phone Company, of Canada, Limited, 2315-19 St. Catherine Street, Montreal, Canada:

Enclosed find one dollar in part payment on the Standard Berliner Gram-o-phone, type A, complete, with 18-inch japanned concert horn and 3 records. If satisfactory after 5 days' trial, I agree to pay eight monthly payments of two dollars each. If not satisfactory, I will return the Gram-o-phon and this order is null and void. If you wish a spun brass horn instead of the japanned horn enclose two dollars extra.

"SEND FOR FREE ILLUSTRATED PRICE LIST."



Bicycles for Ladies and Gentlemen, only \$10.00. For the small sum of ten dollars we can sell you a first-class second-hand wheel. These wheels are all up-to-date and fully guaranteed, nicely enamelled, and look as good as new ones. Last year we sold a vast number of them; this year we expect to sell a still greater number. We sell our wheels all over the Dominion. In many instances, when a wheel is purchased in a neighborhood, and is seen by the friends of the purchaser, we get a great many orders from that district, which shows how our wheels are liked. With each wheel we send a tool bag and full kit of tools. Wheels are nicely crated for shipment without extra charge. Remember, many of these wheels are worth \$20, but to make a quick sale of them we are offering them at this very low figure. We advise customers to buy before the rush. Remember the price, only \$10.00.



We have all kinds of Haying Outfits for Steel, Wood and Cable track. As sample of one of our Outfits, we quote the following. All fully guaranteed.

- Our No. 2 Wood or Steel Track Outfit.
- 1 Improved Car Stop-block and Pulley..... \$4 00
- 1 Best Harpoon Fork..... 2 75
- 13 Track Bolts, jointed..... 1 44
- 3 Swivel Pulleys (one a knot-passer)..... 75
- 3 Wrought-iron Pulley Screw-Hooks..... 27
- 12 Hafter Brackets..... 80
- 1 Rope Hitch..... 25
- 1 doz. 4-in. Bolts for track 25
- 60 feet Trip Rope..... 60
- 120 ft. Horse-power Rope, 1 in. 4 80

\$15.91

If the whole outfit is not required, will sell any parts at price listed. We have also Center Trip Slings at \$2.25 each, and Sling Attachments at \$2.20 each.

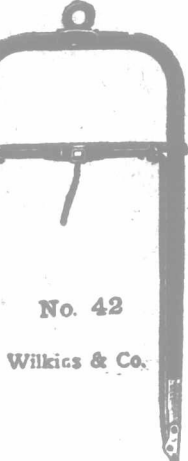
We have everything necessary for Haying Outfits, Haying Forks as low as \$1.25 each.

Track for Steel Outfits, per foot, 11c.

Rubber Drive Belts.

- 100 feet 6-inch 4-ply extra star belt (endless)..... \$26 00
- 110 " " " " " "..... 28 50
- 120 " " " " " "..... 31 00
- 150 " " " " " "..... 40 00
- 150 " 7-inch " " " "..... 47 00

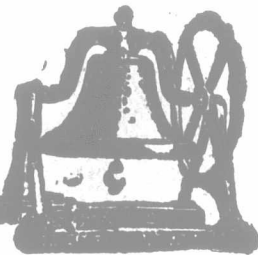
All sizes rubber belting in stock. Will sell any quantity.



No. 42 Wilkies & Co.



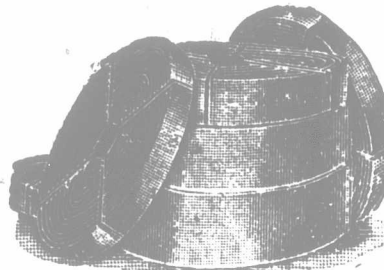
Combination Cobbler's Harness-maker's, and Tinsmith's Outfit, only \$1.80. This very handy set of tools will save many a run to the shoemaker's, harness-maker's, or the tinsmith's; only \$1.80.



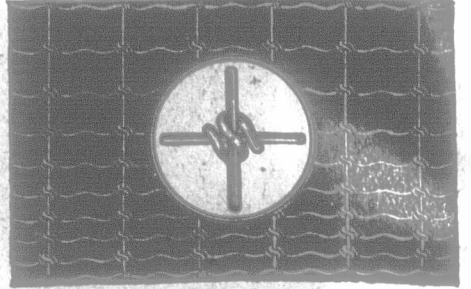
Farm Bells, \$1.75, [\$2.25, \$3.00 and \$4.00.

Church Bells, from \$12.00 to \$80.00.

Remember, we have been in the mail-order business for nearly twenty-five years.



Note the Knot--It Cannot Slip



STRONG, DURABLE Ideal Fencing

THE LIFE of any wire fence is the life of its smallest wire. The IDEAL is large. (No. 9) hard steel galvanized wire throughout, making it the most durable and the strongest.

THE "IDEAL" improves permanently the property it protects.

Write for illustrated catalogue Free

of our Fencing and Gates

The McGregor-Banwell Fence Company, Walkerville (LIMITED) Ontario

MELOTTE CREAM SEPARATORS

are easier to clean than any other. The thickly-enamelled surface of the bowl casing in sizes 1 to 5 is specially provided as being the easiest of all surfaces to clean.



Two-piece Spiral Skimmer.

It should be noted also that the Melotte has neither a number of small tubes nor any long tubes, nor complicated device of any kind to be cleaned. The bowl itself is self-emptying, and every part of it is easily accessible to hand and cleaning cloth. In short, the Melotte is by far the easiest separator to clean and for close skimming is unexcelled.

WRITE FOR BOOKLET No. 4 F.

R.A. LISTER & CO LTD 675 & 581 ST PAUL STREET MONTREAL.

1/2 of greatness

is opportunity.

That's the why of our Special Course for Farmers' Sons. Opportunity for those we know have the stuff to be great.

In school, if you have the time to spare from home.

At home by Mail Course, if you cannot get away.

We have special booklets dealing with this line of work and want to place them in your hands. When you write, address

Central Business College TORONTO, ONT. W. H. Shaw, President.

A COLD STORAGE PLANT

is a necessity on your farm, a luxury for your family; it costs very little to build; it is easy to run; it saves food. Fresh meat, butter, fruit and delicious ice cream are sources of happiness in the country home. Our course by mail teaches you how to build and how to run your own plant. Ask for information now.

CANADIAN CORRESPONDENCE COLLEGE TORONTO, CANADA. WALTER JAMES BROWN, B. S. A., Principal

YOUR PLASTER CEILING is Tumbling Down

And lets the heat out and the cold in and looks unsightly. Why not cover with one of our handsome Metal Ceilings which goes right over the plaster? Their cost is small. Send careful size and diagram of room for free estimate and design catalogue.

The Metal Shingle & Siding Co., Limited PRESTON, ONT.

CO., 166 and 168 King St. East, Toronto, Ont.

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