

Clean Dry Salt!

THERE ARE NO impurities in Windsor Salt; no black specks. It is dry, white, flaky—it is all Salt. It is the Salt that is most generally used by the most successful butter-makers.

WINDSOR SALT.
Leading Grocers Sell It.

DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER? NOW IF YOU HAVE A PIECE OF LAND THAT WONT GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER. WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY. CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED. AGENTS WANTED FOR TERRITORY NOT TAKEN UP. W. A. FREEMAN, LTD. HAMILTON, ONTARIO.

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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.

BOYS FOR FARM HELP.

The Managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 214 Farley Ave., Toronto.

Farm Laborers

from England, Ireland, Scotland, Wales and and Channel Islands arriving at Toronto weekly. If you desire to secure help for your farm, write for application form to

Thos. Southworth,
Director of Colonization,
TORONTO.



I CURE RUPTURE

No further use for Trusses.

READ WHAT MR. KETCHESON SAYS:

Dr. W. S. Rice, Toronto, Ont.:

DEAR SIR,—Your Method has cured me of a very dangerous case of rupture. It is needless to say I am thankful to you for my cure, and I shall, as I have opportunity, recommend you to those suffering from rupture. My age is 78 years, and when you cured me you can cure anyone.

J. R. KETCHESON, Esq., Justice Peace, Madoc, Ont.

Give me a man who has been ruptured for years and who has been driven almost to despair, having used almost every truss on the market in search of a cure, but has not even found relief and is daily growing worse—I CAN CURE HIM so that he will not require to wear a truss. No pain, no danger, no operation nor time from work. No case too bad to be cured, and no one too old.

Here are honest words straight from the hearts of honest people; they were ruptured and now they are cured.

AGED 76 AND CURED.

Dr. W. S. Rice, Toronto, Ont.:

DEAR DOCTOR,—Replying to your esteemed favor, I am happy to say I am perfectly cured. Before using your Method I was dubious about the result, for so many others had failed. You gave me every relief, and it was indeed a happy day for me when I commenced using your Method. My age is 76 years and I am yet hale and hearty. If this letter is of any use to you, you may publish it. Yours truly,

JOHN WALKER, Duart, Elgin Co., Ont.

AGED 81 AND CURED.

Dr. W. S. Rice, Toronto, Ont.:

DEAR SIR,—I am glad and thankful that I was persuaded to try your Method, for, after suffering for nearly 20 years, I am completely cured.

Yours very truly, MILTON DAY, Plum Hollow, Ont.

RUPTURED 40 YEARS.

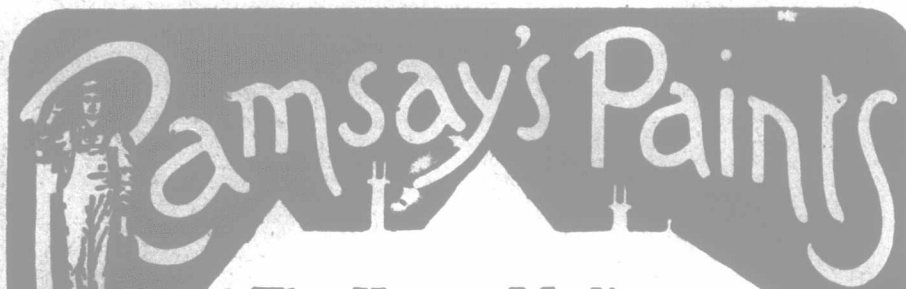
Dr. W. S. Rice, Toronto, Ont.:

DEAR DOCTOR,—I was ruptured for 40 years and have tried every remedy known, but nothing did me any good except your Method, and it has made a complete cure. Yours respectfully,

JOS. D. BOURNE, Midland, Ont.

TO PROVE to rupture sufferers that I can cure them, I will send my valuable book, "HOW TO CURE RUPTURE," plainly sealed, postpaid, free of all cost; also my FREE TRIAL TREATMENT, so that all sufferers can test it for themselves. Write at once.

DR. W. S. RICE, No. 2 East Queen St., TORONTO, ONT.
Dept. 273.



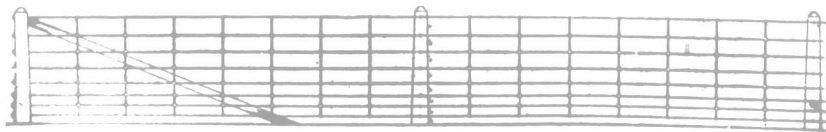
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"Cheap" paint is the kind you DON'T want. "High price" paints cost more than they are worth, because you can buy better for less. Ramsay's Paints are the happy medium. All the goodness of the most expensive kinds—with none of the faults of the "cheap." They are mixed just right—always the same—and hold their surface and their color through zero snows and torrid suns.

The Right Paint to Paint Right

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

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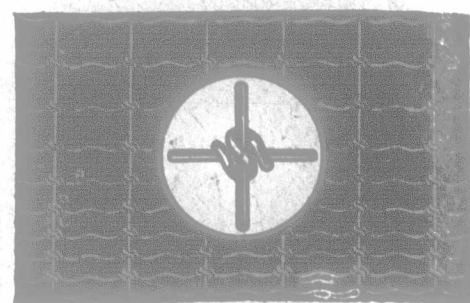


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ESPLEN, FRAME & CO.,
Agents Wanted. Send for Catalogue.
STRATFORD, ONT.

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STRONG - DURABLE



Ideal Fencing

Large (No. 9) hard steel wire is used throughout.

The lock makes a joint that cannot be moved.

Ample provision is made for contraction and expansion.

Absolutely the best and most durable barrier against any kind of stock.

Write for Catalogue of FENCING and GATES showing styles for every purpose.

The McGregor-Banwell Fence Company, Limited
Walkerville, Ontario.

Queenston Cement

The best and cheapest

FOR HOUSE, BARN AND SILO WALLS, STABLE FLOORS, ETC.

Send for our NEW ILLUSTRATED CATALOGUE — it tells all. Prices and estimates cheerfully given. Write to

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Queenston, Ontario.

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Pratt's Astral Lamp Oil

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

WHOLESALE ONLY.

THE QUEEN CITY OIL CO., Limited,
TORONTO.

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IF YOU BUY

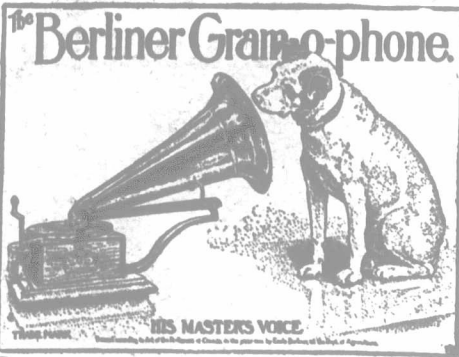
S. & H. HARRIS' HARNESS REQUISITES.

Harness Composition
Saddle Paste Saddle Soap
Jet Black Oil
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British Polishing Paste
For Metals and Glass

Sold by all Saddlers and Ironmongers.
Manufactory: London, Eng.

AGENTS FOR CANADA:
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YOU HAVE THE BEST



Berliner "Maroon" Records

Are in a class separate and distinct from all others—they will last fully ten times as long and are splendid examples of sound recording. No other records can approach them in quality and volume, and as for wearing quality—Gram-o-phone Records will be good for years after others have been forgotten. Be sure to get "MAROON" Records, with the "Dog" on the back.

Berliner Gram-o-Phones and Records are for sale by over 1,800 agents in Canada. There are Berliner "Maroon" Records of everything worth hearing in music, song and speech—more than 2,000 to choose from. Records and Gram-o-Phones are made in Canada. BERLINER GRAM-O-PHONES are sold with a 5-year guarantee. May additions to the list of more than 2,000 Records follow:

7-INCH RECORDS. 50 Cents Each. \$5 a Dozen.

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Resembles "Bedelia" so much that it may be her brother.
 - 798 Daisy Donohue..... Robert Price
Another of the same family.
 - 773 Hannah..... Bob Roberts
 - 776 I'm on the Water Wagon Now..... Billy Murray
Very popular—From "The Office Boy."
 - 795 In the Village by the Sea..... Robert Price
A beautiful sentimental ballad.
 - 777 Navajo..... Harry Macdonough
One of the most popular hits of the season.
 - 794 Navajo..... Robert Price
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 - 801 Plain Mamie O'Hooley..... Robert Price
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 - 798 Susan Van Doosan..... Robert Price
To hear it is to buy it.
 - 778 Sweetest Flower that Grows in Tennessee..... Joseph Natus
One of the latest successes.
 - 779 Who Who Who Hulahan..... Dan W. Quinn
An Irish success.
- VOCAL DUET.**
- 772 Under the Anheuser Bush..... Collins and Harlan
These gentlemen tell of the happy times under this celebrated "bush."
- BAND RECORD.**
- 780 Sylvia Ballet..... Sousa's Band
A new record of an old favorite.
- ORCHESTRA RECORDS.**
- 785 Gondolier, The—Intermezzo..... Pryor's Orchestra
A new intermezzo of the popular order.
 - 787 Polly Prim (characteristic march)..... Pryor's Orchestra
This makes a fine Two-step—by the composer of "The Colored Major."

10-INCH RECORDS. \$1.00 Each. \$10 a Dozen.

- SONGS.**
- 5685 A Jolly Old Monk..... Louis Cassavant
Of the "Red Feather" Company.
 - 5670 Always in the Way..... Joseph Natus
A charming child ballad.
 - 5684 Good-bye, 'Liza Jane..... Robert Price
A new "Coon" song.
 - 5674 I'm on the Water Wagon Now..... Billy Murray
The hit of "The Office Boy."
 - 5686 Maid of the Philippine Islands (Florodora).....
Miss Greta Risley, of the Florodora Company
 - 5671 Man in the Overalls, The..... Joseph Natus
Dedicated to the working man.
 - 5672 Navajo..... Harry Macdonough
The latest Indian melody.
 - 5679 Navajo..... Robert Price
Made in Montreal—Try it.
 - 5673 Sweetest Flower that Grows in Tennessee..... Joseph Natus
A beautiful ballad.
 - 5675 Who Who Who Hulahan..... Dan W. Quinn
An Irish hit.
- VOCAL DUET.**
- 5676 Under the Anheuser Bush..... Collins and Harlan
- BAND RECORDS.**
- The following are all splendid records:
- 5134 Goo Goo Eyes Polka..... Grenadier Guards Band
 - 5683 Love's Old Sweet Song (Cornet solo by Herbert L. Clarke).....
Clarke's Providence Band
 - 5682 Mexican Serenade..... Sousa's Band
 - 5680 Polka Rapide..... Grenadier Guards Band
 - 5677 Sylvia Ballet..... Sousa's Band
 - 5681 Violetta Polka..... Grenadier Guards Band
- DESCRIPTIVE RECORDS.**
- 5678 Clancy's Prize Waltz Contest..... Len Spencer and Orchestra
A lively record, descriptive of a Bowery dancing contest.
Mr. Spencer excels in his portrayal of the East Side tough.

Sold on easy payment plan if desired. Read Coupon carefully and cut out and send to us.

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. Cut 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. Bands and Orchestral selections, Choral Pieces by full choirs, including the famous Papal Choir. The Band Selections have been made specially for the Gram-o-phones 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, Minstrels 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.....

Occupation..... P.O. Address.....

Express Office..... Province.....

If you wish a spun brass horn instead of the japanned horn, enclose two dollars extra. Also send free of charge the following three records..... F.A.L.

**SEND
"B" COUPON
TO-DAY**

The Berliner Gram-o-phone Co., of Canada, Ltd.,
2315-19 St. Catherine St., Montreal.

Enclosed find one dollar in payment on the Standard Berliner Gram-o-phone, type A, complete, with 16-inch japanned concert horn, and 3 records. If satisfactory after five days' trial, I agree to pay eight monthly payments of two dollars each. If not satisfactory, I will return the Gram-o-phone and this order is null and void.

GOSSIP.

"Yes," said the friend of the family, "they were married in haste." "And repented at leisure, eh?" queried the other. "Oh, no," was the reply: "they repented in haste also."

"Is it true," asked the interviewer, "that when you first came to this country you worked in your shirt-sleeves for a living?" "It is not," replied the successful public man, indignantly. "Ah! No offense, I hope." "When I came here," continued the successful man, "I didn't have a shirt."

I was travelling down south, said John S. Flaherty, the theatre manager, and while driving in the country I saw a colored man under a tree by the roadside. He was gazing lazily up through the branches, while by his side was a hoe. Weeds were growing luxuriantly in the cornfield, which stretched over acres into the distance.

"What are you doing?" I asked the negro.

"I'se out heah to hoe dat corn," said he.

The answer was given in an unmitigated drawl. "Then what are you doing under the tree? Resting?" I persisted.

"No, sah, I'se not restin'," was the answer. "Ah'm not tired. Ah'm waitin' faw the sun to go down so Ah kin quit wuhk."

A southern planter employed a negro to work some of his land during the last year on shares. On account of the high price of cotton the negro's half of the proceeds amounted to \$1,600. The planter knew that it would ruin any Afro-American to get such a sum of money, and decided that half of it would be enough. Upon further reflection the conviction grew upon him that \$800 would ruin any negro in the world, so he cut the sum in half again, and, piling four hundred shining silver dollars on his desk, sent for the negro and brother, and said that he was ready to settle. The man came in and fairly gasped at the amount of wealth in sight.

"Fo' Gawd, boss," he said, "is dat money all ours?"

"Yes."
"Well, den, divide it in two ples, and you take youah half and I'll take mine."

When the May baby and the June baby got well acquainted they exchanged confidences.

"My milk comes from the certified cow," said the May baby.

"So does mine," said the June baby. "It is milked by a man in a white suit, with sterilized hands, through absorbent cotton, and kept at a temperature of forty-five degrees."

"So is mine."
"It is brought to me in a prophylactic waggon drawn by a modified horse."

"So is mine."
"Then how in thunder do you manage to be so fat and well?"

The June baby winked slyly.

"I chew old paper and the corners of the rugs and anything I can find that is dirty, and in that way I manage to maintain the bacterial balance which is essential to health," he said chuckling.

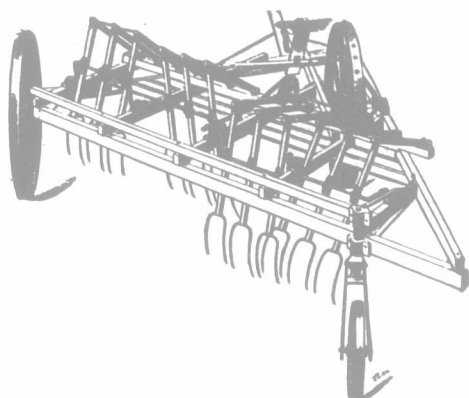
The May baby laughed long and loud. "So do I," said he.

The mammas heard the goo-gooing, but they assigned to it only the usual fantastic significance. It was just as well.

WOUNDS BY RUSTY NAILS.

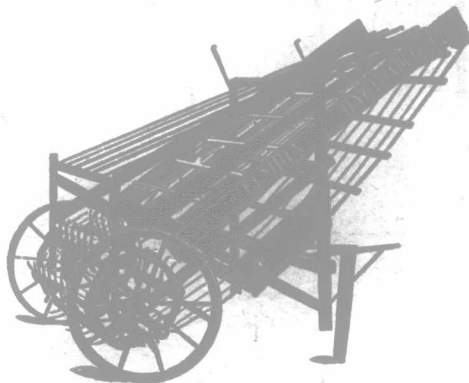
Every little while we read in the papers that someone has stuck a rusty nail in his foot or hand or other portion of the body, and lockjaw resulted therefrom, and that the patient died. If every person were aware of a perfect remedy for all such wounds and would apply it, then such reports would cease. The remedy is simple, always on hand, and can be applied by anyone; and, what is better, it is infallible. It is simply to smoke the wound or any bruise or wound that is inflamed, with burning woollen cloth. Twenty minutes in the smoke will take the pain out of the worst case of inflammation arising from such a wound. People may sneer at this remedy as they please, but when they are afflicted by such wounds just let them try it.

ELMIRA HAY-MAKING MACHINERY.



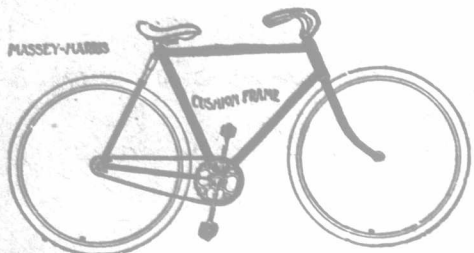
THE SIDE-DELIVERY HAY RAKE and HAY LOADER are the Greatest Time and Labor-saving Implements of the day. They will repay for their cost in a short time by curing and saving the hay properly, and in saving of extra labor.

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



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

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**CUSHION FRAME
MORE COMFORT
COASTER BRAKE
LESS WORK**

A boy in Claybank, Ont., says: "You may ride down a stony hill on a cushion-frame bicycle with your pockets full of apples and they won't shake out." He rode a

Massey-Harris Bicycle

The Coaster Brake saves pedaling and leaves the wheel to glide along of itself.

Write for catalogue with handsome photographs, illustrations and views.

CANADA CYCLE & MOTOR CO.
Limited,
TORONTO JUNCTION.

IT PAYS TO

GO TO
The Best.

The spring term is one of the best in which to enter. The winter rush is now over, and those who have entered in January are well started in their work. Teachers can, therefore, give more time to new students. It is now current talk throughout the country that the student who intends to take a business or shorthand course, and wants to be placed in a paying place when graduated, should attend the

Canada Business College,
Chatham, Ont.

Students of last year already earning over \$1,000 per annum. 346 placed in 11 months. Do you know of any other business school getting such results? We pay your railway fare. Have you ever seen our catalogue? If not, write for it and enter now. Address,
D. McLACHLAN & CO., Chatham, Ontario.

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.

RUPTURE.

Write for particulars as to how to cure it without a risky operation. Invaluable advice FREE

C. H. Dorenwend, R. S., Toronto, Ont.

State your case when writing. 393 Yonge St. om

There is no good thing but what has an imitation. The better the article the more imitations there are.

DeLAVAL CREAM SEPARATORS

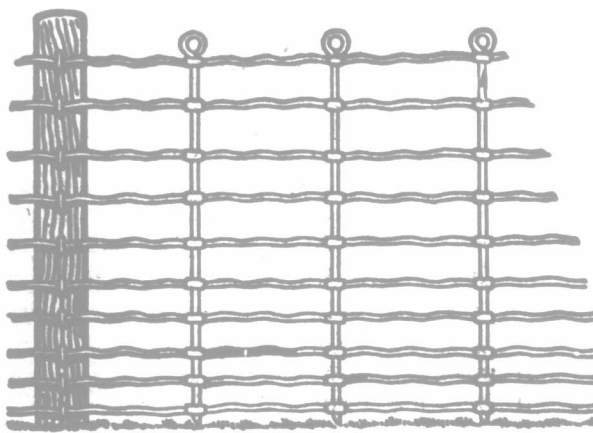
are worth more than all imitations combined. They save \$10.00 per cow every year.

Catalog Free

THE DeLAVAL SEPARATOR CO.

WINNIPEG 77 York St., TORONTO MONTREAL

THE FROST is King Why?



Because it's made of wire that is heavy enough and hard enough to withstand the usage to which a fence is ordinarily put. No Soft Wire used.

Write for Illustrated Catalogue
The Frost Wire Fence Co. Ltd,
Welland, Ont.
Winnipeg, Man.

U.S. Separator 1904 Model

A TRIUMPH OF PERFECTION—RIGHT UP TO DATE

Not only the

CLEANEST SKIMMING SEPARATOR
THE WORLD HAS EVER SEEN,

But the

HANDIEST AND EASIEST OPERATED



The 1904 Model U.S. Cream Separator has the only practical

LOW SUPPLY CAN.

Has clutch bushing; no lost motion; and the gearing stops when crank is released.

Safest machine on the market; gearing entirely enclosed.

Built for service and efficiency.

Investigate its merits and

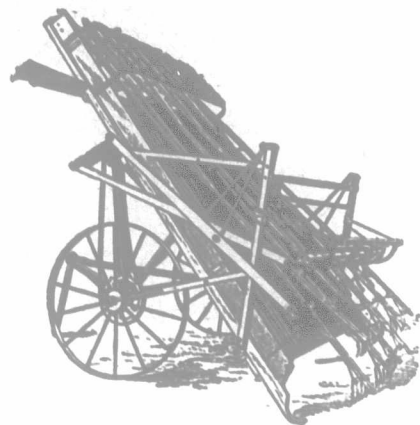
You will Buy None but the U.S.

Catalogues free for the asking.

We have the following transfer points: Portland, Me., Sherbrooke and Montreal, Que., Hamilton, Ont., La Crosse, Wis., Minneapolis, Minn., Chicago, Ill., Sioux City, Ia., Omaha, Neb., and Kansas City, Mo. Address all letters to

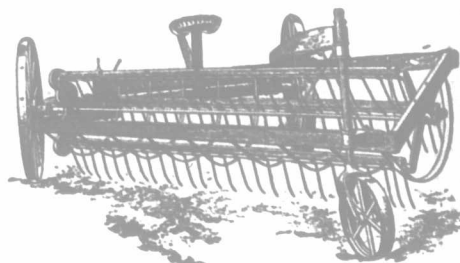
Vermont Farm Machine Co., Bellows Falls, Vt.

A SWATH OR WINROW LOADER.



The Dain Loader rakes perfectly clean from the swath or Side-delivery Rake winrow. Practical tests have proven this. Then it is easily attached to the wagon. The hinged tongue overcomes the necessity of lifting any part of the Loader. A boy 10 years of age can couple it to the wagon. To release Loader, a rope is pulled at the top of Loader from the wagon. There are more labor-saving devices on the Dain than on any other. The

Side-delivery Rake,



as we make it, is a slow-motion machine, and is used by producers of beans, and does not shell the crop. Does not whip or tangle the hay. Is a money-maker on any farm. Send for circulars if you intend purchasing a machine.

DAIN MFG. CO.
PRESTON, ONT.

BRITISH COLUMBIA

"Fruitland," Kamloops, B. C.

Newly-developed irrigated lands in the beautiful fertile valley of the Thompson River, on the main line of the C. P. R., within half a mile of the City of Kamloops, the inland capital of British Columbia, and a well-known health resort. Magnificent soil for fruit of all kinds: Apples, pears, cherries, plums, peaches, grapes, strawberries, and all kinds of vegetables grown in abundance. Perfect climate; air dry and bracing. Good schools, churches, bathing, shooting, fishing, etc. For full information apply to:

Manager, Canadian Real Properties, Ltd.,
Box 155, Kamloops, B. C.

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.

How Delightful Is Independence With the New Century Ball Bearing Washing Machine



and a couple of children over five years old the washing need not stand over if the maid does not report for duty. Five minutes to a tubful, and you will have no use for wash boards. It cleanses perfectly.

You cannot afford to do without it. Order through your dealer. We will mail you a booklet on application.

THE DOWSWELL MANUFACTURING CO. LTD.
HAMILTON, CAN.

\$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 at once. IMPERIAL SILVERWARE CO., Box 606, WINNIPEG, ONT.

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The

Farmer's Advocate

and Home Magazine.

"PERSEVERE AND SUCCEED"

ESTABLISHED 1866.

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VOL. XXXIX.

LONDON, ONT., AND WINNIPEG, MAN., MAY 19, 1904.

No. 608

EDITORIAL.

Plant Trees.

The late Governor Morton, of Nebraska, had a motto, "Plant Trees," which he had engraved on his stationery, and which was his constant hobby. Invariably it was his last injunction when bidding his friends farewell. The interest in tree-planting on the prairie which this motto aroused resulted in one of the most pleasing and redeeming features of that western State, namely, its groves, wind-breaks and rows of trees.

The inestimable value of trees, from an aesthetic standpoint, is not as generally appreciated by farmers as appears desirable. Many grown-up people become accustomed to bare, bleak landscape, and come to regard such a condition as most valuable, because it is evidence, in many cases, of a wide stretch of unbroken fertile land. But upon the children and young people who do not esteem land mainly for its practical value, but whose minds are susceptible to and influenced by the beauty of a varying landscape, the absence of the company of the trees and the birds which they invite is depressing and dwarfing. Children, and older people too, in order to attain their best development, must live as much as possible in constant touch with nature's best conditions. The home, in order that it may retain the attachment of those who call it such, must be not merely a well-arranged pile of brick, or stone, or wood, but must be surrounded by natural adornments, such as orchard, flowers, and trees, which please the eye and furnish a degree of seclusion and comfort not possible without trees.

Probably the particular class of plantation most neglected is wind-breaks and groves. There has been evidenced in some districts a considerable appreciation of the worth of trees by the planting of scattered individuals along roadside fences, for the purpose of shade for stock and of beautifying the farm, but for its value as a protection of the homestead from the prevailing winds, and afterwards its market value, the advantages of planting a grove are far in excess of what its infrequent appearance might lead one to suspect. Its mere monetary value, through the comfort afforded farm stock, and by protecting the dwelling from the penetrating winds, is of no inconsiderable moment. It also furnishes a habitat for birds, which prey upon the injurious insects of the garden and orchard. Its inception and maintenance is a mere trifle in this country, where land is comparatively plentiful, and the more general planting of such groves and wind-breaks would be an indication of the stability which our agricultural status has attained. Everyone who has ever traversed a typical Canadian forest, either in winter or summer, need not be reminded of the peculiar exhilarating influence it imparts; then why not surround the home with a plantation of maple, beech, elm, pine, spruce, cedar, and all the other trees indigenous to any particular district, a procedure which will well repay its cost in added comfort and pleasure, to say nothing of its tendency to increase the selling value of a farm, if for any reason its sale is determined upon? It is not too late to plant trees of many varieties, and we counsel all who can to do what they can along this line of improvement.

"Subscriber" writes: No matter how busy a man is, fifteen minutes spent reading the "Advocate" after dinner is time gained, not lost.

Consolidated Rural Schools, and the New Education.

The educational movements going on in Nova Scotia deservedly command attention, and will make their impress on its future citizens. The manual-training sentiment is growing. In the common school grades alone, the number of pupils taking mechanic science increased last year from 952 to 1,391, domestic science from 678 to 1,048, needlework from 2,803 to 3,048, and so on. The school gardens increased from 24 to 52. At Middleton, in the County of Annapolis, the consolidation of rural schools is being tested through the public spirit of Sir William C. Macdonald and the genius of Prof. Jas. W. Robertson, who is the administrator of this benefaction. Seven school sections around the town of Middleton have federated for three years, on condition of contributing to the consolidated school board annually a sum raised by local assessment, equal to the average for the three years beginning August 1st, 1899, the balance beyond the regular public school grants being provided by Sir William C. Macdonald, to demonstrate the value of consolidation, involving the conveyance of pupils from the usual walking limit of two miles. Each of the seven sections had a single teacher, and Middleton had three. Federation went into effect last August, and eleven two-horse vans were provided for collecting the pupils. Pending the completion of the new building, temporary accommodation was used. The new school is of brick, stone faced, with a roomy basement, asphalted to make a play room in wet weather. The attic contains a general assembly room, where meetings can be held and entertainments given (the pupils raising money to purchase a piano). On the first and second floors there are four teaching rooms each, two of them intended for two branches of manual training. The warming and ventilation arrangements are practically perfect, and there are laboratories, library, class and cloak rooms. Outside there are walks, shrubbery and flowers, and the school gardens. With an efficient staff and a comfortable rig to ride to and from school, any one can see that all this means a complete transformation in rural school life, from a condition in many cases disheartening, alike to teachers and scholars. The Superintendent of Education, Dr. A. H. Mackay, reports the attendance as greatly improved, being over 90 per cent. during most of the past season. Despite unprecedented snow, and even blizzards, the van service was good, and referring to one very stormy Tuesday, the Superintendent says it was surprising that so many came on time, and none very late. Every van was practically full, there being few absentees from a distance of three, four and five miles. The absentees were principally for the central Middleton section, where the pupils attend on foot.

A very generous sentiment towards the project is being manifested. The people find that they are getting something better, as far as school accommodations are concerned, than they had imagined possible. At the opening exercises in February the hall was thronged with over 600 people, and the names of Sir William and Prof. Robertson when mentioned by the speakers were cheered to the echo. Superintendent Mackay says these experiments constitute the grandest thing that has ever been done for education by any man in the history of the Province. "Dr. Robertson," he adds, "is one of the few able men who see the importance of nature-study in the development of an understanding of the conditions by which we are surrounded. The most perfect mechanical drill

in spelling, writing and arithmetic may leave a person merely a useful tool in an office; but to make thinking, understanding and useful individuals, children should be taught how to get at the facts and meaning of their surroundings; and the habit of self-control and the power of will-direction should be incidentally developed in the method. This element of education is considered most likely to produce a love for the industrial occupations, and to supply the individual with the power of mastering the scientific principles underlying them, as in agriculture, so as to make them most productive with the least expenditure."

At Kingston, N.B., a consolidated school movement is under way, and about a week ago Prof. Robertson was at Guelph, Ont., where four school sections are uniting, and a consolidated school to demonstrate the advantages of the system will be erected on the fine site which he purchased for the purpose just between the new Macdonald Institute and the Brock road, which the Ontario Agricultural College overlooks.

Milk and Meat.

Of all the varied products of the farm, those named at the head of this article are the most important, and, on the whole, the most profitable, since they are not only always in demand and always salable, but because by the processes of their production the fertility of the land is maintained and its ability to produce paying crops increased. Milk is declared by scientists to be the most complete food available, being at once palatable, wholesome and nutritious, and promoting health, strength and vigor. Physicians prescribe it for the upbuilding of run-down patients—experience proves its pre-eminent virtues in this regard, and city people are buying it more largely than ever before.

Butter is an indispensable accompaniment of our daily bread, and if withheld would be missed more than any other article of food, barring the bread itself, while our cheese ranks as the greatest export revenue producer the Dominion can boast, totalling over \$20,000,000 annually.

Next to milk and its products, our beef, bacon, mutton and poultry are our greatest sources of revenue, and the milk of cows plays a prominent part in the profitable production of at least two of these first mentioned, providing, besides its golden gift of cream, a wholesome and nourishing food for calves and pigs, which serves to grow them into good money value, our export bacon trade having increased in the last ten years from one million to twelve millions of dollars. And meat will always be wanted to satisfy the craving appetites of hungry human beings, who, in proportion to their financial ability, will buy the best they can afford. The rapidly-increasing population of our own country by immigration will greatly enlarge the home demand for live stock and its products, as the new settlers will for years be mainly engaged in grain-growing, and will gradually become buyers of breeding stock from the farmers of the older Provinces, while the growing cities and towns will provide ever enlarging markets for milk, and meat and the products of poultry.

While these are commodities produced in greater or less quantity, and of varying quality, on almost every farm, it is certain that on many the quality is not such as will bring the best price, nor the quantity such as to render their production as profitable as would be the case were better stock kept and more intelligent and up-to-date methods employed. It has never been the policy

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of the "Farmer's Advocate" to advise all farmers to go in for pure-bred pedigreed stock, and we do not believe it would be the best thing for all, but we know of no other way of improving the productive qualities of either milk or meat making animals than by the use of pure-bred males of the special milk or meat producing breeds, the weeding out of the unprofitable members of the herd, and the substitution of such as will give a fair profit for the food consumed over and above that required for subsistence. And there is now little excuse for failing to avail oneself of this means of improvement, as good male animals of the improved breeds may be purchased at prices little above what they will sell for to the butcher after their term or service, or their services may be secured for a moderate fee, such as any farmer can well afford to pay.

There is at present a good supply of pure-bred males for sale in the hands of breeders, and the prices asked, as a rule, are not out of proportion to the cost of the stock from which they have been bred and the expense of raising them, for it should be remembered that in the case of the beef breeds the calf has had the whole milk of a cow for a season, while in all breeds somewhat expensive feeding must be practiced in order to have the animals in attractive condition, as buyers will take them only when in good flesh.

The lessons of the stock-yards and produce markets constantly teach that only the best quality brings the best price, and in practice it costs little more, if, indeed, as much, to produce the best quality as it does to raise an inferior grade. There need be no fear of over-production of the best, and we all know that the inferior often goes begging for buyers while the superior finds ready purchasers at any time. To those who have resolved on improving their stock we would say, the sooner a commencement is made the better, and no more favorable time is likely to present itself than now.

HORSES.

Retention of the Meconium in Foals.

At birth the intestines of a foal contain a considerable quantity of feces, of a dark, almost black and tarry appearance, existing in lumps of various sizes, and about the consistence of putty. This is called the "meconium," and is formed during foetal life. It is necessary that this material be expelled, else the little animal will soon become ill with what is usually called constipation. The fact in many cases is, the meconium has passed backwards by the normal peristaltic movements of the bowels, the rectum has become filled, and efforts to expel it are made, but it exists in such large lumps the foal has not sufficient expulsive force to overcome the resistance offered by the sphincter muscles of the anus, and hence is not able to defecate. The symptoms presented are as follows: A few hours after birth the foal shows symptoms of uneasiness, elevates his tail and makes vain efforts to defecate; as time passes the symptoms become more marked and continuous. After a time he refuses to take nourishment, lies a good deal, rolls, lies on his back, rises to his feet, takes the natural position for defecation, and makes expulsive efforts; lies down again, etc. If relief be not afforded, inflammation of the bowels will occur, followed quickly by death. This condition is the cause of death in a large percentage of foals every year, and is more likely to be noticed in early foals than in those of mares that have been on grass for some time before parturition. Irrational treatment in such cases is liable to be followed by serious and often fatal results. When the cause of the symptoms is understood, we can readily see that the ordinary practice of administering purgatives is irrational and harmful. We know that the trouble is the meconium exists in the rectum in such large lumps the foal is unable to force them through the anus; we also know that a purgative acts upon the anterior intestines, both small and large, but has very little, if any, action upon the contents of the rectum, whose function is simply to act as a reservoir for the feces until it becomes filled, when, by what is called a reflex nervous action, its muscles contract, and this, aided by a contraction of the muscles of the abdomen, forces the contents out of the anus. We can therefore see that if we, by administering purgative agents, stimulate peristaltic action of the anterior intestines, and also render their contents somewhat or quite fluid, and in the meantime do not remove what may be called a mechanical obstruction to their exit, we complicate matters rather than relieve. The newly-born foal, while probably quite smart and active, is, at the same time, very delicate and very susceptible to the action of medicinal agents, and even small doses of purgative medicines are very liable to set up diarrhoea, even when the meconium is not retained, and diarrhoea very quickly weakens the foal, and is often difficult if not impossible to arrest. We should, if possible, avoid giving purgative agents to foals, and it is very seldom a foal requires them, especially when the first milk ("the colostrum") of the dam has been taken. This is really not milk, but a clear, viscid fluid of a laxative nature. In cases where there has been an escape of milk from the mammae for some days previous to birth, as sometimes occurs, it may be well to give to the foal a small dose of laxative medicine, as an ounce of castor oil, to take the place of the natural laxative that has escaped prior to birth, but in the majority of cases this is not necessary, while in no case should more drastic purgatives, as aloes or large doses of linseed or other oils, be given. The ordinary practice of giving a laxative to all foals as soon as born cannot be too strongly condemned. Of course there are rare cases in which it is necessary to give laxative agents, but they are few, and when one exists great care should be taken, and small doses of castor or raw linseed oil be given. In cases of retention of the meconium, mechanical rather than medical treatment should be adopted. The nail of the fore finger should be trimmed, in order to prevent scarification; the finger then oiled, and introduced into the rectum, and all the meconium that can be reached should be removed. Any person who has never done this will be surprised at the quantity he can generally get. As the contents of the rectum are removed, a fresh supply will be forced backwards from the intestines, and in some cases a couple of pints or more will pass. After all reachable has been removed, it is good practice to inject into the rectum six or eight ounces of a mixture of equal parts raw linseed oil and warm water, or of soapy warm water. This operation should be repeated every four or five hours, until it is noticed that the contents of the rectum are yellow, which indicates that the meconium has all passed and the

feces formed from nourishment taken after birth have reached the rectum. When this condition, which usually appears in about 24 hours after birth, though in rare cases much longer, has been reached there is little danger of constipation. In fact, while in many cases the foal can expel the meconium without extraneous interference, it is good practice to anticipate trouble in all cases, and give the described attention to the meconium. This will save the foal the necessary expulsive efforts to expel the fecal matter, and thereby conserve its strength. Another point worthy of attention, the neglect of which sometimes is responsible for serious losses, is to observe whether the foal urinates in the proper manner. In rare cases we find a false membrane occluding the exit from the bladder, and where such exists of course urine cannot pass. If ineffectual efforts to urinate be noticed, this condition should be suspected, and the assistance of a veterinarian, or other expert, should be secured to pass a small catheter, break down the membrane, and thereby allow the escape of urine from the bladder. When this is not done, unless the urine escapes through the urachus (a foetal canal leading from the bladder to the navel opening, and which should become obliterated at birth), which may have remained pervious, there will soon be inflammation, and probably rupture of the bladder, which of course will prove fatal.

"WHIP."

Fitting the Collar.

The collar should fit so snugly that there can be no slipping and sliding over the shoulder side-wise, and the attachment of the traces should be so adjusted that they will cause no sliding up and down, or any uneven or intermittent pressure on any part of the shoulder. If the top of the collar is not of a shape to grasp the neck firmly, a stiff pad that can be fitted to the neck should be used. There should be no rubbing of the collar over the top of the neck; the latter should be grasped firmly, and move with the lateral movement of the collar. As the horse moves forward, first one side and then the other of the collar is thrust forward of the other, the load pulling back on it produces a sliding of the collar over the shoulder first to one side and then the other, provided there is room in the collar for it. If you will stand to the side of a horse and watch the movement of his shoulder as he walks, you will notice that the upper end of the shoulder-blade has no fixed position, but moves backward and forward. As the upper end moves in one direction, the lower end moves in the opposite direction, the fixed point or center of motion being midway between the two ends of the shoulder blade. It is very important that the point of attachment of the trace be directly over this center of motion. When it is so placed the rotation of the shoulder about this point is not interfered with; when it is placed too high the upper end of the shoulder can move forward only by pushing the load out of the way, and the alternation of pressure on the sloping surface causes a certain amount of rubbing, even if the collar fits well, and a sore at the upper end of the shoulder blade is likely to be the result. Placing the attachment too low does the same for the point of the shoulder. In addition, either improper attachment greatly increases the amount of work the horse must perform, as the load must be pushed out of the way at every step. This is a very prolific source of stiffness in the fore quarters.—[Prairie Farmer.

Management of the Foal.

Once the act is over, let the foal shuffle into life in his own weak and helpless way. Let him for the present be the staggering Bob of the loose box, in which there is no such thing as a manger for him to creep under to his own injury, nor are there any projections, ragged hooks, or nails, nor anything whatever except the framework of a well-floored square or rectangular room. Let the foal find out his own way of sucking the mare. If the attendant attempts to assist the foal the mare will utterly fail, because no one can bend the neck of a foal into the required position, still less can he hold it there during the time of sucking. As the foal strengthens, he will in a few hours so worry for the milk that even a ticklish mare will eventually become so accustomed to his movements and his frolics that she must give way to him. If no one startles the mare she will not tread on him, even accidentally, nor injure him in any way. Here and there a mare will obstinately refuse to allow a foal to suck, and then the attendant should put a blinker halter on her, and hold her during the perseverance of the strong and determined foal. This should be done very frequently during both day and night, or the desirable approach to nature will not be attained. Young, vigorous mares have a copious flow of milk, quite out of all comparison to the size of the udder. Bad milkers must be supplemented by cows' milk and sugar. When the foal is three days old, both it and the dam usually understand each other sufficiently well to be left entirely alone.—[Ex.

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The Automobile.

It was after much deliberation and thought that I decided to invest in an automobile. The salesman told me it was the coming mode of transportation, and that the horse must go. I agreed with him. I bought a new horse last summer, warranted to possess all the equine virtues. The first time I drove him I met an auto, and the horse decided he must go, and I guess he's going yet. I stayed with him a while, but made up my mind he was too swift a proposition for me to keep company with. I never could determine whether it is the appearance of the machine, or the smell, or the raiment of the driver, that gets into a horse's nerves, but I reckon it's the raiment.

The first machine I looked at was small, simple, and inexpensive. It had but one cylinder. The salesman said that was an advantage. He said a four-cylinder engine would get out of order four times as often. This machine had a handle on the side like a barrel-organ. He showed me how to make it go fast and slow, and stop and start, and all the while the machine stood in the store. A child of ten years could run it, he assured me. "Now, if you want to get out of a tight place," he said, "get a sudden move on—so to speak—you just touch this lever, called the accelerator."

He touched it, and with that something went wrong, and the handle I have alluded to flew around and smote me violently in the abdomen. When I came to I told him a child of ten might run the machine, but the child would have to have a very strong stomach.

