

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE
SUCCEED
FOUNDED 1866

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

PUBLISHED AT LONDON, ONTARIO. MAY 15, 1901. WINNIPEG, MANITOBA. No. 526

Land for Everybody.

Free Grants of Government Lands.
Cheap Railway Lands for Sale on Easy Terms.

GOOD SOIL. PURE WATER. AMPLE FUEL.

Take your choice in

Alberta, Assiniboia, Saskatchewan or Manitoba.

Most desirable land can be obtained in Southern Alberta in close proximity to the Calgary and Edmonton Railway and the Crow's Nest Pass Railway, suitable for Mixed Farming and Ranching on both a large and small scale.

Most desirable land can be obtained in the Olds District, along the line of the Calgary and Edmonton Railway, about fifty miles north of Calgary.

In the Prince Albert, Duck Lake and Rosetown Districts, on the line of the Qu'Appelle, Long Lake and Saskatchewan Railway.

In the Beaver Hill District and along the line of the Manitoba and Northwestern Railway.

For full information concerning these Districts, Maps, Pamphlets, etc., FREE, apply to

Osler, Hammond & Nanton,
LAND OFFICE,
440 Main St. WINNIPEG, MAN.

Ensilage Seed Corn

"The Yield is What Counts."

MAMMOTH SOUTHERN, GIANT PROLIFIC, YELLOW DENT, LEAMING YELLOW (early maturing), WHITE CAP YELLOW DENT (early maturing), RED-COB WHITE. Read the following from one who has tried our Mammoth Southern and knows what it is. Don't let your dealer catch you with some Cheap John variety by that name. Get the PURE article—take no other. Write us if your dealer does not keep ours, and we will tell you where to get it pure.

TILSONBURG, ONT., JAN. 24, 1901.

Messrs. E. R. ULRICH & SONS, SPRINGFIELD, ILLINOIS:

Gentlemen,—I notice your advertisement in FARMER'S ADVOCATE, of Seed Corn. I used to buy seed corn from you several years ago, and it was always good and gave me great crops—20 to 24 tons to the acre, but late years I have bought my seed corn from which I have had poor crops, yielding 4 to 6 tons less per acre than what I got from your seed. Two years ago one-half of my seed failed to grow at all—had to re-plant with other seed. Are you still selling that good, sound Mammoth Southern Sweet Corn that I used to buy from you? If so, what would it cost me per bushel, delivered in bond? And have you some good earlier varieties that you can recommend as large yielders of ensilage? We like some earlier that will mature for ensilage. Earlier varieties make richer and sweeter silage, but not so much of it to the acre. I grow 60 acres for silage. Yours truly,
E. D. TILSON.

E. R. ULRICH & SONS,

"Blood will tell." Springfield, Ill., U.S.A.

Family Knitter

Cheapest, Simplest, Best.
Price, \$8.00.
Write for circular.

Dundas Knitting Machine Company,
DUNDAS, ONTARIO.

CONTENTS OF THIS NUMBER.

EDITORIAL.	PAGE.
TORONTO'S OPPORTUNITY..	327
EXTENSION OF CANADIAN PURE-BRED STOCK TRADE..	327
SELECTING STUD STOCK ..	327
HOW TO GROW SUGAR BEETS ..	328
PROVINCIAL LEGISLATION..	328
THE GOVERNMENT SEED SHOP ..	329
STOCK.	
JUMPING HARD ON THE THOROUGHBRED ADVOCATES ..	329
SHROPSHIRE SHEARLING RAM (No. 1292) (ILLUSTRATION) ..	329
THE HARRINGTON HALL FLOCK OF SHROPSHIRE..	329
SHROPSHIRE RAM LAMBS (ILLUSTRATION) ..	329
CONTAGIOUS ABORTION IN COWS. ..	330
OUR SCOTTISH LETTER ..	330
WHY NOT KEEP SHEEP? ..	330
MILITARY TOURNAMENT AND HORSE SHOW. ..	331
LIPTON (2950) (10681) (ILLUSTRATION). ..	331
"THE HOLSTEIN INTEREST IN CANADA". ..	331
VARIOUS BREEDS OF CATTLE AT THE UNION STOCK YARDS, CHICAGO ..	332
RAISING AND FEEDING STEERS FOR PROFIT. ..	332
THE BRITISH EMBARGO ON CANADIAN CATTLE. ..	333
WILCOTT THUMPER (18452) (ILLUSTRATION)..	333
DRAFT HORSE BREEDING. ..	333
GOOD STOCK WATER SCHEME ..	333
SQUIRE RICKELL—74—(ILLUSTRATION)..	333
CONNAUGHT HEIFER—116—(ILLUSTRATION) ..	335
HERMIA—90—(ILLUSTRATION) ..	335
FARM.	
FARM SIFTINGS ..	333
SPRINGTIME ON THE FARM ..	334
CARE OF SUGAR BEETS DURING THEIR GROWTH ..	334
RAPE AS A FORAGE CROP. ..	334
THE TURNIP CROP ..	334
TRAINING A COLLIE ..	334
AVOID EXTREMES ..	334
A LIGHTNING ENQUIRY ..	335
CHARLOCK SPRAYING..	335
GIVE THE BOYS A CHANCE ..	335
DAIRY.	
THE SCORE CARD IN THE JUDGING OF BUTTER. ..	335
A DAIRY SCHOOL EDUCATION. ..	336
THE FARM SEPARATOR IN HOME AND CREAMERY BUTTERMILKING..	336
SUCCESSFUL CALF FEEDING ..	336
A HINT FROM ABROAD ..	336
CLEAN MILKING IMPORTANT..	336
APIARY.	
BEE MOTHS (ILLUSTRATED) ..	337
GARDEN AND ORCHARD.	
HORTICULTURAL SOCIETY NOTES. ..	337
GARDENING FOR PROFIT, PLEASURE, AND HEALTH. ..	337
PROFITABLE AND UNPROFITABLE APPLE GROWING ..	338
WATERMELON RAISING ..	338
THE HORSE HOE FOR GRAIN CROPS..	338
POULTRY.	
THE SPRING CHICK ..	338
THE BATTLE AGAINST LICE IN POULTRY ..	339
DUCK RAISING..	339
WAYSIDE HINTS ..	339
QUESTIONS AND ANSWERS.	
VETERINARY: A VARIETY OF AILMENTS; ATROPHY OF THE LIVER IN PIG; ABORTION IN MARE—MARE WITH MIXED GAIT; DISEASED LIVER IN COW; DISTEMPER IN DOG; FATALITY IN YOUNG PIGS; HEAVES; BLACK-QUARTER IN CATTLE; PHANTOM PREGNANCY ..	339, 340
MISCELLANEOUS: TO KILL QUACK GRASS AND MALLOW; CLOSING A THOROUGHFARE; MUSHROOM CULTURE; LICE ON COW; FLEABANE IN CLOVER; PLAN OF STABLE WANTED FOR POULTRY, HOGS, HORSES AND SHEEP; CHART FOR BEEF RING; TO INVEST OR NOT TO INVEST?; LYE FOR SPRAYING TREES; VIEWS OF THE CANADIAN WEST WANTED..	340, 341
MARKETS.	
CHICAGO MARKETS ..	341
TORONTO MARKETS ..	341
BUFFALO MARKETS ..	341
HOME MAGAZINE.	
THE FAMILY CIRCLE..	342
"ON THE THAMES" (ILLUSTRATION). ..	342
THE QUIET HOUR ..	343
THE CHILDREN'S CORNER ..	343
"CONVALESCENT" (ILLUSTRATION) ..	343
GOSSIP ..	344, 345, 346, 347, 349, 351, 352, 353, 355
NOTICES ..	345, 346, 355
BOOK REVIEWS ..	346
ADVERTISEMENTS ..	325 and 326, 344 to 356



ANALYSIS. GUARANTEED:
PURE LARD, 99.78%
WATER, 0.22%
100%
THE CPC LARD is the finest Lard in this country, guaranteed pure. Ask your grocer distinctly for it, and all other goods with same brand are guaranteed by us.

At our Store, next Post Office, you get all kinds of choice cured and fresh pork products, choicest Sausage, Bologna, and Canned Meats.

Cheese and Butter.

Makers of these articles, in many instances, do not pay the necessary attention to the quality of the Salt they use. Some people think that "Salt is Salt," and it does not matter where it comes from or who makes it. This is a great mistake, for it is essential that to produce the best Butter or Cheese nothing but the purest Salt should be used. The number of prizes obtained by users of—

COLEMAN'S OR RICE'S Dairy Salt

at the various exhibitions is conclusive proof that these brands of Salt stand unrivalled.

FOR PRICES, ETC., ADDRESS

R. & J. RANSFORD
OLINTON, ONT.

Established 1868.

Good Butter

Windsor Salt makes good butter because it dissolves easily and quickly; and, too, because the butter receives the full goodness of each flake of the Salt and the delicate flavor of pure Salt.

Windsor Salt.

Best Grocers Sell It.

PUBLISHED TWICE A MONTH, AT LONDON AND WINNIPEG, CAN.

PLEASE MENTION FARMER'S ADVOCATE.

BRANTFORD STEEL WIND MILLS

19th CENTURY
GALVANIZED ROLLER BEARINGS
OF DEARER HOW FOREGOT, THESE BOYS ARE
20th CENTURY
MY! WHAT A COMFORT THAT BRANTFORD MILL IS

WOODSTOCK STEEL WINDMILLS

POWER AND PUMPING MILLS, STEEL TOWERS AND FLAG STAFFS, IRON AND WOOD PUMPS, MAPLE LEAF GRAIN GRINDERS, BEE SUPPLIES.

OLD SHAPLEY CO. LTD. BRANTFORD CAN.

WOODSTOCK STEEL WINDMILLS

Galvanized or painted.
For Power of Pumping.

DANDY Windmill
with Graphite Bearings, runs easy and controls itself in the storm.

GRINDERS, PUMPS, WATER TANKS, DRINKING BASINS, AND SAW BENCHES.

WOODSTOCK WIND-MOTOR CO.,
WOODSTOCK, ONT. (Ltd.)

Know Lump Jaw

Be able to detect Lump Jaw when you see it; the safety of your herd may depend upon it. Know also how to thoroughly cure it, and how to cure a score more of the most stubborn ailments of cattle and horses. Send for our FREE ILLUSTRATED PAMPHLET on Lump Jaw and its cure, together with instructions for promptly removing Spavins, and all other enlargements by use of

Fleming's Lump Jaw Cure.

Branchton, Ont., July 20, '00. Messrs. Fleming Bros.,—Two applications completely cured a discharging tumor on a two year old heifer, and 8 or 9 applications removed a hard painful tumor from the abdomen of another. The tumor was 11 x 4 inches in size and 3 inches thick, and so painful we expected to lose her. One application almost removed the pain. We used Fleming's Lump Jaw Cure on it as a last resort. We would not be without your remedy, under any consideration.

HUGH WHITE.

Price \$2 per bottle, or three bottles for \$5. Money back if it fails. At druggists, or sent prepaid to any address. Free—Our illustrated Pamphlet to readers of this paper.

FLEMING BROS., Chemists
Room J, 58 Bay Street, TORONTO, Ont.

NO SPAVINS

The worst possible Spavin can be cured in 45 minutes. Curbs, Splints and Ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

Write to-day. Ask for Pamphlet No. 1.

FLEMING BROS., 58 Bay St., Toronto, Ont.

THE COMMON SENSE BOLSTER SPRING.

WINDSOR BOLSTER SPRING CO.

FOR TRANSFORMING COMMON WAGONS INTO FIRST-CLASS SPRING VEHICLES. THE BEST FARM-WAGON SPRING IN THE WORLD.

To carry 1,000 pounds, per set.	\$ 5 00
" 1,500 "	" 6 00
" 2,000 "	" 7 00
" 3,000 "	" 8 00
" 4,000 "	" 9 00
" 5,000 "	" 10 00
" 6,000 "	" 11 00
" 7,000 "	" 12 00

The only truly graduated bolster spring in the market. They always afford a spring for light and heavy use. Every set of springs guaranteed to give entire satisfaction. If your dealer does not handle them, write us direct.

Windsor Bolster Spring Co., Windsor, Ont.

DR. HESS' STOCK FOOD

FOR HORSES. FOR CATTLE. FOR SHEEP.

DR. HESS' STOCK FOOD

It makes the animals eat well, do well and pay well. It produces that sleek, glossy coat that commands the fancy price.

Cows fed on DR. HESS' STOCK FOOD give more and richer milk. Make a test: your money back if it doesn't do what we claim.

Is a Guaranteed Flesh Producer.