Every auto I thought of buying, all my friends assured me was no good, and in the light of subsequent experiences I guess they were right. Finally, on my own responsibility, I bought that lovely lobster-pink creation in which I may be seen most any pleasant day now, running merrily through the park or street, and anon, sitting reposefully while my chauffeur, assisted by the populace, explores the vitals of the machine, looking for trouble. I remember when I was a boy I saw and admired at Barnum's museum a working model of an engine, all made of glass, but I never dreamed I should own one.

I am getting proud of my machine. I think it holds the record for having travelled fewer miles in a given time than any other yet devised. My engine will break when standing motionless on the barn-floor, simply through the power of gravitation. It is operated by a skilled mechanic, and costs me as much per month as it would to run a battleship. But it has one merit. I never wander so far from my own fireside but that I can easily walk back. I have worn out six sets of hinges in the hood, peering at the engine to see what is busted.

I used to get up and help the chauffeur to look, until one day, when we were both hidden behind the hood, a sneak carried off my fur robes. Now I just sit back and listen to the jeers of the populace, and sigh to think of the happy times gone by when I used to travel on the street-cars and get to my destination on the same day.—[Simon Ford, in Everybody's Magazine.]

Docking in Michigan.

Michigan has an anti-docking law, whereby all persons owning docked horses are required to have registered them prior to December 6th, 1901. It is also unlawful to bring a docked horse into the State, unless it be so registered. The fine for violation of the law is not less than \$50, nor more than \$250; in default of payment, the alternative of imprisonment for not less than ninety days.—[American Veterinary Review.]

What They are Saying.

The "Advocate" is such a good farmers' paper, one feels like working for its success.
Elgin Co., Ont. WILLIAM LOGG.

To part with the "Advocate" would be to part with an old friend.
Middlesex Co., Ont. WM. H. JOHNSON.

Please find enclosed our renewal of paper, as we could not do without same since it has become a weekly.
Russell Co., Ont. GEO. H. ARMSTRONG.

A Necessity.

I feel it a pleasure to say a few words in favor of your paper whenever an opportunity presents itself, for the valuable information it contains is as anxiously looked for by our family as is a meal after a long fast. Wishing you every prosperity.
Cardwell Co., Ont. F. W. JEFFREY.

STOCK.

The Pig in Clover.

By A. S. Alexander, V. S.

This is to be about a pig purposely in clover—not the vagrant pig, considered out of place in clover, and forthwith chased out of it by a yellow dog. We know that a pig enjoys life in the clover field. That's the reason for the familiar allusion taken for the title of this article. Depend upon it, that enjoyment in a feeding animal means thrift and that the clover is appreciated because it satisfies. The satisfied pig is then properly situated when in clover, and he should not have to break through and steal this nutritious green growth. Experiments have shown that pigs thrive well when fed grain on clover—much better, indeed, than when fed the same amount or more grain in a yard or pen. If memory serves us aright, practical men have found an acre of green clover productive of four to six hundred pounds of hog in a single season, when corn was fed along with the green food. It is making a fresh start each day, when cropped by animals. It throws out fresh, tender leaves, bravely seeking to attain its aim in life. On these new growths animals thrive apace, and the pig, said to be lacking in taste, as a general proposition, is not behind other animals in appreciating the clover salad as a relish to his dry shelled corn.

But it requires an abundant rainfall to maintain steady growth in close-cropped clover—something we cannot confidently count upon each season—and if this blessing is vouchsafed the farmer, his pigs respond satisfactorily. Even without what may be considered a sufficiency of moisture, there will, in an average season, be at least enough nourishment in green clover to produce profitable gains in pigs allowed to graze, and fed additional food in the form of grain. To obtain the great gains alluded to in the foregoing, some men feed one pound of corn per pig each day. Clover is comparatively rich in protein, so that corn tends to balance the ration for even a growing pig, and without it, or some other concentrate, mere pasture would give poor returns. Alfalfa pasture is perhaps the only hog grazing that produces profitable gains in the absence of an adjunct food, and clover comes next in point of maintenance qualifications. Used in conjunction with grain, the clover pasture, if properly handled, has been calculated to save some 2,000 pounds of grain in hog feeding, or even more in some instances. This is surely well worth trying for, and surely proves that the pig is entitled to enjoy himself in the clover fields.

But we are more interested in the little pig than in the hundred-pound porker, with which most of the reported gains have been made. He is "the making of" the mature hog, and the making of the pig is the building of the foundation—the most important part of every structure. Many of our farm friends have gone about the making in an erroneous manner. They have figured that all foods are suitable building material, that corn which furnishes one necessary material may be depended upon to perfectly take the place of everything required in the animal structure. This is like building with nothing but bricks. Mortar is necessary to cement the bricks into a strong structure fit to endure. "All corn" builds a showy structure, but it has a poor foundation and is not strongly welded together. A mixed ration supplies all of the requirements of the growing frame—the necessary materials from which are formed strong bone, ample muscle, dense sinew,

pure blood, tough hoof, adequate hair; and, in short, all of the concomitants of a robust constitution and vigorous system.

The clover pasture grazed, that it may produce fresh growths daily, offers not only nutritious food for frame and flesh formation, but a place in which the pig takes ample exercise, drinks in fresh air, and avoids disease germs. In such a place it is the proper work of a pig to simply grow—not to become fat. But owners seem more interested in creating fat than in building a strong frame to accommodate loads of it later. They do so at the expense of bone and muscle, and in so doing expose the animal to every ill that hovers about debilitated constitutions. The corn-stuffed, non-exercised pig from weaning time forward is rapidly fitting itself as a host for the hog cholera germ. It may suffer meanwhile from some other ailment, the product of incomplete nutrition. Of these the most common is "rickets"—the trouble present when a pig subsides upon his stern and drags his posterior painfully about the place, squealing pitifully for more corn. He is like the drunkard crying out for rum, for he is seeking the very thing that has wrought his ruin. Corn will not build up the bones that are deficient in earthy matters, nor will it strengthen the weak muscles of the loins, any more than more whiskey will set the staggerer straight upon the right path in life. The pig in clover will be sure to escape partial paralysis if fed foods that assist clover in frame-building. Some corn is all right, but not all corn. Corn plus middlings, bran, shorts, milk, dried blood meal—one or more of the foods rich in protein—will build up the growing pig until it attains age and weight proper for the finishing process, when much corn may be fed to a good profit for fat production without great danger of the train of troubles induced by unbalanced rations. We need the strong hogs—the ones with bone and muscle—and the system producing them will also tend to give us prolificacy in the sow, virility in the boar, and a larger measure of lean meat in the side of bacon, and the "ham what am."—[Live-stock Report.]

Calf-raising for Beef.

Beef production starts with the calf. Presuming that the calf is of the right sort, one bred for beef, with a capacity for laying on thick, even flesh, with a high percentage of choice cuts, it must be fed and cared for as well as possible if it is to make a first-class beef animal. Fall calves are preferable as a rule, usually getting more attention than others, as they have the advantage of the time of year when the farmer has most time to attend to his stock. The best way to start a calf, assuming that it can be hand fed, is to leave it with its mother from three to five days. It should be fed only new milk until it is a month old, when it may be gradually changed to skim milk, always fed warm, taking a week for the change. A little boiled flaxseed in the milk supplies the fat removed, as well as is possible. This should be continued at least three months. After the calf begins to eat a little clover hay, which should be kept within reach, and which it will begin to eat when a month old, give a little whole oats, which it will soon learn to eat. Then a regular ration of ground oats and bran will keep it growing and thriving. After the calf gets older, a little pulped roots should be added to the ration if in winter, or green grass cut and carried in summer if kept in a box stall. If allowed out to pasture, access to a shed should be provided for. If the calf is well cared for during the first eight months of its life, it should be in good shape



How Tree-planting Transforms the Prairie.

The grove on the farm of J. J. Ring, Crystal City, Manitoba.

to thrive on ordinary feed. Care should be taken never to let it lose its calf flesh, as much time, feed and care are necessary to get it into good shape again, and it will never make as good an animal as it would had proper attention been given during this period. FARMER'S SON, Huron Co., Ont.

Dying for an Appropriation.

To the Editor "Farmer's Advocate":

Sir,—Have read carefully the few letters published in the "Advocate" condemning the Live-stock Commission and the live-stock associations for the course taken at the meetings called to consider the advisability of making an exhibit at St. Louis. Now, I think, outside of a very few who are so anxious to die for their country at St. Louis (if they get paid for it), the great bulk of the people were very much pleased with the course adopted by the associations. In fact, it was the only course self-respecting men could take. This continuous grovelling to our American cousins invites, and deservedly so, the contemptuous treatment often received from them. Now, there is a good deal of nonsense in this talk of a national exhibit from these men who want to show at St. Louis, and want their expenses paid. I have before me a report of the Columbian Exhibition in the old Live-stock Journal. It gives the names of the sheep exhibitors, names of sheep that won, and names of their breeders, and I find that in the class in which I am most interested, the Oxfords, in the regular classes there were 42 prizes, 41 of which were won by English sheep, and one by an American-bred. There were two pens shown which had to be bred by exhibitor, so, of course, they had to be home-bred, and I also find that the bulk of the winners of other breeds were also imported. Now, I fail to see where the great glory or any particular benefit accrues to Canada from the prizes won by sheep there, and from the number of sheep about to be imported, there is no doubt the St. Louis exhibit will be a repetition of the Columbian.

The parties who derive the benefit will be, first, the English breeder; then, if this stock is good for breeding purposes, the American breeders who buy them, and the few speculators who import, show, and sell them. There will be very little of this stock distributed amongst Canadian breeders; it is the American market these exhibitors are after, so really any grant made for this purpose will be to, and in the improvement of, American herds and flocks. Besides this, the prizes are very large—it is possible to win between \$200 and \$300 on one sheep, besides the association prizes, which are large also—and these gentlemen will no doubt win all of them, for I see by their advertisements they have the champion flocks of America. Now, sir, I think it is a little too thin to want the Canadian taxpayer to tax himself for something from which he receives no benefit. Now, one word for Mr. Hodson. I think the most of us feel we have the right man in the right place, capable, thoroughly in earnest in his desire to help the live-stock industry of Canada; a man in whom we have all confidence, and I think there is very little sympathy with those parties who are trying to raise a kick at our commissioner. ROBERT J. HINE, Elgin Co., Ont.

The Brains of a Collie.

"T. B. M.," in the "Farmer's Advocate" for March 17th, advanced the argument that the head of the collie dog has been so changed that he has not now, according to bench show requirements (because of the shape of the skull), any brains. So long as a dog has abundance of brain room, that should be sufficient. "T. B. M." wants a "projecting" forehead, one with the "stop" of the setter or St. Bernard. Would he say that a collie with the head formation he desires would certainly turn out a worker? Hardly! He would not want the inexpression of the setter, nor the stolid, complacent look of the St. Bernard. A collie must have his wits about him to be a high-class worker, and the expression of the best individuals now shown give indication of his still possessing them. Besides, collies never had very prominent foreheads, the farmers' dog (always called a collie) sometimes more prominent than the clean-cut ideal of the fancier. The collie of twenty years ago had a medium length of muzzle, and a rather broad, deep and fleshy skull, covered with a comparatively long coat of hair, rendering it in appearance bulkier than it actually was. The collie shown to-day has a long muzzle, set on a skull as long as it is possible to get it, and with the least amount of flesh on it obtainable. The lower jaw too has been fined down, giving less cheek, and also less thickness. With the much greater length of skull, there must be additional space for brains, and this would indicate that the prizewinning dogs of to-day have brains in weight as large as those of years gone by.

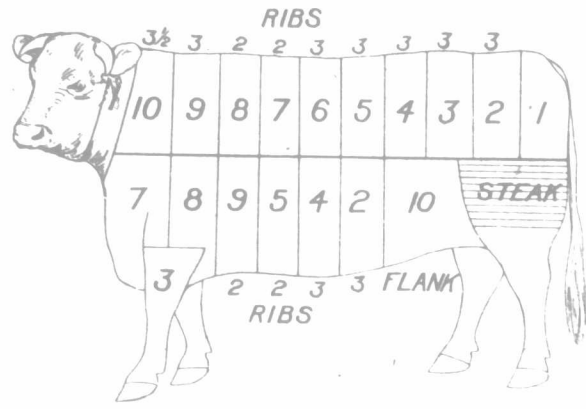
"T. B. M." gives his experience (one instance) of the working quality of a fancy-bred collie. Has he not heard of sheep-dog (collie) trials in Scotland, North of England and Wales, where fashionably-bred dogs successfully compete? Yet all collies are not good workers, no more than are all horses, or even men, as "T. B. M." possibly has realized. He will find families of nervous and shy

dispositions, that never develop satisfactorily, but with individuals of character and courage better results are obtained. When he bought his prize-winning collie, "T. B. M." evidently expected that the prize won was a guarantee of his working ability, about which possibly he took no precaution to enquire. If he were buying a trotter would he not wish to know about his record as well as show winnings? It may be admitted with reason, that collies raised for generations in confined kennels lose instinctive character and intelligence, but most prominent prizewinners are reared on farms, where, if they are not always trained to work, their associations are for their best development, physically and mentally. OBSERVER.

FARM.

Beef-ring Chart for Twenty Members.

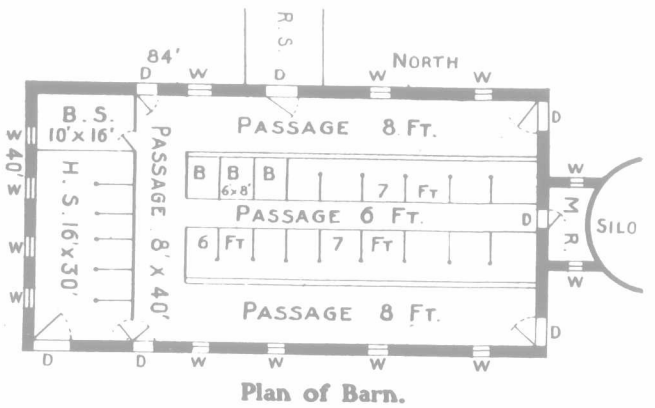
In a late issue of the "Advocate" J. W. A. was wanting a chart for a beef-ring for 20 members, so that each one receive a boil, roast and steak. I enclose a chart, which I have been using for seven years, and which has given good satisfaction. I think it is the easiest chart to cut by of any I have seen. It will work for 20 or 21 members. CHRIS. GROSE, Simcoe Co., Ont.



The Value of Alfalfa Pasture.

The Kansas Experiment Station has been conducting an experiment during the last year for the purpose of determining the value of an acre of land as pasture for swine that a.e fed a grain ration, consisting of half shorts, one-fourth corn meal, and one-fourth Kaffir meal. Thirty shoats, averaging fifty-two pounds in weight, were divided as nearly equally as possible into three lots of ten each. All the lots were fed the same grain ration, but one lot received rape pasture, one lot alfalfa pasture, and the third was fed in a dry lot. The grains eaten were very nearly equal. Where no pasture, however, was used, it required 371 pounds of grain to make 100 pounds of gain; with rape pasture, 301 pounds; and with alfalfa pasture, 300 pounds.

The station, based on this experiment, credits the grain with 877 pounds of pork, and the rape with 199 pounds. At six cents per pound, the price at which hogs were selling at the close of the experiment, this makes the value of an acre of



As used by W. H. Caverhill, Middlesex Co.

rape \$11.90. In a similar manner the alfalfa is credited with 201 pounds of pork, equal to \$12.05, and as there was only a half acre of alfalfa used, the value of the alfalfa was \$24.10 per acre.

The cost of preparing the seed-bed and seeding the rape was \$1.80 per acre. The Station says:

"The experiment emphasizes the superior value of alfalfa pasture. Where alfalfa is not available, or where variety is wanted, or it is desired to utilize otherwise waste land, Dwarf Essex rape, seeded at the rate of 6 to 8 pounds per acre, any time from early spring to late summer, will furnish an excellent diet that is greatly relished by the hog. Succulence and variety will make healthier hogs that will return increased profits."

Water and Tillage in Sugar-beet Culture.

By Mr. H. W. Wiley, Chief Chemist, U. S. Department of Agriculture.

The agriculture which relates to sugar beets is necessarily agriculture of a high grade, because low grade agriculture will not prove profitable in beet culture. The beet is largely a garden plant, and it was for some time after its cultivation began altogether so. Then it developed into a forage plant for cattle, and then, finally, for the production of beet sugar, by the improvement in its quality, which was begun, first of all, by Vil-morin, who was the father of the improvement of the beet, and afterward carried to even greater success in Germany. By selection, by cultivation, and by care, we have developed the beet from a plant containing from four or five or six per cent. of sugar to a plant containing thirteen or fourteen or fifteen per cent. of sugar. Now, there must not only be sugar in the beet, but there must be enough beets to make the amount of sugar grown per acre a profitable amount. The census report shows that considerably less than ten tons per acre was the average yield in the United States during the census year, or the year just previous to the census, and, in fact, it was, in some cases, as low as seven tons. It is difficult to see how agriculture of that kind could prove profitable with such a yield, unless land was very cheap and labor very cheap. But successful industry, especially successful beet industry, tends always to raise the price of agricultural land, so that lands on which good crops of beets can be grown, say an average of ten or twelve or fourteen tons per acre, are lands which naturally command a high price in the market, because they produce a crop which will pay interest on a large fixed investment. It will, therefore, be necessary in this country to bring the average yield up to about twelve tons per acre at least. There is no reason, it seems to me, why we cannot look forward to a yield equal to the average German yield of fourteen tons of beets per acre. We all know that a great many beets have been grown where the yields have been very much larger than these I mention; but we must not take individual instances into consideration when we are speaking of an industry as a whole. We must consider only the average yield.

The question of growing a big crop of beets is simply a question of feeding the beets, and, therefore, it is a question of nutrition just as much as the growing of a steer for the market, or of a horse for the race track, or of a draft animal, or any other animal, is merely a matter of scientific nutrition and treatment. Of course, you must begin with an animal bred for that purpose just as you must begin with a beet bred for that purpose in order to produce sugar. Then you must feed that beet in order to produce the result desired.

The first great food for any growing plant is water. Those of you who live in irrigated regions perhaps have a more lively conception of the importance of that statement than those who live here. The first great need, then, of the beet is water. Hence you cannot grow beets without providing, in some way, for an adequate supply of water. Nature may supply this; but in non-irrigated regions nature's supplies are apt to be somewhat irregular, and, therefore, one of the first functions to be performed in the raising of beets is to prepare the soil in such a way that it will hold water in time of drouth, and let it off easily in time of flood. Water, therefore, which is the chief food of the beet, must be continuously supplied. In irrigated areas the supply is under control; but in non-irrigated areas it must be so manipulated that the land will be supplied in time of drouth and the water may be gotten rid of in time of flood, because in excess it becomes an injury. There should, however, be at all times a sufficient supply to maintain the growth of a plant during times of dry weather. We all know how the preparation of the soil tends to conserve the water supply in time of drouth, and the cultivation of the soil, especially surface cultivation, tends to retain the water which otherwise would escape into the air. We know that if we keep the capillary surface mulched, namely, the upper layer of the soil, which may be regarded as the mulch, and thus break the capillary continuity between the surface and the lower part, which is the seed-bed and home of the root of plants, we can prevent largely the evaporation of water. Hence, until the beets have grown to such an extent as to shade the land, frequent surface cultivation is absolutely necessary in times of dry weather. Previous to that, in the preparation of the seed-bed, there must be a deep loosening of the soil for two reasons: First, because the beet root must be allowed to go straight down. You can never get a profitable yield of beets if the taproot is turned aside by any obstruction, whether it be by a stone, or by hard-pan, or anything else. The soil must be prepared in such a way that the taproot can go straight down in order to get beets of a symmetrical shape, and hence the soil is necessarily loosened to a very much greater depth than is necessary in the cultivation of the cereals. For this reason, unless the soils are naturally

Culture.

Department

gar beets is de, because profitable in garden plant, cultivation beed into a ally, for the movement in all, by Vil- rovement of ven greater cultivation, beet from a six per cent. or fourteen there must be re must be sugar grown nsus report a tons per it States ist previous some cases, to see how e profitable cheap and industry, s always to that lands grown, say n tons per and a high ce a crop ed invest- in this to about no reason, rward to a ld of four- ow that a e the yields I mention; ances into an industry he average

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loose; that is, extremely sandy, precedent to the planting of the beets and preferably in the previous autumn, deep plowing and subsoiling are necessary to prepare the bed. This serves two purposes: It helps to take care of the water supply, and it gives opportunity for the taproot of the beet to enter the soil. This has a double advantage. In the first place, it promotes the growth of a beet of proper shape; and, in the second place, it gives a deeper layer of soil from which the beet may draw its nourishment.

Sugar Beets on Summer-fallow.

"Sugar beets can be well substituted for bare fallow," writes Dennis H. Stovall, in the Northwestern Agriculturalist. "It has been found in Europe and this country that it is much more profitable, as well as better for the land, to raise a crop of beets than to allow the ground to lie as idle fallow.

"The farmer can, by proper cultivation, devote one-fifth of his land to beet culture, and raise as much from the remainder of his land as though none of it was occupied by beets.

"The first plowing, which should be in the fall, should be followed by a spring plowing to a depth of not less than ten inches, and, if possible, subsoiled to a depth of fifteen inches. Shallow plowing will not do in the successful growing of sugar beets."

Mustard-spraying Demonstrations.

The work of giving demonstrations in mustard spraying in Ontario, which has hitherto been carried on by delegates from the Agricultural College, has been this year relegated to the Department of Agriculture, and will be carried on in connection with the Farmers' Institutes. Circulars calling for applications for demonstrations in infested districts have been issued by Mr. Geo. A. Putnam, Superintendent of Farmers' Institutes for Ontario, and steps are being taken for having object lessons in spraying given over an extensive ground. Without doubt, the work so acceptably done by the College in the past will be prosecuted with vigor by the new hands to whom it has fallen, and will be productive of much good in the Province, in ridding from it a pest which is obtaining only too strong a foothold in many parts of the country. Those who purpose having spraying done should bear in mind that the spray, in order to be effective, should be applied just before the plants bloom. Failure has almost invariably been due to the operation having been left off until the mustard had reached too late a stage of growth.

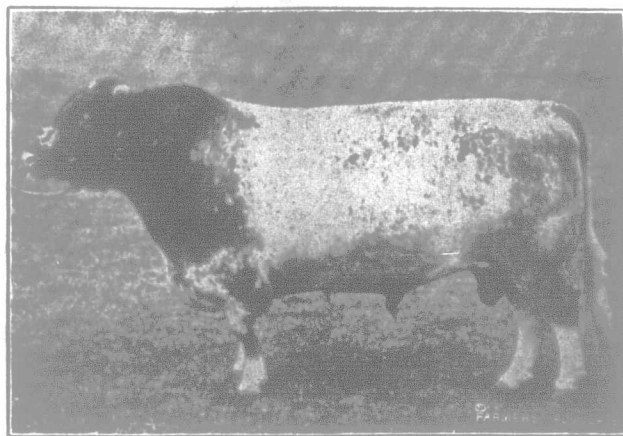
Pointers for Roadmakers.

Ontario Commissioner of Highways.

1. The steepness of hills should not exceed a rise of one foot in twelve.
2. The roadway graded for traffic should be in the center of the road allowance, and should have a uniform width of twenty-four feet between the inside of edges of the open ditches. The width of roadway on cuts and fills should not be less than eighteen feet.
3. Side slopes in cuts and fills should be one and one-half feet horizontal to one foot vertical.
4. The crown of the newly-finished roadway should be uniform, and have a rise of one inch to the foot from the edge of the ditch to the center of the road.
5. When gravel or broken stone is used it should be placed to a width and depth sufficient to form a serviceable road, having due regard to the character and extent of the traffic.
6. The gravel or broken stone used on the road should, preferably, be obtained in the vicinity of the road, but must be of good quality.
7. As a rule, the gravel or stone should not be of less width than eight feet, nor of a less depth in the center than nine inches.
8. Where roads have heretofore had gravel or broken stone placed on them, they should be repaired by cutting off shoulders, shaping with a grader, and adding a sufficient amount of gravel or broken stone to fill ruts, depressions, properly crown and make a road sufficiently strong to accommodate the travel.
9. The gravel or broken stone placed on any road should be thoroughly rolled, otherwise the grade should be maintained by careful raking or scraping until compacted by traffic.
10. An open drain should be made at each side of the road, and given a sufficient fall to free outlet.
11. Durable sluices and culverts should be built where necessary.
12. Tile underdrains should be laid, so as to carry away excessive subsoil water, lower the waterline, and secure a dry roadbed, wherever a moist, damp or springy condition of the subsoil exists.
13. Modern machinery and implements should be used as far as possible to secure the greatest results from the expenditure, and to provide the best work.
14. Where, owing to special local conditions, any departure from the foregoing regulations may be desired, upon application of the council, an examination of the road or roads in question will be made, free of charge, by an engineer of the Public Works Department for the purpose of deciding upon a suitable plan.

Problems of the Soil: VI.—Cultivation and Plant Food.

It has long been noticed that cultivation has a very important effect in increasing the available plant-food in the soil, so that plants cultivated while growing, or plants on soil which has previously received prolonged and thorough cultivation, show, generally, a much better growth than those not so treated. Indeed, so great and noticeable is this fact that at one time many believed that "cultivation is manure," that all that



Shorthorn Bull, Royal Archer 82127.

Winner of championship medal, Dumfries Show, Scotland, 1903. Age three years and five months.

was necessary to secure perpetual crops was to cultivate the land properly. Scientific investigation and practical experience have since proved the incorrectness of this theory, but, nevertheless, it is generally recognized that cultivation does in a way greatly increase the available fertility of the land. It is important that we should clearly understand the manner in which this takes place, that we may use this action to the best advantage.

As we pointed out in our last article, the soil contains immense quantities of plant-food, which, however, is not immediately available to plants, because it is soluble neither in water nor in the juice of the plant roots. Of this food, the ash materials, potash and phosphoric acid, exist chiefly in the form of solid particles of undecomposed rock, or united with other elements of the soil in insoluble form. The action of air and water will cause hard rocks to decay and soften, resolving themselves into fine particles of sand, and setting free their fertilizing ingredients. In the same manner, the fine particles of rock in the soil are acted on by the air and made to yield up their fertility.

ing large quantities of these substances available. Under proper methods, this action should be a very important source of plant-food on every farm. It is to be remembered, too, in connection with these elements, that the action by which they are set free takes place almost as well in cold weather as in warm. So far as they are concerned, the most effective cultivation is that which thoroughly pulverizes the soil in the fall, and leaves it in a condition to benefit by the frosts of the winter.

Nitrogen, too, is made available by cultivation, but in a different way. As we have seen, it exists chiefly in the form of humus, or decayed vegetable matter. This, while available to some extent to plants, is insoluble in water. There is, however, a ferment in the soil, by means of which the humus is broken down, and the nitrogen which it contains is changed into the form of nitrate, in which it is soluble in water, and very available to plants. This ferment acts chiefly in warm weather, and is greatly stimulated by cultivation. Hence, summer cultivation has the effect of liberating large quantities of nitrogen, by changing it from insoluble humus to soluble nitrates. Where plants are present to use the food thus liberated, this action is beneficial, but where no plants are present, as in a bare fallow, the action may be very injurious, since the food thus liberated is liable to be washed out of the soil and lost.

It must be distinctly understood that cultivation adds nothing to the soil. Land when cultivated in the summer does not absorb fertility from the air, as some think. What does take place is the making available of food already in the soil. This is a valuable method of increasing fertility, but may be misused, as we shall endeavor to point out in our next article, in discussing the subject of summer-fallowing.

[NOTE.—In the issue of April 28th, a subscriber, under the head of "Deep vs. Shallow Spring Cultivation," instances a case in which shallow preparation of seed-bed failed to give good results. Here, in my opinion, the failure was not due to any fault in the condition of germination, but to the condition in which the young plants, after germination, found the land. The soil must be porous enough to allow plant roots to grow freely through it. Here the land, unplowed the fall before, and inclined to bake, was likely too hard for the roots to penetrate. Besides, I should expect a shallow preparation, on top of a hard soil, and rolled after seeding, to bake again at the first opportunity. Of all evils, choose the least, and in this case it was better to plow and loosen up the soil so that the roots might penetrate it, than to leave it hard, and pay attention only to the preparation of a seed-bed. The germination was all right, but the condition of the under soil was wrong.

The writer had a good illustration of the point in question on his own farm last summer. In 1902, we had a ten-acre field of roots. After the roots were harvested, we started to plow it, but had only half finished when a fall of snow stopped us. In the spring, a year ago, we finished the plowing, gave the whole field one stroke with the cultivator, harrowed, sowed with barley, and harrowed after the drill. Where the land had been fall-plowed and the seed-bed prepared shallowly, the germination was much better, and the grain showed the difference all through; so much so, that at harvest it was easy to see the exact line between the two preparations. In one case, where a land had been struck out and five or six yards plowed in the fall, the difference was so great that it appeared as a distinct streak across the field, the barley on the fall-plowed and shallowly-cultivated land being taller and better headed than that on either side, where there had been deep spring cultivation with the plow. The difference was even more marked in the clover, with which the land was seeded, showing that where a shallow seed-bed had been prepared, better conditions of moisture had been obtained. The soil was a heavy clay loam. If the land were hard, and had not been fall-plowed, I would use the plow, but I prefer fall plowing and shallow preparation in the spring.] D.

Counting the Cost.

Market conditions this spring are not of the most encouraging nature. Hogs and cheese, the two staples we have come to place so much dependence upon, seem to head the procession in the slump in values, while export cattle prices struggle in vain to rise above five cents per pound. A readjustment to suit conditions begins at once, but is difficult by reason of the firmness with which the bacon and dairy industries have been established.

There is not so much a tendency to launch upon new enterprises, but rather a lessening of the production of those commodities which now appear to be in excess of market demand. Cheese factories have been repaired and improved, and are now in full swing, but from nearly every quarter comes the report of slightly smaller supplies of milk than were coming forward at this time last year, when cheese was selling for more than twice the market price to-day. Factory men regard the short supplies and the low price as not an un-mixed evil. Already there are too many small factories running, whose equipment is not modern, and whose product is too small to be made economically, hence the presence of considerable inferior cheese, and the hampering of larger and better equipped factories. Lower prices and smaller supplies it is believed will close up some



Collie Makes a Spring.

A favorite dog at the Maple Grove Farm, Rosser, Man

This action takes place continually, even where there is no cultivation, so that we must regard the soil as constantly going through a process by which the insoluble plant-food which it contains is being made fit for the use of plants. Under natural conditions, however, this is a very slow process. Where the soil is cultivated, the action is very greatly increased. The land is turned once and stirred, and lumps are broken up, the air is admitted freely to all parts of the soil, and acts on the compound of potash and phosphoric acid, mak-

of these small plants; while the same conditions will make the larger manufacturers more careful in their making and curing.

Lower values for hogs will have its effect later in the smaller numbers marketed; it should also encourage the breeding of only the best bacon types. For the present it is compelling producers to feed more cheaply on clover, rape, and dairy by-products, which lesson of economic production will be used to greater advantage when prices improve.

One of the branches of farming that has not received much attention of late, but one that promises well for this season, is potato-growing. Blight in Michigan, and in some parts of Ontario, is responsible for short supplies this spring, and the high price of seed will prevent a very large acreage being planted. So rapidly is the blight and rot spreading, that it is practically imperative that the seed be treated with formalin and the tops sprayed with Bordeaux mixture. From all appearances one would be justified in planting quite largely where the soil is suitable and other conditions favorable.

The fall wheat crop in many districts has not made the improvement that was hoped of it. Already some has been plowed up and resown, while in other parts farmers are hesitating. Where such is the case, a good crop of feeding grain can be secured by sowing barley and an early variety of oats with the wheat, thus turning a questionable market crop of wheat into a fairly certain crop of feed.

Rape a Money-maker.

Rape is a great money-maker for the farmer, and yet there are comparatively few who have accepted it as such. It will fatten cattle, grow calves, prepare sheep for market, make the lambs increase rapidly in weight, and produce bacon cheaper than any other plant that will grow and flourish on prairie soil. Too much can scarcely be said in its favor. It will produce a fair crop on poor soil, a good crop on soils of average fertility, and a heavy crop on land that is rich. On soil properly prepared and containing a good store of plant-food, it will produce heavily even in dry seasons, but does best with a fair amount of moisture.

The ideal preparation for rape is just such as should be given for roots. It will not do well on sod, but stubble may be prepared so as to make a desirable seed-bed.

Sowing may take place any time from early spring until the last of June. If sown broadcast, a good plan is to use the grass-seed attachment of the seeder, and put on from four to five pounds per acre; or the seed may be directed down every third spout of the seeder, thus sowing it in drills. The heaviest tonnage per acre will be obtained by sowing in drills and cultivating with the horse-hoe, but on the average farm, where labor is scarce and expensive, it is probably better to sow broadcast.

Five or six weeks after seeding the hogs may be turned in, but when cattle or sheep are to be given their first feed, care should be taken to see that they already have had their hunger satisfied; otherwise they will take a heavy feed, and bloating is likely to be the result.

It will pay every farmer who is raising a few hogs or calves to sow some rape. By using a few rods of the portable fence illustrated in the last issue of the "Advocate," an incalculable amount of benefit may be obtained therefrom, but it should not be fed to milch cows, because milk and butter will be sure to taste of rape.

Good Roads in Nova Scotia.

The Nova Scotia Government, alive to the importance of good roads, last session secured authority from the Legislature to appoint a good-roads instructor, and the appointment of C. R. Coutlee, of Aylmer, Que., is announced. Mr. Coutlee is a member of the Canadian Society of Civil Engineers, and is under forty years of age. He was educated at the Royal Military College, Kingston, graduating fifteen years ago. Since then he has been employed on important works from Montreal to Vancouver, and is now carrying on a general engineering practice at Vancouver. He is regarded as an expert on highway construction.

Two-cent Fares Asked.

At a meeting of farmers in Brant Co., Ont., a resolution was adopted asking the Dominion Parliament to impose a two-cent passenger rate on the Canada Southern division of the M. C. R., which runs from Windsor to the Niagara River. The passenger earnings of the road in question in 1902 were upwards of \$3,100 per mile. It was the only road in Canada which had earnings of \$3,000 or over, and would under the Michigan law be compelled to adopt a two-cent rate.

The Best Published.

Enclosed find my renewal. I believe it is the best farmers' paper published, and every farmer should subscribe for it, as it contains a large number of excellent experiments and ideas.

Wentworth Co., Ont. J. H. DICKENSON.

DAIRY.

Dairy Prints.

Marbling (streakiness) in butter is not a desirable condition. Leave that to the beef and bacon producer.

Keep tab on the cows this summer. Find out whether each pays for its keep, or gives a profit over that keep.

For the average farmer in the West, the dual-purpose type of cow is best suited to the conditions.

Prof. Shaw believes that \$18 a ton for bran is more than farmers in the Northwest can afford to pay for that necessary stock-food. Is this right?

You cannot expect your cows to rank as dual (or general) purpose if you let the calves suck their dams.

Do not expose the calves to the mid-day sun; have them keep civil-service hours—ten to four—inside the barn.

The by-products of the dairy need pigs and poultry to make a good profit.

Cheese Trade Notes.

Birmingham, Eng., is not a very large wholesale market for cheese, but very large quantities are purchased by retailers and jobbers in this district. The large shipping centres for this section are Liverpool and Bristol. Mr. P. B. Ball, Canadian commercial agent there, has made extensive enquiries as to how cheese comes into this market from Canada. One of the largest importers says:

Waxed Cheese.—There is no doubt that waxing preserves the cheese, and keeps it in good condition and avoids loss in weight, and the only reason the retailers object to it is because of the 4-6 ozs. per cheese additional loss in weight they have to suffer. It is well within our memory, however, when the retailer kicked just as vigorously against the custom of making the cheese in cloths, but this died a natural death, just as we imagine the objection to waxing will. Another firm: "Several of our customers object to waxing. No doubt it prevents the cheese from shrinking in weight, and keeps them milder than they otherwise would be. At the same time, it is very difficult to tell what month's make they are when preserved in this way."

"September Cheese."—One firm states that in their opinion shippers are most unreliable in selling a certain month's make, and state that it is becoming a by-word in the trade "that the month of September contains at least ten weeks." However, in the long run this finds its level, because experts here are generally able to detect the difference, and either an arbitration results, or we take care to place our orders in other hands.

Another firm states: "We think with reliable shippers there is no doubt about the make they give us being correct, and of course most goods are bought subject to arbitration this side."

Last Year's Cheese.—In talking over the subject of the quality of last year's cheese with one of the largest retailers in this section of the country, he stated that it was certainly due to the fact that prices were very high, and that cheese was rushed on this market not properly ripened to take advantage of the good prices. I asked whether it was the fault of the Canadian shipper or the English sellers that cheese sold as September cheese was proved to be an earlier make. He said this frequently happened through the anxiety of certain salesmen to improve their prices, and in several cases, through dealing with unreliable houses, he found that matters at times were not entirely satisfactory at the English end.

Branding Cheese.—I have asked several firms whether they thought it would be commendable for the Canadian Government to adopt the method of branding in precisely the same way (and with such good effect) as that used in connection with apples. The retailer certainly thinks this would be very good, but the importer does not think so, as I suppose it probably might not give the latter the same opportunity for making the extra price he would be able to if they were unmarked. It might effect the prices for a short time, but I think it would pay well ultimately. Until last year, retailers were very thoroughly satisfied with the quality of goods coming from Canada.

This same firm said the cheese of 1903 did not ripen as well as the cheese of 1902, and when I asked them if they thought it was due to waxing, they said they were unable to state positively. He thought it was quite probable, as when the cheese was cut and put in the shop, it cracked and dried on the surface very much and did not show up as clean a cut and close a grain as it should do.

From a retail standpoint, I think the method of marking the month of manufacture on the cheese would certainly have a very good effect in this market. I find a good many of the cheese shippers mark the town of origin, more particularly Brockville. The cheese from that district seemed to rank very high in the market here.

Temperature of Night's Milk.

The Chairman.—Has any person present made observations as to the temperature at which the night's milk should be kept in order to have the right degree of acid for cheesemaking when mixed with morning's milk? They have paid some attention to this in England, but I do not know that we have done anything in this country.

Mr. Stratton.—Experiments were made, covering a number of years. In these experiments, I took the temperature at which the milk was left at night, and again in the morning. It makes a difference when you take the temperature. But if it is at seventy degrees at night, it will not be much out of the way in the morning; that is, for summer or fall work.

Professor Dean.—That is, when mixed with the morning's milk?

Mr. Stratton.—Yes. Another point is that we did not always have good milk to deal with, and in our experiments we have just as bad cheese and as gassy cheese as anyone.

HUMIDITY AND MILK.

The Chairman.—The relative humidity would make some difference, I suppose?

Dr. Connell.—No; the temperature is the determining factor. The milk is always wet.

The Chairman.—The reason I mentioned that is that it is a common experience of everyone who handles milk that when you have the humid conditions that prevail before a thunderstorm, you have the milk souring very rapidly. It is popularly supposed that there is greater activity under such conditions—not necessarily that there is a difference in the milk, but that germs are more active. That is the common theory, and it is just as well to have it exposed if it is wrong.

Professor Harrison.—It is commonly thought that at the time of a thunderstorm the air is charged with electricity, and so the milk goes sour.

The Chairman.—I was not referring to the electricity, but to the humidity. It is thought that even at a fixed temperature the greater humidity has an effect upon the milk.

Professor Harrison.—So far as bacterial experiments have shown, there is no increase in the bacteria that cannot be accounted for by the rise in temperature. Dr. Conn, of the Connecticut Station, has done some work on this line, as also have several European investigators, and they have not shown that electricity stimulates the growth of bacteria.

The Chairman.—But that is not the point. The question is as to the humidity.

Professor Harrison.—Well, as Dr. Connell says, the milk is as wet as it can be anyway. It is simply a question of temperature.

The Chairman.—But I am referring to the moisture in the air.

Professor Harrison.—That has nothing to do with the bacteria in the milk. You have eighty-five per cent. of moisture there, and that is more than enough for bacterial developments.

The Chairman.—It is often said, and very commonly believed, that milk spoils more rapidly in very damp weather, even when other conditions are the same.

Dr. Connell.—The drier kinds of food, like bread or meat, would spoil more quickly in the humid atmosphere we observe before a thunderstorm. But, under ordinary conditions, that does not apply to moist foods like milk.

Mr. Leclair.—I understand, Mr. Chairman, that you wish to know the degree of acid which should be developed in the night's milk before the morning's milk is added to it, and the relation of this point to the temperature.