7-LB. SACK, 65c.; 12-LB. SACK, \$1.00. Sold by dealers generally, or Address: THE GREIG MFG. CO., Canadian Agents, MONTREAL. For two-cent stamp we will mail you our 64-page veterinary book.

Address: DR. HESS & CLARK, ASHLAND, O., U. S. A.

PROVAN'S PATENT REVERSIBLE Carriers, Fork and Slings

FOR ROUND IRON, WOOD, OR ANGLE STEEL TRACKS.

Have now become a standard of excellence with the farmers of Canada and the United States. At the World's Fair, Chicago, 1893, the only medal and diploma given on hay carriers, forks and slings was awarded to us on these implements. Following is a copy of the judges' award: AWARD.—"For open trip hook to receive the sling; automatic clutch, adjustable for size of load desired; ingenious design of stop-block, which enables perfect control of carriage; no springs required for locking car, which has motion in all directions; compact form of fork, which can be tripped in any position; the car is reversible and of double action; for novelty, ingenuity and usefulness, excellence of material and construction. Manufactured by

JAMES W. PROVAN,
OSHAWA, ONT., CAN.
Special discount for cash. Correspondence solicited.

Built on the interchangeable plan.

All machines built so must be exactly alike, each part standardized, and a plunger or valve or any other part from one must fit all. This saves money for the users of the

SPRAMOTOR

Any part can be supplied at once from London, and it will fit in the machine without the use of a file. Every part works smoothly together and without friction. More solid brass by weight in the Spramotor than any 3 inferior spray pumps made. Awarded first place at the Government Spraying contest. It will spray your orchards, kill the wild mustard, paint and whitewash your buildings.

An 84 page treatise free.

SPRAMOTOR CO.
London, Can.

The Modern Way to Destroy Sheep Ticks

IS BY THE USE OF

Instant Louse Killer.

It is not a dip, but a powder that can be applied in zero weather. No slop, no muzz, no danger. There's no profit in letting ticks sap the life out of your sheep during winter, and there is no longer any call for it. With **INSTANT LOUSE KILLER** the weather cuts no figure. Examine your sheep at once, and you will probably find ticks, and lots of them. Don't wait on the weather, wait on the sheep with a package **INSTANT LOUSE KILLER** (guaranteed).

Put up in 1-lb. packages, with perforated top, ready for use. Very convenient. Price, 35c.

Address: The GREIG MFG. CO., Montreal, Canadian Agents.

SOLD BY DEALERS GENERALLY.

David Maxwell & Sons,
ST. MARY'S, ONT.

PATENTED

STEEL ROLLER BEARINGS, IMPROVED DETACHABLE LINK,

IMPROVED STEEL FRAME, COMBINED LEVER AND FOOT DRIVE.

Improvements you will not find on other churns. Do you want the best? Then don't purchase until you see it. Sold by the leading wholesale houses in the Dominion.

No.	CAPACITY.	Churns from
0	6 gl.	to 3 gl. cream.
1	10	1 to 5 "
2	15	2 to 7 "
3	20	3 to 9 "
4	25	4 to 12 "
5	30	6 to 14 "
6	40	8 to 20 "

SOLD BY ALL LEADING WHOLESALE HOUSES AND DEALERS.

STAY AT HOTEL LELAND

The Leading Hotel of the West.

ALL MODERN CONVENIENCES, RATES, \$2 to \$1 PER DAY. BUS MEETS ALL TRAINS.

W. D. DOUGLAS, Prop., Winnipeg, Man.

Catalogue Printing our Specialty.

Many of the best Catalogues in Canada are produced by us. Latest type faces, designs, ornaments, and modern machinery.—Best in America. Up-to-date covers designed by special artists without extra charge.

London Printing & Litho. Company, Ltd., LONDON, ONTARIO.

SPRAY PUMPS

WE OFFER ONE MONTH FOR The "America" Spray Pump

AS FOLLOWS:

As shown in cut, 2 leads of hose, 2 nozzles, for top or side of barrel.

\$9.00 cash

Or as shown in cut, but 1 hose and 1 nozzle,

\$7.50 cash.

Write quick:

Ont. Wind Engine & Pump Co.
(LIMITED).
TORONTO, - ONTARIO.

YOU SHOULD KNOW:

That in the ten days preceding April 26th we sent out direct from our school

SIXTEEN YOUNG MEN
FOURTEEN YOUNG WOMEN

into business offices in this city. This work is going on every month in the year—no vacations. You can enter any time and prepare in a short time for a good situation.

CATALOGUES FREE. WRITE—

CENTRAL BUSINESS COLLEGE,
TORONTO.
W. H. SHAW, PRINCIPAL. om

A BUSINESS EDUCATION IS NECESSARY ON THE FARM.

Mr. Daniel A. Campbell, of Port Elgin, Ont., says: "I could not have got along without it, and would not now part with the knowledge obtained for any amount of money. I find it just as useful to me on the farm as it was in business. When your business principles are applied to farming, it pays as well as any business, and is more independent. Every young man who wishes to succeed in any calling should have a business education, and the **NORTHERN BUSINESS COLLEGE** is, I believe, the best place in Canada to get it."

Write for catalogue and college journal, which contain many more such testimonials, to **C.A. FLEMING**, Principal, Owen Sound, Ont.

CENTRAL Business College
STRATFORD, ONTARIO.

A Commercial School of the highest standing. Our College has the reputation of doing the best work in business education in Canada to-day. Write for catalogue.

W. J. ELLIOTT, Principal.

BOYS FOR FARM HELP.

The managers of Dr. Barnardo's Homes are glad to receive applications from farmers or others for the boys who are arriving periodically from England to be placed in this country. All the young immigrants will have passed through a period of training in English Homes, and will be 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. 4-y-o.

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

LIGHTNING WELL MACHY PUMPS, AIR LIFTS, GASOLINE ENGINES
THE AMERICAN WELL WORKS.
AURORA ILL.-CHICAGO.-DALLAS, TEX.

GOOD ROADS MACHINERY CO. (Reg.)
JOHN CHALLEN, Mgr., HAMILTON, CAN.
"CHAMPION" Road Graders, Rock Crushers, Road Rollers, Street Cleaners, Macadam Spreading Wagons, Road Plows, Wheel and Drag Scrapers. Twentieth Century Catalogue now ready.

GOOD ROADS MACHINERY CO.,
HAMILTON, CANADA.

PLEASE MENTION FARMER'S ADVOCATE.

The Farmer's Advocate

"PERSEVERE AND SUCCEED." and Home Magazine. ESTABLISHED 1866.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

VOL. XXXVI.

LONDON, ONT., AND WINNIPEG, MAN., MAY 15, 1901.

No. 526

EDITORIAL.

Toronto's Opportunity.

Recognizing the need for a distinct advance in the facilities of the Toronto Industrial Exhibition, in order to sustain its position as a leader in the present era of remarkable Canadian progress, the management, at the close of the last fair, took stock of the situation. Through the press and otherwise, the mind of the Toronto people was gauged, and the views of those prominently identified with the chief industries of the Province were carefully taken into account. From every point of view it was felt that the beginning of the new century was a fitting opportunity to carry out the imperative work of improvement. To this end plans have been prepared and approved for the erection of an immense new Manufacturers' or Main Building, containing 100,000 square feet of floor space and estimated to cost over \$100,000; a new Dairy Building (which the FARMER'S ADVOCATE has repeatedly urged), 240 feet long by 60 feet wide, divided into different departments for the exhibit of butter and cheese, dairy utensils and a working dairy, and costing \$15,000; and a new Art Gallery costing \$10,000. A by-law to provide the money for the erection of these buildings will be voted on by the citizens of Toronto on the 31st of May, and if carried, as there appears to be every probability of its being so, the work will be proceeded with at once. The consensus of opinion among the business men of the city, and, in fact, among all who have given the subject due consideration, is that an investment in these permanent improvements is fully warranted by the returns that will accrue; and, in view of the immense numbers of prominent people from the Pan-American, as well as from Eastern and Western Canada, who will take in the Toronto Show from August 26th to September 7th this season, the latter must put its best foot forward. Many of the present buildings are out of date and wholly inadequate for the needs of so great a show. Toronto cannot afford to invite the foreign visitor without making the improvements suggested and doing it in a liberal spirit. The vote should be overwhelmingly in favor of the by-law.

In the event of the erection of the new Main Building, it is proposed to use the present Crystal Palace for the exhibit of vehicles, and the present Music Pavilion will be set apart as a "Women's Building."

The prize list has been revised, and will be found to contain many special and attractive features, including judging competitions for farmers and farmers' sons, buttermaking competition, sheep-shearing competitions, and other competitive tests in several departments. As the Toronto Fair immediately precedes the show of cattle at the Pan-American, special inducements are offered to breeders to show at Toronto. The list of prizes offered for Shorthorns alone amount to \$2,200, half of this amount being given by the Industrial and the other half by the Shorthorn Breeders' Association. Since the manufacturers of Canada are not exhibiting to any extent at Buffalo, they are, we understand, going to make an extra display this year at Toronto and other Canadian exhibitions. The prize lists will be ready for distribution about the end of this month. Manager Hill's correspondence indicates that there will undoubtedly be a much larger attendance of visitors from outside of Canada at the Toronto Fair this year than usual, many of whom will, without doubt, be on the lookout for good stock; hence, the breeders of Ontario should put forth a special effort to make

the display one that will be a credit to this country, and the same should be said in regard to agricultural exhibits generally.

Extension of Canadian Pure-bred Stock Trade.

The recent purchase in Canada, by Mr. Alex. Bruce, in conjunction with Mr. Wm. Nelson, of Liverpool, England, of a number of Shorthorn bulls for shipment to the Argentine Republic, in South America, elsewhere referred to in detail in this issue of the ADVOCATE, while not the pioneer exportation of pure-bred stock from this country to that—a trial consignment or two having been made a few years ago by Mr. W. C. Edwards, of Russell County, Ontario—indicates the possibility of a new and particularly desirable market for Canadian pure-bred stock, should the venture prove a financial success, as it is earnestly hoped it may. The present relations between Great Britain and the Argentine in regard to the importation and exportation of live stock, owing to recent outbreaks of foot-and-mouth disease, are such as to prohibit, for the time being, trade in that line, and the South American cattle-breeders in the meantime, in looking around for available supplies, have naturally turned their attention to Canada and the United States, where, for nearly a century, such stock has been propagated from importations from the parent land and bred with a gratifying degree of success, adding immensely to the value of the farm stock—and, consequently, to the wealth—of both countries on this side of the sea. It is well known that Argentine breeders are discriminating buyers, that the best is none too good for them, and that they are not open to the imputation of haggling over the price if the quality of the animals is good enough to suit them. A knowledge of the discretion used by our new customers in buying should prove an incentive to Canadian breeders to produce superior stock in large numbers, giving the necessary care and treatment to ensure their best development, in order that we may secure and hold the trade that has been opened.

The increasing interprovincial trade resulting from the rapid development of the West, the general prosperity prevailing in the country, and the demand for pure-bred stock from the Maritime Provinces and also from the sister Provinces of British Columbia and the Northwest, is gratifying and encouraging to breeders in all sections of the Dominion.

The organization of the Dominion and Provincial Stock Breeders' Associations is properly credited with much influence in bringing about this increased trade by their successful efforts to secure from the railway companies favorable freight rates for the shipment of registered pedigreed stock, making it possible and practicable to spread the influence of good blood over wide areas of the Dominion, a policy which we are confident will prove profitable in the near future to the railway companies as well as to the farmers. The opening up and settlement of new sections of the country results in the production of commodities the transportation of which brings revenue to the roads, and so the improvement of the breeding and quality of live stock brings trade and commerce in the shipment, for home and foreign consumption, of a better class of stock and of its products in the form of beef, bacon, mutton, wool, milk, butter, cheese, poultry, etc., and the benefit to producers and carriers is mutual.

The United States, our natural outside market for this class of stock, owing to its nearness and the adaptability of large areas of its territory for stock-raising, will doubtless continue to take a large share of our surplus, as it has done in the past, and

all that is needed to give the fullest scope to this great industry is the removal of the unnecessary and galling restrictions which, under the guise of protection, and at the whim of interested officialism, have been fastened upon it, vexatiously hampering a trade which, but for this, would be one of our most prosperous and satisfactory enterprises.

Selecting Stud Stock.