The Chairman.—The point I raised was to learn if there was any authority to let us know at what temperature the milk should be kept over night in order to be ripe for adding the morning's milk, when the milk is to be used for cheesemaking. If we wish to advise patrons to cool milk, it is important that we should know to what temperature to cool it. From Mr. Stratton's experiments, it would appear that a temperature of seventy degrees in the evening is about right in such cases.

Mr. Publow.—From my observations, made in going from factory to factory since the use of the alkali test was begun, I have been led to believe that if the morning's milk is mixed with the night's milk when the night's milk is over seventy-five degrees, the whole will be overripe for the best results. I would like to have the night's milk cooled so sixty-five degrees, so as not to have it too warm. But if it is at seventy degrees, it would be a good deal better than at seventy-five degrees. If you wish to keep it from Saturday night to Monday morning, it should be cooled to forty degrees if possible—certainly to fifty degrees or below.

Mr. Stratton.—In all this work I made the rennet test. I never found the milk over-ripe when I cooled it to fifty-four degrees or below; that is, for Saturday night's milk. Sometimes it was up to fifty-four degrees, and held at that temperature till Monday; and kept at that temperature, or below, it is not over-ripe. But above that temperature, kept from Saturday till Monday, I found it over-ripe.

Mr. D'Aigle.—I must admit that it is a revelation to me to find that aeration is not advisable. I am not going to say that Professor Dean is not right; but I have always found, particularly when I was making butter and cheese, that I could always get better results when I could have aeration of the milk. Of course, I am willing to be convinced by these experiments conducted at the college. But when there has

been anything wrong with the milk, I have generally found that it could be cured by aeration in pure atmosphere. Even after what has been said, I should be inclined to think that aeration should be encouraged; that is, where the conditions are favorable. There can be no doubt, of course, that aerating milk in a bad atmosphere is injurious. But until it can be shown that we cannot have the milk aerated under good conditions, I would cling to aeration a little longer.—[Report Conference Dairy Instructors and Experts.

Imported Holsteins.

Mr. F. S. Peer, who has recently imported some Holstein cattle for an American breeder direct from Holland, personally selected by him, in a letter to the Country Gentleman of recent date says:

It will naturally be asked in what respect are the native Dutch cattle superior to American-bred animals? Wherein are the Dutch breeders superior to American breeders? What makes it desirable to go there for animals to improve the American herds? Certainly there cannot be found in Holland any such milk and butter records as in America. The best breeders of Dutch cattle in Holland are more particular as to conformation. American Holstein breeders, as in the case of Jerseys, Guernseys and Ayrshires, have been too much carried away with performance. A worthless or even a degenerate bull as to conformation, if out of a great producer, has brought a high price, while a bull nearly perfect in conformation has gone to the butcher for the want of phenomenal record in his dam.

Americans, as a rule, want a cow for what she can do. "Handsome is that handsome does," but when this class of breeders come into the show-ring, they generally cut a poor figure there. "Handsome is that perfect is." Production is principally the result of good feeding; style, symmetry and beauty are the result of good breeding. Anyone can shovel grain into a cow up to her capacity. That's a good feeder. A man may be a great success as a feeder, and a perfect failure as a breeder. The art and science of feeding is one thing, and in this many Americans have succeeded. The art and science of breeding is another question altogether. American cattle-breeders, as a rule, have succeeded better at the former than at the latter. While some of the Dutch breeders have also been led astray by breeding principally for production, there are a good many all-round breeders—men who will not sacrifice everything for production. The greatest perfection in conformation is not, as many suppose, antagonistic to the greatest production, and no man can claim the distinction of being a first-class breeder who does not go in as much for breeding for conformation as for production. Anyone with feed can succeed at the latter; but it takes a genuine breeder to turn out year after year animals more perfect, more symmetrical in conformation. This, after all, constitutes a first-class breeder.

Pasteurized-cream Butter.

J. H. Anderson, New York.—My experience in making pasteurized-cream butter has all been gained in Denmark, and as I have not made any in this country, I can only describe the method I used there. The milk is examined very carefully, and any tainted and off-flavored milk is rejected. The factory and all apparatus is kept very clean. The milk is heated in the tempering vat to 85 degrees, and the cream is run from the separators into the cream elevator, and elevated by same so as to run in a continuous pasteurizer in which the cream is heated to 185 to 190 degrees F., and as the cream leaves the pasteurizer it runs over a cooler and is cooled at once to the ripening temperature, 65 to 70 degrees, according to the season of the year. From the cream cooler the cream flows into the cream vat, and as soon as about 20 gallons of cream is in the vat, 10 to 15 per cent. of pure culture starter is added to the cream, and thoroughly stirred several times, while we are separating, as well as during the afternoon, and as soon as the cream has developed about .36 per cent acid, it is at once cooled to 54 degrees, and enough ice water around the vat as to lower the temperature 2 to 3 degrees during the night. Butter is churned, washed, worked, salted and packed with care. Cleanliness, good milk, pasteurizing and pure cultures are necessary in order to turn out first-class butter, uniform, and with keeping qualities.—[N. Y. Produce Review.

Best in Existence.

I am very much pleased with the "Advocate," and think the change to a weekly has made it even more popular. I believe it to be the best agricultural paper for the price in existence. Elgin Co., Ont. FRED E. DUNN.

Moisture in Butter.

A great deal has been said during recent years concerning the amount of moisture contained in butter. Butter has been criticized by commercial judges for containing too much moisture, when a chemical analysis showed only a low percentage of water, and, on the other hand, much butter apparently dry contained much moisture. It has also been noticeable that the amount of butter which different creameries are capable of making from a given amount of fat has varied considerably. In order to throw some light upon these problems, Prof. McKay, of Iowa Agr. College, has conducted a series of investigations, the results of which, as issued in a bulletin, are summarized herewith, and conclusions given.

Many people think the less moisture there is in butter the better. The best judges, however, demand a certain amount, properly incorporated into the body of the butter, so that there is no appearance of leakiness. In Germany and England, 16 per cent. of moisture has been set as the maximum standard, more than that being considered deleterious to the quality of the butter. Danish butter, which is recognized as the best in the world, contains, on an average, nearly 15 per cent. moisture.

A casual examination, however, is not sufficient to enable the majority of people to decide whether butter contains too much or too little water. The only way to test whether the dry appearance in any sample of butter is due to too much or too little moisture, is to test it with a butter-trier in a rather warm room. The overworked butter will stick, but will not roll on the trier, while that containing too much water will shrivel and roll on both sides of it. This peculiarity will not show

been reached: (1) When the cream is thick and churned at too high a temperature, too much water is incorporated. (2) By churning at a high temperature and washing with cold water, much moisture will be incorporated, provided it is not cooled to such an extent that the granules become hard. Such treatment will impart a tallowy color to the butter. (3) By churning cold and washing with warm wash water, the butter will also absorb and hold moisture. Churning at high temperature and washing cold, and churning at low temperature and washing warm, are two conditions which must be guarded against. (4) By excessive churning in wash water, the butter will absorb and hold as much as 46 per cent. of water. Excessive churning in either buttermilk or water is to be condemned. The churn should be stopped when the granules of butter are still small, and the moisture content controlled by churning a trifle more in the wash water at the proper temperature.

The temperature of the wash water should be regulated according to the degree of hardness or softness of the butter. The water should not be so cold as to cause the small granules to become hard and stay apart. In such a condition the butter is likely to expel too much moisture when worked. The amount of water to use is also of importance. The less water that can be used and still obtain efficient washing, the better the butter is. If a large amount of water is used in the churn it is difficult to gather the granules; besides, a large amount of churning in a great deal of wash water is unfavorable to the flavor of the butter.

In order to retain the moisture in butter, and to incorporate it properly, it is necessary that the

butter is not in the hard, round, granular shape when the salt is added. The butter granules must not be churned together to such an extent as to cause massive butter lumps to appear throughout before the salt is added, but the small, somewhat irregular granules should be united into larger lumps, so that when the mass of butter is opened with a ladle the granules can still be distinguished as individuals. At this stage it is in the proper condition for salting, and the butter should be worked immediately after the salt is added. It has been the general practice in the past to add the salt to butter while it was still in granular form, then revolve the churn a few times. This method has a tendency to produce leaky butter. If the butter is gathered a little more before the salt is added, it will retain moisture in better shape. It is necessary, however, to start the workers immediately after the salt has been added. When butter is gathered before the salt is added it is well to leave out the drain plug in the churn.

The Dip to Use.

At recent meetings of Western stockmen held to discuss the question of mange, Dr. Rutherford, Toronto, stated that the Dept. of Agr. did not intend to be arbitrary as to the dip to be used; and it was also suggested, we believe, by the same official, that steers to be exported previous to the dipping season, be sprayed with a 15% solution of creolin. Creolin is too expensive for general use, but excellent substitutes can be obtained, which cost less money, and some of which are closely allied to creolin, being coal tar products. We allude to such preparations as Chloro-Naphtholeum, Zenoleum, Little's dip and wash preparation, also Cooper's dip, all of which have been largely used for dipping animals. We have used some of these preparations when dipping sheep and swine, and in treating cattle for vermin, with satisfactory results, and have also given the two first-mentioned internally for worms in live stock. Such preparations as those mentioned are convenient to use, and are comparatively cheap, and are handy to have around as disinfectants available for many purposes. They have been in use by leading stockmen for many years, and have stood the test most satisfactorily.



Babyhood on the Farm.

noticeably unless there is more than 18 per cent. of moisture present.

The leaky condition of butter is brought about chiefly by churning the butter to small granules, washing it very little in cold water, and salting heavily while the granules are still small and firm. The salt added to the butter in this state seems to cause the small drops of water to run together into larger ones, which, during the working, become caught in pockets or crevices of the butter. The dull and dry appearance of other samples may be due: (1) To the presence of an excess of well-incorporated moisture, which has been taken into the butter by excessive churning in the buttermilk or in the wash water; or, (2) it may be due to churning at a very high temperature, or to being overworked, in which case it will contain very little moisture.

Experiments in regard to temperature tended to show that, although the moisture content of butter churned at a high temperature is not very much greater than that of butter churned at a lower temperature if the process is stopped at the right time, yet it is difficult to stop the churning early enough to avoid over-churning. Very little over-churning, when the butter is in such a soft condition, will induce butter to take up moisture very rapidly. As a rule, the larger the granules and the softer the butter the more moisture it will contain, sometimes as much as 30 to 40 per cent. Such butter is very poor; the buttermilk cannot be washed away from it, consequently it is likely to turn sour in a short time. The proper temperature is about 56 degrees F., or a trifle higher in winter. At this temperature the degree of hardness resulting is most favorable, permitting the salt to dissolve quickly and become evenly distributed.

The following are the conclusions which have

GARDEN AND ORCHARD.

Alkali Wash for Orchard Trees.

Early in June is the time to use an alkali wash to good advantage in the orchard. There is nothing better than lye made from hardwood ashes, and it can be used pretty strong. Where the trees are large they should first be scraped to remove the shell bark from the surface, and one of the best methods of applying the wash is by the use of an old wood splint broom; one that is pretty well worn suits very well. Tie a wire around it to keep it in shape, for the lye will soon soften it. The trunk of the tree should be scrubbed, and as far up and out on the limbs as possible, being particular to scrub off any moss and places on the limbs that seem to have a black sooty appearance. It will remove bark lice and destroy them wherever it comes in contact with them. It seems to have a tonic effect on the bark, and is a very effective preventive of borers. The borers usually lay their eggs on the trunk of the trees about the first week of June, or thereabout; in the case of the round-headed borer, mostly near the ground, while the flat-headed borer is likely to deposit its eggs higher up. But the effect of a strong alkali wash applied to the trunks is to prevent the borers from depositing their eggs. The wash will be still more effective for the prevention of borers by the addition of a little crude carbolic acid. In the case of the borers, prevention is better than cure, for these insects spend three years in the larval stage, and in that time work great mischief. Four or five bushels of good ashes will make enough lye for a large number of trees. Take the lye when it will float a potato, and add water until the potato sinks. This will not be too strong for large trees, but should be diluted still more for young trees.

Dust Spraying.

In the Western States, particularly in the State of Missouri, where orchards are often on steep hillsides, and where water is sometimes scarce, fruit-growers have been looking about for some easier way of applying fungicides and insecticides than by means of water, which is difficult to get, and more difficult to draw over the rough ground. Trees have been dusted with sulphur and other materials in the East in the past, but copper sulphate had not been used in this way until tried in the West.

Air-slaked lime has been used in the place of water for carrying the fungicides, but it in itself has a beneficial effect also. The formulas recommended up to the present year were not entirely satisfactory, as they did not contain the copper in the same chemical condition as in Bordeaux mixture. Experiments were conducted by the chemist of the Missouri Experiment Station, and a dust is now recommended which is said to have the copper in the right chemical condition.

A dust machine was obtained and tested at the Experimental Farm, Ottawa, in 1903, by the Horticulturist, W. T. Macoun. It was found to distribute the dust satisfactorily, but in order to get the dust to adhere, it must be applied when the dew is on the foliage. This is a serious drawback to dust-spraying in this time of scarcity of labor. Moreover, the liquid spray gives such satisfactory results when properly made and applied the dust spray is not likely to take its place, except, perhaps, where the ground is rough and where the orchards are on steep hillsides, and possibly in spraying young trees. As there was no apple-spot fungus last year, and practically no codling moth, accurate comparison could not be made between the effectiveness of the dust and liquid sprays, but the general conclusions reached by experimenters elsewhere are that although good results may sometimes be obtained by dust spraying, it is not the best method for general use.

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.

Abreast of the Times.

C. W. Hartman, Grey Co., Ont.—Enclosed please find draft for \$1.50, subscription to the "Farmer's Advocate" for the ensuing year. I have been a subscriber for about a quarter of a century, and have found it always abreast of the times.

The Fight with Fungous Diseases.

By Mrs. Anna L. Jack.

Among the many drawbacks to successful horticulture, one of the most important is the fungous diseases of plants. These blights, mildew or rot, confront us at every turn, and the gardener who would keep them at bay must be in constant warfare with up-to-date appliances. The maladies that occur every year, as black spot on the apple, leaf blight on many varieties of fruit trees, and black rot on the grape, are easier managed than those that are fostered by varying climatic influence, by soil, or other surroundings. In the latter case, not knowing what to expect, the horticulturist is at a loss where to begin, and while he hesitates his crop may be destroyed. As prevention is the only method with the black spot on the apple, it is folly for the orchardist to delay or speculate as to whether climatic conditions will be for or against it. Last year, those happy-go-lucky people who did not spray, felt that they had gained a point, for the dry summer, with its drought just at spraying time, kept all fungous growth from germinating, and the apples of the careless were as fine as those of the careful. But as there is an old saying that it is "easier to keep out, than to pick out," so in spraying it is better to err on the safe side.

It seems strange that among the many fungicides that have been tried, only that familiarly known as the Bordeaux mixture has stood all tests. There are others cheaper, but they lack efficiency, or prove injurious after steady application. This well-known formula is four pounds sulphate of copper, six pounds fresh-slacked lime to forty gallons water. The method of preparation has so often been repeated as to be an old story. The water from the slacked lime is poured into a vessel where the sulphate is in solution, and the two mixtures thoroughly amalgamated; then it requires straining so as not to clog the nozzle. If poor lime is used, the foliage is likely to be injured by the action of the sulphate. If properly and economically prepared it costs about a cent per gallon for the mixture when ready for the spray pump. Besides apple trees, this solution is used for the cherry blight and rot, the grape mildew, and cracking of the fruit of the pear tree. For grape mildew, the first spraying must be soon after the berries begin to form, and a second application twelve or fifteen days later, followed by others at intervals till the fruit begins to ripen. In a vineyard, one man with a knapsack pump can spray four or five acres a day, and a gallon of the mixture would answer for the season for each vine. Of course, much depends on the size of vine or tree, also on careful handling. But the spraying must be given up before the fruit begins to ripen, for at one time we had grapes sent to the Montreal market from the Hudson River growers, who were overzealous in these matters, and they had sprayed their vines so that the fruit bore trances of it, and alarmed purchasers.

In spraying, the weather is an important consideration, for during a rainy season it is more important to continue the work, and an extra application will be necessary, but as to the time of spraying no rigid rules can be laid down, it will be found that experience is the best teacher. And in the diseases of plants, it is only of late years that we have realized by close observation how much we are dependent upon the weather conditions in the early part of the season, and can form an idea as to when any certain disease is likely to appear, from the wind and the moisture, the sunshine and the mist.

Planting a Large Orchard.

A correspondent says: "I have thirty-five acres of land. The soil is a good quality, quite heavy, dark, sandy loam; subsoil is a fairly stiff clay, with some gravel through it. How would this suit for apple, pear, plum and cherry trees?"

This soil is all right if it is well underdrained, either naturally or artificially. It does not follow, however, that because the soil is of suitable composition a prolific and profitable crop is insured. The physical condition of the soil probably has a greater influence upon the growth of trees and fruit than has its composition, either chemically or from an arbitrary class distinction. Later on in the growth of the orchard, pruning, thinning, spraying, grafting, etc., are operations that must be attended to intelligently and skillfully, and this modifies the importance of the suitability of the soil. With a plantation the size mentioned, there is invariably greater success than with the average farm orchard. More is at stake, consequently more attention is given. The marketing is an important transaction, and greater care is given to the selection of varieties that suit the needs of the market and that are adapted to the local conditions. If this particular plot is set to a well selected variety of trees it should prove a profitable branch of farming, provided it receive the care suggested above.

"Thorough tillage not only saves moisture, but at the same time it permits the seed-bed to warm up so that plant foods are freely liberated. The same warmth that liberates food also hastens germination, thus getting the plant into a condition to take advantage of the food being prepared."—The Homestead.

POULTRY.

Treatment of Young Chicks.

[Condensed from Bulletin No. 100, Maine Agricultural Station.]

When the chicks are 30 to 40 hours old they are carried in warm covered baskets from the incubator to the brooders, and 50 or 60 are put under each, where the temperature is between 95 and 100 degrees. The temperature is not allowed to fall below 95 degrees the first week, or 90 during the second; then it is gradually reduced, care being taken not to drive the chicks out by too much heat, or to cause them to huddle together under the hover because they are cold. Under no condition are they allowed to huddle outside of the brooder. They should be put under the hover to get warm, until they learn to go under of their own accord, but they should not be permitted to stay under it too much, as when forced out into the cooler air frequently during the daytime they will gain strength. They are not allowed to get more than a foot from the hover during the first two days, then a little further away each day, and down onto the house floor about the fourth or fifth day, if the weather is not too cold; but they must never be allowed to get cold enough to huddle or cry. . . . The floor of the brooder is cleaned every day, and kept well sprinkled with "chicken grit." The floor of the house is covered with clover leaves or hay chaff. For raising winter chicks, the long-piped brooder house is indispensable; its advantages also are especially great if April or May prove to be cold and wet.

FEEDING THE CHICKS.

For feed for young chicks we make bread, by mixing three parts corn meal, one part wheat bran, and one part wheat middlings or flour, with skim milk or water, mixing it very dry, and salting as usual for bread. It is baked thoroughly, and crumbled very fine. The infertile eggs are boiled hard and ground, shell and all, in a sausage-mill. About one part ground eggs and four parts bread crumbs are rubbed together. Eggs are always mixed with the crumbs for the first week or two, and then fine-sifted beef scraps is used instead. When the chicks are first brought from the incubator to the brooders, bread crumbs are sprinkled on the floor among the grit. After the first day the food is given in flat tin plates, which are removed after the food has been before them for five minutes. In a few days light wooden troughs are substituted for the plates, and in these the birds are fed four times a day—bread and egg in the morning; at 9.30 dry grain, either pin-head oats, crushed wheat, millet seed, or cracked corn; at 1, dry grain again, and the last feed of the day is of the bread, with egg or scrap. Between the four feeds the fine grain, as above, is scattered in the chaff for the chicks to scratch for. Food is never allowed to remain in the troughs more than five minutes, before the troughs are cleaned or removed. Charcoal, granulated bone, and sharp grit are always kept by the chicks, as well as clean water. Mangolds are cut in slices and given them, and plenty of green food, grass which they can get in the yards, or green-cut clover. After they are removed to the range they are fed in the same manner, except that the morning and evening feed is made of corn meal, middlings, and wheat bran, to which one-tenth as much beef scrap is added. The other two feeds are of wheat and cracked corn. One year we fed double the amount of scrap all through the growing season, and had the April and May pullets well developed and laying through September and October. To our sorrow, they nearly all moulted in December, and that month and January were nearly bare of eggs.

How to Break up the Cluckers.

Remove the cluckers from the nest to a roomy coop on the grass or dry earth. Feed them well, and give them clean water; keep them there three or four days. You can put three or four in one coop. This has been my method for years, and I have never found it to fail. I treat clucking turkeys the same, but sometimes they have to be cooped for a week.

I consider coops with a board bottom an abomination. I like to move the coop every morning, then the grass keeps fresh and green. When our coops are occupied with young turkeys, and we have a number of cluckers, we shut them in the root-house for several days, and have no more trouble.

MRS. J. L. H.

Gapes in Turkeys.

A lady reader writes: "When young turkeys show symptoms of the gapes by falling over and gasping, or if some of the flock die, give a drop of turpentine on a piece of fat pork, as it will kill the worms." Other remedies are given in our May 5th issue, page 657.

Profitable Egg Production.

For all farmers a most profitable branch of the poultry business is the production of eggs during the winter, says Mr. F. C. Hare, Chief of the Poultry Division, Ottawa. Every winter there is a great demand for new-laid eggs; the supply is always limited, and high prices are paid. In the large cities strictly fresh eggs sold readily during the past winter at from forty to sixty cents per dozen. Some farmers are so situated that they can maintain a city trade in fresh eggs throughout the year. A premium of several cents a dozen can usually be obtained for new-laid eggs shipped weekly to the city merchant. There is a growing preference on the home markets for brown-shelled eggs. The shells of the eggs should be wiped clean if necessary, and the eggs graded in size. For shipment to the merchant, they should be packed in cases holding 12 dozens or 30 dozens each. Eggs to be palatable, should be eaten in a strictly fresh condition; therefore, they should reach the consumer without unnecessary delay. This requires (1) that the eggs be collected regularly every day, and stored in a cool room (temperature, 40 to 50 degrees F.), until a sufficient number are on hand to deliver to a dealer; (2) that the dealer forward the eggs to the merchant at least once a week; and (3) that the merchant protect the eggs from deterioration while in his possession.

Experiments at the Utah Experiment Station showed that the profit from young hens or pullets was about five times greater than that from hens three to four years old. Not only did the old hens lay considerably fewer eggs, but the eggs were worth less per dozen. This is accounted for by the fact that the pullets laid a larger proportion of their eggs in winter, when the price was good. When the pullets are forced for winter egg production, there should be kept in addition another breeding pen of selected fowls, from which to rear the chicks. A hen or pullet that commences to lay in the spring will at that time produce stronger-germed eggs for hatching than will another that has had her vitality impaired by winter laying.

The farmer should select from the flock of pullets ten or twelve of the best winter layers, placing a regular leg band or a piece of wire around the leg of each. The next winter these pullets (then yearling hens) should be separated from the laying hens and kept in good health and medium flesh, but not fed for winter laying. In February or March they should be mated with a suitable cockerel, and their rations increased so as to bring them into laying at the time when their eggs are required for hatching. Such a process of selection would soon produce a particularly fine strain of winter layers.

Preserving Eggs in Waterglass.

Writing in the Farmer and Stock-breeder, a farmer's wife says: Whenever I hear of eggs having failed to keep absolutely fresh in waterglass, I suspect some deviation must have been made in their mode of treatment from the one which invariably succeeds. I cannot always get to the bottom of it, but occasionally indications are found pointing to two probable causes of failure, and I met with a very prominent instance of this the other day. I met a friend who had just been to a local chemist's for a tin of waterglass. Knowing my interest in the matter, she asked for an opinion on the liquid. The tin had rather an excessive amount of printing, from which it appeared the chemist had set up a process of his own. This is to collect the eggs and fill the bucket or cask with them before putting any liquid on them. Now, goodness knows how old some of the eggs would be before the preserving influence reached them. With some, egg selling is now discontinued, and all are being preserved. Others who have egg contracts running have to keep them going, but all the surplus ones are preserved. These may be at the rate of a dozen or a score a day, and before a dish holding two or three hundred is full the first put in may be a fortnight or three weeks old. The last put in will be fresh, but the first stale when the liquid is added. When the time comes to use them next winter some will be perfect and others inferior and probably a little tainted in flavor. Then there will be an outcry that the waterglass has not done its work, which is a discredit it in no way merits, and if consideration were exercised it would be found that the fault was at the beginning, as I have indicated. Now, I have always advised that all eggs must be quite fresh when put into the waterglass, and this rule can have no exceptions, and if the liquid is put into the dishes at the start, and the eggs submerged every evening as collected, every good point will be retained, and there need be no fear of their failing. At best an egg is a very perishable article. Preserving must be done to a nicety, and I have no sympathy with those who are careless in statements as to how to proceed, as this is sure to result in failure more or less.

A Short Course in Poultry Diseases.

When the excrement secreted by the kidneys, which is normally pure white, appears yellow, though the droppings are solid and the bird appears perfectly healthy, look out for bowel trouble.

When the crop is hard and unyielding, there is danger of the bird becoming crop-bound.

When the discharges are streaked with blood, it is time to give preventives for diarrhoea.

When the joints are hot and swollen, and the fowl is disinclined to stand, rheumatism has taken hold.

When the nostrils are clogged with dirt, and the eyes water, ward off a possible case of roup by timely treatment. If the case is bad, apply the hatchet, and bury the carcass.

When the bird seems lame and has a small swelling on its foot, remove to a house with no perches, and oblige it to roost on a bed of straw. Bumble-foot is easily cured in the early stages if the cause is at once removed.

When a hen seems to drop down behind, and goes repeatedly to the nest without laying, she is usually suffering from a disorder of the oviduct, and would as well be killed and eaten.

When a bird is "going light," has good appetite, but passes food from the bowels undigested, it is in the early stage of consumption, and treatment is useless.

When the hen seems giddy, and turns round and round, she is probably suffering from apoplexy.

When the bird has leg weakness, with no disorder of the liver, feed lighter, and give plenty of bone-forming material.

When new fowls are bought, quarantine them until sure they have no disease.

When a fowl has difficulty in breathing, look out for pneumonia.

When a fowl is dangerously sick with an organic disease, it is worse than useless as a breeder. It is usually safer to kill a bad case of illness than to try to cure it.—[Farmers' Gazette.]



A Young Farmer's Start—Begin Right and Then Go Ahead.

For Lice

I found last summer it was an excellent plan to hang a small canvas bag, about the size of a blue-bag, containing sulphur, inside the turkey coop, just low enough so that the mother turkey would knock against it as she stepped about the coop. I suppose the same thing would answer just as well with hens. I always use insect powder on my young turkeys. I powder them once a week for about three weeks, and have very good success with young turkeys. MRS. J. L. H.

Kind Words.

Herman Buck, Addington, Ont.—"I could not do without your magazine in my home."

C. F. Slipp, Houlton, Me., U. S. A.—"I love to read the 'Advocate,' which is the best farmers' paper printed in America."

Chas. Moody, Algoma, Ont.—"Your paper is excellent. Could not get along without it."

George Kirkwood, Grey, Ont.—"The first of May issue of the 'Farmer's Advocate' was delayed in coming, and every night was like a week without it."

Geo. L. Pugh, York Co., N. B.—"I have taken the 'Advocate' a long time, and prize it very much. Was pleased when you changed it to a weekly."

APIARY.

Lessons in Wintering.

At the spring meeting of the East Middlesex Beekeepers' Association, one of the most important points brought out in discussing the wintering of bees in a bee cellar or outdoor storehouse, was to have the room full of colonies, so that there would not be a large area of cold air circulating about the hives. When a person has a given number of colonies to winter, the room in which they are stored should just hold that many and no more. If the room is too large for the number of hives on hand, then partition off part of it, by boarding up tightly. A house for the purpose of storing bees should be quite closely built of boards and paper, or the walls packed with sawdust. A wall similar to the ordinary stable wall should prove satisfactory. The ceiling should be well covered, and drafts prevented from circulating under the floor. Ventilation can then be provided, by making an opening in the floor and another in the ceiling. Such a room should be packed full of colonies, or filled around the sides with chaff. In March, when warm weather approaches, the house can be gradually emptied, until in the warm days of seedtime all the hives have been set out.

When bees are kept in a cellar, a temperature between 42 and 50 is safer than anything below 40. Last winter many bees died with stores in the hives, simply because the cluster was too cold to move over to the stores.

Clipping and Scraping.

By Morley Pettit.

I wish to mention two matters of importance to be attended to now. These are clipping queens for the swarming season, and scraping hives and frames clear of propolis and beeswax.

When the swarming time comes, it is a great advantage to be able to go to a hive that is swarming, find the queen at the entrance, cage her, move back the hive, set the new hive in its place, with caged queen at entrance, then watch the swarm return for its queen, and enter the new hive. What a contrast to the nerve-wracking, tree-climbing methods of hiving swarms with unclipped queens. The value of having hive parts well fitting, and kept as free from propolis and burrcombs as possible, should be almost self-evident. An annual overhauling will accomplish this fairly well.

During fruit bloom, or before, when the bees are getting enough honey to keep them from trying to rob, every brood-chamber should be looked over and set to rights. The day must be bright, comparatively still, and thermometer at or above 70° F. in the shade. The beekeeper should have at least one extra hive and bottomboard. Have it scraped, bottom stop edges and frame rabbets, clean of propolis and beeswax. Transfer the combs of the first colony into the clean hive, being careful to keep them in the same order. Use just enough smoke to keep the bees quiet on the combs while they are being handled. Glance over each comb until you find the queen, catch her carefully, and clip off her wings with a pair of embroidery scissors.

When all the combs and bees are transferred to the clean hive, scrape off the top bars with a short-handled hoe, and set the hive on the stand where the old one stood. Thoroughly scrape out the old hive, and use it for the next colony, and so on.

Outdoor and Spring Management of Bees.

A great many beekeepers think (or did think before this last winter) that this subject was worn threadbare. Beekeepers that knew all about wintering bees, have come to the conclusion that there is a lot to learn yet. For my part, I do not think I know it all, nor do I ever expect to, but I am always willing to learn, or willing to do all I can to help a brother beekeeper. As I have had success this last winter, only losing eight colonies out of 160, I will give you a few outlines of my method.

In the first place, as soon as the honey harvest is over, I go through each colony to see if they have a queen. If I find any without, I give them a frame of brood from some other colony so they can raise a queen. Then along in September, I weigh up all the hives, and if I find any short of stores, I feed them up. All colonies should have not less than thirty pounds of honey, not counting bees, hives or combs. When all are fed up, I start and pack away for a hard winter, and if it comes a mild one I lose nothing. I follow Mr. Alpaugh's system considerably, for I think it is as cheap and as simple as any I have seen or read about. In the first place, I make a case to hold four colonies, two facing north and two facing south, or at any angle I choose, as it makes no difference how they stand as long as they have plenty of stores and are well packed. I make the outside cases large enough so that there will be

about three or four inches of chaff or forest leaves all around, and about eight inches or a foot on top. When setting the bees in, put a little chaff in bottom of case at the back of the hives, so they will slope a little, then if there is any snow blows in it will melt and run out. I take the cover off and put a new piece of cotton over the top of the frames, so the moisture can pass off, and the bees come out as clean and healthy as they went in in the fall. The cover of the case must be well painted, so that no wet can get in, as bees cannot live where there is dampness.

My spring management is mostly all done in the fall, as I do nothing with them in the spring but occasionally look at them carrying in pollen, and clustering on the outside of the cases, which they were doing yesterday and to-day, May 4th and 5th. It is more pleasure for me to sit on a case and see the bees working than it is for me to try and boom them. I take them out of the packing as soon as the apple trees blossom, and put on extra supers for the queen to lay a few more eggs, so I will have plenty of bees for the clover when it comes.

Middlesex Co., Ont.

D. ANGLIS/F.

EVENTS OF THE WORLD.

The bubonic plague has reappeared at Johannesburg.

The boundary dispute between Peru and Brazil has reached a climax, and military preparations are being made on both sides.

Typhus fever, dysentery and smallpox are raging among the Russian soldiers at Mukden, and one hundred doctors have been sent for to St. Petersburg.

The Executive Committee of the British Cotton-growing Association, at London, May 4th, decided to apply for a royal charter. The capital of the concern will be \$2,500,000 in shares of \$5 each. No profits will be divided during the first seven years.

Tokio correspondents ascribe the superiority of the Japanese artillery in the great battle on the Yalu River, May 1st, to the heavy Arisaka battery, a secret invention of a Japanese military expert. The guns of the battery were used with the deadliest effect in the battle.

Upon May 4th, the United States Canal Commission took formal possession of the Panama canal route, and of the property of the Panama Canal Company. The canal works have been placed under the direction of Major Mark Brooke, of the Engineer Corps of the U. S. army.

The Russians now admit the loss of 1,200 men killed and wounded, and 30 guns, in the battle of May 1st. They assert that the Japanese lost twice as many, but the Tokio reports only record 800. The Russians also claim to have had only 8,000 men, as opposed to 40,000 Japanese, and declare that, under the circumstances, the result was not a defeat.

The dreadful sleeping sickness, which has been supposed to attack only the natives, is now fastening itself upon European officials in the Congo State. So far, no remedy has been found for it. Those who take it sleep continually, become greatly emaciated, and finally die. Physicians are of the opinion that the disease is transmitted by the tsetse fly, mosquitoes and other blood-sucking insects.

The new cancer treatment of Professor Doyen, of Paris, depends upon injections of a toxin produced from micrococcus neofornans, a microbe for some years past observed in rapid-growing tumors from wounds. In cases where debility is not too great and no vital organ is affected, the growth is arrested. A report of forty-seven cases treated has been given, and of these twenty-one were completely cured.

The Japanese have of late years been making noted strides in medical science. It was Kitasato, a Japanese bacteriologist, who discovered the bacillus that causes lockjaw, and thus made possible the use of the anti-toxin serum which is now the remedy for that disease. Another fellow countryman, Shiga, recently discovered the bacillus that causes dysentery, and although the remedy has not yet been found, the discovery of the bacillus is usually the prelude to that of the means by which to combat it. To a Japanese chemist, Takamine, also belongs the credit of having found out a preparation known as adrenaline, said to be the most powerful chemical agent ever discovered for the suppression of hemorrhage.

Sir Henry M. Stanley, the famous African explorer, died in London on May 10th, aged 63. His career was chequered and progressive. His real name was John Rowlands. He received his early training in a workhouse in Wales, and later went to sea as a cabin boy. Arriving at New Orleans, he was adopted by a

Mr. Stanley, whose name he took. During the Civil War he fought first in the Confederate army, afterward with the Federal navy. At a later date he entered upon newspaper work, and in 1871 was sent by the New York Herald to search for Dr. Livingstone in Africa. After encountering many dangers, he found Livingstone in 1872 at Ujiji. During 1874-75 he travelled again through Africa, exploring Lakes Tanganyika and Albert Nyanza, and traced the course of the Congo. As a result of these two expeditions he wrote his two famous books, "How I found Livingstone," and "Through the Dark Continent." In 1892 he became naturalized as a British subject, and in 1895 he was elected M. P. for North Lambeth. Before he died he expressed a wish to be buried at his country seat, Fibrigh, but the question is being discussed of burying him beside Livingstone in Westminster Abbey.

Event has been crowding upon event in the Far East. Almost immediately after the news that the Japanese had landed on the peninsula and cut off railway and telegraphic communication with Port Arthur, came the word that the connection had been re-established and that the Russians were again rushing in supplies to the Port. It was surmised that, owing to unfavorable weather, the Japanese had not been able to land sufficient troops to hold the situation. Later despatches, however, state that the Japanese have again occupied Polatien



Garden Scene, Nikha, Japan.

Station, where they first cut off the lines, and that, once more, Port Arthur is completely isolated. The report that all the docks at Dalny had been blown up by the Russians, in order to prevent them from being utilized by the Japanese, has been modified. It is now confirmed that two only of the quays were destroyed, the object being to prevent the Japanese from landing field guns with which to threaten Port Arthur. It is believed that it is now impossible to transfer such guns from the ships to the shore. The Japanese are making quick work with the construction of the new railway in Corea, which is being built to facilitate the forwarding of troops to the north. General Kuroki is still advancing steadily toward Liaoyang, and unofficial despatches state that a Japanese force is marching north from the Liaotung Peninsula to co-operate with him. Heavy land action is expected at an early date. The Japanese torpedo boat, No. 48, was destroyed while removing mines from Kerr Bay, north of Port Dalny, on May 12th, seven men being killed and seven wounded. This is



The Post in Manchuria.

the first warship Japan has lost in the war. The Russians are more and more concerned regarding the attitude of the Chinese, who, it is feared, inflamed by the news of the Japanese victories, may take an aggressive hand, and Russian diplomatic agents have been instructed to take every precaution toward keeping the peace among them. It is stated that the Chinese throughout Manchuria are already behaving insolently and charging outrageous prices for the provisions bought from them by the Russian army.

A proposition is afoot for forming railway connection, to be known as the Central Trunk Railway, between Gaspé Basin and Georgian Bay. Chicago capitalists are at the back of the scheme, and have asked the Government for aid towards its accomplishment. The Premier has promised to look into the proposition.

NOTES AND NEWS.

"Content thyself to be obscurely good."—Addison.

"Too swift arrives as tardy as too slow."—Shakespeare.

Over 2,000 immigrants, chiefly British, landed at Quebec on May 9th.

When a rich young man gets to sowing his wild oats he usually buys a horse to feed them to.

The Winnipeg Presbytery will urge the General Assembly to take organic church union into consideration.

French River District settlers report deer dead by the thousand in the northern woods, as a result of the severe winter.

A new iron deposit of rich hematite has been discovered in the Temagami Reserve, about sixty miles north of North Bay.

The saying that all the world is a stage would be all right if it were not for the fact that everybody wants to ride on top.

Navigation was opened at Fort William on May 7th. The first C. P. R. steamer left Owen Sound for the Upper Lakes on May 10th.

The herd of buffalo kept on Lord Strathcona's farm at Silver Heights, near Winnipeg, stampeded on May 9th, and made off across the country.

On May 12th, the C. P. R. grain elevator at Fort William was burned with 300,000 bushels of grain. The loss is about half a million dollars.

A fruit, flower and honey show, to be conducted on the same lines as the Fat-stock Show in Guelph, will be held in Toronto in November next.

St. Henri, a western suburb of Montreal, was destroyed by fire on May 13th, over twenty houses being destroyed; \$100,000 is the amount of loss.

On May 15th, Captain Dunn, of the Dominion cruiser, Petrel, seized 127 more gill nets, which had been set in Canadian waters in Lake Erie by American fishermen.

Large numbers of fish, many of them maskinonge, were frozen in Lake Scugog, Ontario, last winter. It is thought that owing to the low water the lake froze to the bottom.

Captain Dunn, of the Dominion Government cruiser, Petrel, on May 10th, seized 118 gill nets, which were being illegally used in Canadian waters in Lake Erie. The nets were all confiscated and sold.

Mr. Joseph Chamberlain's fiscal campaign, which has flagged somewhat since his departure for Egypt, has been reopened. Intense interest in the issue has again been aroused throughout England.

Sir Cavendish Boyle, who has been Governor of Newfoundland since February, 1901, has been transferred to Mauritius. His departure has caused much regret among the people of Newfoundland.

A painting by J. W. Morrice, a Canadian artist, has been purchased by the French Government for the Paris Art Gallery. It is entitled "Le Qual des Grand Augustins," and represents a view in Paris.

The C. P. R. will, at an early date, construct a railway from Guelph to Goderich, a distance of about eighty miles, thus obtaining from the line an independent connection between Toronto and Lake Huron.

In the British House of Lords, Lord Stanley has intimated to the Australian Government that if they will fix a day for their adhesion to the scheme, he will at once establish a penny-post from England to Australia.

Dr. Wolff, of Berlin, Germany, a well-known authority on the subject, calls attention to the high mortality from cancer in the beer-drinking districts of Germany. He instances Bavaria and Salzburg, both great beer-drinking centers.

Sir Henry Campbell-Bannerman, speaking recently before the Land Law Reform Association, at Westminster, said the fiscal campaign of last autumn had served a good purpose in calling attention to the land question. "Back to the land" was the cure for the greater part of our social evils.

The Duke of Sutherland has expressed himself as much pleased with Canada. He thinks, however, that there is some danger of Canada becoming Americanized, and is of the opinion that the Canadian and Imperial Governments should make more earnest efforts to have British immigrants settle in the Dominion.

"The value of 'succulent food' cannot be over-estimated on a dairy farm. Some, otherwise careful farmers, make the mistake of thinking that 'anything nutritious and filling will do for the cows.' Such a course may do fairly well for the cows, but it won't do best for the milk-pail or the butter profits. Roots, ensilage, pumpkins—succulent food of many kinds—are appetizers that bring extra dairy dollars."—Farmer's Advance.

Forthcoming Stock Sales.

June 15th.—Imported Yorkshires; D. C. Flatt & Son, at Hamilton, Ont.

June 28th.—Shorthorns; W. C. Edwards, and others, at Hamilton, Ont.

What do You Want?

Do you want to buy anything right away? Do you want to sell anything right away? If so, state your wishes in our "Wants and For Sale" department of the "Farmer's Advocate," which has been instituted to meet the needs of our readers in these lines in the speediest possible manner. "Wants and For Sale" will appear weekly henceforth. We have much pleasure in calling your attention to it, and have all confidence that you will not be disappointed in the result if you decide to make this column a medium by which to state your requirements. "Poultry and Eggs" is another small advt. department of similar character. Special rates are quoted, as announced at the head of these departments in every issue. Copy of all such advertisements should be sent so as to reach this office on or before Saturday before the week's paper in which they are to appear.

The Montreal Horse Show.

The fifth annual Montreal Horse Show passed into history about midnight on Saturday, May 14th. It opened on Wednesday at 2.30, and continued at the rate of three sessions daily while the week lasted. The show was favored with beautiful weather throughout, which assured a good attendance, more especially during the afternoons and evenings. This show, like that held in Toronto recently, had no military features, but the time was well filled, each session lasting considerably over the schedule time.

The competition in the sixty-odd classes was generally keen, running over the score in a number of the single harness and saddle classes. The breeding classes were not well patronized, and the class for the Governor-General's prize was very disappointing. This emphasizes the fact that country folk look upon this as a city rather than a rural event. In all, there were over 150 exhibits. Most of them were local, but quite a number of the winning entries came from a distance. Messrs. Crow & Murray, also Geo. Pepper & Co., of Toronto, had forward a number of their well-schooled harness and saddle horses, which succeeded in carrying away a good share of the prizes for which they competed. There were also a number of American firms present with jumpers and polo ponies. There were E. H. Weatherbee, of New York, and Allan Forbes, of Boston, each of whom carried off important awards.

THE BREEDING CLASSES.

The prize list provided only one class for Thoroughbreds—stallions qualified to improve the breed of saddle horses and hunters. Of these, there were three. The first prize was awarded to the aged horse, Barefoot, by Longfellow, a very well made bay, standing fifteen hands three inches. He is owned by Wm. Anderson, Pointe Aux Trembles. His closest rival was Romancer, an upstanding chestnut, owned by L. Reinhardt, of Montreal. A little bay fellow, The Monon, owned by L. Curran, Bougie's Corners, was the remaining entry. This class was judged by Dr. Andrew Smith, Toronto.

Five out of seven entries in Standard-bred stallions came before the judges, E. P. Ball, Rock Island, Que., and Geo. B. Hulme, New York. Apart from the first winner, they were not a very high-class lot, most of them being very plain. A horse called King Antidote was easily first. He was bred on Montreal Island by his owner, Jas. I. Roy, Bordeaux. He is a beautiful brown, nearly sixteen hands, a good shower, and an excellent mover. He is from a Wilkes-bred mare, and his sire was Antidote, who had a record of 2.10½ at four years old. The second and third prize horses were not easily placed, as they were as different as though they belonged to different breeds. This is an unfortunate characteristic of Standard-bred horses. Eli Allerton, a big son of Allerton, owned by Geo. Jordan, Montreal, won second. This is a free mover, but inclines to be plain. A little bay horse, called Al, won third. This is a son of Alexander, by Allerton. He stands fifteen hands one inch, and is very well made. He is owned by A. Frank Ramsay, Montreal. This horse afterwards won second in the harnessed roadster class, in which he gave a good exhibition of speed.

Three Clydesdales and no Shires competed in the class for draft stallions. Robt. Ness, Howick, Que., had forward Killarney, by Baron's Pride, and Durward's Type, by Durward Lely. The former is about four and the latter a year younger. These are both of the good kind, having a good amount of substance and abundance of quality, especially in the feet and legs, and they are both good movers. A six-year-old horse, called Tinwald Shaw, owned by W. V. Henderson, Sault au Recollet, Que., was the remaining entry. This fellow defeated Killarney at this show in 1903, but this year the decision was reversed, and the three-year-old was placed third. The judge was Dr. Andrew Smith.

Montreal can boast of a grand lot of draft horses. The several large transportation and milling companies in the city all have fine weight movers, and among them are some of the best draft horses in Canada. Both teams and single horses shown to Scotch carts put up a great display. The entries were largely of the Clydesdale pattern and marking, and they ranged in weight from about 1,600 to \$1,800 pounds. In the single class, Wm. Hendrie, of Hamilton, Ont., won first

on a black gelding of unusual weight and quality. The Lake of the Woods Milling Company won second and third on fine showy geldings. The Dominion Transport Co. and the Shedden Co. also showed excellent specimens. The same firm showed pairs, and shared in the honors.

The good prizes offered by the Governor-General for Canadian-bred four-year-old gets of Thoroughbred sires, suitable for riding or cavalry purposes, should have brought out a fair competition, but they did not. Only two entries were made, and only one animal showed up. This was a black mare, by Tom Flynn, owned by A. E. Ogilvie, Montreal. She was of decided Thoroughbred type, fifteen hands two and a half inches, and of good conformation.

News from the Capital.

DOMINION SAN JOSE SCALE REGULATIONS.

The Department of Agriculture, Ottawa, has been requested to establish fumigating stations at Victoria, B. C., and Yarmouth, N. S., to protect against the San Jose scale. Hon. Sydney Fisher says the Province of Ontario seems to be adequately supplied with the stations at Windsor and Niagara Falls. Dominion officers report that since the passing of the Act, six years ago, establishing these inspection depots, no disease has been imported from the United States. Ontario is the only Province where the scale is said to exist to a serious degree, and it is decreasing rapidly since the restriction on nursery importations. Besides the stations mentioned, there are four other inspection depots, one at Vancouver, one at Winnipeg, one at Quebec, and one at St. John, N. B., which does service for the Maritime Provinces. Dr. James Fletcher, Dominion Entomologist, has just returned from a tour in Western Ontario, instructing fruit men in regard to the San Jose scale. The trade returns show that although the restriction on nursery importations impeded the introduction of new trees from the United States, when the Act was passed, there have been large importations the last few years. The Dominion appropriation for fumigating trees this year is the same as last, namely, \$4,000.

CANADIAN IMPERIAL EXHIBIT.

The vote of \$8,000 at the last session of Parliament for improving the Canadian exhibit in the Imperial Institute, London, Eng., was never expended, and a similar sum is being appropriated for the purpose this year. The delay in the arrangements for the Imperial Institute is on account of reorganization under the Board of Trade of the Imperial Government. The Institute was formerly under a special commission.

THE DOMINION EXHIBITION AT WINNIPEG.

The members on both sides of the House of Commons approve the vote of \$50,000 to the Dominion Exhibition to be held in Winnipeg next July. Now Mr. Sifton says the Exhibition of eastern manufactures and the introduction of visitors from agricultural settlements in the United States are the two features the Government wishes to encourage by the subsidy. A special building will be provided for the manufactures from Eastern Canada. The special attention to be paid to American visitors is an effort to keep up the movement of settlers to the Northwest. It is being made by the Government to offset the campaign carried on by United States people in the Western States to injure the reputation of the Canadian Northwest. The opinion of Parliament is that the proposal to run an excursion train from Halifax should be carried out, and give every member an opportunity to visit the exhibition. The Dominion grant would, of course, not be devoted to defraying the expenses of the excursion. The appropriation for exhibitions in foreign countries this year is \$200,000, an increase of \$50,000 over last year. One hundred thousand is asked for experimental farms, \$10,000 more than the previous year. This is to cover the new cereal-breeding department and a general increase in expenses.

EXPERIMENTAL FARM NOTES.

The seeding of the experimental plots was finished last week on the Central Experimental Farm. The sowing of the field crop will be finished considerably later than last year. A new building has been erected for brooding and incubation. It is separated from the main poultry-house as a protection against fire. The brooder set fire to the building a short time ago.

THE SALE A FAILURE.

The Ottawa Horse Fair and Sale on the first Wednesday in May was smaller than many such enterprises held in the past. The prices ranged from \$15 to \$200. T. Spratt, of Gloucester; T. Fleming, of Ottawa, and Mr. Elliott, had the best animals. The sale seems to be on the decline.

CHEESEMAKERS' WAGES.

S. S. Cheetham, of Gananoque, who has taken charge of the Ottawa syndicate of cheese factories, and whose district extends from ten miles west of Ottawa to Embrun, says the wages for cheesemakers are higher in the Ontario Valley than last year.

ST. LOUIS FAIR OPENING.

A private despatch to Ottawa gives the information that the real opening of the St. Louis Fair had to be postponed twelve days on account of unpreparedness on the part of exhibitors. The time was extended till the 13th of May. Canada is among the exhibitors that will benefit by the extension. There is scarcely another nation, however, so far advanced in the preparations.

Eastern Townships Products.

What at first bade fair to be another bad sugar season, turned out to be the best for some years. The average yield may be estimated at a little over one and a half pounds to the tree. Probably the largest "sugary" in the Province is that of W. S. Bullock, of Roxton Pond. The surrounding bush numbers about ten thousand trees, and the sap gathered in the more distant parts of the camp is brought through a pipe line to the evaporators. Mr. Bullock finds a good demand for his maple products in the Canadian Northwest, whither he had, up to April 23rd, shipped \$6,000 pounds this season, with more to follow. Maple sugar of extra quality is now selling for eight cents per pound, and syrup for 80 cents to \$1.00 per gallon.

In some districts the farmers are reaping extra profits from their poultry. At Knowlton and Foster, Mr. A. P. Hillhouse, manager of the Dominion Poultry Station, buys eggs for ten cents per pound. He buys every week, and last week's purchase amounted to over five hundred dozen. The eggs are disposed of by the Government in Montreal, and must be perfectly fresh goods.

An orchard meeting, under the auspices of the Department of Agriculture, will be held in Mr. W. Knowlton's orchard during May. Lectures are to be given by Dominion Government fruit inspectors on the care of orchards; also, practical demonstrations in pruning, grafting and spraying.

The Montreal butter and cheese buyers are making a determined effort to stamp out a good many of the boards for the sale of dairy produce throughout the Province. As far as is known, the buyers will attend only three. This move seemed inevitable, since so large a number of butter and cheese boards have sprung into existence. In attending certain selected boards, the buyers have recognized the principle to be correct, but in discriminating against such a board as the Sherbrooke Dairymen's Exchange they have neither exercised discernment nor foresight.

The butter market is in a state of demoralization not often experienced at this time of the year. Factorymen are tumbling over each other to get their rapidly increasing product disposed of. Fresh-made goods are realizing fifteen and a half to sixteen cents a pound in Montreal, and the hope of prices stiffening upon the advent of grass butter may prove as illusive this year as in the past. The outlook this season for butter is not encouraging. Cheese factories are only just commencing operations, and if a large diminution in the make of fodder cheese can have a beneficial effect, prices should rule high from the very commencement of the season.

In order to place its financial position on a sounder basis, the Great Eastern Exhibition Co., of Sherbrooke, have planned to issue bonds to the amount of \$15,000, bearing interest at four per cent., and cared for by a two-per-cent. sinking fund. The city of Sherbrooke has been asked to guarantee the bonds, in order to facilitate their sale, taking as security a first mortgage on the exhibition property, valued at \$25,000.

"COMPTON."

Live-stock Shipping and Marketing.

From time to time we occasionally note a farmer or rancher who markets his own stock at Winnipeg, instead of selling to the local dealer. It will be some time before the practice is very general, but with the increase of abattoirs, and enlargement of stock-yards, such a step will be necessary and advisable, and in the stock-grower's interest. At the big stock-yards at Chicago, Kansas City, Omaha, and other places, the live-stock commission broker is one of the stand-bys of the market, both in buying and selling; he makes it his business to keep posted on the state of markets, the supplies coming, and the demand for live stock; he advises his farmer clients against flooding an already overcrowded market, or urges them to rush the stuff forward when supplies are scarce and buyers keen, and in order to continue in the business he simply has to play straight. We could name many live-stock commission firms in Chicago whose clients rely on them wholly in their marketing, season after season. As seen in our advertising columns last issue, Maybee & Wilson are in the live-stock commission business at the Toronto stock-yards, and solicit your business. We welcome such enterprise as being a sign of the times, in that the live-stock business of Canada warrants such enterprise.

The Human Tide.

One day recently, over 2,000 emigrants to Canada landed at Quebec, five days aggregating an inflow of over 7,000 settlers. Mr. Smart, Deputy Minister of the Interior, states that since Jan. 1st, of the present year, 35,000 new settlers have arrived at Winnipeg, 10,000 from the United States, and the balance from the British Isles and Continental Europe.

On May 10th, the steamer Manitoba, with 1,000 immigrants, settlers for the Northwest and skilled mechanics for Ontario, and one hundred selected domestic servants from the North of Ireland and Scotland, in charge of Mrs. Sandford, began her trip across the Atlantic.

Elgin Co., Ont.

At the time of writing (May 11th), farmers in this section are employing every available means for "pushing" the work of spring seeding. Owing to the early freeze-up last fall, little and in many cases no plowing was done, which, together with the lateness of the present season, will tend to make life on the farm extremely active for some time to come. The past winter had a very disastrous effect on the local outlook for wheat, even on lands where large yields have been almost invariably secured. Where time will allow, fields on which wheat has been winter-killed are being prepared for spring grains, and in some instances will swell the acreage of hood crops. Pastures were slow in starting, but with the coming of a few very warm days in the first week of May made very rapid growth, which will undoubtedly be welcomed, as, owing to the severe winter and the larger amount of feed required, little remained to tide the stock over a backward spring. Old clover meadows are reported badly killed out, and cannot be depended on for much as early pasture.

The farmer who is alive to his own interest will now make arrangements for sowing some soiling crop, in order that the mid-summer droughts, which seem to be one of the few things of which we can be reasonably certain, may be safely passed over. For this purpose, we sow peas and oats at intervals. They are feed par excellence for milk production, and are easily and cheaply grown. We sow three bushels of the mixture, two of oats and one of peas, as it is just as convenient to use plenty of seed and grow a good heavy crop as otherwise, and far more satisfactory.

J. H. M.

Fruit, Flowers and Honey Show.

The meeting of the representatives of the Ontario Fruit-growers' Association, Ontario Beekeepers' Association, Toronto Horticultural Society, Toronto Electoral District Society, and Toronto Florists' and Gardeners' Association, held Friday, May 13th, to arrange for the combined fruit, flower and honey show to be held in Toronto next fall, proved very successful. It was decided to hold the exhibition in the Granite Rink on Church street, on November 8th, 9th, 10th, 11th and 12th. The exhibition will be conducted on an extensive scale. One rink will be devoted exclusively to the exhibit of flowers, and the second rink, which immediately adjoins, to the exhibit of fruit and honey. All the exhibitions will be conducted on purely educational lines. There will be exhibits of machinery and implements used by fruit-growers and florists. These will be shown in the open space between the two rinks. In the fruit department, one of the most prominent features will be a display of packages prepared for export. An exhibit will be made by the Fruit Division, Ottawa, which will show how various varieties of fruit will be packed and marked, and the best packages to use. Under the direction of the Farmers' Institute there will be a demonstration of cooking and preparing of fruit and honey for table use. Some of the lady Institute speakers will have charge of this work, under the direction of the Superintendent, Mr. G. A. Putnam. The directors of the Ontario Fruit-growers' Association will look after the collection of exhibits of fruit which will be representative of their different sections of the Province. There will also be exhibits by the fruit experiment stations.

A number of meetings will be held at the time of the exhibition. The Ontario Fruit-growers' and Ontario Beekeepers' Associations will hold their annual convention. It is also proposed to hold a convention of representatives of the various horticultural societies of the Province. Each of the organizations interested in the show have appointed representatives to act on the general committee, which will have charge of all further arrangements. The secretary of the committee will be Mr. H. B. Cowan, Provincial Superintendent of Agricultural Societies, who at the request of the Hon. Mr. Dryden, will act as the representative of the Department of Agriculture, and make all the arrangements for the exhibition.

Another Canadian Promoted.

At a recent meeting of the Board of Trustees of the Iowa State College, Professor W. J. Rutherford, Assistant Professor of Animal Husbandry, was made Acting Head of the Department, and Acting Chief of the Animal Husbandry Section of Iowa Experiment Station during the absence of Professor Kennedy, who was granted a year's leave of absence to study livestock conditions in European countries, and make a report of same for the United States Department of Agriculture. Professor Rutherford has also been appointed Expert in Animal Husbandry by the United States Department of Agriculture, and given direct supervision over the co-operative range sheep-breeding experiments. He came to Iowa one year ago from the Ontario Agricultural College, of which he is a graduate, and has won the respect and admiration of all who have come in contact with him, either in the classroom or elsewhere.

Canadian Bacon Ranks High.

When speaking to a leading produce firm, I asked one of them what they were doing in Canadian bacon, and he named two firms from whom they were buying very largely. He stated that the goods he had received from these firms were better than anything he could purchase from Great Britain or the United States. He stated that the cases came even, beautifully packed and cured, and that for high-class goods nothing came into this market to be compared with them, so far as

his trade was concerned. The general feeling on the subject of our hams and bacon is that Canada is advancing very much, and as time goes on, if they continue to keep up the fine quality, there will be practically no end to the business to be done in this country.

P. B. BALL,
Commercial Agent to Birmingham.

Orchard Notes.

Arrangements have been made to hold a series of model orchard meetings at the Central Experimental Farm, Ottawa, this week, to be conducted by Mr. W. T. Macoun, Dr. Fletcher, Prof. Shutt, and Inspectors A. McNeill and F. L. Dery. These meetings will demonstrate the most approved methods of orchard management, pruning, grafting, spraying, cultivation, and so on, not merely for the information of those who may attend, but to serve as a guide to all instructors. In this way it is hoped to secure the adaption of uniform instruction which will eventually lead to uniform methods of growing, packing and marketing.

Mr. John Brown, Inspector for the Department of Agriculture at Glasgow, reports to the Fruit Division, Ottawa, that the Wagner apple is much esteemed by some in the trade there, and if the fruit is of good size it is readily bought by certain of the best buyers. Others, again, will not look at this variety if they can get Spies or Baldwins, and class it next to Ben Davis. Its color and appearance are its redeeming points, as it lacks the flavor and juiciness of the two above mentioned varieties. Some dealers say it is a mistake to

ship Wagners after the month of December, as they take on scald very easily.

An Englishman's Opinion as to the Mission of the Hackney.

The following is Mr. Whitworth's opinion on the thorny question of what ought to be the mission of the Hackney, according to the Farmer and Stock-breeder:

"I certainly think the Hackney ought to be a ride-and-drive horse; that is, a double-purpose horse. No man would, of course, choose a Hackney as a riding horse solely, but as a double purpose horse there is nothing to equal him. As a harness horse he is supreme, for high-class harness horses cannot be bred without Hackney blood. One must have it for action.

"Some maintain that the Hackney should be bred for harness alone. Well, I think it should be for both. It is merely a question of shoulders. They should be well laid back, and then, though the action is high, you will have a horse that rides well. A straight-shouldered horse never gives a good feel when ridden.

"The Hackney proper should be a 15.1h. horse. Horses standing 15.3h., with size and action, are certainly sought after. When they get bigger, however, they lose type and have not the same action. Generally speaking, all the great show horses have been 15h. to 15.1h., or not much over. We will always have big and little ones, however.

"How would you breed the 16h. to 16.2h. carriage horses so much in demand in the West End of big towns?"

"I would use the Hackney sire on a Yorkshire coaching mare to get a carriage horse. You get good shape from the dam, and, if fortunate, the sharp action from the sire."

"To the question of the infusion of more blood into pedigree Hackneys, Mr. Whitworth said: 'I should allow more blood. It is undoubtedly this that has given the Yorkshire Hackney the pull over

the Norfolk. In the district lying between Market Weighton and York and Market Weighton, Selby and Hull, many farmers used to breed carriage horses from light legged cart mares with the Hackney sires. They hoped to get them into the Book, but when they found they could not they seemed to be discouraged, and gave up the breeding of a very useful class of horse, and to some extent the Book has done harm in this direction. Since Shires began to boom they have used Shire stallions, but then from the light-legged mares they don't get sufficient weight, and get nothing better than railway parcel



An Alberta Landscape—North End of Pine Lake, Alta.

Food Values.

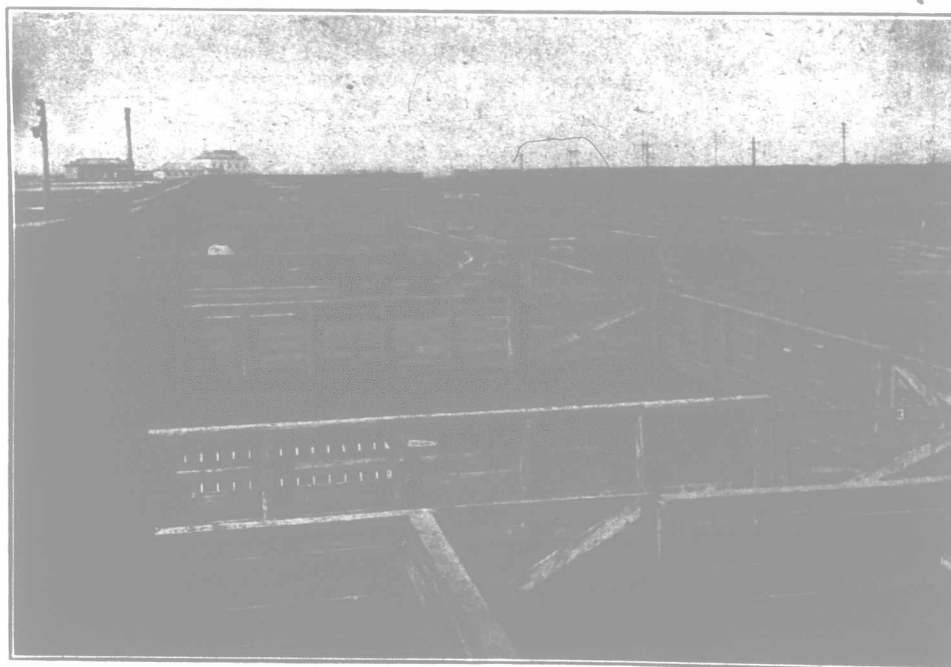
With bran at \$1.00 per cwt., what are red carrots worth for feeding cows? F. H.

It is practically impossible to give equal money values to the constituents of different foods, or to compare these values in dollars and cents, for the reason that every food has a characteristic effect upon the animal economy not explainable upon a knowledge of its chemical composition. The effect of supply and demand and the cost of production are generally more potent factors in fixing market values than is the chemical composition. The comparative composition of bran and carrots is:

	Carbohydrates			
	Dry Matter.	Protein.	(or Starch).	Fat.
	Per cent.	Per cent.	Per cent.	Per cent.
Bran	88.5	12.2	39.2	2.7
Carrots	11.4	0.87	7.8	0.2

Fertilizing Constituents in 1,000 Pounds.

	Phosphoric		
	Nitrogen.	Acid.	Potash.
Bran	26.7	28.9	16.1
Carrots	1.5	0.9	5.1



A Corner in Winnipeg's New Stock-yards.

By these figures it will be seen that bran contains about eight times as much dry matter as carrots, of which nearly one-third is protein, the most valuable constituent of fodders, while the dry matter of carrots is largely of a starchy nature—a comparatively cheap ingredient. Taking the fertilizing constituents as a criterion, bran also has a great advantage over most other foods. Carrots and other roots, however, are valuable for their toning effect upon the system, and may be considered a good investment for feeding at about two dollars per ton.

vanners. These are not so valuable as the carriage horses they used to breed.

"How do you think the size might be improved? We must have a cross to get more size, for we are short of big harness horses. I know a dealer in Manchester who turned over £38,000 (\$190,000) last year in German horses, almost every one of them by English Hackney horses, out of their big mares, which breed big browns and bays.

"The question of color is a serious one with the Hackney. We have a large proportion of chestnuts, and would be better with more bays and browns. The London dealer prefers the dark colors. White legs are not loved by the coachman, as such necessitates washing frequently.

"The success of the Hackney, possessing quality as a getter of the lighter types of horses in Canada has been such as to almost warrant his exclusive use by farmers on their lighter mares with a bit of blood."

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.

The discouraging outlook throughout the winter wheat area of Canada and the United States has had a rather depressing effect upon the binder-twine trade.

MARKETS.

Live stock is being marketed quite plentifully at present. Export cattle and good butchers sell fast, and many short-keeps are being picked up at butchers' prices. Hogs fell again to \$5.00 in Toronto, but Montreal quotations improved. Communications from British dealers to the "Farmer's Advocate," speak very highly of the Canadian bacon, and especially of that supplied by some of the smaller packing houses. Dairy products are low, but it is hoped a greater consumption and a smaller make will tend to improve conditions.

LIVE STOCK.

Toronto.

Exporters—Choice well-finished heavy exporters, \$4.75 to \$4.95 per cwt.; medium, \$4.60 to \$4.70.

Export Bulls—Choice, \$3.75 to \$4.25; medium, \$3.50 to \$3.60.

Export Cows, \$3.75 to \$4.25 per cwt.

Butchers—Choice picked lots of butchers', equal in quality to best exporters, 1,100 to 1,200 lbs. each, \$4.40 to \$4.70; loads of good, \$4.25 to \$4.35; medium, \$3.90 to \$4.10; common, \$3.50 to \$3.75; rough and inferior, \$3 to \$3.55 per cwt.

Feeders—Short-keep feeders, 1,100 to 1,200 lbs. each, \$4.40 to \$4.70; those weighing from 950 to 1,050, of good quality, \$4 to \$4.25 per cwt.

Stockers—Choice yearling calves, \$3.50 to \$3.75; poorer grades and off-colors, \$2.50 to \$3.25.

Milch Cows—Milch cows and springers, \$30 to \$35 each.

Veal Calves—\$2.50 to \$10 each, or \$3.50 to \$5.50 per cwt.

Sheep—Export ewes, heavy weights, \$4 to \$4.50; light export ewes, \$4.25 to \$4.75; export bucks, \$3 to \$3.50.

Lambs—Yearling grain-fed lambs, \$5.75 to \$6.00; barnyard lambs, \$4.00 to \$5.00 per cwt.

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Spring lambs, from \$2.50 to \$5.50 each. Hogs—Prices for straight loads, fed and watered, \$5.00 per cwt., and \$4.75 for lights and fats.

GRAIN AND PRODUCE.

Toronto Wholesale Prices.

Wheat—Ontario—No. 2 red, white and mixed, 93c. to 94c. for milling. Spring is scarce at 88c. to 89c., any freights, for No. 1. Goose, No. 2, 82c. to 83c., any freights.

Wheat—Manitoba—For spot delivery, No. 1 hard is quoted 98c.; No. 1 northern, 92c.; No. 2 northern, 88c., on track, lake ports. The same prices are quoted for the opening of navigation. Milling-in-transit price for each grade is six cents more.

Corn—Canadian—42c. for yellow, and 41c. for mixed, cars west. American—59c. for No. 2 yellow, 59c. for No. 3 yellow, 58c. for No. 3 mixed, in car lots, on the track, Toronto.

Oats—No. 1 white, 33c. to 34c., low freights, 32c. to 33c. middle freights, and 31c. to 32c. high freights; No. 2 white, 3c. less.

Barley—No. 2, 42c., middle freights; No. 3 extra, 40c., middle freights; No. 3, 38c., east or middle.

Rye—No. 2, 59c. to 60c., low, middle or high freights.

Peas—No. 2, 65c. to 66c., any freights.

Buckwheat—No. 2, 48c. to 50c., low freights; 47c. to 48c., middle; and 46c. to 47c., high freights.

Flour—Manitoba Flour—First patents, \$4.80. second patents at \$4.50, and strong bakers' at \$4.40, bags included, on the track, Toronto.

Mill Feed—Ontario shorts, \$17; bran, \$15.50 to \$16.00, in bulk, cars west. Manitoba Mill Feed—\$21 for shorts, and \$20 for bran, in car lots, bags included, on the track, Toronto.

Beans—Prime beans are quoted at \$1.50 to \$1.60, and hand-picked at \$1.65 to \$1.70.

Detroit—Beans—Cash, \$1.80; October, \$1.60.

Potatoes—The demand is good. Cars on the track here are quoted at \$1.05 to \$1.10. Potatoes, out of store, sell at \$1.20 to \$1.25 per bag.

Baled Hay—The demand is fairly well balanced with the supply, and the market is steady at \$9 per ton for car lots, on track, here.

Baled Straw—Car lots, on track, \$5.50 per ton.

Butter—The market continues weak under the influences of heavy receipts in all lines:

Creamery, prints 17c. to 18c.

Creamery, solids 16c. to 17c.

Dairy, pound rolls, choice 12c. to 13c.

Dairy, large rolls 11c. to 13c.

Cheese is easy in tone. Receipts of new are large and stocks on hand heavy. Quotations: 8c. per pound for new large, and 8c. for new twins. Old large is about steady at 9c. for job lots, here.

Eggs—The demand continues active, and there are hardly enough eggs coming forward to fill it. The market has a firm tone at 15c. per dozen.

Wool—The movement in new clip is light. Washed is quoted nominally at 16c. to 17c., and unwashed at 10c. to 11c.

Montreal Wholesale Prices.

Oats—Buyers bid 37c. for No. 3, Montreal inspection, and 38c. for No. 2; sellers demand half a cent more. Peas—71c., afloat, May. No. 2 barley, 49c., and No. 3 extra, 48c. No. 2 rye, 62c. Flour—Manitoba patents, \$4.90 to \$4.95; strong bakers', \$4.60 to \$4.65; winter wheat patents, \$4.80 to \$5.10; straight rollers, \$4.60 to \$4.85; straight rollers, in bags, \$2.20 to \$2.30. Feed—Manitoba bran, in bags, \$19; shorts, \$21 per ton. Ontario bran, in bulk, \$18.50 to \$19; shorts, \$20; mouille, \$26 to \$28 per ton. Provisions—Fresh-killed abattoir hogs, \$7.35 to \$7.70; live hogs, \$5.25 to \$5.50. Eggs—New-laid, 14c. to 15c. Butter—New-made, 15c. to 16c.; Western dairy, 13c.; rolls, 12c. to 13c. Cheese—New fodder, 6c. to 7c.; Quebec fodder, 6c.

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Retail Prices, Toronto Street Market.

Wheat, white\$0.95

Wheat, red 90 to \$0.92

Wheat, goose 77 to 78

Wheat, spring 90

Oats 37 to 39

Barley 45 1/2

Rye 61

Peas 66

Hay, No. 1 timothy11.00 to 13.00

Hay, mixed or clover 7.00 to 9.00

Straw, sheaf10.00 to 10.50

Dressed hogs 6.25 to 7.25

Butter 18 to 20

Eggs, new-laid 15 to 16

Fall chickens, pair 75 to 1.50

Spring chickens, pair 1.00 to 1.50

Turkeys, per pound 15 to 18

Apples, per barrel 1.00 to 3.00

Potatoes, per bag 1.25 to 1.80

Cheese Markets.

Madoc, May 12.—500 boxes offered, all white; 75 sold at 6c., remainder at 6 9-16c.

Tweed, May 12.—There were 300 cheese boarded; all sold at 6c.

Brockville, May 12.—Offerings on Brockville Cheese Board to-day were 504 white and 770 colored; 6c. was bid on the Board, and refused. Salesmen ask 6c., and a great deal changed hands on the street at this price.

Kingston, May 12.—On the Board, 855 boxes were registered. The highest bid was 6c., none being sold.

Winchester, May 12.—366 boxes were registered; all sold on the board at 6c.

Vankleek Hill, May 12.—There were 515 boxes of white and 59 of colored cheese boarded here; 122 boxes withdrawn, being green; 6c. was bid, but salesmen would not sell. Bid was raised to 6c. for white, and 6 1/2c. for colored. At this figure, 188 white and 59 colored were sold.

Belleville, May 12.—The Cheese board to-day was very dull; 6c. was offered, and no person would sell. A small quantity was disposed of at 6c. on curb.

Picton, May 12.—Twelve factories boarded 645 boxes, all colored; highest bid, 6c.; all sold.

Tweed, May 12.—At Tweed to-day 300 boxes cheese were boarded; all sold at 6c.

Alexandria, May 12.—296 boxes of white and 159 boxes of colored were boarded. All, with the exception of six white and sixteen colored, sold for 6c.

London, May 14.—Three factories offered 305 boxes; sales, 135 at 7c., 70 at 7c.

Cowansville, Que., May 14.—At the weekly meeting of the District of Bedford Dairymen's Association here to-day, 20 creameries offered 990 boxes butter; 14 factories offered 630 boxes cheese. Nine hundred and thirty-seven boxes of butter were sold at 15c.; 150 boxes cheese brought 6c.; and 36 boxes, 6c.

Chicago Markets.

Chicago.—Cattle—Good to prime steers, \$5.10 to \$5.65; poor to medium, \$4.10 to \$4.90; Texas-fed steers, \$4.25 to \$5. Hogs—Mixed and butchers', \$4.70 to \$4.90; good to choice heavy, \$4.80 to \$4.90; light, \$4.65 to \$4.80. Sheep—Good to choice wethers, \$4.65 to \$5.50; fair to choice mixed, \$3.75 to \$4.50; clipped native lambs, \$4.50 to \$6.

Buffalo Markets.

East Buffalo.—Hogs—Heavy and mixed, \$5.15 to \$5.20; Yorkers, \$5 to \$5.20. Lambs, \$4.50 to \$6.90; yearlings, \$5.75 to \$6; wethers, \$3.25 to \$5.50; ewes, \$4.75 to \$5; sheep, mixed, \$3.25 to \$5.25.

British Cattle Market.

London.—Canadian cattle are steady at 11c. to 12c. per lb.; refrigerator beef, 9c. to 9 1/2c. per lb. Sheep, 12c. per lb.; yearlings, 13c.

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"The birds for love are singing,
The young buds bloom for joy,
The flowers, their incense flinging,
The great brown bees employ."

A FAIR BARBARIAN.

BY FRANCES HODGSON BURNETT.

CHAPTER XXVI.

"Jack."

The first person they saw, when they reached the lawn, was Mr. Dugald Binnie, who had deigned to present himself, and was talking to Mr. Burmestone, Lucia, and Miss Belinda.

"I'll go to them," said Octavia. "Aunt Belinda will wonder where I have been."

But before they reached the group, they were intercepted by Lord Lansdowne; and Barold had the pleasure of surrendering his charge, and watching her, with some rather sharp pangs, as she was borne off to the conservatories.

"What is the matter with Mr. Barold?" exclaimed Miss Pilcher. "Pray look at him."

"He has been talking to Miss Octavia Bassett, in one of the arbors," put in Miss Lydia Burnham. "Emily and I passed them a few minutes ago, and they were so absorbed that they did not see us. There is no knowing what has happened."

"Lydia!" exclaimed Mrs. Burnham, in stern reproof of such flippancy.

But, the next moment, she exchanged a glance with Miss Pilcher.

"Do you think"—she suggested. "Is it possible?"

"It really looks very like it," said Miss Pilcher; "though it is scarcely to be credited. See how pale and angry he looks."

Mrs. Burnham glanced toward him, and then a slight smile illuminated her countenance.

"How furious," she remarked cheerfully, "how furious Lady Theobald will be!"

Naturally, it was not very long before the attention of numerous other ladies was directed to Mr. Francis Barold. It was observed that he took no share in the festivities, that he did not regain his natural air of enviable indifference to his surroundings,—that he did not approach Octavia Bassett until all was over, and she was on the point of going home. What he said to her then, no one heard. "I am going to London to-morrow. Good-bye."

"Good-bye," she answered, holding out her hand to him. Then she added quickly, in an undertone, "You oughtn't to think badly of me. You won't, after a while."

As they drove homeward, she was rather silent, and Miss Belinda remarked it.

"I am afraid you are tired, Octavia," she said. "It is a pity that Martin should come, and find you tired."

"I am not tired. I was only—thinking. It has been a queer day."

"A queer day, my dear!" ejaculated Miss Belinda. "I thought it a charming day."

"So it has been," said Octavia, which Miss Belinda thought rather inconsistent.

Both of them grew rather restless as they neared the house.

"To think," said Miss Belinda, "of my seeing poor Martin again!"

"Suppose," said Octavia nervously, as they drew up, "suppose they are here—already?"

"They?" exclaimed Miss Belinda.

"Who"—but she got no farther. A cry burst from Octavia,—a queer, soft little cry.

"They are here," she said: "they are! Jack—Jack!"

And she was out of the carriage; and Miss Belinda, following her closely, was horrified to see her caught at once in the embrace of a tall, bronzed young man, who, a moment after, drew her into the little parlor, and shut the door.

Mr. Martin Bassett, who was big and sunburned, and prosperous-looking, stood in the passage, smiling triumphantly.

"M—M—Martin!" gasped Miss Belinda. "What—oh, what does this mean?"

Martin Bassett led her to a seat, and smiled more triumphantly still.

"Never mind, Belinda," he said. "Don't be frightened. It's Jack Belasys, and he's the finest fellow in the West. And she hasn't seen him for two years."

"Martin," Miss Belinda fluttered, "it is not proper—it really isn't."

"Yes, it is," answered Mr. Bassett; "for he's going to marry her before we go abroad."

It was an eventful day for all parties concerned. At its close Lady Theobald found herself in an utterly bewildered and thunderstruck condition. And to Mr. Dugald Binnie, more than to anyone else, her demoralization was due. That gentleman got into the carriage, in rather a better humor than usual.

"Same man I used to know," he remarked. "Glad to see him. I knew him as soon as I set eyes on him."

"Do you allude to Mr. Burmestone?"

"Yes. Had a long talk with him. He's coming to see you to-morrow. Told him he might come, myself. Appears he's taken a fancy to Lucia. Wants to talk it over. Suits me exactly, and suppose it suits her. Looks as if it does. Glad she hasn't taken a fancy to some haw-haw fellow, like that fool Barold. Girls generally do. Burmestone's worth ten of him."

Lucia, who had been looking steadily out of the carriage-window, turned, with an amazed expression. Lady Theobald had received a shock which made all her manacles rattle. She could scarcely support herself under it.

"Do I"—she said. "Am I to understand that Mr. Francis Barold does not meet with your approval?"

Mr. Binnie struck his stick sharply upon the floor of the carriage.

"Yes, by George!" he said. "I'll have nothing to do with chaps like that. If she'd taken up with him, she'd never have heard from me again. Make sure of that."

When they reached Oldclough, her ladyship followed Lucia to her room. She stood before her, arranging the manacles on her wrists nervously.

"I begin to understand now," she said. "I find I was mistaken in my impressions of Mr. Dugald Binnie's tastes—and in my impressions of you. You are to marry Mr. Burmestone. My rule is over. Permit me to congratulate you."

The tears rose to Lucia's eyes.

"Grandmamma," she said, her voice soft and broken, "I think I should have been more frank, if—if you had been kinder sometimes."

"I have done my duty by you," said my lady.

Lucia looked at her pathetically.

"I have been ashamed to keep things from you," she hesitated. "And I have often told myself that—that it was sly to do it—but I could not help it."

"I trust," said my lady, "that you will be more candid with Mr. Burmestone."

Lucia blushed guiltily.

"I—think I shall, grandmamma," she said.

It was the Rev. Alfred Poppleton who assisted the rector of St. James to marry Jack Belasys and Octavia Bassett; and it was observed that he was almost as pale as his surplice.

Slowbridge had never seen such a wedding, or such a bride as Octavia. It was even admitted that Jack Belasys was a singularly handsome fellow, and had a dashing, adventurous air, which carried all before it. There was a rumor that he owned silver mines himself, and had even done something in diamonds, in Brazil, where he had spent the last two years. At all events, it was ascertained beyond doubt, that, being at last a married woman, and entitled to splendors of the kind, Octavia would not lack them. Her presents to Lucia, who was one of her bridesmaids, dazzled all beholders.

When she was borne away by the train, with her father and husband, and Miss Belinda, whose bonnet-strings were bedewed with tears, the Rev. Alfred Poppleton was the last man who shook hands with her. He held in his hand a large bouquet, which Octavia herself had given him out of her abundance. "Slowbridge will miss you, Miss—Mrs. Belasys," he faltered. "I—I shall miss you. Perhaps we—may even meet again. I have thought that, perhaps, I should like to go to America."

And as the train puffed out of the station and disappeared, he stood motionless for several seconds; and a large and brilliant drop of moisture appeared on the calyx of the lily which formed the centerpiece of his bouquet.

(The end.)

He Could Dress Himself.

A teacher in a kindergarten in Boston had among her pupils a little chap of tender years named Harry D. One morning Harry came to school with the flush of triumph on his face.