Pessimists are already "getting busy" uncovering the mould of the past to find a reason for their fears that, in view of the present activity of the horse market, horse-breeders will overdo the thing in the next few years. Looking at it one way, these pessimistic fellows have a little ground for their fears too, if past breeding by horsemen is taken as a precedent. If any old kind of horse is used as sire or dam, it is quite likely that the market will be glutted if breeding is going on as extensively as reported, for plenty of scrubs are coming to market even now when horses are reported scarce. Keep your good mares on the farm; breed for quality, and you need have no fears that your horses will not find a good market. There is always a place for the good ones.—*Chicago Live Stock World.*

It is true that a horse of only moderate quality, if sound, will sell for a fair price if he suits a certain definite purpose, but it is only the superior few that return a satisfactory profit for the raising. There will probably be a greater percentage of mares in the country bred this season than for a long time, and those that are sound and properly mated will, barring accidents, produce a profitable progeny. That was good advice to keep the good mares on the farm. While quality in the sire and dam are equally important in producing offspring, we can only breed such mares as we possess, while we have more latitude in selecting the sire of 1902 foals. If a farmer wishes to breed more than he has mares suitable, or wishes to breed more than he possesses, he then has to go out and purchase, which affords him an opportunity of selecting the dams of his foals, as well as the sires, and to select these wisely is a matter that one cannot afford to pass over indifferently. As a rule a man possesses a fancy for some particular class of horse, and it is with these he will best succeed, because he will incline to judge them more correctly and give them the detailed attention they require for best results. Unless one possesses that liking for horses that stamps him a horseman, he had better leave horse-breeding to others, as he is more likely to go wrong than right. It has often occurred that the old mare, lame or in other ways defective for work, is chosen to breed, because she has nothing else to do, or can do little else; but while this may prove satisfactory, there is a strong probability that some of her defects will show up in her offspring. The farmer who breeds only this sort is horse-breeder in a very slight degree, only to the extent that he can hardly help himself, although such old mares, when free of hereditary defects, such as ringbone, spavin, roaring, and the like, sometimes do produce well when they themselves are well bred and wisely mated.

Since the horse trade has adjusted itself into classes, the aim in breeding a mare should be to adhere to her particular class as far as possible. To this end, the crossing of breeds should be avoided. While we may expect a handsome looking mare of the light draft type, bred to a good-looking light stallion, to produce a foal midway between them in form and weight, in many cases such crossing will be disappointing in producing an offspring quite different from either parent, probably leggy and altogether lacking in quality, and it is quality that counts in selling a horse. A mare that inclines to any particular desirable type, whether it be draft, roadster, saddle or carriage, should be bred to a stallion of the same breed as her sire, and it

THE FARMER'S ADVOCATE
AND HOME MAGAZINE.
THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

TWO DISTINCT PUBLICATIONS—EASTERN AND WESTERN.

PUBLISHED SEMI-MONTHLY BY
THE WILLIAM WELD COMPANY (LIMITED).

EASTERN OFFICE:
CARLING STREET, LONDON, ONT.

WESTERN OFFICE:
MCINTYRE BLOCK, MAIN STREET, WINNIPEG, MAN.

LONDON, ENGLAND, OFFICE:
W. W. CHAPMAN, Agent, Fitzalan House,
Strand, London, W. C., England.

JOHN WELD, MANAGER.

1. THE FARMER'S ADVOCATE is published on the first and fifteenth of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
2. TERMS OF SUBSCRIPTION—\$1.00 per year *in advance*; \$1.25 if in arrears; sample copy free. European subscriptions, 6s., or \$1.50. New subscriptions can commence with any month.
3. ADVERTISING RATES—Single insertion, 30 cents per line. Contract rates furnished on application.
4. DISCONTINUANCES—Remember that the publisher must be notified by letter or post-card when a subscriber wishes his paper stopped. All arrears must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given.
5. THE ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.
6. THE LAW IS, that all subscribers to newspapers are held responsible until all arrears are paid and their paper ordered to be discontinued.
7. REMITTANCES should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.
8. ALWAYS GIVE THE NAME of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done.
9. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
10. SUBSCRIBERS failing to receive their paper promptly and regularly will confer a favor by reporting the fact at once.
11. NO ANONYMOUS communications or enquiries will receive attention.
12. LETTERS intended for publication should be written on one side of the paper only.
13. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the Advocate, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

is not enough that he be of that breed, but also that he is sound and good-natured, a good individual, and descended from a superior parentage on either side of his lineage. Nor is it enough that the particular breed we have in hand should be adhered to in choosing the services of a stallion. There is often a wide difference in form and characteristics between the first and second prize horses in big classes of good ones at our leading exhibitions. Take, for example, the Clydesdale class at the recent Toronto Horse Show: the first-prize horse differed as much from the second-prize horse as though they belonged to different breeds, although each was an excellent individual worth a big price. On some classes of mares the first-prize horse would be more suitable, and *vice versa*. The breeder who is to select well, must have in his mind, and well defined, the form or type of an animal he desires to breed. This image, though only existing in the mind, should be as clearly defined as though it were a living thing. He is a victim for the sharp groom or agent unless thus equipped. Without being able to select with reference to a true type, he may undo in one generation what has been effected in two or three others, thus going back wards in having his mare produce a foal of less excellence than herself. Disposition and action are as important as form, and these have their indications that need not be mistaken by a horseman. It is of utmost importance to select a good walker, as a slow-walking work horse is a time-waster, and a slow-walking roadster is exasperating to its driver.

With all the individual excellencies that could be desired, a horse should not be used as a sire unless he is "well come." And that he have length of

pedigree is not so important as that it possess excellence, especially in the near ancestry. A bad cross two or three generations ago is as likely to crop up as any other, and it is no bad rule to be guided as far as possible by the progeny, if we can learn of these, of the sire we propose to use. Selection of sires must be continuous from generation to generation, for the time will never come when all the animals brought into existence will be equal to their parents. Some will excel them and some will not reach their standard. Great improvers of live stock are indeed few, and what we know of their methods leads us to believe that the most studious care was always given to the matings, endeavoring to perpetuate the good and overcome the undesirable.

How to Grow Sugar Beets.