"I can deth mythelf, now," he said, with a decided lisp.

"You can dress yourself?" said the teacher. "Why, what a smart little boy you are."

Soon after the session of the school had begun up went Harry's hand.

"What is it, Harry?" asked the teacher.

"I can deth my own thelf."

"You have already told me that," said the teacher.

Twice Harry announced that he could "deth himthelf," and when he announced it for the third time the teacher said:

"Now, Harry, you have disobeyed me twice, for I told you not to interrupt me by saying again that you could dress yourself. You may go behind that screen in the corner and stay there until I say that you can come out."

Harry obeyed, and a moment later two or three visitors were announced.

"What a charming lot of little people," said one of the callers, "and only one vacant seat."

"The little boy who sits there is here," said the teacher. "I had him go behind that screen for a slight infraction of the rules, but he may come out now. Harry, dear, go back to your seat."

Harry came forth, and, horrors! he was clad in nothing but the simplicity of nature!

"I can undeath mythelf too!" he announced.

Tableau.—[M. W.]

The Story of Caliph Stork.

An Old German Fairy Tale Translated by James Speakman, Penhold, Alta.

CHAPTER IV.

When the Caliph had finished his narrative, the owl thanked him, and said: "Now, listen also to my story, for I am not less unhappy than you. My father is king of India. I am his only daughter. My name is Lusa. The magician, Kaschner, who enchanted you, is also the author of my misery. One day he came to my father and demanded me as wife for his son Mizra. My father, a hot-tempered man, ordered a servant to throw him downstairs. The wretch succeeded in approaching me again in a different disguise, and one day, when I was taking refreshments in our garden, he, disguised as a slave, administered a drink to me, which changed me into my present abominable shape. I fainted with fright, and he brought me here, crying to me in a terrible voice: 'Here you shall stay, ugly, despised even by animals, until your death, or until a man, with his own free will, asks you, even in this horrible shape, to become his wife. Thus I am avenged on you and on your proud father.' Since then many months have flown. Lonely and sad, I live as a hermit in these ruins, abhorred by the world, a fright even to animals. The beauties of nature are hidden from me, for I am blind by day, and only when the moon pours her pale light over the castle does the veil fall from my eyes."

The owl had ended; again she wiped her eyes with her wings, for the recital of her sufferings had made her tears flow. The Caliph fell into deep thought during the story of the princess. "If I am not deceived," he said, "there is a secret connection between your misfortune and mine, but where shall I find the key to this riddle?"

The owl answered: "Oh, sir, I have the same feeling, for in my earliest youth a wise woman once prophesied that a stork would bring me great happiness, and perhaps I could tell how we might be saved."

The Caliph was much surprised, and asked in what way she meant.

"The magician who has made both of us miserable," said she, "visits these ruins once in every month. Not far from this room is a hall, where he feasts with many companions. Often I have listened to them there. Then they tell one another their infamous deeds. Perhaps he might then pronounce the magic word which you have forgotten."

"Oh, dearest Princess," cried the Caliph, "tell me when he comes, and where is the hall?"

The owl was silent for a moment, and then said: "Don't be angry, but only on one condition can I fulfil your desire."

"What condition? What condition?" cried Chasid. "Command us; I agree to anything."

"Well," said the owl, "I would also like to find my deliverance, and that can only be if one of you marries me."

This proposal seemed to hit the storks rather hard, and the Caliph beckoned his servant to go outside with him.

"Grand Vizier," said the Caliph, outside of the door, "this is a stupid business, but you could take her."

"Indeed," answered the Vizier, "so that my wife might scratch my eyes out when I get home? And then I am an old man; you are young and unmarried,

and more suitable for a young and beautiful princess."

"That is just it," groaned the Caliph, hanging his wings, sadly "Who can tell whether she is young and beautiful? It is buying a pig in a poke."

They tried to persuade one another for a long time, but at last, when the Caliph saw that the Vizier would rather remain a stork than marry the owl, the resolved to accept the condition himself. The owl was delighted. She told them they could have come at no better time, for the magicians would probably assemble that very night.

She left the chamber with the storks, and led them to the hall. They walked for some time along a dark passage. At last a bright light streamed towards them through a half-ruined wall. The owl whispered to them to keep very quiet. Through the crack, where they stood, they could overlook a large dining hall. A row of pillars ran around it, and it was splendidly decorated. Many-colored lamps replaced the daylight. A round table, laden with many and exquisite dishes, stood in the center of the hall. Round the table stood couches, on which sat eight men. In one of these men the storks recognized the peddler who had sold them the magic powder. His comrades called on him to narrate his newest deeds. Among other stories, he told them the story of the Caliph and his Vizier.

"And what was the word you gave them?" asked a magician.

"A very difficult Latin one; it is Nutabor."

(To be continued.)

A Horse-to-Horse Talk: The Family Steed's Story.

Black Molly Finds Waiting More Wearisome Than Work—Hard-hearted Woman.

"Oh, indeed!" black Molly sniffed, wrinkling her upper lip; "that shows how much you know—or, rather, how little. Look at me! This is what family horses come to. I was only ten years old last grass, but am stiffer and rustier than my own grandmother! Family horses, understand, work seven days in the week—I fairly hate the sound of church bells. Think of standing tied in a shed all day long, with only a swallow of water and a wisp of hay—and sometimes not even that. Still, Sundays are not quite so bad as weekdays—you go everywhere then—to mill, to market, the post office, and, worst of all, to the store. You are tied in the boiling sun, or where the wind strikes to your marrow, and left without food or water, hours and hours and hours. I wonder what men can find to talk about. I wonder, too, how they are so stupid as to let their own property be so badly used. I don't in the least mind work—there was never one of my stock but was willing to do or die. It's standing, the long, cruel, useless waiting that has soured me. And they won't even loose the checkrein while I wait. If they gave me my head free, I should not be more than half so tired."

"True for you, Molly! Truer than gospel," Lord Kelso, the brown hackney, said in a plaintive whinny. "I know. Checkreins have been for me, at least, the root of all evil. They brought me to my present pass. Five years ago I was a park horse, with nothing much to complain of, out of harness. I had a box stall, always knee deep in clean bright straw, and was free to walk or roll or lie down in it, at my own sweet will. Since the windows were set so as to give me light without glare, and screened to keep out flies, even my docked tail did not trouble me much. I stood by oats and hay, had apples and mashes nearly every day, and a groom who knew how to rub and curry me without hurting me the least bit. He was a good-hearted fellow, too; so, I think, was my owner. I am sure if he had known more I should have suffered less. It was different with his wife: she was hard-hearted; flinty-hearted, indeed. In the park she wanted him to be forever putting me through my paces, and once I heard her say, petulantly, 'Frank, what's the use of paying so much for a horse unless you mean to make him show off, especially when the Grimmys are in sight?'"—

[Exchange.]



Two Little Maids from School.

Nan and Margery Danescombe could hardly sit still as the train drew nearer and nearer to the little country village where "grandmother" lived. School, with its worries, was left behind for ten days—the Easter holidays are dreadfully short, are they not?—and every minute these two little maids from school were flying nearer and nearer to the dear old country homestead. At last the train stopped and the eager crowd of cousins on the platform almost tumbled under the wheels in their hurry to welcome the travellers. What a jolly ride they had from the station in the big old-fashioned carriage, and how fast all the tongues went! Aunt Nancy declared it was enough to drive any old maid crazy, but she looked as happy as any of the children, and they knew she was only joking. After a hurried visit to the pigs, calves, hens and other live stock—not forgetting the puppies and kittens—Margery and her cousin Mary slipped away into the attic, and presently returned dressed as you see them in the picture. They always loved to "dress up," as most little girls do, and they were tired enough by that time to settle down for a little while with a big book full of pictures. Margery was almost too excited to look at the pictures, and the book soon dropped to the floor, where it stayed until Aunt Nan picked it up with a resigned sigh, which ended in a smile—for who could be vexed when the children were so happy?

Next day was Good Friday, but the rain was coming down in torrents, so nobody could go to church. Aunt Nancy gathered the wild flock of nephews and nieces round grand-

mother's chair, with her hands all over flour, and put a stop to this new and dangerous play of sliding down the banisters. George then sat down on the top step and recited the verses, as he was not allowed to act them.

"Down grandmother's banister rail
Swift as the wind I slide;
I'm the engineer
That never knows fear,
And I travel far and wide.
Each time I rush upstairs
Grandmother cries, 'Don't fall!'—
When, whiz! I drop
Without any stop
Between Boston and Montreal.
I hurry again to the top,
Oh, my! it is such fun,
For this is the train
That's flying from Maine
And arriving at Washington.
Once more I am off like a flash,
To carry the Winnipeg mail.
I am sure you would guess
'Tis the lightning express
On grandmother's banister rail."

After dinner was over it was still raining, so Margery and Mary decided to make a doll's house. They got a good-sized cardboard box, and used nearly a paper of pins to fasten the partitions between the different rooms. As Margery (the chief architect) had just come from Toronto, she made a basement kitchen and dining-room, with a swinging door between. Above that was a long drawing-room, and on the top flat were two bedrooms. The carpets were made of wall paper in small patterns, with narrow borders to finish each room. Window-blinds and curtains, cut out of old catalogues, were pasted in place to represent windows. Eaton's catalogues also furnished pictures for the walls, and any quantity of other articles. The stove and stovepipe were made of a bit of black card-

board, and the kitchen was soon well furnished with pots, pans saucepans, teapots and dippers. It also contained a cardboard table, and a shelf for lamps and clock—which also came out of the catalogue. A trim little cook in cap and apron was in charge of this room, and a quaker (cut from an advertisement of Quaker oats) was sitting comfortably in a cardboard chair. The dining-room looked very complete with its table, chairs and sideboard—made of cardboard—and its white tablecloth of paper. This cloth was set with breakfast dishes on one side, and dinner dishes on the other, drawn with a blue pencil. A colored cloth was also found in the scrap-basket, and carefully fringed. The drawing-room was quite grand, with its draped mantelpiece, and fireplace blazing with red tissue-paper flames; its piano built of old dominoes, with a row of black spots on the white ivory for a keyboard, and all the rest of the dominoes showing only the black backs. A silk drape and piano lamp made a good finish. The cosy corner was covered with crinkled tissue-paper, and some tiny silk cushions were heaped on it. Nan had become interested long before this, and her clever fingers manufactured a dainty dressing-table for one of the bedrooms. The mirror was made of a bit of broken looking-glass, draped with the crinkled paper. One bedroom was pink, and the other blue. The beds were like English beds, each one had a tiny canopy top, and net curtains tied back with baby ribbon. The washstands were just squares of cardboard, bent in the middle and sewed to the wall. Pretty drapes hung down in front, and pitchers and basins—from Eaton's—were pasted to slips of paper and fastened in place.

Of course all this was not done in a day; in fact, a good many hours of every day were spent in the big empty conservatory, which made such a pleasant playroom. If the floor was littered with paper and scraps of silk, who cared? Certainly Aunt Nancy didn't, for the Easter holidays are very short, and she knew the house would probably be tidy and rather too quiet in a few days.

One day Eaton's new spring catalogue for 1904 was brought in, and the children at once pounced on the colored rugs and carpet squares which decorated the back of the cover, putting them down in the little house, where they looked very grand. I have told you all about this house-building, so that you can try your hand at it some rainy day, when you have nothing to amuse you.

When the last day arrived—all too soon—the pretty toy was carefully hidden in a corner of the attic, to be left there until the summer holidays. How unwilling they were to go to bed that last night! They would not own that the cap fitted when Aunt Nan brought out her scrap-book and read aloud these verses:

"Two little girls are weary,
Weary of books and of play,
Sad is the world and dreary,
Slowly the time slips away;
Four little feet are aching,
Bowed is each little head,
Yet they are up and shaking,
When there is mention of bed.
Bravely they laugh and chatter,
Just for a minute or two;
Then, when they end their clatter,
Sleep come quickly to woo.
Slowly their eyes are closing,
Down again drops each head,
Two little maids are dozing,
Though they're not ready for bed.
That is their method ever.
Night after night they protest,
Claiming they're sleepy never,
Never in need of their rest;
Nodding and almost dreaming,
Drowsily each little head
Still is forever scheming
Merely to keep out of bed."

COUSIN DOROTHY.

Plain Living.

A set of rules for a simple life has been drawn up. They are not perfect, but they will help.

We should never buy things that we do not want.

We should never willingly, or through mere indifference, buy things that are not genuine.

We should never try to do things that we know we cannot do, or have not time to do.

And we should never do things that we do not want to do and do not approve, just because other people do them and ask us to do them.

If we all observed these four rules of sincerity, we should discover that simplicity of life is, indeed, after all, an attainable ideal.—[Classmate.]



Two Little Maids from School.

mother's chair, by ringing the big hand-bell. Then they had a nice little Good Friday service, beginning with the 95th Psalm, which even little Alfred could sing through without a mistake. They sang hymns and read some more psalms—verse about—then listened to the wonderful story of how the Lord Jesus died on the first Good Friday. Then they scattered in different directions, looking quiet and grave for a little while, but soon laughing and shouting again. George amused himself by putting into practice some verses he had learned at school, and Alfred followed his lead until poor, distracted Aunt Nan came flying out to

board, and the kitchen was soon well furnished with pots, pans saucepans, teapots and dippers. It also contained a cardboard table, and a shelf for lamps and clock—which also came out of the catalogue. A trim little cook in cap and apron was in charge of this room, and a quaker (cut from an advertisement of Quaker oats) was sitting comfortably in a cardboard chair. The dining-room looked very complete with its table, chairs and sideboard—made of cardboard—and its white tablecloth of paper. This cloth was set with breakfast dishes on one side, and dinner dishes on the other, drawn with a blue pencil. A colored cloth was also

HEALTH IN THE HOME.

By a Trained Nurse

Breathing.

A great deal is said about the importance of deep breathing, and a glance at the anatomy of the chest shows us why this is so. The greatest capacity of the chest and the greater portion of the lungs are beneath the armpits. If the entire lungs are to be filled with air, the chest must be enlarged to its full extent, for the lungs do not expand and contract by any muscular effort of their own, but suck in air like a sponge as the chest cavity expands, thus giving them room to fill up, and the air is expelled again by the contraction of the chest, the ribs pressing down upon them. The lungs are never entirely empty of air, except in diseased portions; a certain amount always remains, which is called residual air, as opposed to tidal air, which comes and goes with the act of respiration.

EXPANSION OF THE CHEST is accomplished by the muscles of the chest, back and front, and the diaphragm, a strong elastic membrane, which constitutes the floor of the chest cavity, and separates the heart and lungs from the organs immediately beneath. If the muscles have room for action, when the chest expands during the act of inspiration, the diaphragm or floor of the chest is pulled down, thus greatly increasing the size of the chest cavity, and permitting the lungs to take in a great deal of air. This is the natural way to breathe, with each breath expanding and filling the lungs in the region under the arms and about the waist line. All animals, children and savage peoples breathe in this way; everyone, in fact, except women who have accustomed themselves to wearing tight corsets. These compress the muscles of the chest and back so that expansion is impossible, and the individual has to do without sufficient air in the lower and greater part of the lungs, which means doing without the proper amount of the most vital element. It is a fortunate thing that it is not customary to sleep in corsets.

THE RIGHT WAY TO BREATHE happens to be the one that comes most easily. People who keep open windows, spend time out of doors, wear loose clothing, and work hard, cannot help breathing properly. The open windows provide the fresh air; work calls upon the nerve centers for more of it; the conscious desire to breathe arises in the brain, which through the nerves directs the proper motions of chest and abdomen to attain this end, and loose clothing permits the proper fulfilment of the function. No one breathes more with the upper part of the lungs than the lower on ordinary occasions, unless the lower lungs are diseased or the body deformed by tight clothing. The more work done, the more oxygen needed, which is one reason why fairly hard bodily work is so good, except when prohibited by the physician for special reasons. Those whose work is of the sedentary indoor kind can be greatly benefited by exercises. Everyone who leans over a desk all day knows the feeling of wanting to raise the arms and stretch. Round shoulders and shallow chests may be avoided and corrected by spending a short time morning and night, and even at noon, in exercising with a few comparatively simple motions. Oxygen is the great blood-purifier, and there is no way of getting enough oxygen except through the lungs. No one can afford to shut off any of their possible supply of oxygen, for no one is built to take in more than is needed. The human body is most perfect in its functions, and most beautiful in form when left

to nature and healthy living. The muscles of the body are the natural supports, and if they are kept strong and in working order by proper exercise, no artificial help is needed. If they are compressed within tight clothing they cannot perform their natural functions, and eventually lose the power of doing so, which is the reason why so many people assert that they need "support." Such people should exercise daily, removing their corsets while doing so, even if they replace them afterwards. In a short time they will find that they no longer like the corset; it will become uncomfortable, and finally be discarded, the body meanwhile attaining a graceful muscular poise, instead of the stiff upholstered corset effect. This applies also to heavy people. I have personally seen an extremely heavy, perfectly shapeless, elderly woman regain a natural, well-proportioned figure by means of physical exercises, done, of course, under competent direction, and comprising many involved movements. Any woman who is distressed about her figure would do well to ask her physician to recommend some thoroughly competent teacher of gymnastics, and take advantage of such instruction. The

BREATHING EXERCISES

given below are recommended by a gymnastic teacher of standing amongst the medical profession, with whom I have consulted concerning them, in order to give my correspondents the best advice available. The fundamental qualification for deep breathing is a flexible chest. The following exercises raise the chest and increase its flexibility. I begin with the easier ones, and go on to those more difficult:

1. Lie flat on the floor, relaxing completely, so that the back is not arched nor the knees bent. Stretch the arms above the head along the floor, straight up from the shoulders, making a great effort to stretch more and more, as if trying to reach something a little too far away. Depress the chin at the same time, and do not stop breathing because you are stretching hard. Breathe in as you raise the arms, and continue to breathe deeply as you work. The ribs will be felt coming up high, and the whole chest enlarged and raised, the lungs being compelled to take in more air in consequence of the greater vacuum created in the chest between the lungs and the chest walls. This is less fatiguing than the standing exercises.

2. Hanging by the arms from a horizontal bar or rings is excellent—not trying to pull up on it, merely hanging, and remembering not to hold the breath. This also raises and expands the whole chest.

3. Stand straight on both feet, arms hanging at side, chest up and chin depressed. Extend arms in straight line slowly forward, upward, above head, well back, and then let them sink sidewise downward to first position, and repeat. Breathe in steadily and slowly as the arms are raised until the chest is quite full, and expel the air as they sink. Keep the arms perfectly straight from shoulder to wrist all the time, and the muscles on tension. None of these exercises are of any value when done with flabby muscles, or unless the chest is held high up, and there must be no bending back from the waist line, but from a point between the shoulder blades, as if there were a hinge there. When accustomed to this exercise it may be repeated with the heels raised. Rise on toes as the arms are extended upward, and lower again as they sink.

4. This is a Swedish movement. Stand firm with arms hanging at

side; raise forearm, placing finger tips on shoulders, keeping elbows close and firm against ribs, chin depressed, and chest up. Thrust arms straight up from shoulder with considerable force, retaining position firmly while you count one, and bring back sharply to first position. Thrust arms out straight and firm sidewise, and back to first position; thrust arms forcibly downward, and return to first position. Repeat, but not until over-fatigued.

5. Raise elbows on a level with shoulder, at the same time placing finger tips on chest, and from this position, keeping arms on a level with shoulder, fling them forcibly as far back as they will go; return to first position and repeat.

6. Stand firm, with hands on hips and chest up, chin depressed, and spring lightly on the toes from one foot to the other, as if running, though without leaving the spot, or if there is room to do it, run, rigidly remembering to keep the chest up and chin depressed.

7. This exercise is difficult, and had better not be attempted than not done properly. Assume the fundamental position, hips firm, chest up, chin depressed. Place hands on hips, the fingers of each hand pointing toward those of the other, and pushing on them, bend slowly back from a point between the shoulder blades until you feel the muscles pulling hard on all the ribs. Return slowly to first position. Fill up chest as you bend back. Except for the bending back, the fundamental position must not be changed.

All tight clothing must be removed while doing these exercises.

ALICE G. OWEN.

Notes from Some Old-time Chronicles.

A VOYAGE TO HUDSON'S BAY IN 1851.

The Aftermath of the Esquimaux Visit.

Oh! the "ancient and fish-like" odor which poisoned the whole ship upon the morning which followed the visit of the Esquimaux, and, oh! the comical incidents which each had to relate of the previous day's experiences. Upon the rigging flapped a multitude of garments, which, inflated by the light breeze, took on the shape of the bodies from which they had been stripped, smelling the while almost as horribly as they. These, in common with nearly every other bartered article, were not suffered to be taken "below" until they had been exposed to the sun and wind for many a day. Strung by their necks, hung miniature Esquimaux, i.e., dolls cleverly modelled and dressed, and bearing weapons for spearing fish, or for assault, some of which had been purchased for us by means of a good-sized packing needle, that possession most desired of every Esquimaux, man or woman. Indeed, one woman had smilingly handed up her baby to one of the sailors, who pretended he wanted it, and, so the story went, was reluctant to take the poor little creature back again, until it was made clear to her that she could keep her needle too. Babies were plentiful in Esquimaux land, but not so needles of any description. However, we took that story with a grain of salt. Upon the deck sprawled two or three fat puppies, and from hand to hand passed miniature canoes of artistic construction, perfect in detail and equipment.

"Did you see," said Capt. Hill, "that dirty beggar who fought so hard to keep the painted water-can he had stolen after he had dodged the steward to get down the companion stairs, and was brought up finally by the astonishing sight of himself in the long mirror in the ladies' cabin?" See him! I should think we did, for it was an incident too comical ever to be forgotten. I can recall it now as if it had happened but yesterday. First there was the start of surprise, for he knew that he was the first to break bounds

and get within any closed door; then the cautious approach; then the pantomime of motion, until by noting the unerring repetition of every movement, the truth dawned upon him that the creature he saw was himself, and no other. We had watched him with breathless interest before, but from that moment his every antic was punctuated by shouts of laughter from the beholders. Having touched the figure in the long mirror, finger to finger, head to head, and finally tongue to tongue (which appeared to be the test of all tests to an Esquimaux), he burst into mad yells of triumph, and began a series of leaps, which, getting higher and higher, threatened to end in concussion of the brain, as his head, at each bound, got nearer and nearer to the ceiling of the cabin. It was as much as two strong men could do to overpower the excited man, and get him on deck, from whence he was unceremoniously and quickly thrust over the bulwarks into his canoe.

"Well, you may laugh, young people, and by the same token I laughed enough myself too, but I had the worst luck of the whole of you, for didn't the creature tumble head foremost into my berth, roll his dirty carcass in my scarlet travelling rug, which you'll never set eyes on again, Miss Hetty, for 'tis overboard and scaring the walrus by now, and was just going to lay hands on my forage cap when he sried the hot water can and made a bolt of it. I've had the steward and the cabin boy busy scouring, scrubbing and fumigating ever since, but I'm thinking it won't be only polar bears I'll be hunting in my dreams when after this I bid ye good night on the Prince of Wales."

AN EXPLORATION PARTY GOES ASHORE.

July 29th tells of great excitement on board, it having been decided to carry out instructions given to the Captain from the Hudson's Bay Company, to land at one or more points to learn the nature of the soil and products, and to report generally upon the possibilities of the country. I am not sure whether the spot chosen was Charles, or Nottingham Island, or, indeed, whether it might not have been the mainland itself, one of the landings being at the "North Bluff," but my mother records that "the party had walked some miles, never wholly losing sight of the coast. They had found the country a succession of small hills, over which they clambered, only to find another awaiting them in its turn. They brought specimens of rock, plumbago, sandy-soil heath, and plants, but I do not think they found traces of what they had counted upon discovering. We ourselves, as our ship tacked slowly from point to point, sometimes very near to the shore, could see how treeless and stunted was the vegetation, the only green being of a mossy brown hue, and apparently produced by a low-lying, compact, berry-bearing shrub, edible or otherwise. We are told that no one had ever landed on this spot before, which may or may not give significance to the fact that the flag was hoisted, and after the Captain's health had been drunk, all voices had united in a burst of loyal song, "God Save our Gracious Queen." The explorers say that they took their luncheon by a lovely clear lake, and rested their weary bodies upon the softest of mossy cushions. Another entry speaks of the party having met several natives who at once hailed them as "King Jargy," showing that they were of the friendly tribes whose representatives had at one time or another visited the ships. In one hut, built roughly of stones, they saw the remains of a fire, which certainly corrects the idea that the Esquimaux never make use of such; at another some women and children set up a wailing, as if of fear, but were speedily appeased by gifts in token of goodwill. They had seen many kinds of ducks, deer, white bears and

cubs, seals, plover and swans, and brought on board two beautiful cygnets alive, besides wild fowl which had fallen to their guns. Amongst their "finds" were some not quite so pleasant, namely, mosquitoes and other winged tormentors. One of the men had picked up a piece of ore, to our uneducated eyes resembling silver, and another had put, one in each pocket, the skulls of two little Esquimaux children, which he had found protruding from what was apparently a grave once covered by stones.

I need hardly say that it had not been without longing, nay, with almost envious eyes, we younger ones had watched the boats conveying the exploring parties ashore. It seemed cruel to be so near "Robinson Crusoe Land" and yet to be forbidden to enter therein. The limitations of sex were hard to bear, but had to be borne nevertheless, for even in the Arctic seas what "can't be cured must be endured." The North Bluff was the rendezvous of the sister ships, and a pleasant break it was when the boat of the Prince Albert brought the commodore and some of the passengers on board the Prince of Wales as our guests, before we came to the parting of the ways, when the former must head for Moose, whilst the latter would make for York Factory, the haven where we would be.

H. A. B.
(To be continued.)

"When Lubin is Away."

"I cannot mind my wheel, mother, when Lubin is away!" And what about Lubin, and what about the sheep upon the hills which Lubin is or should be minding? If he, like his bonnie sweetheart, has for awhile lost himself in the land of dreams and forgotten his shepherd's crook and his wandering flock, we may find some excuse for Lubin in the sweet face of his sweetheart. It is a good and intelligent as well as a bonnie one, and we may safely predict a happy home presently for the dear old mother, whose patiently quizzical look the artist has so cleverly caught, for she knows (who better?) that when the maiden's day dreams end in their blessed reality there will be no wheel less neglected and nothing left undone which can make the cottage Lubin is preparing for his bride the brightest and sunniest upon the hillside.

H. A. B.

Be Happy.

"Tis better to laugh than to cry, dear—
A proverb you'll grant me is true;
Tis best to forget to be sad, dear;
The heart's ease is better than rue.

"Tis best to be glad for what is, dear,
Than to sigh for the things which are
not;
Tis braver to reckon the joys, dear,
Than the trouble that falls to your
lot.

"Tis more to be good than be great,
dear;
To be happy is better than wise;
You'll find if you smile at the world,
dear,
The world will smile back in your
eyes."

"Give me my work to do,
And peace of the task well done;
Youth of the spring and its blossoming,
And the light of the moon and sun.

"Pleasure of little things
That never may pall or end,
And fast in my hold no lesser gold
Than the honest hand of a friend."

A priest asked, when examining a class in the south of Ireland, "What is the sacrament of matrimony?" "It's a state of torment into which souls enter to prepare them for another and better world." "That," said the curate, is purgatory; put her down to the bottom of the class. "Leave her alone," said the parish priest, "for anything you or I know to the contrary, she may be perfectly right."



The Attraction of Christ.

"Whatsoever spark
Of pure and true in any human heart
Flickered and lived—it burned itself to-
wards Him
In an electric current, through all bonds
Of intervening race and creed and time—
And flamed up to a heat of living faith
And love, and love's communion, and the
Joy
And inspiration of self-sacrifice!
And drew together in a central coil
Magnetic, all the noblest of all hearts,
And made them one with Him, in a live
flame."

A few days ago I attended a missionary convention in Toronto, and, as I joined with more than a thousand fellow Christians in eating the Lord's Supper, I could not help thinking how grand must be the sum total of that great multitude which no man can number, gathered from all nations and kindreds and peoples and tongues, which is drawn by a mysterious but irresistible attraction after Christ. Talk about the age of miracles being over! This divine spell is a continual miracle, in every century since the first two disciples left John the Baptist to follow One who had not even spoken to them. Think of those words which seemed so impossible of fulfilment: "I, if I be lifted up from the earth, will draw all men unto Me," and then think how wonderfully this Man has drawn to Himself the hearts of ten thousand times ten thousand, and thousands of thousands. Napoleon once said that he had inspired men so that they were willing to die for him; but they must see and hear him before the fire of enthusiasm could be kindled, and even then it soon died out, for he complained sadly, "My army has forgotten me while I am still living." He said he was sure Christ must be more than man, for at this hour millions of men would die for Him—millions who had never seen His face nor heard His voice.

The attraction of Christ is still as

enough to deny that there is some real, though invisible, influence attracting it. Though every needle may not feel this attraction, every magnetized needle does, and it could not possibly be accidental that for hundreds of years every magnetized needle that is free to move should always point unerringly in the same direction. Neither can it possibly be accidental, that for so many centuries millions of men, differing in everything else, have felt and acknowledged the mighty force which draws them to Christ. This fact stands without the faintest shadow of a parallel in history. No other man has ever won the passionate devotion of multitudes who have never seen him nor heard his voice.

Once when a surgeon was probing for a ball in the breast of a member of Napoleon's body-guard, the wounded soldier said, "Go a little deeper and you'll find the emperor." But only Christ Himself knows in how many hearts He dwells supreme. How many burdened souls can say:

"Over the narrow footpath
That led from my lowly door,
I went with a thought of the Master,
As oft I had walked before.
My heart was heavily laden,
And with tears my eyes were dim;
But I knew I should lose the burden
Could I get a glimpse of Him."

Then think how wonderful it is that this attraction of Christ should be personal and individual. He does not win men in the mass, but attracts them one by one. "Draw me, we will run after Thee!" the King hath brought me into His chambers: we will be glad and rejoice in Thee, we will remember Thy love more than wine: the upright love Thee." Solomon seems to mix up his singular and plural pronouns in this sentence, and yet how exactly they express the truth. Each one can say to Christ—"Draw me." Each can say—"The King hath brought me" into the secret place of His dwelling—for He



When Lubin is Away. (G. G. Kilburne.)

powerful as ever. Every day new disciples are drawn into the mysterious current of love to Him which has carried away with a glorious enthusiasm men, women and children for nearly two thousand years. This is a fact which no sceptic can deny. You may twist and turn a compass how you will, but as soon as it is left to itself the needle turns toward the north. We cannot see any force drawing it always in that one direction, but no one would be foolish

has a special attraction and a special message for each soul, "which no man knoweth saving he that receiveth it." On the other hand, in spite of our many disputes and points of difference, we can join together in saying—"We" will run after Thee, "we" will be glad and rejoice in Thee, "we" will remember Thy love. When I first began to write for the "Advocate," I was warned not to air my pet prejudices any more than I could help, as they might clash

with the prejudices of many of our readers. The truth is that instead of showing a united front against unbelief, we spend a great deal of time and energy in quarreling with other Christians. But surely all true Christians—of every denomination—are one in their love of the Master. "The spell of Christ—hast thou felt its fascination? Little children seek Him, young men and maidens in life's early promise are drawn by Him, men and women in the strength of their maturity, with all their heart and soul and mind and strength, mastered by this fascination are following Him."

"Not the pearly gales attract us,
Not the streets of shining gold;
'Tis the 'Altogether Lovely'
Whom we languish to behold:
Object of supreme affection,
Central source of Heaven's perfection."

I will only mention one example, out of many that might be given, to illustrate the mighty strength of the secret, invisible spell by which the Master draws men after Him. Many hundreds of years ago an order was sent out that every soldier in the Roman army must offer sacrifice to the emperor or die. Of course every Christian considered such sacrifice to be idolatry, and there were many soldiers of Christ in the Roman legions. One centurion found that forty men in his band were ready to die for Christ, but quite determined not to offer sacrifice to any other man. He ordered them out to the center of a frozen lake, with the choice of staying there and freezing to death, or returning to the warmth of the camp-fire and renouncing their Master. Boldly those brave men marched forth to die, clothed only in the robe of righteousness. The centurion watched them as they fell on their knees on the ice, and he wondered to hear their victorious shout: "Forty wrestlers wrestling for Thee, O Christ, claim for Thee the victory, and from Thee the crown."

Hour after hour crept slowly on, and the night grew colder and colder, but still the shout went up: "Forty wrestlers wrestling for Thee, O Christ!" But as the centurion watched, he saw one half-frozen man creep away from the rest and crawl towards the camp. One had given in, but the others did not know that their number was incomplete, and still the song arose to heaven: "Forty wrestlers wrestling for Thee, O Christ!" Then was shown the wonderful power of the attraction by which men are drawn, in spite of themselves, to the feet of Christ. The iron will of the Roman officer was conquered by that silent influence which he was powerless to resist. He threw aside his cloak and joined the band of martyrs, raising his voice with theirs in the triumphant shout: "Forty wrestlers wrestling for Thee, O Christ!" One had deserted from the ranks, but the gap had been quickly filled and the number made up.

Who can read this inspiring record without feeling stirring within him something of the matchless spell which has drawn men in all ages to be ready at any moment to yield their bodies that they might not serve nor worship any god except their own God.

The great army which follows the greatest Leader the world has ever known, is growing larger every day—are you a loyal member of it?

"Our fellow-travellers still
Are gathering on the journey! the bright
electric thrill
Of quick instinctive union, more frequent
and more sweet,
Shall swiftly pass from heart to heart in
true and tender beat.
And closer yet, and closer, the golden
bonds shall be,
Enlinking all who love our Lord in pure
sincerity;
And wider yet, and wider, shall the cir-
cling glory glow,
As more and more are taught of God,
that mighty love to know."

HOPE.

INGLE NOOK CHATS

Dear Friends,—By especial request, the subject of our next competition will be original poetry. You may choose any subject you like, hence the only rules governing the competition will be: (1) Poems must be strictly original. (2) They positively must not exceed 24 lines in length, but may be shorter if you wish. (3) They must contain no "slang" expressions. (4) They must be received at this office not later than June 25th. . . . The competition following this will be a "drawing match," so will our artists kindly be on the lookout for suitable subjects?

We thank J. P. Buchan, Drayton, Ont., and Miss A. M. Russell, Hagersville, Ont., for sending us the poem "Cuddle Doon." As this poem, however, appeared in our issue of Feb. 4th, we shall not reprint it immediately. . . . The following letters have been received from Ingle Nook friends. You will notice that we have this week one from Nova Scotia (or Prince Edward Island, was it?—unfortunately, I have lost the address) and two from Quebec. I am pleased to see that our eastern friends are becoming interested, and hope that we shall hear from more of them.

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

INFORMATION WANTED.

Dame Durden,—Would you kindly give me what information you can through Ingle Nook Chats about learning to cook? I would like to be a cook. Is there not a place where this is made a study? If so, would you tell me what you can, and give me the directions to the place? I live nearer Hamilton than any city, and so would rather it would be there.

Yours truly, H. M. M.

Write to the "School of Domestic Science," Hamilton, for terms and curriculum of studies. You might write also to the MacDonald Institute, Guelph, a school affiliated with the Ontario Agricultural College, which has been instituted especially for farmers' daughters. Cooking, dressmaking, gardening and laundering are all taught there, along with many other subjects, which may be taken by those who desire them.

INFORMATION WANTED.

Dear Dame Durden,—I enjoy very much your weekly chats, also the helpful hints from friends. Could some member please give full directions for making a gentleman's hat-band? I would send some nice recipes, if they would be of any value.

LITTLE GIRL.

We shall be pleased to have the recipes.

A RIPPLE FROM BAY CHALEUR.

Dear Dame Durden,—I now take the pleasure of writing you a letter. It is so long since I wrote to the Nook that I am now almost a stranger, but "better late than never," I suppose. I live on a large farm in the Province of Quebec. It is a very pretty place in summer. We have in front of us the beautiful Bay de Chaleur, where we bathe and enjoy the summer months. About a half mile distant is the Little Cascapedia River, where horses cross both summer and winter. Our house is situated in a very picturesque place overlooking the bay, and is surrounded by huge willow trees, hence its name, "The Willows." We also have a fine large orchard. My eldest sister is in the States training for a nurse, and my other sister graduated at the McGill, in Montreal, for a teacher last year, and I am going to school. My birthday is in June; I am fifteen years of age. How nice it is to see the spring back again. We had a sort of a snowstorm only last night (April 8th);

but to-day it is really lovely. We can't expect the snow to remain much longer; it is generally late here before the snow is entirely all gone; but the summers are very warm. Now I think I must close for this time; next time I will have my letter longer.

BELLE MCKENZIE.

A CHARMING BEDROOM.

Dear Dame Durden,—I have long been interested in your charming circle, and in the many pleasant letters you publish.

I thought I would write and tell you about how I fixed my room last summer. We had moved to a new house, and over the kitchen there was a room with two windows, facing east and south, but it was not papered, and the paint was an ugly brown, partly worn off. I got a paper with a pretty pattern of wild roses for the walls and ceiling, and a half can of green paint for the woodwork, which I made lighter with white lead for the window sash and door panels.

This made a great change in the appearance of the room. We had an old table with a drawer in it and a shelf underneath, which I painted white and use for a writing table. I also made a small bookcase of a soap box; made shelves in it, painted it white, and ran a curtain of pink and white silkoline in front of it. I also got a larger box, which I covered with green and pink cretonne; the lid is hinged, and the top is padded, and with a few cushions makes a very comfortable seat.

I made covers for the dressing-case and wash-stand of white muslin over pink sateen, and hung curtains of white muslin at the windows.

The whole thing did not cost me over two dollars, and I would not change my room for any other.

DAISY.

LOVE TO ALL THE MEMBERS.

Dear Dame Durden,—As I have read the letters of the other members of the Ingle Nook, and as my father takes the "Advocate," I thought I would like to become a member. I am sixteen, and go to school nearly every day. I live in the country, and like it very much. I like the "Advocate" very much, and so do all my sisters and brothers. I have read all the stories and pieces written by the other girls and boys, and thought I would try this time. So, with love to all the other members of the Nook, I remain your loving friend,

SARA SMALLMAN.

A MARITIME PROVINCE CORRESPONDENT.

Dear Dame Durden,—Mother and I take a great interest in the "Ingle Nook Chats," as we have received quite a few helpful hints and recipes. I thought I would send a couple of recipes, which have come down in our family from my grandmother, who, in her day, was a noted bread-maker. We have always used them, and always with complete success. Hoping you may long be spared to the "Ingle Nook." POLLY.

RECIPE FOR BREAD.

First have a good-sized bread-pan, with a tight-fitting cover; into this, sift four quarts of flour, and set to warm. I set my bread about six o'clock in the evening. To make the sponge: Mix well together, in a bowl, four level tablespoonfuls of flour, and four mashed potatoes; pour in enough boiling water (be sure it is boiling) to make a thick batter, and set aside to cool. When it is about lukewarm, stir in one cupful fluid yeast, or one Fleischmann's yeast cake dissolved in warm water, and beat the batter well. Pour this sponge into the warm flour, and add two heaping tablespoonfuls of salt and enough water to make a stiff dough (about three pints, some brands of flour take more water); turn the dough out on the board, and knead until smooth; set to rise in a warm place. In the morning, mould into loaves and put into well-greased pans; set to rise in a warm place, about one hour; place in a hot oven and bake one hour,

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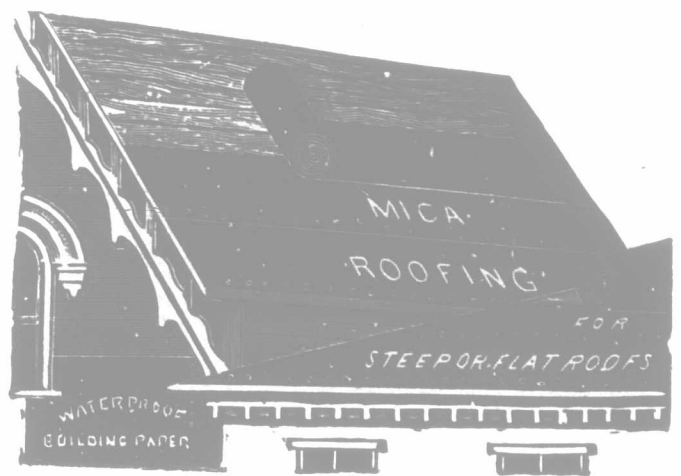
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turning them as they require to bake evenly.

RECIPE FOR POTATO YEAST.

Put one square inch of pressed hops and one gallon of cold water into a kettle and boil till the water is reduced one half. While the hops are boiling, grate four large potatoes. When the hops are boiled sufficiently, strain the water on to the grated raw potatoes; and one cupful each of salt and sugar, set aside to cool. When it is still lukewarm, add one cupful yeast; bottle in quart bottles; filling them almost half full; cork; set in a warm place to rise. Watch them well, as this yeast, if properly made, should be very lively, and is apt to shoot the cork.

A Rich Man.

One of Thoreau's quaint sayings was, "A man is rich in proportion to the number of things he can afford to let alone." On this basis there surely never were such opportunities for wealth as at the present time, when we are surrounded by beautiful, attractive and tempting objects which are freely bought and used by our neighbors and acquaintances. To be able to resist temptations to buy things which we are just as well off without, and to indulge in amusements and recreations which are not for our physical or moral well-being; to be able to limit ourselves in regard to creditable indulgences—these are evidences of a strong character. One of the first and most important lessons which the mother of to-day must teach her child is to let things alone. When the baby has learned to admire the pretty flowers without picking them, to see candy, fruit or other things which he knows "taste good" without putting them in his mouth; when the child has learned not to do things simply because "the other boys and girls" do them—then he can be trusted to go out into the world alone, for he can resist temptation. When such a boy grows to manhood his wants will be so few, his desires will be so well under control, that he will be indeed what Thoreau would call "a very rich man."—[The Congregationalist.

Humorous.

QUITE THE CONTRARY.

Old Mrs. B—, a lady notorious for her saving habits, one morning entered the doctor's surgery, leading by the hand a stoutly-built boy of nine years of age and of exceedingly healthy appearance.

"Well, Mrs. B—," said the doctor, "who's our patient? I don't seem to recognize his face. Not a village boy, is he?"

"No, doctor; my nevw from town," Mrs. B— replied.

"Not much wrong with him, I should say," laughed the doctor, pinching the red cheeks of the boy.

"It's about 'is appetite, doctor," said the boy's aunt, in a low voice.

"What!" exclaimed the doctor, staring at the well-fed young patient.

"Surely he doesn't need an appetizer?"

"Good gracious, no, doctor," replied Mrs. B—, in horrified accents.

"I want you to give me summat to make his appetite less. 'E'll eat me out of 'ouse an' 'ome afore 'is month's 'oliday if up 'is appetite ain't cut down!"

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."

A Hospital Episode.

It was during the latter half of my second year in a training-school for nurses near Boston. Hours on duty were from seven a. m. to eight p. m., and as it was now seven p. m. I hurried my remaining duties that an engagement to attend the theatre that evening might not be delayed longer than necessary.

How my heart had swelled with pride on realizing that I was head nurse in a male surgical ward. My dainty white cap and apron received special attention, and no opportunity was lost to impress upon my "junior" and "probationer" that the example of their "superior" might well be emulated.

At seven-fifteen I was in the midst of an evening "sponge" when Miss C—, the aforementioned probationer, appeared behind the screen with:

"A new patient, Miss A—. What shall I do with him?" at the same time handing me a permit.

"Always the way when I have a little outing in view," I thought with chagrin. "That means that I won't get off duty until half-past eight, and the first act missed." But professional dignity must be maintained, and turning to Miss C— I said,—

"Does he look very sick?" "I should think that there is nothing in the world the matter with him," was her reply.

"I'll look at him," I said, with a hasty glance at the "permit," at the same time following Miss C— to the ward sitting-room.

A distinguished-looking man of about fifty years arose at our entrance, but before he could utter a word I motioned him to be seated and placed my finger over his pulse, at the same time eying him critically.

"I presented a permit, nurse," he said, with a puzzled look.

"And I received it," was my reply. I did not tell him that all I saw on it was the superintendent's name at the bottom.

Now, an inflexible rule in all training-schools is that each patient on his admission must take a bath—a tub—unless otherwise ordered.

This gentleman's appearance was immaculate, neither did he have any extra apparel, and I wondered at his having been admitted as a ward patient. But time was passing, and I told Miss C— to proceed as usual, at the same time assigning him a number in a low tone to Miss C—.

Rushing back to complete my task, I had barely reached the patient's bedside when Miss C— again appeared with an expression which beggars description.

"Well," I said impatiently, "what now?" She pushed the permit under my nose and I read,—

"Admit bearer to see number 7 after visiting hours."

"Great heaven! where is he?" I exclaimed, growing hot and cold by turns.

"Sitting on the edge of the bathtub."

In desperation we rushed to the bathroom: there, sure enough, with an angry glitter in his eyes and fiercely twirling his shining beaver, sat our man on the rim of the bathtub. He greeted us with:

"This is my first experience in a hospital, and, God helping, it will be my last! You hospital people are a lot of cranks! Make a man take a bath before he is allowed to see his protege! Now, see here, my time is limited and I flatly refuse to comply with this rule."

Explanations followed. Mr. B— was a wealthy manufacturer of Boston who had run out to see one of his injured employees. He has a true Yankee appreciation of the ridiculous and readily agreed to keep the affair a secret; but that stupid probationer did not, and though undoubtedly my consequent discipline was beneficial, it required great courage to meet the laughing reminder:

"If a refractory patient refuses to take a bath, interview Miss A—. She'll settle him!"—[Elizabeth H. Gray, in Lippincott's.

Mr. Summerboard—"What are you up to now?" Mr. Hay-Seed—"Jist a-settin' this hen." "While you are about it couldn't you set that rooster, too?" "Set th' rooster?" "If that ain't a good one! W'y—" "As I was saying, could you not set him for about six in the morning? I am tired of being waked at daybreak."

THROUGH THE POST OFFICE

No matter where you live, our Savings Department is made accessible to you without the slightest inconvenience. Avail yourself of the security our great strength affords. Send your address for our Booklet, SAVING MONEY BY MAIL.

CANADA PERMANENT MORTGAGE CORPORATION

TORONTO STREET, TORONTO.

MELOTTE CREAM SEPARATORS

have the separating bowl suspended from a hardened steel spindle, which revolves in a socket fitted with ball bearings. It hangs quite freely, and thus is not only practically frictionless, but cannot possibly get out of balance. The gear wheels turn on ball bearings, which are always completely covered with oil. For close skimming the Melotte is unexcelled.



WRITE FOR BOOKLET No. 7 F.

R. ALISTER & CO. LTD. 679 & 561 ST. PAUL STREET MONTREAL.

\$2.25 FOR THIS Beautiful \$4 JAPAN TAFFETA SILK WAIST.

direct from our Waist Factory. Any color or size, made with large or small tucks, as preferred, tucked back nice full sleeves, fancy strapped box pleat, button trimmed; same waist in luster \$1.50, velveteen \$1.95. The above waists lined or not as desired. Linen waists, same style, all colors, \$1.25. Lawn waists, same style, all colors, \$1.00. Chambray waists, same style, all colors, \$1.25. We have the same waists as shown in Linen, Lawn and Chambray, trimmed with insertion. State which preferred. Give Bust measure and sleeve length under seam, add 15 cents for postage. Money refunded if any waist not satisfactory. Mention this paper, and its date.



Southcott Suit Co., London, Can.

ADVERTISE IN THE ADVOCATE.

Real estate advertisement for Mountain Valley Lands. Last \$8.10 PER ACRE. Prices will be raised on June 1st. WM. PEARSON & CO., 383 Main Street, Winnipeg. Write for descriptive pamphlet.

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.

Five Tamworth Boars

READY FOR SERVICE. These boars are well bred and of grand quality. One yearling and 4 under year; sired by Imp. British King. Write at once for price.

A. O. Hallman BRESLAU, WATERLOO CO., ONT.



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 complete-sprayer made. Splendid seller. Liberal terms. Cavers Bros., Galt, Ont.

AN UNRESERVED AUCTION SALE OF Registered Shorthorns

and High-grade Cattle, will be held at MR. JOHN KELLY'S, within 2 1/2 miles of Shakespeare, on Wednesday, June 1, '04, as follows:

12 registered females, 1 registered bull calf, 4 grade cows. Sale to commence at 1.30 p. m. TERMS OF SALE.—8 months' credit upon approved security; 5% per annum off for cash. Positively no reserve. Conveyance will meet 9 o'clock train from the west; also noon train from the east, at Shakespeare on day of sale. JOHN KELLY, Shakespeare, } Proprietors. THOS. TROW, Auctioneer, Stratford, Ont. JAS. K. CAMPBELL, Palmerston, }



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 SDRAMOTOR, 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.

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

With the Flowers

Mrs. A. T. Powell writes:
"Would you kindly let me know through your valuable paper how to care for geraniums to have them flower? The buds will come on them, but they will shrivel away instead of coming out. Is liquid ammonia good for plants; if so, how many drops are required to a gallon of water?"

Geraniums are very easy of culture. Give them good drainage, good ordinary soil, and plenty of light; water when the soil becomes dry, and wash the leaves frequently, and your geraniums are likely to do well. If, however, you wish them to bloom at their best in the winter season, you must not let them flower during the preceding summer. Take off the buds according as they form, and nip the ends off the branches, so as to induce a compact growth; then, in the fall, repot into pots which are not too large. It is better to put plants in rather small pots, and shift according as the roots fill them, than to place them in large pots immediately. Diluted liquid manure will be better for your plants than simple ammonia and water. If, however, you object to this, you might try the following, which is recommended by Ida Bennet, a practical florist and writer on floral subjects. Get at the drug store 1 1/2 ozs. nitrate of soda, 1 oz. phosphate of soda, 1 oz. sulphate of potash. Mix and pulverize well. Put a rounding tablespoonful of the mixture in a gallon of hot water and let cool. When you wish to use this fertilizer, put a teaspoonful of the liquid on a six-inch pot; more, in proportion, on larger pots. Do not use oftener than once in two weeks, and do not let the liquid get on the leaves. The fertilizer need not be applied regularly until the plants begin to bloom.

A "PANSY LETTER."

Dear Friends,—I will tell the success we had last summer with pansies. They were called "Mill's Giant Pansies." First we sowed them in the hotbed. After they came up they were very thick, so we transplanted them into boxes. Then we prepared our flower-bed, which was about twenty-five feet by four feet. We manured it well with cow manure, no straw mixed with it; then we put nice black soil on top, and when the plants were about three inches high we planted them in the bed, about six inches apart each way. They grew nicely, and when they began to bloom they kept on blooming till the frost killed them in the fall. They were greatly admired by all who saw them. We had poultry netting, two feet high, around the beds to keep the chickens out. Last fall we put pine boughs over the pansies, and we picked some blossoms the first of April this year. Could you please give any information about these climbers, cypress vine and Cobæa scandens—how to prepare the soil, and how they should be taken care of?
LILLY M. HUETHER.

The seeds of both Cypress vine and Cobæa scandens (Cup- and-saucer vine) should be planted in a hotbed, or in the house, early in spring. When the weather is warm, and all danger of frost past, they should be planted out in rich, mellow soil. The Cobæa scandens does best in a northern or eastern exposure, and requires less water than other vines. The Cypress vine is one of the Ipomœas, which are tender annuals; the Cobæa is a half-hardy annual, hence neither will stand much frost. The Cobæa grows very rapidly, and is much used in some places for covering trellises, fences, etc. Its flowers are at first green, but later they assume a lilac tint. The foliage of the Cypress vine is very pretty, and its flowers are scarlet and white.

FLORA FERNLEAF.
"Farmer's Advocate" office, London, Ont.

Eggs.

By Kathleen Merivale Darrel.

[Note.—Many of our readers were delighted with the article on "Fish and How to Prepare Them," by the same writer, and we are sure this will also prove very helpful and seasonable, now that eggs are becoming more plentiful.]

As a rule, eggs are not given the prominent place upon the farmer's table which they deserve. They are a perfect food, and are highly nutritious, comparing very favorably with meat in this respect, and are really preferable as a hot-weather food, as they are much less heating. A few recipes for preparing several unusual and delicious dishes are given below:

Baked Eggs.—Fry four or five thinly-sliced onions in a tablespoon of butter till they are lightly browned. Stir in one tablespoon of vinegar, and sprinkle the onion in the bottom of a buttered graniteware pan; carefully break in six eggs, and bake till the eggs are set. Mix one tablespoon of dried parsley with one cup of bread crumbs; fry to a golden brown, and sprinkle over the eggs before serving. Another good method of preparing eggs is useful in utilizing leftovers of rice or tomatoes. Press one cup of tomatoes through a colander, and mix into it one cup of boiled rice. Season with pepper, salt and three tablespoons of grated cheese. Simmer gently for eight minutes. Bake six eggs, and serve on a platter, with little mounds of rice dotted between them.

Creamed Eggs.—Boil eight eggs for twenty minutes; dip in cold water; roll, and shell. Divide them in half (crosswise), cutting a thin slice from the round ends to enable them to stand upright. Blend two tablespoons of butter with two of flower in a saucepan; pour in two cups of hot milk, and stir till it bubbles. Add four tablespoons of grated cheese, and season with celery, salt and pepper. Chop the thin slices of egg, and add them to the sauce. Arrange the eggs on a platter, and pour the sauce over them.

Poached Eggs.—Chop one small onion, and cook it in a pint of sweet milk; add butter, the size of an egg, pepper and celery salt. Turn into a frying-pan, and break in as many eggs as are required. Have ready a heated platter, covered with rounds of buttered toast, and when the eggs are set, place them upon the toast. Thicken the milk with two tablespoons of flour, mixed with three of cream, and turn over the eggs. Eggs poached in meat stock, seasoned with curry powder, are also delicious.

Eggs in a Nest.—Separate the yolks and whites of six eggs, being careful to keep the yolks whole. Beat the whites to a stiff froth, and nearly fill six buttered earthenware cups with them. Drop a whole yolk in the centre of each cup, sprinkle with salt and pepper; add a dash of lemon juice, and steam for thirty minutes. Serve in the cups placed upon small fruit-plates. This is a most delectable dainty for Sunday tea, and will tempt an invalid's capricious appetite when most foods fail.

Omelette.—Beat six eggs till light; add two cups each of milk and bread crumbs, and season to taste. Melt two tablespoons of butter in a frying-pan; turn in the eggs, and cook till nicely browned beneath. Fold one half over the other; slip on a platter, and serve hot. Endless variety may be secured by mincing cold ham and spreading it over the omelette before folding; dried cheese (grated), chopped cress, onions, radishes, or fresh parsley. Remnants of peas, string beans, tomatoes, corn, asparagus, parsnips or mushrooms may be re-heated in a cream sauce and spread on the omelette. For a dessert, omit the seasoning, sweeten, and spread with any variety of jam, or mashed and sweetened stewed fruit. I have found this recipe an excellent one for scrambled eggs; stirring the mixture with a fork till it is sufficiently cooked.

Tobacco and Liquor Habits.

Dr. McTaggart's tobacco remedy removes all desire for the weed in a few days. A vegetable medicine, and only requires touching the tongue with it occasionally. Price \$2.

Truly marvellous are the results from taking his remedy for the liquor habit. Is a safe and inexpensive home treatment; no hypodermic injections, no publicity, no loss of time from business, and a certainty of cure. Address or consult Dr. McTaggart, 75 Yonge street, Toronto.

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.

BUFF Cochins, Golden, Silver, White, Buff Wyandottes, Dorkings, Houdans, White, Brown Leghorns, Spanish, Silver Hamburgs, Rouen ducks; Eggs, settings \$1. R. J. Laurie, Wolverton, Ont.

FOR sale: My Stay White Wyandottes, 15 for \$1, 100 for \$4. Cook's Buff Orpingtons, 15 for \$1. W. C. Dempsey, Rednerville, Ont.

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

BUFF Orpington eggs from imported Ontario and Industrial winners, \$2 per 13. Write for free catalogue describing them. J. W. Clark, Cainsville, Ont.

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

EGGS for hatching from White and Golden Wyandottes, Black Langhans, S. C. White Leghorns, White-faced Black Spanish, Silver-spangled Hamburgs and Pekin ducks. \$2 per setting. Bees and honey for sale. Geo. A. Gummer, Colborne, Ont.

THE Poultry Advocate is the best exclusive poultry monthly published in Canada, telling how to make most money out of chickens, turkeys, ducks and geese. Special attention to practical poultry-raising on the farm; 40 cents per year; sample free. Address Poultry Advocate, London, Canada.

BARRED ROCKS Eggs for hatching from a pen headed by a cock bred by E. B. Thompson, N. Y., \$1.00 per setting; also from a pen of Thompson's pullets, \$1.50 per 15. Write to C. & J. CARRUTHERS, Cobourg, Ont.

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

White Wyandottes and **Buff Orpingtons** Eggs \$1.50 per 15, cash with order. C. W. BRAVEN, "Pinegrove," Prescott, Ont.

Eggs for Hatching from a pen of 42 hens, B. P. Rocks, "National strain"; large, healthy birds, choice markings, persistent layers of large eggs, having run of orchard. Price \$1 per setting, or \$2 for 3 settings. Safely packed to W. C. SHEARER, Bright, Ont.

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.

If you do not use an incubator you are neglecting one of the greatest profit-producing departments of your farm. There is always a big demand for chickens. The greatest success in poultry raising has been achieved with the

CHATHAM INCUBATOR

It has a record of hatching out every fertile egg put in it. It is the perfect incubator and requires the least watching.

We sell the Chatham Incubator on very easy terms. We'll ship one anywhere in Canada—freight prepaid—and let you have three years to pay for it. It will make many times its cost in that time.

Write for full particulars and catalogue to
M. CAMPBELL FANNING MILL CO.
Dept. 251 Chatham, Canada.



ARE YOU SATISFIED with your present employment? If not, become an expert **TELEGRAPHER** by taking a day or evening course at our school. Our telegraphy book, mailed free, tells how.

The DOMINION SCHOOL OF TELEGRAPHY, 36 King St. East, Toronto.

GOSSIP.

Mr. D. Milne, Ethel, Ont., writes: "We have a few young Shorthorn bulls for sale, the get of Red Duke (imp.), and from show cows of straight Scotch breeding, that we are pricing at \$80 to \$125 for quick sale, that will compare favorably with bulls that are being sold at \$150 to \$300."

At the combination sale of Aberdeen-Angus cattle at Des Moines, Iowa, April 26th, under the management of Chas. Escher, Jr., 65 head sold for an average of \$104. The bulls out-averaged the females, 24 selling for an average of \$114.30. Black Monarch of Homedale, one year old in March last, contributed by Silas Igo, brought \$305, the highest price of the sale.

The entire string of Thoroughbred horses—some 18 or 20 in all—the property of the late Joseph Duggan, owner of the Woodbine Race Track, Toronto, who died recently, are to be disposed of by private sale. Mrs. Dixon, daughter of the deceased, and the inheritor of his estate, does not intend to maintain a racing stable.

The annual meeting of the Holstein-Friesian Association of America will be held at Syracuse, N. Y., June 1st. Propositions will be offered relating to increasing the fees for registry of imported cattle; to increase the penalty fee for registering animals over one year old; to discontinue the use of all equivalents of estimated butter-fat, and establish a butter-fat basis for all official records, and to express fractions of a pound in official tests in decimals of a pound instead of in ounces.

The joint sale of Shorthorns belonging to Messrs. John Kelly and J. K. Campbell, to be held near Shakespeare, Ont., on June 1st, is another opportunity that "Advocate" readers and lovers of good cattle have of building up and improving their herds. While the number being offered is not large, they are the choice of both the above mentioned herds. The sires that have been used in the building of these herds have not only been of special individual merit, but were richly bred, mostly Watt-bred bulls, notably among which were: Wallace Chief =21049=; Donald D. =22605=; Clan Campbell =33094=, and Captain Watt =26141=, by that noted sire, Royal Sailor (imp.). Among the females that are to be sold, we noticed the fine, strong, smooth, young cows, Jean of Broomie Knowe and Mary, both by Captain Watt, cows that are not only richly bred, but are good individuals and good milkers. Among the heifers are some choice ones, notably Maggie Durno, by Lord Durno (imp.), and Millie, of Golden Consul breeding; also May Violet 4th and May Violet 5th, by Clan Campbell, a Royal Sailor. Most of the young stock is got by Lord Durno (imp.) =40394=, a bull whose stock is very good. Jim Durno, the bull calf that is to be sold, is by this sire, and it has not been our pleasure to inspect a better one. He is a wonderful calf for his age. The females that are of breeding age are bred to Nonpareil Fame (imp.), bred by Alex. Campbell, Deystone, Aberdeenshire. This bull is richly bred, being of the Cruickshank Nonpareil family, and is a choice individual. The stock being offered has not been at all pampered, but has been kept in useful breeding condition. They are a thrifty, strong-constituted lot. Parties wanting to get a few will consult their own interests by attending this sale. See the advertisement in this issue.

SMOOTH SAUCES.

If a brisk beating with an egg-beater is given as the sauce begins to boil, the unsightly lumps will usually disappear. Similarly, a boiled salad dressing, a plain cornstarch pudding, a boiled custard, any of which have curdled in inexperienced hands, may have their texture restored by a rapid use of the egg-beater after they are removed from the fire.

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

GOSSIP.

Buy a better bull, and improve the beef or milk productive capacity of your herd. You will not get a better chance than right now.

Mr. A. C. Hallman, Breslau, Ont., writes that altogether some 30 head of Holsteins have left his herd since last fall. He has yet a nice herd of 20 head, some of the choicest still remaining, including the Toronto sweepstakes bull, Judge Akkrum De Kol 3rd, and some of his best heifers. He has also a nice lot of Tamworths; and the boars he is offering are of choice breeding and good individuals.

THE HAMILTON SHORTHORN SALE.

The catalogue is to hand of the joint sale of 62 selected Shorthorns from six standard Canadian herds, to be sold at Hamilton, Ontario, on June 28th. A glance through its pages reveals that the cattle are richly bred on up-to-date and approved lines, and if they are as good as their pedigrees, which we are assured they are, the public may look for one of the most useful lots offered at public sale in Canada in many years. The list includes 13 imported Scotch-bred females, 2 imported bulls, one bred from imported sire and dam, and one by an imported sire and having four top crosses by Scotch-bred bulls. Among these is the roan, Imp. Scotland's Fame =45225=, contributed by D. Milne & Son, calved April, 1902; sired by the Duthie-bred Golden Fame (76786), and of the Kinellar Claret tribe. This young bull has been tested as a breeder, and his calves are very promising. Another, consigned by W. C. Edwards & Co., is Fair Shot (imp. in dam), red, coming a year old in July, sired by Chance Shot, of the Cruickshank J tribe, a son of Master Archer, by Scottish Archer. This is said to be a very promising youngster, and he will soon be available for service. Mr. Rankin contributes British Prince, a dark roan, calved last October, sired by Rosicrucian of Dalmeny, bred by Lord Rosebery, a son of the Cruickshank "Village" bull, Villager, dam Imp. Sunflower 9th, bred by Mr. Reid, of Cromley Bank. Mr. Usher consigns Queenston Chief, a roan, calved Sept. 27th, 1903; sired by Imp. Derby, a Cruickshank Secret bull, bred by Mr. Jamieson, of Ellon, Aberdeenshire, and sired by Jemidar, of the excellent Inverquhomery Rosewood family. Derby is very highly spoken of as a bull of fine character and quality, and is proving an exceptionally good breeder.

Among the females offered are representatives of most of the popular Scotch families, including half a dozen of the Uppermill Roan Lady tribe, five Missies, four Minas, five Jilts, two Clarets, two Urys, two Lady Fannys, and one of each of the following: Nonpareil, Brawwith Bud, Miss Ramsden, Lovely, Cecelia, Rosebud and Rose of Autumn, besides quite a number bred from imported sire and dam, and a number of members of other good families of deep-milking strains, topped by first-class Scotch-bred sires. Many of the cows, all of which are young, have calves at foot, by imported bulls, and are in calf to such good sires as Imp. Marquis of Zenda, Imp. Village Champion, Imp. Derby, Imp. Red Duke, Imp. Aberdeen Hero, Imp. Pride of Scotland, and other high-class Scotch-bred bulls. This offering will certainly afford an excellent opportunity to secure the right sort of cattle to found a herd or to improve existing herds. The date of the sale is surely favorable to buyers, and the character of the breeders is such that buyers may confidently expect fair and honorable treatment. Those interested should make early application for the catalogue to Mr. Hudson Usher, Queenston, Ont., who will gladly furnish any information required that is not given in the announcement of the sale.

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

SAVE YOUR HAY & SAVE EXTRA LABOR

SPECIAL LABOR SAVING TOOLS

MAXWELL TEDDER SIDE DELIVERY RAKE & LOADER

MAXWELL

ST. MARY'S, ONT. CANADA

IS THERE AN AGENT IN YOUR DISTRICT IF NOT ADDRESS THE FIRM DIRECTLY

DAVID MAXWELL & SONS, ST. MARY'S, ONTARIO CANADA

PORTLAND CEMENT CONCRETE SILO

Built for HENRY BROUGHTON, Sarnia Township, Lambton County, Ontario, 14 feet in diameter and 30 feet high, with

"Rathbun's Star" BRAND

MANUFACTURED BY

THE CANADIAN PORTLAND CEMENT CO., LIMITED

SOLE SALES AGENTS: **The Rathbun Company**

310 and 312 Front St. West, TORONTO, ONT.

GOSSIP.

CORSETS THAT FIT.—We wish to call the attention of our readers of the Home Department to the advertisement of the Robinson Corset Co., which appears in this issue. Your new spring dress cannot look well if worn over badly-fitting corsets. The Robinson corsets fit because they are fitted to the peculiarities of your figure. Kindly see what the company has to say in regard to the matter.

A PROFITABLE HOLIDAY.—Attention is directed to the advertisement in another column of Cecil French, Naturalist, Washington, D. C., who is anxious to secure any species of live wild bird or animal. Any person living in the game-producing districts of Canada might easily combine pleasure with profit when having a few days' hunt. Anything from a white mouse to a white elephant is wanted.

FRUIT GROWERS.—There is advertised in another column of this paper a complete list of orchard and garden hardware supplies, including the Wallace power sprayer, operated by horse-power from the wheel of the truck. This sprayer is particularly useful for large orchards, or for spraying mustard. All the goods kept by the F. Hamilton Co. are catalogued in an illustrated circular, which will be sent to parties desiring it. Address, F. Hamilton Co., Hamilton, Ont.

TRADE TOPICS.

Ex-Mayor George Roach, of Hamilton, Ont., died May 13th. He was many years ago an importer and a breeder and successful exhibitor of Berkshire swine at provincial fairs.

Mr. Wm. Aldcorn, of Dundalk, Ont., has purchased from Trumans' Pioneer Stud Farm, Bushnell, Ill., the fine, massive Shire stallion, Ivory (19720). This is a big, stylish draft horse, stands over 17 hands high, and weighs over the ton mark, is five years old, a winner at the great London (England) Shire Horse Show, and it is safe to say that there are few as good draft stallions in the Dominion to-day, and the farmers in the Dundalk district are lucky to get the services of such a horse.

Last week Trumans' Pioneer Stud Farm sold to Messrs. Neil McCallum and John Johnston, of Gladstone, Ont., the handsome four-year-old black Percheron stallion, Magar, one of the most stylish and finished horses of the breed, possessing the very best of action, and is the very kind that will get good, active high-class farm, van or dray horses. Farmers in that part of the country will do well to avail themselves of the services of this fine stallion, and these enterprising gentlemen are to be congratulated on having secured so good a horse, as they gave a special order for this horse, and had him shipped from Trumans' Pioneer Stud Farm, Bushnell, Ill., direct to their London branch, and as both Mr. McCallum and Mr. Johnston are readers of the "Farmer's Advocate" and good horse judges, it is needless to add that only something first-class would suit them.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS.

From April 30th to May 9th, 1904.

During this period 13 thirty-day records, 66 seven-day records, 2 for fourteen-days each, 1 for forty-four days, 1 for thirty-six days, and 1 for twenty-eight days, have been approved.

Of the seven-day records, 26 full-age cows averaged, age, 7 years 2 months 12 days; days from calving, 21: Milk, 457.3 lbs.; butter-fat, 16.050 lbs.; equivalent butter, 18 lbs. 11.6 ozs. Eight four-year-olds averaged, age 4 years 4 months 0 days; days from calving 14: Milk, 400.1 lbs.; butter-fat, 13.749 lbs.; equivalent butter, 16 lbs. 0.7 ozs. Thirteen three-year-olds averaged, age 3 years 5 months 25 days; days from calving 17: Milk, 365.5 lbs.; butter-fat, 12.462 lbs.; equivalent butter, 14 lbs. 8.6 ozs. Nineteen classed as two-year-olds averaged, age 2 years 4 months 3 days; days from calving 24: Milk, 294.8 lbs.; butter-fat, 10.267 lbs.; equivalent butter, 11 lbs. 15.7 ozs.

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

IRVIN LEAVES 6.58

The Railroads run on ELGIN TIME

The Elgin Watch is the watch for those who use railroads as well as for those who run them.

Every Elgin Watch is fully guaranteed. All jewelers have Elgin Watches. "Timemakers and Timekeepers," an illustrated history of the watch, sent free upon request to
ELGIN NATIONAL WATCH CO., ELGIN, ILL.

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.

Miscellaneous.

VALUE OF WALNUT LUMBER.

Will you please let me know, through your paper, the value of walnut lumber per thousand, sawn in boards and plank with the bark still on, been kept covered for eight or nine years? E. A.
 Ans.—From seventy-five to one hundred dollars, depending upon the quality.

A DIVISION FENCE.

A has been living on the farm for one year. A's cows and horses were getting into B's pasture all last summer. B built the one-half of the fence four years ago; but has no ward to show which is his half.
 1. Is it necessary to have one?
 2. Can B charge him for damages for last year?
 3. B has given A notice to build his half of the fence. If he does not build it, what is best to do about it?

ONT.

Ans.—1. It is unusual, but certainly advisable, and in some cases absolutely necessary.
 2. Yes.
 3. Advantage should be taken of the provisions of the Line Fences Act, and the fenceviewers called in.

BREEDING OF STALLION.

I recently purchased the two-year-old Clyde stallion, Macqueen Yet [4158], sire Macqueen (imp.) [462], dam Jennie of Springbank Farm [801]. I would like to learn something of his breeding; also is it advisable to use him this season, and to what extent? He is very fat. Will he grow and develop better that way than if he was only in moderate condition? G. L. P.
 Ans.—Imp. Macqueen [462] won first prize at the World's Fair, Chicago, as best Clydesdale stallion five years old and over; also first prize at same show for best Clydesdale stallion and five of his get of either sex. He was also the sire of Young Macqueen [2290], winner of first prize and sweepstakes at the Toronto Industrial Exhibition, in 1902. Jennie of Springbank Farm [801] was sired by Imp. Cheviot [981] (2672), by the noted breeding and show horse, Darnley (222). The dam of Jennie of Springbank Farm was by Imp. Prince of Wales 2nd [229] (1456), who was a son of the famous breeding and prizewinning horse, Prince of Wales (673). We would not advise breeding him to more than 25 or 30 mares this season, and not to more than three in a week. He will be better for the run of a yard connected with a box stall, so that he may get plenty of exercise, and with that privilege may be fed liberally of oats and bran with a moderate amount of good clean hay and green grass in season.

Every Farmer Should Have a

2,000-lb.

KING EDWARD SCALE

Manufactured by



Get our special prices this month

C. Wilson & Son, Ltd., Toronto, Canada.

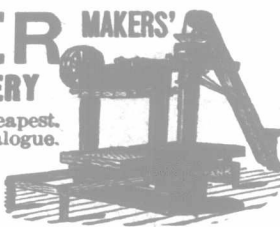
WOOL

E. T. CARTER & CO.,

TORONTO, ONT.

CIDER MAKERS' MACHINERY

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

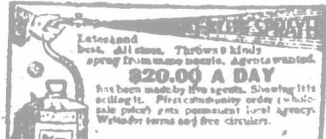
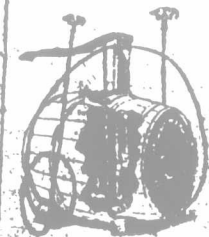
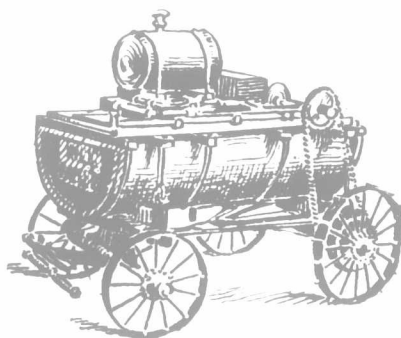


Bruce's Giant Yellow Intermediate Mangel.

This grand Mangel, which we introduced in 1891, is without doubt the favorite with all cattle men at the present day, and there has been such an increase in the demand each successive year, that we have usually sold out entirely before the close of the season, though we estimated that we had ordered enough to provide for the increase each year. The large size of the roots, their uniformity, handsome shape; bright, smooth, yellow skin, flesh of the most solid texture, nutritious and splendid keeping qualities, make it the most valuable introduction of recent years. While in point of size they will not equal the best of the long varieties, yet in the yield per acre they have frequently produced as much, and in richness they far exceed the best long varieties, added to which they are much more easily harvested, about half of their length being above the ground. We have kept our stock fully up to the original high standard, and it will pay every grower to procure our grand strain of this unequalled variety. 1-4 lb. 10c.; 1-2 lb. 15c.; 1 lb. 25c.; 4 lbs. for 80c. postpaid. Write for our beautifully illustrated up-to-date catalogue (88 pages) of "Everything Valuable in Seeds." Free to all applicants.
 Established **JOHN A. BRUCE & CO. HAMILTON, 1850.**

Headquarters' Fruit-Growers' Supplies

Wallace Power Spray
 Has no equal. Strong and durable. Great labor and money saver. Get our price.
Hand Sprayer
 We carry a full line of
Barrel Pumps
 Aymer & Hardie are, without doubt, the best Hand Pump manufacturers.
Price \$5 Each
 Hand Pruners, Step Ladders, Extension Ladders, Grapp Trivine, Vitriol, Paris Green, Sal Soda, Sulphur, etc. Write for Prices and Illustrated Circulars.
F HAMILTON CO., Limited, Hamilton, Ontario



Miscellaneous.

GETTING WIVES AND HUSBANDS
 Please give me the name and address of one or more papers in which men and women advertise for wives and husbands. If possible, give me your opinion of such advertisements. READER.

Ans.—We have not at hand the names of any papers which make a specialty of personal advertisements, such as you refer to. We have no faith in that plan of getting wives or husbands. It is the favorite device of adventurers, and usually results in heart burning and loss. Our advice is to stick to the good old way of making selection from among the best people you know.

CATTLE CHEWING WOOD.

Can you tell me the reason why young cattle should, when let out of their stables, eat pieces of lumber off the barns, etc.? Is it a disease, and is there any cure for it? F. K.

Ans.—Cattle sometimes develop a depraved appetite while in winter quarters, due to a craving for some of the constituents of the soil, which usually passes away when they are turned on grass. There is a danger, however, of the craving giving rise to a habit, if long continued. Let them have free access to salt in which lime is mixed in the proportions of one of lime to ten of salt.

Veterinary.

PANTING COLT.

Two-year-old colt, when at work, breathes quite fast, about three times as fast as his mate. He does not heave or cough; eats well, and is in good condition. J. H.

Ans.—It is not uncommon for horses, and especially colts not accustomed to work, when put to work in warm weather, to pant, somewhat like a dog, except that they do not breathe through the mouth, nor often loll the tongue. It is due to insufficient vigor of the respiratory and muscular system. Some horses are more susceptible to the heat of the sun than others. It is not due to disease, and requires no medicinal treatment; but care must be taken, or heat prostration will result. By care, I mean, he must not be worked hard when affected in this way. A two-year-old is not able to do much work in such weather as we had the first week of this month. He must be allowed to rest frequently, and if a few mouthfuls of cold water be given frequently, it will be found of great benefit. If care be taken, he will gradually get over this weakness. V.

LITTLE'S SHEEP DIP and CATTLE WASH

Non-poisonous

The Original Fluid Dip, used all over the world.

A guaranteed cure for mange on cattle and animals and scab on sheep.

Superior to Creolin, being stronger, more efficacious, and 75% cheaper.

A most powerful Disinfectant and Germicide—it not only prevents contagion from one animal to another but absolutely destroys all germs of disease.

BEWARE OF IMITATIONS.

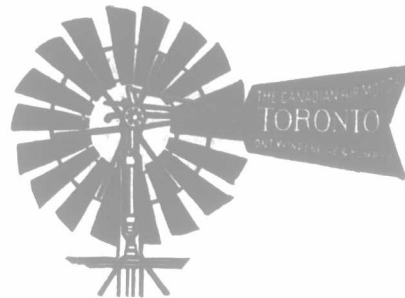
Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen and others requiring large quantities.

SOLD BY ALL DRUGGISTS.

SEND FOR PAMPHLET.

Robt. Wightman, Druggist, Owen Sound
 Sole Agent for the Dominion. om

WIND MILLS



A CANADIAN AIRMOTOR
 in one single year
 Will save you Time, Labor and Money.
 It has a constitution that will

STAND { Storms, Hard Work and all Opposition.
 Investigate for yourself.

Ontario Wind Engine & Pump Co., Limited, TORONTO, ONTARIO.

ADV'TISE IN THE ADVOCATE.

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

IMPORTANT AUCTION SALE

Of 80 Head of Imported Large English

YORKSHIRES

To take place at the Stock-yards Sale Pavilion, Hamilton, Ontario, on

WEDNESDAY, JUNE 15TH.

This lot of Improved Yorkshire boars and sows have been selected with great care from the leading herds of England and Scotland. Many of the sows are in pig to the best boars in those herds, and all are of the best bacon type.

Parties desiring to secure show stock for St. Louis or Canadian fairs will find in this offering what they require.

We promise to show those attending the sale the best lot ever put together in America.

Sale to commence at one o'clock sharp. Catalogues mailed on application to

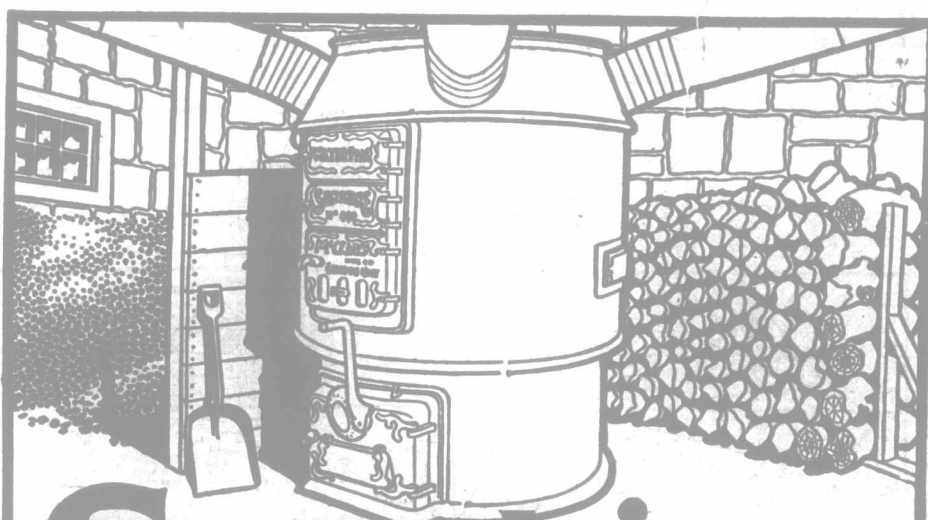
**Auctioneers: THOS. INGRAM, GUELPH.
S. FRANK SMITH, CLAPPISON'S.**

D. C. FLATT & SON, Millgrove, Ont.



GOSSIP.

In the combination sale of Shorthorns to be held at Hamilton, Ont., June 28th, the public will be much interested as to the nature of the contributions. Regarding the offering from the justly celebrated Pine Grove herd of Messrs. W. C. Edwards & Co., of Rockland, Ont., which won first for both aged and young herds at the Dominion Exhibition, 1903, they write: "The cattle we are putting in the June sale are a very even lot, and are all in just good breeding condition. The cows are a useful lot, and have all been good breeders. Ferndale Lady is a very thick, smooth cow, has a nice head, neck, shoulders and back, is a good milk-er, and has a nice red bull calf at foot. Susanna (imp.) is a smooth, useful cow, plenty big enough, and looks like a matron. Her bull calf of July last will be in the sale. Lily (imp.) is a very breedy looking cow, and has bred well with us. She is the dam of Lily of Pine Grove 2nd, second-prize winner in Toronto in 1901, as a junior heifer calf, second in 1902 as a junior yearling, and second last year as a two-year-old in very strong company. Mary Leslie is a very thick, low-set cow. She is dam of Knight Errant, sold by us to Mr. James Leask, of Greenbank, Ont., and by him to Mr. W. D. Flatt. He won second prize as a yearling at Toronto, and first at Pan-American, Buffalo, for Mr. Flatt, also headed his first-prize young herd at Toronto. Bessie is a very even cow, and has bred us some good calves. Her dam, Bessie of Rockland, was a show cow. She won first and female championship at Toronto, Montreal and Ottawa in 1895, the only time she was shown in Toronto. Her calf, Banker, won in Toronto the following year in a very heavy class of calves. Melrose Queen is a strong, straight cow. With her breeding, and being with calf to Marquis of Zenda, she should produce something good. Elvira's Rose (imp.) is one of the right kind, full of quality and breed character. She leaves a good calf behind her at Pine Grove. Canadian Rosebud 3rd is a heifer with lots of size and substance, with the meat put on in the right places. Ruby of Pine Grove



Sunshine Furnace

—burns coal, coke or wood with equal facility.