Whether through design or what is called good luck, it was certainly a fortunate circumstance whereby Dr. A. E. Shuttleworth, Chemist of the Ontario Agricultural College, when taking his supplementary course in agricultural science in Germany a couple of years since, found himself in the midst of one of the areas of that country where sugar-beet culture has been reduced to a science and is prosecuted with a degree of success attracting the attention of the world. Devoting himself to a study of the subject, both from the practical and the scientific point of view, he returned to Canada full of the theme and ready for the sugar-beet propaganda now under way. The campaign of investigation and education begun last year with most encouraging results, under his direction, in three districts, is being continued this season in some fifteen different areas of the Province of Ontario. In each of these some twenty-five farmers with soil and other conditions suitable are putting in a quarter of an acre each according to approved methods and under skilled direction, and which will likewise be cultivated and harvested under supervision and analyses made of representative samples by Dr. Shuttleworth, so that by next fall not only will a great deal of valuable experience be gained by the growers, but the general data as to sugar content of beets, purity and yield obtained will be of an extensive and thoroughly trustworthy character. Preliminary to the inception of these trials, Dr. Shuttleworth has gone from point to point addressing gatherings of farmers and others interested. At the London (Ont.) meeting he indicated the scope for the industry by stating that it would require the output of thirty large factories, valued at about half a million dollars each, to furnish sugar for Ontario use alone. With soil conditions and climate such as exist, and proper cultivation, there was no doubt about successful sugar-beet growing, which would not only prove an extremely profitable crop for the grower, but tend to improve the fertility of the soil, owing to the fact that sugar extracted little from the soil, and the tops, which were good food for milk, and the pulp for fattening stock, etc., were restored. Properly speaking, the manure should be applied to a previous crop and the land deeply fall plowed, so as to increase its moisture-holding power. A fine, mellow seed-bed is then secured by thorough spring cultivation, not more than three inches deep. The seed should be sown from April 20th to May 10th, on the flat, one inch deep, with an ordinary seed drill, in rows, say twenty-one inches apart, using sixteen pounds of seed to the acre. A drill set to sow one and five-eighths bushels peas to the acre would put in beet seed about right, with only every third spout running. To keep down weeds and break the crust, making a mulch and preventing evaporation of moisture, he recommended going up and down the drills with one of the "weeder." Thin after the third leaf shows, first "bunching" them with a hoe and then by hand, removing all but one healthy plant every seven inches. Scuffle or cultivate frequently, not more than three inches deep, using an implement with the harrow form of teeth, so that the ground will be kept flat, being careful not to mould up. Cultivate twice a week, and after every rain. By the middle of July the luxuriant tops, through which, by the aid of sunshine, the plant collects its sugar from the air, should completely cover the ground, and the cultivation is done. As the season advances, the leaves become a rich yellow, and droop, the under leaves dying. The beet is then ready to harvest, at an average weight of from one-half to two pounds each. The foregoing corresponds fairly well with the experience of successful Michigan sugar-beet growers, whose testimony we gave very fully in recent issues of the FARMER'S ADVOCATE.

Provincial Legislation.

The Lieutenant-Governor prorogued the Legislative Assembly of Ontario on the 15th day of April, and at the same time gave his official assent to 112 acts which have now come into operation. We propose to refer only to those which mainly and directly concern farmers.

First on the list is *An Act respecting the Encouragement of the Sugar Beet Industry*. This question has been before the farmers of Ontario for many years. Readers of the reports of the Ontario Agricultural College will have seen reports of the growing and testing of beets during the past twelve or fifteen years. On several occasions the Ontario Department of Agriculture has provided seed for growing sugar beets, and the chemist at the College has analyzed them. The general conclusion was that in many sections first-class sugar beets suitable for the making of sugar could be produced in various parts of the Province. Mr. Robert Lauder, it may be remembered, was an enthusiastic promoter of the work, and did much to keep the question going. He died a short time ago, just as the agitation has taken firm hold upon some of the Central States. California, Utah and Nebraska had for years been producing sugar. Recently, however, New York and Michigan have taken up the work. In the former State the industry has had a somewhat uncertain experience, but in Michigan the growth has been extraordinary. The decay of the lumbering and milling industry has set free capital, and the presence of a population suited to the growing of the roots, are the main reasons for the extensive trying of the experiment. Last year the Ontario Department of Agriculture provided the means of conducting experiments at three localities—Aylmer, Welland, and Newmarket—and there has recently been published an exhaustive report in this work and an investigation into the working of the factories in Michigan. Dr. Shuttleworth, the chemist of the College, has had the supervision of the work, and to him has again been intrusted the experiments for the coming season. The Government concluded, from this investigation of the past year, that Ontario was ready for a sugar-beet campaign, and has passed an Act to encourage the industry. A fund of \$225,000 has been created. Out of this, factories are to be paid at the rate of one-half cent per pound of sugar manufactured during the first and second years, and one-quarter cent per pound during the third year. In order, however, that the farmers growing the beets shall be protected and benefited, it is provided that this grant is conditional upon the growers receiving at least \$4 per ton for all beets grown the first year, and during the second and third years, at the rate of 33½ cents per ton for every one per cent. of sugar above 12% which the beets contain. Thus, if the grower produces beets containing thirteen per cent. of sugar, the price will be \$4.33½ per ton; if the beets contain 14 per cent. of sugar, the price will be \$4.66½; if 15 per cent. of sugar, \$5.00 per ton. Not more than \$75,000 is to be paid out in any one year. The Act requires that all forms of contract between the manufacturer and the farmer must be approved by the Minister of Agriculture. All persons interested are recommended to apply to the Department at Toronto for a copy of the report of the experiments made in 1900. It may be interesting to give some statistics from a recent U. S. Consular report as to the extent of the past year's operations in the principal beet-sugar countries of Europe:

	No. of Factories	Acreage	Beets per acre	Per cent. of sugar in beets	Sugar production
			tons.		tons.
Germany	395	1,095,790	12.06	14.91	1,970,000
France	342	685,391	10.79	15.01	1,110,000
Austria	213	839,152	8.82	14.78	1,075,000
Russia	268	1,356,075	4.70	13.83	890,000
Belgium	106	170,128	14.47	12.92	70,000

A comparison of this table with results given in the report will show that Ontario appears to be well adapted to the growing of the roots.

The Department of Agriculture has arranged to conduct experiments at or near the following places during the present year: Watford, Simcoe, London, Alvington, Mt. Forest, Walkerton, Clinton, Waterloo, Dunnville, Cayuga, Peterboro, Lindsay, Whitby, Picton.