Flues, grates, fire-pot and feed-doors, are specially constructed to burn any kind of fuel, and a special wood grate is always supplied.

Sold by all enterprising dealers. Write for booklet.

McClary's

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

2nd (imp.) is a quality heifer, and being safe with calf to Village Champion (imp.) she will be a good investment for someone. The same may be said of Scottish Lassie. Lovely of Pine Grove 2nd is a big, sappy, straight heifer. She is not in high flesh, but will develop into a good cow, and will surely make money for someone. The bull, Fair Shot, is a nice, straight, good-backed fellow, and looks likely enough to develop into a very good one.

GUELPH HORSE SHOW.

Last year the Guelph Horse Show Association held their first show, and evidently gave their patrons one of the most pleasant surprises of the year in the large classes of really phenomenal horses shown. Not every one is privileged to visit the horse shows in the larger cities of Toronto, Montreal, New York or Boston, but the enterprising people of Guelph bring these horses right to their own town and provide three days of splendid sport and an educational exhibition. This year, the prize money is larger than before, more classes are catalogued, liberal provision is made for farm teams and amateur drivers, and the energetic management are doing all in their power to make the show interesting for breeders, dealers and visitors. Remember the dates, June 9, 10 and 11. Entries close June 1st. Set aside one of the dates to see one of the best horse shows in Ontario.

Last October, at Wichita, Kansas, the famous trotting stallion, Cresceus, trotted a fast mile against time, and was credited with a mile in 1.59½. This performance and the claim to the record aroused considerable discussion among harness horsemen, with the result that the decision of the judges who held the time on the fast horse was protested before the Board of Appeals of the American Trotting Association. This Board, after carefully examining the evidence before it, denied the application to establish such a record. The Board also charges that gross fraud was attempted, and the Wichita Fair Board will be called upon to justify their position.

Advertise in the Farmer's Advocate.

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

TRADE TOPIC.

GATTING A SEPARATOR.—Says a correspondent: "The first advantage noticed in using our U. S. (Vermont Farm Machine Co.) cream separator was getting one pound per day more butter from our herd of ten grade cows, which would amount to a handsome item in the year. Both cream and butter were of better quality, and the calves testified to the merits of the skim milk. Labor was reduced to a minimum; cans and tanks abolished, and also the need for supplies of cold water or ice. Dairy farmers should not make the mistake of buying a separator of small capacity. I got a No. 5, U. S., 600 lbs. of milk per hour, and run 150 lbs. in 15 minutes with ease. It was none too large. The saving of time will soon make up for the little extra cost. I find it a very steady, easy-running, hand machine, and like it especially for its durability and thoroughness of separation—two other essential points in a separator. When one considers the great speed at which the bowl revolves, and that the machine must be operated twice daily, the absolute necessity for a well-constructed piece of mechanism is apparent."

GOSSIP.

HAND-REARING A FOAL.

The chief difference between cow's milk and mare's milk is in the proportion of water, the mare's being much weaker than the cow's. The weight of solids is as 135 in the cow's and 95 in the mare's. Addition of 25 per cent. of boiling water to cold cow's milk suits colts very well. Give lime water, as a change from plain water every few days, and after the first three weeks, mix a little very fine oatmeal with milk in the palm of the hand, and induce the foals to take it by wetting their muzzles. Also add a little pounded white sugar as time goes on, and then some linseed tea. The chief trouble is to feed often enough. Follow the habits of the foal as closely as possible, which consist in a little food, a little play, and a little sleep, alternately. Do not give a lot of milk in the early morning, because the foal has been empty so long; that is how to get curdles and diarrhoea, which is difficult to stop. A tablespoonful of linseed oil now and again will be found to answer well, and will not gripe.

"PERSISTENCE OF THE URACHUS."

In April 28th issue of the "Farmer's Advocate" appear two articles on joint or navel ill. Having had a foal recover from a disease similar to this, I thought it would be of interest to your readers to give an account of symptoms and treatment. Two or three days from birth the foal was noticed to be swollen in hock joint of one hind leg, and very stiff. We then saw that the end of the navel was slightly swollen and inflamed, and water at first ran out the navel, then finished in drops. We applied Monsell's solution of iron to the navel with a feather four or five times daily, and rubbed the swollen joints four or five times a day with white liniment, and gave the foal half a teaspoonful of salicylic acid on the tongue three times a day. When we began the treatment, the joint was swollen twice its natural size, and appeared full of liquid. The other hind leg, receiving a skin scratch between the two joints, stocked up like a greased leg, making it difficult for him to get around. However, the leaking stopped almost at once, but we kept up the treatment until the joint blistered and started to go down, slowly regaining its normal size. He did not fatten or grow much for about a month after, but after that quite recovered.

P. E. Island. WALTER M. LEA.

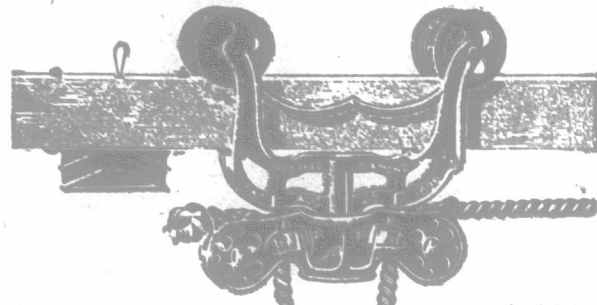
[NOTE.—In reference to the above, I am of the opinion there was a mistake in diagnosis. The treatment given was favorable to the treatment for persistence of the urachus, but I prefer butter of antimony to Monsell's solution as an application, although their actions are quite similar. If, as stated, there was large quantities of liquid in the hock, what became of it? It is not possible for such large quantities to become absorbed. It is probable both hocks got injured, and the swelling and lameness were due to the injury, and joint-ill never existed.—"WHIP."]

PAGE "ACME" NETTING

150-foot roll, 4 feet high.....\$4.40 For poultry and garden. Better than old style. Of local dealer or us. Freight paid.
150-foot roll, 5 feet high..... 5.10
150-foot roll, 6 feet high..... 6.00

THE FACE WIRE FENCE CO. LIMITED 204
Walkerville Montreal Winnipeg St. John

"SEND FOR FREE ILLUSTRATED PRICE LIST."

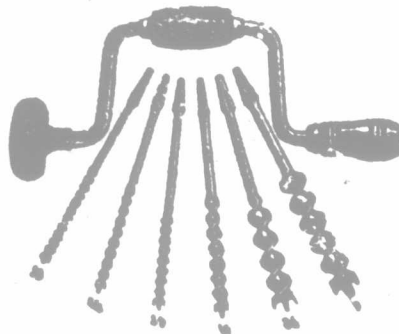


Haying Outfit, from \$12.00 to \$25.00.

Horse Clippers, \$1.25, \$1.50, and \$1.75 each. Our \$1.75 horse clipper is a daisy. They are all postpaid at this price.



Brace and 6 best Augur Bits, only \$1.50; postpaid any where in the Dominion for \$2. (If you want a ratchet brace add 50c. extra.)



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.

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 \$60.00.



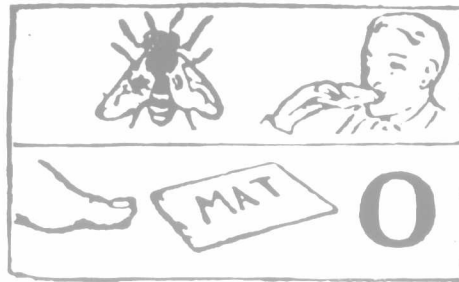
Remember, we have been in the mail-order business for nearly twenty-five years.

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

\$200.00 GIVEN AWAY

FOR CORRECT ANSWERS TO THIS SEED PUZZLE.

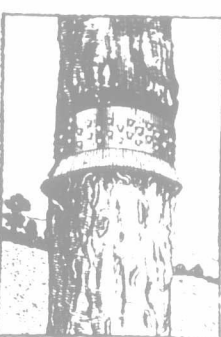
We are spending thousands of dollars to advertise our business. Each of these six small pictures represents a well-known Garden Vegetable. Can you think out the names of three of them? If so, the money is surely worth trying for. Three correct answers win. If you cannot make it out yourself, get some friend to help you.



Each of the Six Pictures Represents a Garden Vegetable. Can You Name Three of Them?

It does not cost you one cent to try and solve this puzzle, and if you are correct you may win a large amount of Cash. We do not ask any money from you, and a contest like this is very interesting. It does not matter where you live; we do not care one bit who gets the money; if you can make out the names of three of these Garden Vegetables, mail your answer to us, with your name and address plainly written, and if your answer is correct we will notify you. We are giving away \$200.00 for correct answers, and a few minutes of your time. Send in your guess at once, with your full name and address, to

THE MARVEL BLUING COMPANY, Dept. 1401, TORONTO, ONT.



ARNDT TREE PROTECTOR

(BRASS BAND.)

SIMPLE, EFFECTIVE, INEXPENSIVE.

Absolutely the most positive preventive against all creeping and crawling insects. It will save the trees. Save time and labor. Save money.

This simple brass band is patented and put upon the market as pre-eminently the very best and surest device yet invented for preventing the encroachment of all creeping and climbing insects. It is made of brass, does not corrode or rust, does not take an expert to place on a tree, and when once on overcomes all the difficulties met with by other methods of tree protection, and lasts for years. No chemicals used. The Arndt Tree Protector comes in coils of twenty (20) feet, neatly and securely packed in boxes, with brass fasteners and cotton wadding, and with full directions for using on each box.

ARNDT TREE PROTECTOR, Limited

F. V. PARSONS, Manager.

Office: Standard Stock Exchange Bldg., No. 43 Scott St., Toronto, Ont. Write us for pamphlets giving full particulars and rates. Live agents wanted

The race for the King's Plate, to be run on the 21st inst., at the Woodbine Track, Toronto, promises to be one of the closest races yet run for the valuable ware. On account of the ground containing more moisture than usual, the track has been very fast for training. For the Dymont stable, Nesto, who finished second last year, and Sapper are favorites; Heather Jock and Nimble Dick are among the Hendrie stable's best, and from the Seagram lot, eight have been declared as candidates. War Whoop, McKenzie Bros.' Plater, works well, and is regarded by some as a sure thing. Golden Crest, the Osburne horse that ran third last year, is again out. Altogether, there are some thirty entries made.

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

TRADE TOPICS.

To-day and to-day and to-day is my motto.

The "to-morrow and to-morrow and to-morrow" people acquire their education, but fail to use it soon enough.

They acquire wealth, but forget to enjoy it.

They are like the Philadelphia social climbers who get into society just when they are ready to die.

They drift.

They miss life's trophies.

MANURE SPREADER.—Two hand operations done in one by horse-power is the strong feature of the manure spreader. Time must be saved, and there is no better way of doing so than by spreading the manure by horse-power. Manure handled with the Great Western Endless Apron Spreader is spread so thin and evenly that the plant food it contains is at once appropriated by the crop, so that the minimum is wasted. Simplicity, lightness of draft, evenness of spreading, are characteristics of the Great Western for sale by the Wilkinson Plow Co., Toronto, and their agents. See the advertisement, and investigate the merits of their machines.

STARTING A BALKY HORSE.

Not long since a typical crowd was gathered in a village street to see a balky horse, and all kinds of devices were tried to get the horse to move on, but all failed until an attache of a livery stable came out with a rope and looped it around the animal's right fore leg and then gave it a hearty pull, which brought the leg sliding forward. The driver scarcely had time to get hold of the lines before the horse was off and gone. Since then this method has been tried several times when animals have balked, and it has been successful in moving them in every instance. The animal can only think of one thing at a time, and while he is speculating on the intentions of the man with the rope he forgets his determination to balk, and is travelling before he thinks what he is doing.

\$5.35 for Exporters.

A local paper reports the purchase of 54 prime export cattle by Henry Leslie, of Listowel, from Henry Smith, of Wallace. They were, the report says, as fine a lot as ever left Listowel. The total weight was 78,250 lbs., being just 50 lbs. short of averaging 1,450 lbs. The heaviest animal, a four-year-old steer, weighed 1,720 lbs. Several others went over 1,600 lbs. each. Three two-year-olds weighed 4,370 lbs., averaging 1,457 lbs. each, and another lot of two-year-olds averaged 1,377 lbs. each. The cattle were purchased some time ago at \$5.35 per 100 lbs. They netted Mr. Smith the snug sum of \$4,186. Mr. Leslie shipped them direct to London, England.

Three Gateways to The West.

Since the Southwest Limited, the new electric-lighted train of the Chicago, Milwaukee & St. Paul Railway, has been placed in service, Chicago to Kansas City, this company offers the best of train service to the West through three important gateways—Kansas City, Omaha and St. Paul.

The Pioneer Limited, Chicago to St. Paul and Minneapolis, for years has been the most popular train between these cities. The Overland Limited, Chicago to Omaha and San Francisco, is the most famous of transcontinental trains through Omaha.

The Southwest Limited, Chicago to Kansas City, with its standard and compartment sleepers, library-observation cars and other excellent equipment, offers travellers to the Southwest better service than they have heretofore enjoyed, and in consequence has proved a success from its initial trip.

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 pay 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. 28-30 Wellington St., West, Toronto, Ontario.



LOADED UP WITH IMPURITIES. IN THE SPRING THE SYSTEM IS LOADED UP WITH IMPURITIES.

After the hard work of the winter, the eating of rich and heavy foods, the system becomes clogged up with waste and poisonous matter, and the blood becomes thick and sluggish.

This causes Loss of Appetite, Biliousness, Lack of Energy and that tired, weary, listless feeling so prevalent in the spring. The cleansing, blood-purifying action

BURDOCK BLOOD BITTERS.

eliminates all the pent-up poison from the system, starts the sluggish liver working, acts on the Kidneys and Bowels, and renders it, without exception,

The Best Spring Medicine.

Guelph Horse Show

JUNE 9th, 10th and 11th, 1904

The success of last year will be increased in 1904.

Special rates on railroads. Big prizes to all classes of horses.

Send for a Prize List.

H. LOCKWOOD, C. H. NELLES, President, Secretary.

FOR SALE: CLYDESDALE STALLION, PRIZE OF SPRINGDALE, 3 years old, registered (4151) Vol. 13, Clydesdale Studbook. Apply to WILLIAM WOODLEY, Dundas, Ont., near G. T. R. Station.

GOSSIP.

The "to-morrow and to-morrow and to-morrow" people are like Napoleon's Austrians in Italy. While they wheeled their army about he struck it twice.

A man addicted to walking in his sleep, went to bed all right one night, but when he woke he found himself in the street in the grasp of a policeman. "Hold on!" he cried. "You mustn't arrest me; I'm a somnambulist." To which the policeman replied: "I don't care what yer religion is—ye can't walk the streets in yer nightshirt."

Two candidates for office in Missouri were stumping the northern part of the State, and in one town their appearance was almost simultaneous. The candidate last arriving happened to stop at a house for the purpose of getting a drink of water. To the little girl who answered his knock at the door, he said, when she had given him the desired draft and he had offered her in recompense some candy: "Did the man ahead of me give you anything?"

"Oh, yes, sir," replied the bright girl; "he gave me candy."

"Ah!" exclaimed the candidate, "here's five cents for you. I don't suppose that he gave you any money?"

The youngster laughed merrily. "Yes, he did, too! He gave me ten cents!"

Not to be outdone, the candidate gave the little one another nickel, and, picking her up in his arms, kissed her.

"Did he kiss you, too?" he asked, genially.

"Indeed, he did, sir!" responded the little girl, "and he kissed ma, too!"

IMPORTANT PURCHASE OF AYRSHIRES.

Mr. Robert Ness, of Burnside, Howick, Que., (whose father is well known as an exporter of high-class Clydesdales for the last thirty years), has been on a visit to Scotland for the last month, and returned to Canada by the Donaldson liner, Silacia, last week with a well-selected lot of Ayrshires. Mr. Ness is a thorough good judge of a dairy animal, and would look at nothing but what had a strong constitution, good teats, combined with the promise of being a good milker. When he got those properties to his mind he was not afraid to pay a good price to become possessor of the animal. He visited nearly all the principal herds in the south-west of Scotland, and selected 17 head. From Mr. Andrew Mitchell, Barcheskie, he purchased nine, including the bull he intends to head his herd, viz., the prize bull, King's Crest, which gained first prize at Castle-Douglas the day before sailing. This bull was bred by Mr. McKean, Dam of Aber, and was first at the Dumbarton and Stirling Shows, as well as first at the Southern Counties Shows at Newton-Stewart last year. For color, size and general Ayrshire character, this bull will be hard to beat in Canada. Two bull stirs of Mr. Mitchell's own breeding accompany him, both out of very heavy-milking dams. In females, the selection from Barcheskie included the cow, Snowflake, that was first in the uncalved class, and first in pairs at Castle-Douglas. She was a well-known prizetaker last year at the principal shows. The promising three-year-old heifer, Irene, a daughter of The Master; the two-year-old heifer, Jean, that was first at Lanark, Leshmahagow, Hamilton, Douglas Water, etc., last season, and four Barcheskie-bred heifers, less than twelve months old, which have still a name to make for themselves, completed the Barcheskie contingent. From Mr. Wilson, Finlayston, he purchased a grand type of a cow that has been proving herself a splendid breeder, and two calves. From Mr. Duncan, Little Kilmory, two big, substantial, four-year-old cows, of the kind which are hard to find. One of them, besides other honors, was fourth in the Ayr Derby last year, and the other was first at the Highland, in milk. From Mr. Woodburn, Whitehill, he purchased the good four-year-old, Gipsy I., a daughter of Gay Gipsy, and by Traveler's Heir. From Mr. Logan, Barginnoch, a good four-year-old cow. From Mr. Thomas Barr, Monkland, two particularly promising bull calves, one sired by White Cockade, out of Beauty of Orchardton, and the other, by Barcheskie May King, out of Snow White.—[Scottish Farmer.]

Warranted to give satisfaction. GOMBAULT'S CAUSTIC BALSAM. A safe, speedy and positive cure for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle. As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

"THE REPOSITORY" WALTER HARLAND SMITH, Prop.



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.

16--Clyde Stallions--16

I will have in Toronto, during week of Spring Stallion Show, March 2nd to 4th, 16 Clydesdale Stallions from 3 to 8 years old, 12 of which are imported, and which will be sold on small profits. These horses are by such noted sires as Baron's Pride, Prince Thomas, Sir Thomas, Sir Robert, Clan Chattan, Ascot, etc. Intending purchasers will consult their own interest by looking them up before buying elsewhere.

T. H. HASSARD, MILLBROOK, ONTARIO.

FOR SALE. Seven Imported Clydesdale Fillies,

2-year-olds, sired by the prizewinning stallions, Ascot Corner, Handsome Prince, William the Conqueror, etc. All have been bred to stallions. For further particulars address: PATTERSON BROS., Millbrook, Ont. Millbrook on G. T. R. Cavanville, C. P. R.

MERTOUN CLYDESDALES

Two choice young stallions and one filly of good breeding and quality, also one good Shorthorn bull. Prices right. Visitors will be met at Seaford, G. T. R., on application to

D. HILL, STAFFA P. O., ONT.

DEATH TO HEAVES Guaranteed NEWTON'S Heave, Cough, Discomper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.50 per can, mail or express paid. Newton Remedy Co., Toledo, Ohio. Your druggist has it or can get it from any wholesale druggist.

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

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

TRUMAN'S CHAMPION STUD SHIRE, PERCHERON, BELGIAN, SUFFOLK AND HACKNEY STALLIONS.

Seven importations within the past twelve months.
More select prizewinning Shire stallions than all our competitors.
Seven stallions sired by the 1904 London champion, Blaisdon Conqueror, for sale.
Twenty-six years importing Shire stallions.

We have opened a
BRANCH STABLE AT LONDON, ONT.,
for the convenience of our Canadian customers.
WRITE FOR NEW CATALOGUE.

Truman's Pioneer Stud Farm

Address H. W. TRUMAN,
Care City Hotel, London, Ont. BUSHNELL, ILL.

A New Record

For draft geldings of any breed was made in the Chicago Auction Market on March 23rd last, when a high-grade Clydesdale Gelding was sold for \$665 to Messrs. Armour & Co.

We are the oldest and largest importers of Clydesdales in America, and are now offering extraordinary bargains in this breed, and also in PERCHERONS, SHIRES, SUFFOLKS, HACKNEYS and GERMAN COACHERS.

ALEX. GALBRAITH & SON,
JANESVILLE, WIS. BRANDON, MAN.

If your district is not supplied with a good stallion, write at once to MR. JAMES SMITH, Manager Manitoba Branch.

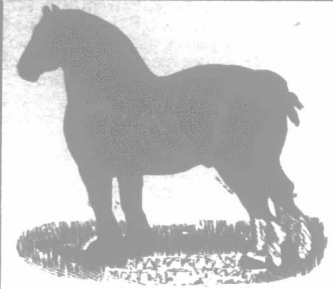


Clydesdales.

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.



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 Lohian, 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.

IMPORTED CLYDESDALES

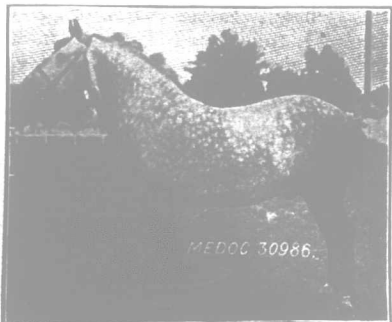
I have just returned from Scotland with a fine lot of Clydesdale stallions of great breeding and individuality. They are indeed a fine lot and just the kind the country needs. Write for prices and description, or, better still, come and see and be convinced of what I say.

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

LARGEST STUD IN THE WORLD OF AMERICAN-BRED PERCHERON, SHIRE and HACKNEY STALLIONS AND MARES

Won more First Prizes and Gold Medals in past 3 years than any firm in America; ages 2 to 6 years. Prices to Canadian buyers for next 30 days will run from \$600 to \$1,200 for choice of my barns, except 2 horses which are not for sale; also R. R. fare to my place and expenses while here. Time of payment made to suit customers. Every stallion sold to get 60 per cent. of mares in foal, also a safe delivery.

LEW W. COCHRAN,
607 West Main St., CRAWFORDSVILLE, IND.



GOSSIP

Lost wealth is sometimes brought back, lost health seldom, but lost time, never.

Col. R. T. Lawley, of the Imperial Remount Station, London, Eng., and Major J. Moore, have been purchasing horses in Ontario for the King's Life Guards. They secured only about half a dozen suitable animals. The King's Life Guards include three regiments, and all the members are mounted on the finest black chargers it is possible to obtain. First-class black horses are not easily obtainable.

A GREAT SALE OF YORKSHIRES.

Messrs. D. C. Flatt & Son, of Millgrove, Ont., proprietors of the noted Summer Hill herd of Improved Yorkshire swine, announce in our advertising columns in this issue an attractive auction sale at Hamilton, Ont., on Wednesday, June 15th, of 80 head of imported Large English Yorkshire boars and sows, carefully selected from the leading herds of Great Britain with a view to meeting the requirements of this country for hogs of the best bacon type, combined with strong constitution and good breeding qualities. Those who were privileged to see the grand importation sold by this firm at Hamilton in June last year will be able to form some conception of the character of the offering included in this year's sale, when they are assured that this is the best lot ever put together in America. Last year's offering was a revelation to Canadian breeders of the possibilities of breeding with true-ness to the best type and the combination of strength with smoothness and quality, and those who saw them were unanimous in proclaiming them the best lot they ever saw together, and while some sold for high prices, many of the sows were secured at prices that the litters they were carrying more than paid, while many of the boars, somewhat thin from the worry of shipping and quarantine, were bought at prices that proved positively cheap, as their breeding and type was the best, and only rest and quiet was needed to bring out their good qualities. Canadian breeders and farmers generally are deeply interested in maintaining the good name that our bacon has secured in the British markets, bringing millions of dollars to the farmers of this country, largely through the influence of the Improved Yorkshire breed, and the enterprise shown by the Messrs. Flatt in bringing out these costly importations of breeding stock of the best class for distribution should be liberally supported and encouraged by a large attendance at the sale, and an active interest in securing for it a successful issue. The sale catalogue, which will soon be ready, will be mailed to those applying for it, and further notes on the offering may be looked for in future issues of the "Farmer's Advocate."

TRADE TOPIC.

GOD MAGAZINE LITERATURE.—A striking feature of the Canadian Magazine for May is the illustrated article on Paul Wickson, the artist, several of whose best pictures have been reproduced in Christmas numbers of the "Farmer's Advocate" during recent years. Horse studies have been his specialty, and he is one of the few painters who have succeeded in portraying this noble animal with fidelity to life. Throughout, the magazine is good, instructive and entertaining. People should not run after cheap, frothy U. S. periodicals, when they have such excellent home production. "The Westminster" for May is another bright Canadian monthly, beautifully illustrated. A noteworthy sketch is "Historic Landmarks of Victoria," and the serial, "Duncan Polite," by Marian Keith. During the year a new story, "The Prospector," by Ralph Connor (Rev. M. Gordon), will be commenced. An old and popular periodical with thousands of Canadians is the "Methodist Magazine and Review." The number for May contains a charming sketch, "On the Lackawanna," a valuable paper on "The Rainless Valleys of Peru," an account of Lady Aberdeen and her work, "Frances Ridley Havergal and her Publisher," and other literary features. As usual, the magazine is profusely illustrated.



Lameness

in all forms and Curb, Splint, Spavin, Sprained Cord, etc., all yield readily to and are permanently cured by

Tuttle's Elixir

Used and Endorsed by Adams Express Company.

Nothing equals it when used internally for Colic, Distemper, Founder, Pneumonia, etc.

Tuttle's American Condition Powders

—A specific for impure blood and all diseases arising therefrom.

TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

Dr. S. A. TUTTLE, 66 Beverly St., Boston, Mass.

Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all bilsters; they offer only temporary relief, if any.

LYMAN, KNOX & SON, Agents, Montreal and Toronto, Canada.

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., COBBOURG, ONT.

Thorncliffe Clydesdales

THORNCLIFFE STOCK FARM has for sale some excellent YOUNG CLYDESDALE STALLIONS of right stamp, and a number of superior MARES from imported dams, by imported sires, and now in foal to the imported stallion "Right Forward." For prices, etc., apply to

ROBERT DAVIES
36 Toronto Street, TORONTO.

CLYDESDALES

AYRSHIRES and
POULTRY.



R. Ness & Sons, Howick, Que.

Importers of Clyde, Percheron and Hackney stallions, Ayrshire cattle, and poultry, have for sale 5 Clyde stallions, sired by Baron's Pride, Sir Everitt, and Royal Carrick, 1 Percheron, and 1 Hackney, winners. Ayrshires of both sexes, and poultry.

Clydesdales & Hackneys

We handle only the best of their representative breeds. We have on hand more good young stallions and mares than ever before. Large importation just arrived. Correspondence and inspection invited. Farm only ONE MILE from station.



Graham Bros., Claremont, Ont.

Imported Clydesdales



My offering now consists of

The Imported Three-year-old Clan McLeod Stallion

Of choicest breeding, best quality and immense size. Inspection invited.

Geo. Stewart
Howick, P. Q.

QUESTIONS AND ANSWERS. Miscellaneous.

FARMING AND DAIRYING.

I wish to secure a book on farming, with dairying as a specialty. C. C. W. Ans.—"Successful Farming," by Rennie, \$1.50, and "Canadian Dairying," by Dean, \$1. Order through this office.

POLAND-CHINAS SLEEPING.

Please inform me through your valuable paper where I can procure a pure-bred Poland-China boar. W. H. E. Ans.—Is the Poland-China asleep? Someone who is breeding these useful hogs should make the fact known through our advertising columns. It seems unfortunate that the light of this breed of hogs should thus be kept out of sight.

SETTING HENS—OLD COUNTRY ADDRESS.

I should like to know the best treatment for hens that want to sit, and also the address of a girl or lady teacher in Scotland with whom I could correspond? MISS GEORGIE MATHESON. Searletown, P. E. I. Ans.—Place them in a bare coop, and feed sparingly for a few days. See article in this issue. Old Country readers please note.

FRENCH-CANADIAN STALLION.

Can you inform me who raised the registered French-Canadian stallion that took first and sweepstakes in that class last fall at Ottawa Exhibition, and was sold there to a man west of Ottawa, along Canada Atlantic Railway. He was owned and sold by Jas. Mooney, Laggan, Ont. SUBSCRIBER. Ans.—The horse must be Devin (541), bred by Jeremie Veroniqueau, Boucherville, Que.; second owner, Cho. Normandin, Boucherville; third owner, J. C. Mooney, Laggan, Ont.; fourth owner, Wm. D. Tuffy, Cobden, Ont.

MUSTARD SPRAYING.

I saw a short paragraph in the "Advocate" treating on the killing of mustard without injury to the crop. Kindly inform me where suitable apparatus could be got for field sprayings also chemical fluid used and quantity per acre so as not to be injurious to the grain, and about what time would be the best, at blossom or before? ENQUIRER. Ans.—The large spray pump and apparatus advertised in this paper can be recommended for field spraying. See paragraph in last issue on spraying for mustard. Make the application after the mustard plants are all up, and at the time when they are above the grain crop. The spraying is less effective when the mustard plants get older and begin to bloom.

Veterinary.

PARTIAL DISLOCATION OF THE PATELLAS.

Colt, now a yearling, sprained his stifles when a sucker. The joints are enlarged, and they snap when colt moves. A. B. V. B. Ans.—There is partial dislocation of the stifle bone in each leg. The snap is made by the bone slipping in and out of position. It is not probable he will ever be right; but if properly attended to, will make a useful animal. Put him in a box stall, and keep as quiet as possible. Blister him once monthly. The prescription for blister and details for application are given in this number in answer to A. E. G. You should have been treating all winter. It will be better if you keep him quiet all summer; but if you turn him to pasture, the field must be level and smooth. V.

Advertisement for 'Four Free Friends for Farmers' featuring Potash. Includes text: 'Our money winning books, written by men who know, tell you all about Potash. They are needed by every man who owns a field and a plow, and who desires to get the most out of them.' Also mentions 'GERMAN KALI WORKS, 98 Nassau Street, New York'.

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.

Says the Fence to the Post,

"Get a Gate on You."

LAMB GATES

are made with gas-pipe frame, filled with woven fabric.

Can be hung on either post and will swing in either direction.

Lamb Fence is made of High Carbon Steel Wire.

The H. R. LAMB FENCE CO.

Limited London, Ontario Winnipeg, Manitoba

THE SUNNYSIDE HEREFORDS

headed by imp. Onward, 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-head. 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.; Ilberton or Denfield on L.H.&B.

SHORTHORNS and SHROPSHIRE.

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

Advertise in the Advocate

QUESTIONS AND ANSWERS. Veterinary.

SWOLLEN SHEATH.

Horse that gets little exercise is troubled with swollen sheath; the swelling sometimes extends forward on the abdomen. He urinates freely, but it contains a red sediment. J. H. B.

Ans.—This is due to good feed and want of exercise. Purge him with eight drams aloes and two drams ginger. Follow up with two drams nitrate of potash night and morning for a week. Give regular exercise, and in addition to hay and oats, give a feed of bran, with a half cupful of linseed meal at least twice weekly. For horses that are predisposed to swellings of this kind, regular exercise and very low diet is absolutely necessary. V.

CEDEMATOUS SWELLING.

Last year my pregnant mare, some time before foaling, swelled under her abdomen and along her sides. My veterinarian punctured, and bloody water escaped. This reduced the swelling some, but it was considerable time after foaling before she got all right. She is due to foal May 17th, next, and she is swelling again. J. McK.

Ans.—In most cases swellings of this kind, before foaling, are not serious, and disappear gradually after foaling. In others, where the swellings are excessive and contain serum, it is necessary to lance them as your veterinarian did last year. It is not wise to give internal medicines. If regular exercise will not reduce the swelling, and it becomes quite extensive, you had better call your veterinarian in, and if he considers an operation necessary, allow him to treat. V.

LUXATION OF THE PATELLA.

Once a week, or oftener, my horse is unable to move one of his hind feet. All at once it will come up with a jerk and sometimes a crack, and he will be all right. He has been this way all winter. A. M. N.

Ans.—This is luxation or dislocation of the stifle bone or patella, commonly called stifled. Tie him in a narrow stall so that he cannot lie down. Put a collar on, buckle a strap around the pastern of the affected leg, being sure the bone is in its place, which can be told by his ability to lift the foot, draw the foot about one foot in advance of its fellow, and tie a rope from the pastern to the collar to keep the foot forward. Then blister with two drams each biniodide of mercury and cantharides, mixed with two ounces vaseline. Blister the front and inside of the joint in the same manner as recommended for A. E. G.'s horse. As soon as you wash the blister off, turn him into a roomy box stall, and put him to work in a week. Always give him a box stall, and let him loose, and it is probable you will have no further trouble. If you do, blister again. It is probable the trouble will recur if you tie him in the stable. V.

Miscellaneous.

SHOE BOIL—CALKS.

1. Five-year-old carriage mare, kept sharp shod, has on her front legs, near the body, lumps, something like boils, nearly as large as cups. I would like to know if they can be removed, and by what treatment? T. B.

Ans.—1. These enlargements may consist either of a serous abscess or fibrous tumor. The former contains pus, while the latter is a growth something the nature of a corn. First discover the nature of the enlargement: If an abscess, open and syringe out with warm water, to which a few drops of carbolic acid is added. If a tumor, dissect out and treat as an ordinary wound.

2. Remove all foreign matter, make perfectly clean, and apply a lotion, composed of acetate of lead, one ounce; sulphate of zinc, six drams; water, one pint.

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.

ZENOLEUM

Famous COAL-TAR Carbolic Dip. For general use on live-stock. Send for "Piglets' 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, \$4.00. ZENOLEUM DISINFECTANT CO., 113 Bates St., Detroit, Mich.

FOR SALE:

Shorthorn Bulls

Two imported—a "Cruickshank Lavender" and a "Mar. Emma"—bred in the purple, and individually as good as the breeding would suggest. Also two grand young bulls about ready for service. Yorkshire boars and sows from imported stock. Prices right. Come and see me.

RICHARD GIBSON, DELAWARE, ONT.

GEDARDALE FARM. For Sale, two richly bred bulls, 9 months and two years old, one sired by Lord Gloucester 29995, the other by Royal Standard 27134; also some good cows in calf, and heifers, all good Scotch blood. DR. T. S. SPROULE, Markdale P. O. and Station.

HIGH-CLASS SHORTHORNS. 8 heifers, in calf to an imported Scotch bull; 6 bulls ready for service; about 15 heifer and bull calves, from 3 to 12 months old. Prices very reasonable, considering quality. Inspection invited. FRANK W. SMITH, Walnut Farm, Scotland, Ont.

SHORTHORNS

For sale: Young bulls from six to sixteen months; two sired by Red Rover (imp. in dam), and one sired by Village Champion (imp.), owned by W. C. Edwards & Co. Inspection invited.

N. S. ROBERTSON, ORANPURIOR

Shorthorns and LEICESTERS. Present offering: Young bulls, cows and heifers of the best Scotch families. Also a number of Leicesters of both sexes now for sale at reasonable prices. Address: W. A. DOUGLAS, Tuscarora P. O., Ont. Station—Caledonia, Ont.

Scotch-bred Shorthorns

5 bulls from 12 to 20 months old, of good Scotch breeding, size and quality, at let-live prices. Also several females, reds and reans. L. K. WEBER, Hawkesville, Ont., Waterloo Co.

TWO SHORTHORN BULL CALVES

FOR SALE AT THE

GLENAVON STOCK FARM.

They are from good milking strains. Write or call. W. B. ROBERTS, PROP., SPARTA, ONT. Station—St. Thomas, C.P.R., G.T.R., M.C.R.

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.

Shorthorns and Berkshires for sale

Cows and heifers with calves at foot or in calf. Some very heavy milkers in herd. Berk-hires—Young sows 7 and 9 months old; choicely bred and of bacon type. These must be sold quick. Prices reasonable: F. MARTINDALE & SON, York P. O., Ont. Caledonia Station.

Maple Cliff Dairy and Stock Farm.

R. REID & CO., PROPS

FOR SALE: A number of imported Tamworth sows, one of them in pig to Darfield Grandee (imp.); also two boars imported in dam. Two Berkshire boars fit for service.

HINTONBURG, ONTARIO.

Family and Stockmen's Recipes

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

Advertisement for 'Hed-rite' headache remedy. Includes text: 'It Speaks for Itself! Hed-rite CURES HEADACHE 25c. Guaranteed to Cure within 30 Minutes, or money refunded. All Druggists or mailed. The Herald Remedy Co., Montreal'.

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Sharple's Tubular Separators

EVERY TUBULAR STARTS A FORTUNE

If you had a gold mine would you throw half the gold away? Properly managed dairies are surer than gold mines, yet many farmers throw half the gold away every day. The butter fat is the gold—worth twenty to thirty cents a pound. Gravity process skimmers—pans and cans—lose half the cream. Your dairy can't pay that way.

Like a Crowbar

Tubular Separators are regular crowbars—get right under the trouble—pry the mortgage off the farm. How? Gets all the cream—raises the quantity and quality of butter—starts a fortune for the owner. It's a modern separator. The picture shows. Write for catalogue P-193.

Canadian Transfer Points: Winnipeg, Toronto, Quebec, St. John, N. B., Calgary, Alberta. Address: **THE SHARPLES CO., CHICAGO, ILL.** P. H. SHARPLES, WEST CHESTER, PA.



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.

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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; 6 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.

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, Cobourg P. O. and Station

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

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, Onono P. O., Newcastle Station, G. T. R.

WILLIAM BANK STOCK FARM
Established 1855.

SHORTHORNS AND LEICESTERS

A grand lot of young stock for sale, rich in the blood of Scotch Booth and Bates families. Rosicrucian of Dalmeny 45220 (imp.) at head of herd. We breed the best to the best Leicester sheep of rare breeding and quality. Address: **JAS. DOUGLASS, Proprietor, P. O. and station, Caledonia, Ont.**

SCOTCH SHORTHORNS

Twelve blooky, sappy young bulls, 10 to 14 months old, reds and roans, sired by the Princess Royal bull, Imp. Prince of the Forest = 40409 =, and out of high-class Scotch and Scotch-topped cows. Also ten thick-fleshed heifers, in calf to Imp. Prince of the Forest, placed at head of herd at cost of \$850. Come and see, or write for prices.

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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.

QUESTIONS AND ANSWERS.
Veterinary.

WOUND REFUSES TO HEAL.
Horse got cut between fetlock and foot. The wound will not heal, and the leg swells. W. A. S.

Ans.—Apply a little butter of antimony to the wound with a feather once daily for three days. Follow up, by applying three times daily, one part carbolic acid to twenty parts sweet oil. The swelling will disappear as soon as irritation ceases. V.

BRONCHOCELE.
Two calves have thick necks. The enlargements are in the throat, just behind the jaws, and are getting thicker. E. H.

Ans.—This is enlargement of the thyroid glands. Rub them well once every day with compound iodine ointment. If this does not effect a cure, get your veterinarian to inject into them a solution of iodine. V.

APOPLEXY.
Pigs wheeze when eating, turn purple at the nose, fall over and die. There appears to be a spongy growth at the lower end of throat. R. S. L.

Ans.—These pigs die from cerebral apoplexy, caused by too high feeding and too little exercise. The growths you speak of are the thymus glands. It is probable you will have no further trouble now that the weather is fine and you can let them out on the grass every day. It would be good practice to purge them with Epsom salts; feed lightly, and allow exercise. If any are attacked, pour cold water on their heads, and cut the tail off, to allow some blood to escape. V.

LUMP ON HOCK—QUIDS HER FOOD.
1. Horse has hard lump on outside of his hock, caused by rubbing against the tongue.

2. Aged cow masticates well, but does not swallow. Food drops out of mouth, and she slavers a great deal. A. E. G.

Ans.—1. Take two drams each biniodide of mercury and cantharides, and mix with two ozs. vaseline. Blister the parts as follows: Clip the hair off; rub blister well in; tie so he cannot bite the part; in twenty-four hours rub well again, and in twenty-four hours longer wash off, and apply sweet oil; let his head down, and oil every day. As soon as the scale comes off blister again, and repeat once every month. It usually takes a long time to reduce enlargements of this kind, and, of course, the cause must be removed.