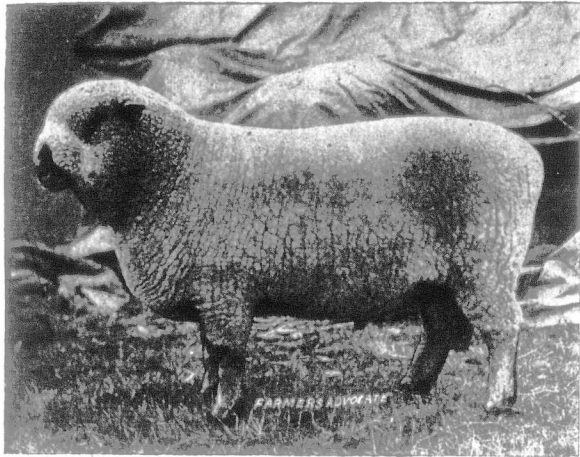
Good roads were the other agricultural subject that received special attention by the Legislature. Two Acts were passed: *An Act for the Improvement of Public Highways* and *An Act to Facilitate the Purchase of Toll Roads by Municipalities*.

By the first Act \$1,000,000 was set apart as a fund for road improvements. On or before Jan. 1st, 1903, any county council may by by-law designate the highways to be improved as county roads. The township councils are then to accept or disapprove of the plan. If one-third or more of the township councils disapprove, a by-law is to be submitted to the voters of the county, and if their vote is in favor of the county-road system, the roads to be designated as county roads are to be determined by arbitration. If the county council fails to take action, or if the vote of the ratepayers of the county is adverse, then a local municipality may apply for a portion of the grant. The basis of the division of the \$1,000,000 among the counties and townships is to be the assessed area of each municipality. All roads so improved are to be subject to the approval of the Public Works Department of the Province, and the Legislative grant is not to exceed one-third of the total amount expended. The money voted may be used in the purchase of toll roads or in the freeing of roads from tolls. Statute labor on roads

so assisted may be commuted, and the funds so obtained used on other roads of the municipality.

The second Act provides for the freeing of any toll road by a municipality. If the owner and the municipality do not agree upon the price to be paid, arbitrators are to be appointed. The Act gives instruction as to how the valuation may be arrived at, and the municipalities are given power to borrow, if necessary, the money required, the same to be payable in not more than twenty years. Upon the removal of tolls from any road, the keeping of the same rests upon the local municipalities as in the case of ordinary highways.

Reference might be made to the exploration of



SHROPSHIRE SHEARLING RAM (No. 1292).

First prize, Royal Show, Maidstone, 1899.

OWNED BY MR. A. E. MANSELL, HARRINGTON HALL, SHIPNAL, ENG.

Northern Ontario carried out in 1900, and the report of which was ordered to be printed. It is understood that this report is now ready for distribution by the Crown Lands Department. What is the conclusion? It appears that north of the C. P. R. there is a block of agricultural land containing over 10,000,000 acres. There may be twice that. The soil is principally clay, and the whole section is covered with a magnificent spruce forest suitable for pulp-making. The reading of this report will be a revelation to the majority of Canadians.

Agricultural grants for 1901:

Agricultural and Horticultural Societies.....	\$76,650
Fruit Growers' Association	1,300
Entomological Society	1,000
Dairy Associations (2)	8,000
Horse Breeders', Cattle Breeders', Swine Breeders' and Sheep Breeders' Associations.....	8,000
Poultry Associations	2,000
Beekeepers' Association	1,100
Registrar of Live Stock	1,500
Experimental Union	1,400
Farmers' Institutes	9,900
Experimental Fruit Stations.....	2,800
San Jose Scale	5,000
Eastern Dairy School	4,700
Western Dairy School.....	2,600
Pioneer Farm.....	1,000
Bureau of Industries	5,500
Agricultural College, Experimental Farm, and Central Dairy School	51,592
Sugar Beet Experiments	2,000
Cold Storage Inspection and Buildings.....	3,500
Winter Show at Guelph (new equipment)	1,652

In addition to the above, \$18,000 has been voted for the Pan-American at Buffalo, part of which will be used for exhibits of fruit, dairy products and live stock.

For the Agricultural College, \$34,500 also was voted, of which \$20,000 is for a new building, \$8,000 for equipment of laboratories, and the remainder for alterations and improvements in various buildings. When to this is added the Massey gift of \$40,000 for a library and hall, it will be seen that an important addition is about to be made to the College equipment. The report of President Mills gives the attendance in 1900 as 259 in the regular courses, and 83 in the dairy course, 342 in all. The greatest need appears to be that of increased accommodation for students. The intention is to remove the library, museum and class-rooms from the main building, and add a large number of students' rooms in their place.

The recent United States census shows that the total number of farms in the Republic has increased during the past ten years from 4,500,000 to 5,700,000, an increase of 20 1/2 per cent. more than keeping pace with the growth of population. Hence the big farms are not swallowing up all the small ones. The number of farms worked by their owners is 500,000 more than ten years ago, or an increase of 18 per cent. At the same time, tenant farmers increased about 40 per cent. The greatest increase in tenant farmers has been in the Eastern and middle Western States, where owners have retired to cities and towns, leasing their farms to others. Very recently a popular movement has set in whereby men of means purchase and run fine farms on which they reside with their families throughout the summer season instead of going to high-priced and often stuffy fashionable resorts. Altogether, from these points of view the outlook for American agriculture is encouraging.

The Government Seed Shop.

The quotation given below, from the *Country Gentleman*, of Albany, N. Y., is an example of how a project, originally apparently very innocent and simple, has been prostituted in the hands of unscrupulous politicians. In the first place, the U. S. seed distribution was to introduce entirely new varieties which might prove advantageous to agriculture. It has now degenerated into a wholesale system whereby congressmen are enabled to parcel out from Washington vast quantities of free seeds to their favorites and "heelers," giving them at the public expense what should be purchased out of their own pockets. The people are thus corrupted and pauperized, and from these gratuities little, if any, real improvement can be expected. That the abuse is growing may be seen from the fact that while last year the seed contract was \$78,000, this year it is \$180,000. Our contemporary says:

"Judging by a number of packages of Agricultural Department seeds that have been sent to this office, the wrong and outrage of the free distribution has been made ten times worse this year than ever before. The pretence of a purpose to introduce new varieties has long been abandoned; but this year there is no pretence at issuing even valuable varieties, and, in fact, the names of the varieties do not appear! Just think of that! The packets are marked, 'Celery, a Selected Variety'; 'Cucumber, a Selected Variety'; 'Watermelon, a Selected Variety,' and so on and so forth, *ad nauseam*. We should think the contractors could easily supply the stuff, under these circumstances, for half the contract price of \$78,000—even supposing that the seeds are fresh. It would seem that somebody in the department must be either grossly incompetent or grossly dishonest. The thing has risen to the proportions of a national disgrace. What is Mr. Wilson thinking about?"