2. This is due to disease of mouth or tongue, irregularities of the teeth, or paralysis of the muscles of deglutition. If you are sure the teeth, mouth and tongue are all right, blister her throat the same as the horse's hock, and give her two drams nux vomica in a little cold water as a drench twice daily. V.

OBSTRUCTION OF THE PYLORIS.
Calves two to four months old, that suckle their dams, which are fed on oat sheaf, wheat, oat and spelt straw, with oat and spelt chop, are dying. They slaver, grind their teeth, lick mouth and nose, fall down and bellow; eyes roll upwards and inwards, get up, and are dull, etc. Some die in an hour, and others live for two weeks. I opened one and found lungs dark and bloody. In the stomach were balls of chewed oat sheaf, with strings or cords in them; a couple of balls of hair, one the size of a hen's egg. T. G.

Ans.—The calf upon which you held a post-mortem, died from obstruction of the passage from the stomach to the intestine (this opening is called the pylorus) with one of the hair balls mentioned, and the symptoms given indicate this to be the trouble with all. When the ball gains the opening, it stops all passage from the stomach, and causes the symptoms noted. If the obstruction remains, then death takes place quickly; but if it changes its position, as it is liable to do during the struggling of the calf, the symptoms are relieved for a time. An animal may live for weeks or even months under these conditions. Nothing can be done to cure. The balls are caused by the calves eating undigestible food, as twine, overripe hay, etc., and by licking their dams and swallowing the hair. Clipping the cows, and being careful that they get nothing to eat but food of good quality, will save those not already affected. V.

Dan Patch 1.56 1/4

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IF IT'S GOOD FOR DAN IT'S GOOD FOR YOUR STOCK

Fastest Harness Horse in the World

INTERNATIONAL STOCK FOOD

International Stock Food 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 rations. We positively guarantee that it will keep all stock in good condition and insure rapid growth. It will enable you to fatten your stock in from 20 to 30 days less time than you could without it. International Stock Food will save you money over the ordinary way of feeding. A trial will convince you.

A \$3,000 Stock Book Free
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This book cost us over \$3,000 to produce. The cover is a beautiful live stock picture without any advertising on it, contains 160 pages, size 6 1/2 x 9 1/2, gives history, description and illustrations of the various breeds of horses, cattle, sheep, hogs and poultry. Many stockmen say they would not take \$5.00 for their copy if they could not get another. The finely illustrated Veterinary Department alone will save you hundreds of dollars, as it treats of all the ordinary diseases to which stock are subject, and tells you how to cure them.

WE WILL PAY YOU \$100 IF THIS BOOK IS NOT AS REPRESENTED

This book will be mailed free, postage prepaid, if you will write us at once and answer these two questions:—
1st—What paper did you see this in?
2nd—How many head of stock have you?


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SPECIAL OFFERING:



(IMP) PRINCE SUNBEAM, 1894
1st TORONTO AND LONDON, 1903

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

Shorthorns and Clydesdales.

We are now offering an extra good lot of young bulls, home-bred and imported; also stallions, and a few young mares which are in foal.

JOHN MILLER & SONS,
Claremont Sta., C.P.R. om Brougham P.O.

SHORTHORNS

Some extra good young bulls for sale. Catalogue.

JOHN CLANOY, Manager. om

H. CARGILL & SON,
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PINE GROVE STOCK FARM.

Breeders of high-class Cruickshank, Marr and Campbell Shorthorns, and superior Shropshire sheep. Herd headed by imported "Marquis of Zenda," bred by Marr, assisted by imported "Village Champion," bred by Duthie; also "Missie C. ampion," son of "Missie 153rd," and "Clipper King," a superior young bull, full of the blood of the Cruickshank Clipper family. One imported and four superior young home-bred bulls, ready for service, fit for herd headers, for sale. On June 28th next, we sell at public auction, in conjunction with other Canadian breeders, at the Sale Pavilion, Hamilton, Ont., fifteen of our imported and home-bred cows and heifers. W. C. EDWARDS & CO., Limited, Proprietors; Joseph W. Barnett, Manager; Rockland, Ontario, Canada. om

Hawthorn Herd OF DEEP-MILKING SHORTHORNS.


FOR SALE: Five young bulls, also a few females, by Scotch mares. Good ones. om

Wm. Grainger & Son, Londesboro, Ont.

HILLHURST FARM
(ESTABLISHED FORTY YEARS.)

SHORTHORN herd numbers 30, with Imp. Scotch Hero (Missie) and broad Scotch (Sittytan 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 **HAMPSHIRE** flock 80 ewes; milk strains. **HAMPSHIRE** '03 lambs all sold

Jas. A. Cochrane
HILLHURST P. O., o COMPTON CO., P. Q.



High-class Shorthorn Bulls For Sale


3 imported bulls.
4 bulls from imp. cows and by imp. bulls.
The others from Scotch cows and by imp. bulls.
21 Scotch cows and heifers, including 9 imp. animals.

ARTHUR JOHNSTON, Greenwood, Ontario.

Sunnyside Stock Farm. JAMES GIBB, Brookside, Ontario.

Breeder of high-class **SHORTHORN CATTLE** (imp.) "Brave Ythan" at head of herd. Stock for sale. om

Spring Grove Stock Farm
Shorthorn Cattle and Lincoln Sheep.



HERD prize and sweep-stake at Toronto Industrial Exhibition, three years in succession. Herd headed by the Bruce Mayflower bull, Prince Sunbeam, imp. Present crop of calves sired by Imp. Wanderer's Last, sold for \$3,000. High-class Shorthorns of all ages for sale. Also prize-winning Lincoln. Apply

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Was So Nervous She Could Not Sleep At Night.



Had Palpitation of the Heart and Loss of Appetite— Are You One of Those Troubled in this Way? If you are, MILBURN'S HEART AND NERVE PILLS will Cure You—They Cure Nervousness, Sleeplessness, Anaemia, Faint and Dizzy Spells, General Debility, and all Heart or Nerve Troubles.

Read what Mrs. C. H. Reed, Cobocok, says about them:—Over six years ago I was troubled with palpitation of the heart and loss of appetite. I was so nervous I could not sleep at night. I took MILBURN'S HEART AND NERVE PILLS. They cured me, and I have not been bothered since.

Price 50c. per box, or 3 for \$1.25; all dealers or The T. Milburn Co., Limited, Toronto, Ont.

16 Shorthorn Bulls

All pure Scotch, two imp. in dam, 7 from imp. sire and dam, others by imp. sire and from Scotch dams of popular families. Herd numbers 72; headed by Imp Greengill Victor, a Princess Royal; bred by W. S. Marr. Present offering also includes a number of Scotch heifers and imp. cows in calf. If you want a herd header, or cows that will produce them, write us.

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

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 Epicly Robin; and one Cruickshank Orange Blossom, from imported sire and dam; also females of all ages. Herd headed by imp. Joy of Morning (76929), 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.

ONLY THE BEST.

Eight young bulls and 10 heifers of the purest Scotch breeding and of the low-set kind, as good as I have ever offered, for sale at prices that will induce you to buy. Most of the heifers are in calf to imported bulls that stand as high as any in the world in breeding and individual excellence. High-class Shropshires for sale as usual.

ROBERT MILLER, Stouffville, Ont. Representative in America of Alfred Mansell & Co., Shrewsbury, Eng. The largest exporters of live stock in the world.

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

Scotch Shorthorns and Berkshire Swine AT VALLEY HOME STOCK FARM.

For sale: 3 young bulls of superior breeding and quality, from 10 to 18 months old, the low-down sort and good heavy animals; will sell cheap to make room for our increase in young stock. Also Berkshires of all ages, 3 young boars and a fine lot of sows, due to farrow in one month's time. Stations Meadowdale or Streetsville Junction, C. P. R., and Brampton, G. T. R. Visitors welcomed. Address S. J. PEARSON, SON & CO., Meadowdale P. O. and Telegraph.

Shorthorns, Cotswolds, Berkshires FOR SALE.

Bull and heifer calves from one to nine months; also cows and heifers. Barred Rock eggs, Hawkins & Thompson strain, 75c. for 15; \$2.00 for 50; \$3.50 for 100. F. BONNYCASTLE & SON, Campbellford P. O., Ontario.

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. Am A. W. SMITH, MAPLE LODGE, ONT.

SHORTHORNS AND SHROPSHIRE 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. FUGIE, Claremont P. O. and C. P. R. Sta.

QUESTIONS AND ANSWERS. Veterinary.

CALK.

Horse calked himself above coronet; his leg swelled; we poulticed, and it broke. We wash with a solution of Jey's fluid, and bandage with Friar's Balsam and sweet oil. W. L.

Ans.—Your treatment has been all right, except the bandaging. Do not use a bandage until the wound or opening has healed. Inject a little of the solution into the cavity twice daily, and when the parts are healed, bandaging will have a tendency to prevent swelling. If swelling becomes chronic, blister as advised for A. E. G.'s horse's hock. V.

INAPPETENCE.

1. Cow had diarrhoea; we ceased feeding turnips and the diarrhoea ceased. This was eight or ten weeks ago. She now eats very little, and stands around with back arched. She is due to calve in a month.

2. Have blistered a horse for thorough-pin. The hair is all off. What shall I apply to make it grow the natural color again? B. P.

Ans.—1. Give the cow a laxative of one and a half pints raw linseed oil, and follow up with a tablespoonful of the following three times daily, given as a drench in a pint of cold water, viz.: Equal parts sulphate of iron, gentian, ginger, nux vomica, nitrate of potash, and bicarbonate of soda.

2. If you have used the blister so often recommended in these columns, the hair will grow all right; but if you have used some nostrum, which contains ingredients that destroy the hair follicles, it will never grow. All that you can do is to apply a little vaseline or sweet oil daily. V.

PERSISTENCE OF THE URACHUS.

Male foal, ten days old, is doing well and thrifty, but passes no urine by the normal channel. Urine escapes in small quantities from the navel. One veterinarian says to tie it; another says do not. S. C. S.

Ans.—This condition was discussed at length in a special article by "Whip" in the issue of April 28th. You must first ascertain whether the normal channel is pervious. If you have not noticed urine escape in the normal way, have your veterinarian pass a small catheter to break down any obstruction that may exist. When you see urine escape through the catheter, you will know that it is all right in that respect; but if this passage be not pervious, and you tie the navel, the urine will not be able to escape from the bladder by any means. When assured that the normal passage is pervious, you proceed to check the flow from the navel. If the cord still protrudes sufficiently to be tied, it is good practice to tie it, and repeatedly dress with an antiseptic, as a five-per-cent. solution of carbolic acid, until healed. If you cannot tie the cord, apply equal parts butter of antimony and tincture of myrrh with a feather twice daily until the parts become dry and urine ceases to escape. V.

DIARRHOEA IN CALVES.

Lost two calves, one at three and one at two weeks. They were fed on separated milk and stock food. They took diarrhoea, and the faeces were fetid. To one I gave castor oil and laudanum in repeated and increasing doses, until I gave one ounce oil and teaspoonful of laudanum, but it died. Now another, six weeks old, is becoming affected. It seems to be contagious. W. R.

Ans.—I do not think the disease is contagious, but caused by the food and local conditions. In cases of diarrhoea, where the patient is not too weak, it is good practice to give a dose of castor oil to remove any irritant; but repeated doses, such as you gave, do harm. In fact, the oil counteracted the action of the laudanum. Give the calf now affected two teaspoonfuls of laudanum in a little fresh milk every four hours, until the diarrhoea ceases. Change his quarters, if possible, and give new milk with about one-sixth lime water, until he has thoroughly recovered; then gradually fetch him back to separated milk, with a little ground linseed meal; continue the lime water. Disinfect and whitewash the stalls in which these calves have been kept, as there is a contagious form of diarrhoea, and while it usually attacks very young calves, it is well to observe all precautions. V.

JOHN DRYDEN & SON

BREEDERS OF

CRUICKSHANK SHORTHORNS AND SHROPSHIRE SHEEP.



Catalogue of twelve young bulls of choicest breeding—straight legs, strong bone, thick flesh, good size, splendid quality—sent on application. Station and Post Office, Brooklin, Ont.



Imp. Bampton, Chancellor No. (78286)

Imported and Canadian-bred bulls, cows and heifers for sale of the following families: Broadhocks, Village Maid, Marchioness, Victoria, Beauty, Merry Lass, and other good strains. Four extra good bulls, ready for service. H. J. DAVIS, Importer and Breeder of Shorthorns and Yorkshires, Woodstock, Ont., C. P. R. and G. T. R. main lines.

OAK LANE STOCK FARM.

Shorthorns Cotswolds Yorkshires and Barred Rock Fowls.

Imported and Canadian-bred Shorthorns. Open to take orders for N.-W. trade. Write for prices. Satisfaction guaranteed.

GOODFELLOW BROS., MACVILLE, ONT.

T. DOUGLAS & SONS,

STRATHROY STATION & P. O., BREEDERS 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. Farm 1 mile north of town.

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 E. H. BULL & SON, C. P. R. and G. T. R., Brampton, Ont.

FOR SALE Jersey Cattle and reg. Cotswold Sheep for sale. Some very fine heifers, and two bull calves, and three 8 months old, of our very best stock; also some very fine ewes. William Willis & Son, Pine Ridge Farm, Newmarket, 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. EVERETT, Box 552, Chatham, Ont.

Riverside Holsteins

80 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 Pietertje and Johanna Rue 4th Lad. Write for prices.

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

FOR SALE—35 HOLSTEIN SPRING CALVES of the famous De Kol and Abbekerk breeding, from deep-milking dams, for March, April and May delivery; also cows and heifers. E. GEORGE & SONS, Crampton, Ont.

HOLSTEINS, TAMWORTHS, COTSWOLDS Present offering: Bull calf, 8 mos., won 4 first prizes. Litter 3-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.



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 Douglassdale, 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. One mile from electric cars.

QUESTIONS AND ANSWERS. Veterinary.

ECZEMA.

Colt constantly rubs himself against fences, etc. Skin appears all right, and there are no lice. A. S. N.

Ans.—He has eczema. Clip him; give the whole body a thorough washing with strong, warm soft soap suds, applied with a scrubbing brush. Then dress, twice daily, with corrosive sublimate, twenty grains to a quart of water. Give, internally, one ounce Fowler's solution of arsenic, night and morning, every alternate week, as long as necessary. V.

UNTHRIFTY CALVES.

Our calves are fed on new milk for two weeks, then on skim milk and gruel of ground wheat and oil cake. We also give all the hay and oat chop they will eat. Some are doing well, but others gaunt, and seem to have colic at spells. C. C.

Ans.—The food is too strong for the calves to digest. Some can assimilate it, others cannot. Separate the unthrifty from the others, and feed on whole milk, hay and oat chop. Give grass as soon as it grows. Give each calf, night and morning, one of the following powders: Take of sulphate of iron, gentian and nux vomica, each one ounce. Mix, and make into thirty-six powders. V.

MISCELLANEOUS.

1. Horse's sheath swells when in the stable. The swelling disappears on exercise.

2. Horse has tumor or wart the size of a robin's egg on outside of sheath.

3. Mare struck her leg about half way between knee and fetlock. A bony growth the size of a hen's egg has appeared, this interferes with the ligament, and causes lameness. R. J. M.

Ans.—1. Give him a purgative of eight drams aloes and two drams ginger; follow up with two drams nitrate of potash night and morning for a week. Give regular exercise. If necessary repeat treatment in two weeks.

2. Remove this growth with a knife or excrescer, and apply butter of antimony to the seat once daily with a feather for three applications.

3. If the bony growth extends backward, and presses upon the ligament and tendon, an operation, which consists in the removal of the growth, by a veterinarian, will be necessary to remove lameness. If the pressure be not great, repeated blistering may cause sufficient absorption to relieve it. V.

PERIODIC OPHTHALMIA.

When I went to the stable one morning, one eye of my five-year-old mare was running water and half closed. In about a week it was all right. I drove her next morning, and the trouble returned. In about three weeks it got better, but the eye looked dim. The trouble appeared again about two weeks ago. I treated it, and it got better; but the eye is dimmer than before. J. K.

Ans.—This is a constitutional disease called specific ophthalmia, sometimes called moon blindness. There is a congenital predisposition to the affection, which cannot be removed. The attacks will, in all probability, reappear at variable intervals. Sometimes a month, or several months, elapses between attacks, and in most cases it results in cataract in one or both eyes, and, of course, total blindness. The attacks cannot be avoided, and all you can do is to treat as follows: Give a gentle purgative, as six drams aloes and two drams ginger; keep in a partially darkened stall, excluded from drafts and sun; bathe the eye three times daily with warm water, and after bathing put a few drops of the following lotion into the affected eye: Sulphate of atropia, fifteen grains; distilled water, two ounces. V.

Your System Demands Help.

Just Such Help as can Best be Supplied by the Use of the Great Restorative

Dr. Chase's Nerve Food.

Spring seems to be the time of year when the vitality of the human system is at its lowest ebb.

To most people the winter season is a trying time. Either as a result of colds or as the effects of indoor life with poor ventilation and the use of artificial foods, the system gets run down and exhausted, the blood becomes thin and watery and the nerves play out.

Headache, sleeplessness, stomach troubles, loss of energy and ambition, feelings of discouragement and despondency are among the symptoms which cause distress.

It doesn't do to neglect these warning notes. Your system needs help, and you cannot do better than call to your aid Dr. Chase's Nerve Food.

If you have been reading the cases reported in the newspapers from day to day in which this great medicine has been instrumental in restoring health and strength to weak and suffering people you are no doubt already convinced as to its extraordinary medicinal properties.

Then why not make a test in your own case? You cannot possibly use a preparation which is so certain to prove of lasting benefit.

Dr. Chase's Nerve Food, 50 cents a box, 6 boxes for \$2.50, 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.

AYRSHIRES. We are now offering 8 Ayrshire bulls from 5 to 15 months old, smooth, straight and bred right. Prices right if sold quick. Also Buff Orpington Eggs, \$1 for 13.
H. J. Whittaker & Sons,
North Williamsburg P.O., Morrisburg Sta.

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

FOR SALE.—Sir Pietertje Josephine Keyes, No. 2095, Vol. 5, H.-F. Assn. of Canada; calved 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 Koniggen Van Friesland 5th. Also a few bull calves sired by the above bull.
J. A. CASKEY, Madoc, Ont.

SPRING BROOK AYRSHIRES are bred for profit. Heavy milkers, high test, 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.

AYRSHIRES FOR SALE. Four yearling bulls and 6 heifers, and spring calves of both sexes, all sired by Minto (10490). Bred 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. Dairy man of Glenora, bred from Imp. sire and dam, at head of herd. Young bulls fit for service and bull calves and females for sale.
N. DYMENT, Clappison, Ont.

SPECIAL OFFER—BULL CALVES out of such dams as Cherry of Hairlock and Morjorie, one of the best Silver King cows in herd. These calves will be sold at very low prices, quality considered.
ISALIGH ORANGE FARM, J. N. Greenshields, Prop. Danville, P. Q.

AYRSHIRES **YORKSHIRES** Choice February and March calves, sired by Prince of Barcheskie (imp. in dam) and deep-milking dams. Cheap if taken soon. An extra good yearling bull. Write us, Yorkshires of different ages.
ALEX. HUME & CO., Menie P. O., Ont.

AYRSHIRES FOR SALE Some choice heifer calves. Price, from \$15 to \$25 each. Registered.
JOHN FERGUSON, Camlachie, Ont.

GOSSIP.


Messrs. R. Reid & Co., Hintonburgh, Ont., ordering a change of advertisement, write: "Our Tamworth sows have never had as fine litters as this year; large litters of strong pigs, sired by Whitacre Bruce (imp.) and Darfield Grandee (imp.), which enables us to supply pairs not akin. We have one imported sow, in pig, to Darfield Grandee for sale, and two sows, imported in dam, about seven months old, also two young boars, seven months old, good ones, imported in dam, of the bacon type."

Sir William Van Horne, President of the Canadian Pacific Railway, was interviewed in New York not long ago, by a young reporter, who insisted on treating him like a foreigner. The Montreal capitalist took it as a matter of course until the interviewer asked innocently: "Did you ever have anything to do with our American railroads, Sir William?"
The good knight's eyes sparkled as he answered: "Oh, yes. I served on both Alton and Illinois Central."
"In what offices?" asked the scribe, with a pencil ready.
"I sold books on Alton and oranges on the Illinois Central," said the president of the Canadian Pacific quietly; "but that was some little time ago."

Messrs. F. Martindale & Son, York, Ont., make a change in their advertisement of Shorthorns and Berkshires, and write: "We are now offering some grand cows and heifers with exceptionally good breeding, some having calves at foot and are bred again, others are in calf. Our calves by Bandoleer—40106—are coming grandly. He has turned out to be a bull of the right type, full of quality, with plenty of size. We are also offering one boar seven months and sows seven and nine months old, some bred to our stock boar, Benjafield's Royal Carlisle, whose sire and dam are imported, and were first-prize winners at the English Royal. Following are some of our recent sales: A grand red bull, twelve months old, to John Bird, Canfield; one red bull, nine months old, to William Lang, Oneida; one two-year-old bull to John Beer, Binbrook; a roan bull, ten months old, a choice one, to Hanson Bros., Blackheath; a good roan bull, twelve months old, we sold, by order, to H. & G. Bennett, Sandringham. He is of good quality and size, and gave good satisfaction. Also an extra good roan, ten months old bull, of our Waterloo Daisy family, we sold to the Messrs. Simmons, Garnet. This one is closely connected to the cow, Bella of York, which we have recently sent to take part in the dairy test at St. Louis Exposition. A grand eight months bull and a Berkshire sow nine months old went to Alfred Wismer, Dalhousie."

FUNNY ADVERTISEMENTS.

"Annual sale now going on. Don't go elsewhere to be cheated—come in here."
"A lady wants to sell her piano, as she is going abroad in a strong iron frame."
"Wanted, experienced nurse for bottled baby."
"Furnished apartment suitable for gentlemen with folding doors."
"Wanted, a room for two gentlemen about 30 feet long and 20 feet broad."
"Lost a collie dog by a man on Saturday answering to Jim with a brass collar around his neck and a muzzle."
"Wanted by a respectable girl, her passage to New York, willing to take care of children and a good sailor."
"Respectable widow wants washing for Tuesday."
"For sale—a pianoforte, the property of a musician with carved legs."
"Mr. Brown, furrier, begs to announce that he will make up gowns, capes, etc., for ladies out of their own skin."
"A boy wanted who can open oysters with reference."
"Bulldog for sale; will eat anything; very fond of children."
"Wanted an organist and a boy to blow the same."
"Wanted, a boy to be partly outside and partly behind the counter."—[Lyre.



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.

BARREN COW CURE

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

W. W. CHAPMAN,

Secretary of the National Sheep Breeders' Association,
Secretary of the Kent or Romney Marsh Sheep Breeders' Association,
and late Secretary of the Southdown Sheep Society.
Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.
Address: **HOWRAY HOUSE, NORFOLK ST. LONDON, W. C., ENGLAND.**
Cables—Sheepsco, London.

"BROAD LEA OXFORDS."

An offering choice ewe and ram lambs, shearing ewes and a few shearing rams for flock headers. Also young Yorkshire pigs of the best bacon type. Teeswater, G. T. R. **W. H. ARKELL,** Mildmay, G. T. R. on Teeswater, Ont.

Linden Oxfords.

A fine bunch of yearling rams, imported and home-bred; also early ram lambs fit for show.
R. J. HINE, Dutton, Elgin County, Ont.

SHROPSHIRE

shearing rams, shearing ewes, ram and ewe lambs of choice breeding. Prices right. **GEO. HINDMARSH,** Alisa Craig, Ont.

Lincoln Sheep and Shorthorn Cattle

Choice Lincoln Lambs of both sexes. Several carloads choice yearling rams and two carloads of one and two-year-old ewes, ready for Sept. and Oct. delivery. Also some choice young bulls, cows and heifers, which will make good herd foundations.
F. H. NEIL, PROP. Telegraph and R.R. Station, **LUCAN, 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.

FAIRVIEW SHROPSHIRE.

Fairview is now the home of more high-class rams and ewes than ever since the flock was founded. The flock has produced more winners than any other. Twenty-three years' close experience accounts for it, with nothing but the best being always mated. Extra good values offered for summer shipments.
JOHN CAMPBELL, Fairview Farm, Woodville, Ont.

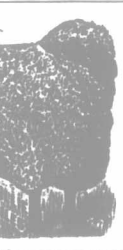
COTSWOLDS

Shearing ram, shearing ewes. Ram lambs and ewe lambs from 450-lb. ram, winner of silver medal, Toronto.
ELGIN F. PARK, Box 21, Burgessville, Ont.

"MODEL FARM"

SHROPSHIRE

Everything sold that has been offered for sale. Am booking orders for rams and show flocks. August delivery. Write for prices.
W. S. CARPENTER, PROP., SIMCOE, ONTARIO.




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.

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.



If you were sure you could buy for 60c. per foot a satisfactory hog trough good for 10 years' hard usage, you would buy quick, wouldn't you? Leal's Patent Steel Trough will fill this bill easy. Honestly made, heavy and strong, nice rounded edges. It's a winner. Money back if not as represented. Every foot guaranteed.
Get catalogue from **WILBER S. GORDON, TWEED, ONT.**

TAMWORTHS

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

TAMWORTHS

At living prices. Have some excellent young stock of good bacon type; both sexes. **LOUIS D. BARCHFIELD,** Grimsby, Ont., P. O. and Station. Telephone on farm.

TAMWORTHS AND HOLSTEINS

Boars fit for service, sows bred and ready to breed, 30 boars and sows from 2 to 4 months; a fine lot of March pigs. Pairs not akin.
BERTRAM HOSKIN, Grafton Sta., G. T. R. The Gully P. O.

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.

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; pedigree and sale delivery guaranteed. Address **E. D. GEORGE,** Putnam, Ont.

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

YORKSHIRES.

Six sows to farrow this month to imported boars. Orders booked for pigs at weaning. **EGGS—**M. B. and W. H. turkey, \$2.50 per setting. B and W. Rock, B. Orpington, B. Wyandotte, and Rouen duck eggs, \$1.
T. J. COLE, Box 188, Bowmanville, Ontario.

Chester White Swine

between four and five months old; either sex; good bacon type. Sires and dams were prize winners at Toronto and London fairs. Write or prices. **W. E. WRIGHT,** Sunnyside Stock Farm, Glanworth, Ont.

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 our orders. **Joseph Featherston & Son,** Streetsville P. O., Ont. C. P. R. station, Streetsville; G.T.R. station, Clarkson.

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.

BEKESHIRE AND YORKSHIRE.

For Sale—Boars fit for service; sows in farrow and ready to breed, and younger stock, all of the ideal bacon type. Pairs not akin. **JOHN BOYES, JR.,** Rosebank Farm, on Churchill, Ont.

FOR SALE: Yorkshires and Holsteins

Best type and quality. Young stock constantly on hand. Prices right. **E. HONEY,** on Brickley P. O., instead of Warkworth.

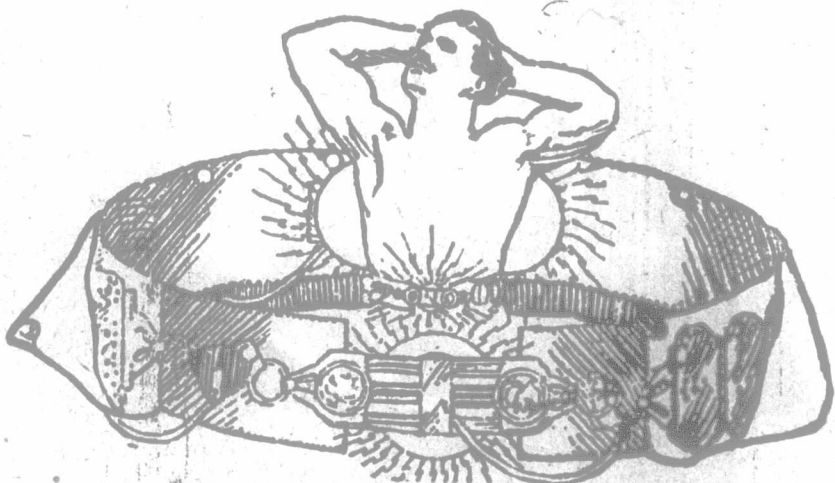
MAPLE LODGE BERKSHIRES.

Although leaving Willow Lodge Farm and moving to Brampton, we will still be in a position to supply the same type and breeding as usual, with some fresh blood added, and in as large numbers as ever before. Have a few young boars left, ready for service, and some fine young sows ready to be bred. Our young pig are coming in good form this spring. Am booking orders right along. Old customers, as well as new, will find me, after 1st April, at Box 191, Brampton. **WILLIAM WILSON,** on Brampton, Ont.

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

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It's
Easy
to
Wear



Cures
While
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Sleep.

MORE PRAISE FOR DR. McLAUGHLIN'S ELECTRIC BELT

It does the work! That is what makes the Business for my Electric Belt. When a man has squandered the earnings of years on quacks and all kinds of drugs and got no relief, and then comes to me and I cure him, he is my friend and he wants others to know what he has found out—that my Belt will cure where nothing else will.

A SURE CURE AND A CHEAP ONE,

As every man has been cured by my Belt says it is the best and cheapest cure he ever found. You spend more in a month doctoring than it costs you. It is cheap because it saves you future doctor bills.

It is a Wonder.

Dr. McLaughlin:

Dear Sir: I take pleasure in dropping you a few lines about the Belt. It is a wonder. I have worn it off and on since I received it, and have never felt the slightest pain since. I can safely say that if I could not get another one like it I would not part with mine for five times its value. Wishing you luck and prosperity, I remain, yours truly, N. Girard, Strathcona, Alta.

Wouldn't Part With Belt for Any Price.

Dr. McLaughlin:

Dear Sir: The Belt you sent me is all you say it is, and more. I would not be without it at any price. Six days after I received it I went to work. I had been in bed for nearly a month with lumbago. I have had very little pain with my back since the first time I put it on. A few hours use of the Belt will make me O.K., even when I am feeling tired. I have recommended your Belt to a lot of railroad men, and I think your Belt will cure them. You are at liberty to use my name if you desire to do so. Yours truly, A. R. Carmichael, conductor, C.P.R., Calgary, Alta.

A New Man Again Since Using the Belt.

Dr. McLaughlin:

I might say, in answer to your letter, that the Belt has improved my condition wonderfully. The varicose veins are only about one-third the size they used to be, and I find that your Belt has also strengthened my whole nervous system. I feel like a man now to what I did before I commenced the use of your Belt. Yours very truly, Ed. McInnes, Indian Ford, Man.

Such letters as these are received every day. A great many of my patients are those who have tried and been disappointed so often that they had given up all hope. It is to such people as these that I offer my Belt on trial. I take all chances. If you will give me security you can use the Belt and

Pay After You Have Been Cured.

It is the only Belt that doesn't burn nor blister. It also cures Nervous Disorders, Weak Back, Lumbago, Sciatica, Liver, Kidney and Bowel Troubles, "Come-and-Go" Pains and that Tired Feeling after every other treatment has failed.

CAUTION—Don't make the fatal mistake of thinking that any appliance sold as an electric belt will cure you. Electricity must be applied properly, and many of these "free" and "just as good" belts give no current at all, and some which do, burn and blister so they cannot be used. The best is none too good for you, so come to me and I will not disappoint you.

FREE BOOK—I have a beautifully illustrated book which every man ought to read. Send for it. It will show you the way to health and happiness. I send it, closely sealed, FREE, upon request. Call if you can. **CONSULTATION FREE. I Have a Book for Women also.** Act to-day. Address—

OFFICE HOURS:—9 a.m. to 6 p.m.; Wednesday and Saturday till 8.30 p.m.

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Standard Scales

For railroad, hay, live stock, dairy, coal and platform.

For prices and particulars write or call on
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Ask your nearest hardware man or dealer for them.

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.



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The Home Specialist of Chicago, who Cures Varicocele. Established 1880.
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Varicocele Cured to Stay Hydrocele Cured in 5 Days

VARICOCELE—Under my treatment this insidious disease rapidly disappears. Pain ceases almost instantly. The stagnant blood is driven from the dilated veins and all congested varicose and swelling subsides. 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**—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 lectures mailed **FREE** upon application.
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direct from factory. Saves 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

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

Union Jack Bicycle Works
TILLSONBURG, ONT.

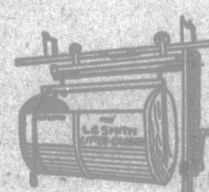
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5, 6, 9 and 12 foot widths. The favorite rollers for all the Provinces. Write for full description and reasons why Bissell's are the best. Address on



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THE L. O. SMITH FEED LITTER CARRIERS.

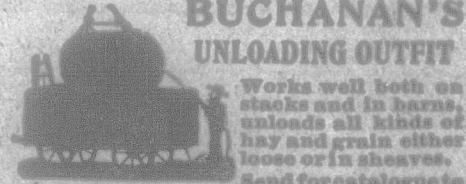


Patented June 10th, 1903. Can be adapted to any barn or farm building. Write us for particulars.
LYMAN C. SMITH, ONAWA, ONT.

Farmers Contemplating Marriage, These Already in Wedded Bliss,

should present their bride or family, as the case may be, with a **BEAUTIFUL MASON & BIRCH PLANO.** Liberal allowances made for old pianos and organs. Call and get our prices before buying.

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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.
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roof it with Corrugated Galvanized Steel Sheets, in 8ft. lengths. They are applied over sheeting or direct to rafters, making a light strong covering. Very lasting; lightning and fire proof. Ask for our free catalogue and send rafters and ridge lengths. For estimates
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ABORTION RETENTION OF PLACENTA Failure to Breed

Kellogg's Condition Powder is a positive cure for these diseases. Prevents stoma 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
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Coaster Brakes, Hedgehorn pneumatic proof tires and best equipment. 100 & 105 Models \$7 to \$12
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Great Factory Clearing Sale at half factory cost.
EARN A BICYCLE taking orders from sample wheel furnished by us. Our agents make large profits. Write at once for catalogue and try special offer.
AUTOMOBILES, TRIPS, Sewing Machines, Sundries, etc. half usual price.
HEAD CYCLE CO., Dept. 2540, Chicago

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in fencing a 100-acre farm, and get a stronger and better fence by building it on the ground with a

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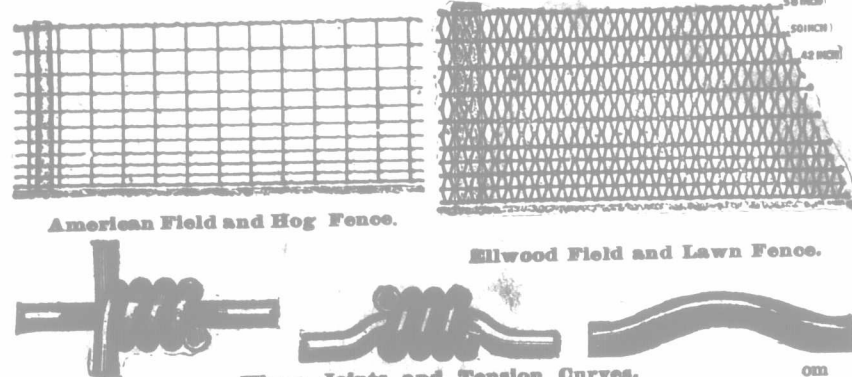
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LONDON FENCE MACHINE COMPANY
London, Ontario. Limited



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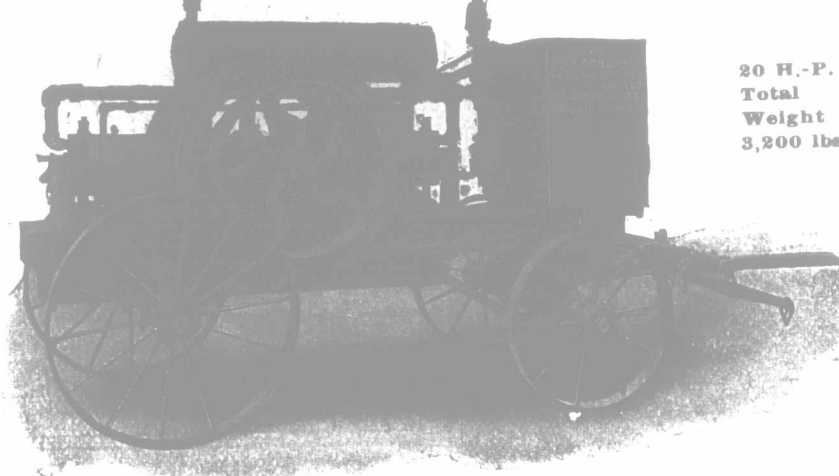
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Any farmer can stretch 300 rods of our American Fence in one day. Don't buy a fence that it takes you all summer to build. If your dealer doesn't handle our fence, write to us. Farmers and railroads from Halifax to Vancouver are using it.

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Patented and Pending. Our **Gasoline Threshing Engine.** Write for prices, etc., to **The McLaughlin 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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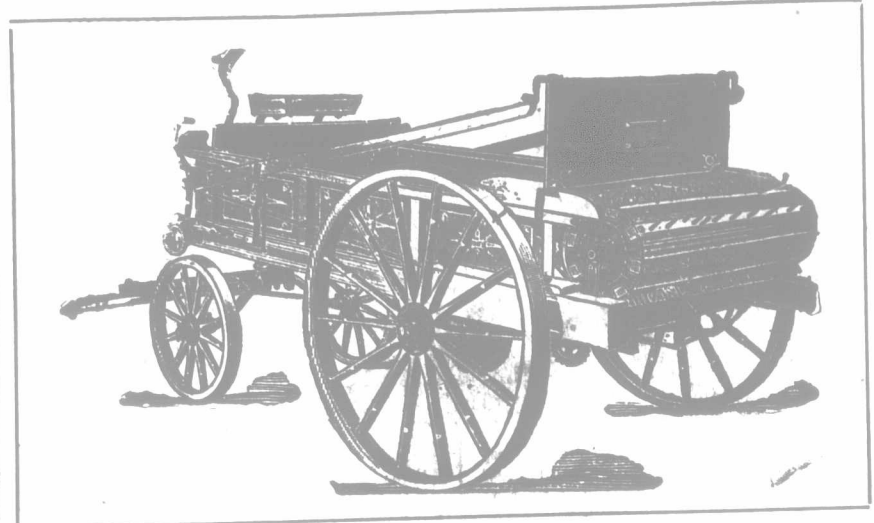
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OUR QUEEN CITY WAGON
with iron wheels, strong and of light weight and convenient to load and unload, a perfect wagon for the farm. Carries five thousand pounds. Write for catalogue of both wheels and wagons. This wagon should not be confused with the cheap American wagon with iron wheels now on the market.

H. F. ANDERSON & CO., WILCOX, Agents for Manitoba and the N.-W. T., always carry a full stock of our products. Write to save time, order wheels direct from factory.

Kemp's 20th Century Manure Spreader.



A CROP-MAKER and A LABOR-SAVER.

J. M. LeMoine, Director, Government Agricultural School, Compton Model Farm, Compton, Que., Aug. 19, 1903.
Mr. J. L. Thornton, Barnston, Que.:
Dear Sir,—Some years ago I used two of the Kemp Manure Spreaders, which gave me the greatest satisfaction. I found the manure was well pulverized and evenly spread on the land. The result was an even crop. I have no hesitation in strongly recommending your Spreaders as one of the best labor-saving machines of the day. I consider that they are indispensable to good farming at present.
Yours truly, JOHN M. LEMOINE, Director.

Drop a postal card for our Booklet, entitled "Multiplying His Acres."

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are rented far more quickly than others. Besides the insurance premium is brought down to the lowest possible figure. Metal ceilings and wall decorations render the interior of your building fire-proof. They also add a beauty and attractiveness which wood and plaster fail to give. The expense and annoyance of constant repairing is done away with. Our catalogue will interest you. It's yours for the asking.

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Made for the Man Who Wants the Best.

THE GREAT WESTERN Manure Spreader

is the only Spreader with an ENDLESS APRON and the many advantages which it possesses. It's always in place and ready to receive the load without any turning back either by hand or complicated, easily broken machinery. The front and rear axles are of same length which, with the Broad Tires prevents rutting of fields, meadows, etc. and makes wet, dry, frozen, light, chaffy, packed or caked, spreads fine, plaster, wood ashes, cotton-seed and loads per acre. Made of best material in every way.

LIGHT DRAFT. SPREADS ALL KINDS OF MANURE. Can be changed instantly to spread thick or thin while the machine is in motion—5 to 25 loads per acre. Has the only successful **END GATE AND BEATER AND HOOD PROTECTOR IN USE.** All parts breaking within one year under a **POSITIVE GUARANTEE** as to quality, capacity and durability. Will be replaced without charge. Write for free Illustrated and Descriptive Catalogue—the best and most complete spreader catalog ever published.

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