STOCK.

Jumping Hard on the Thoroughbred Advocates.

To the Editor FARMER'S ADVOCATE

SIR,—The article in your last issue, by Mr. O. A. Coates, seems to me to be a very valuable contribution to the horse-talk of this country. His general purpose horse agrees with a great deal of evidence I gathered by systematic reading of American agricultural papers while attending our provincial agricultural school some years ago. His opinion of the Thoroughbred also agrees with my own. I once owned the stoutest and fleetest Thoroughbred that has ever landed in Nova Scotia, or is likely ever again to come this way. I knew thoroughly all about his descendants and the descendants of another famous Thoroughbred that left offspring here. They gave anything but general satisfaction; and now when I hear or read about men in prominent places advocating the improvement of our horses by crossing with the Thoroughbred, I feel that "jumping hard on them" would be rendering good service to our country. When one reflects on how very different the purpose for which the Thoroughbred has always been bred is from the purposes for which we in this country must breed horses, it seems absurd that he should so often be advocated as an "improver." The improvement he can effect needs to be corrected and improved again and again for very many generations before it is all right for the uses to which we put horses. Is not this about exactly the thing that has already been done in the Standard-bred, and, better still, I believe in the French Coach horse? These two breeds are evolved out of the original Thoroughbred, as we can see by tracing back their pedigrees. Here we have the great fleetness, endurance and beauty of the Thoroughbred nearly entirely retained, while an incomparably better disposition and a more useful action—good trot and walk—are added. The lack of a uniform good size as a breed is the great drawback of the Standard-bred as a producer of general purpose horses. Is not this about entirely overcome in the French Coach horse? I have read a good deal about how these horses are bred, and heard much favorable talk about them from parties who have had experience with them in the United States. Now I would be very well pleased to hear their

suitableness for our Canadian conditions discussed by some one who has had much experience with them. I am also at a loss to account for why there are so few Percherons in Canada and so many in the United States. Where considerable driving over hilly and stony roads, as in Cape Breton, is required of horses, in addition to heavy farm work, should not the Percheron be more suitable than the Clydesdale or Shire horse? J. D. MCKINNON. Cape Breton.

The Harrington Hall Flock of Shropshires.

Owing to the exceptional importance of the dispersal sale of Mr. A. E. Mansell's flock of Shropshire sheep at Harrington Hall, Shipnal, Shropshire, England, which is announced in our advertisement columns to take place upon August 29th next, we have departed from our usual practice and obtained from our English representative, who will attend the sale and execute commissions, or in any way further the interests of our readers, a brief account of the world-renowned flock.

Its foundation goes back the long period of fifty-seven years, during the whole of which time it has been managed by two of the admittedly best breeders and judges of the breed, the late Mr. T. Mansell, and his son, the present owner, Mr. A. E. Mansell. The flock is one of those few that is indeed and in fact a pedigree flock, for full individual pedigrees of each and every sheep, both on its sire's and dam's side, will be furnished. Away back to previous to 1877 has this record been carefully kept, and there can be no question but that it is mainly owing to this that the unrivalled and undisputed success that has been achieved by its produce in Great Britain, Canada, the United States and Australia is due.

Space will not, of course, permit of full extended pedigrees being given, but as typical of the rest we have included in our notice, as a sample, the extended pedigree of Royal Blood, first-prize ram at the Royal Show, York, in 1900, who was sold for export to Australia last August for \$1,150. Similar pedigrees are obtainable, so far as they go, for each and every one of the sheep included in the sale, which compose a flock which for its purity of breeding, true type and character, good wool and skins and uniformity, is practically unmatchable. The actual numbers that will figure in the catalogue are 70 yearling and two-shear rams, 200 young stock ewes, 120 yearling ewes, 120 ram lambs, and 130 ewe lambs. Therefore, any buyer who purchases at this sale will be able to secure in all cases a full extended pedigree that will be of considerable value to him, and in certain cases, where the older lines of blood are included, pedigrees that can hardly be equaled from any other flock.

Mere tabulation of the show-yard results are of little value unless the full report of each of these contests is known, for it is possible for any breeder who may not be successful at the larger and more important shows to exceed in the aggregate the number of prizes won thereat by success at smaller shows. Thus it is hardly advisable to go into any lengthy detail as to what this flock has won, more than to mention that at the four or five leading



SHROPSHIRE RAM LAMBS.

First-prize pen, Royal Show, York, 1900.

PROPERTY OF MR. A. E. MANSELL, HARRINGTON HALL, SHIPNAL.

English shows it has, during the last ten or a dozen years, won upwards of 150 prizes in the strongest competition, besides champion awards. It and its produce has won the Mansell Memorial Challenge Cup eight times out of the ten times it has been competed for, Mr. Mansell himself winning it four times, a feat no other breeder has yet accomplished. Twice it has been won by a ram bred by Mr. Mansell, twice by a son of a Mansell ram. This is a record which shows how good is the produce of the flock, for this particular prize, more than any

other, is entitled to the honored name of the "Blue Ribbon of the Shropshire Breed."

Now, as to sale records, these have to do with the sheep which have gone, and gone, we may remark, with such good effect to flocks both at home and elsewhere, that year by year the original purchasers have come again to get some more of that blood which once tried is ever after wanted. Therefore, a mere recapitulation of such records would be of but little value; they might or might not be a guide as to the values the present and final sale will realize. This time will prove, and we venture to hope that when the final sale record is made up, it will be one that will, so far as money value can, fully recompense the owner for his great work, and, at the same time, establish a record for the breed that will be one for future generations to attempt to exceed. In fact, a record that will enable that eminent and world-renowned firm of auctioneers, Messrs. Mansell & Co., of Shrewsbury, who will forward catalogues and full information, to again publish, as they did after the 1895 sale, when 45 yearling rams made the then unequaled average of £41 16s. 6d., another pamphlet entitled "Another Red-letter Day in Shropshire Sheep Annals."

[NOTE.—The sample pedigree referred to as being sent with the above notes includes reference to the records of 14 generations of high-class sires and dams, and would cover a whole page itself, which is greater space than we can afford to give it.—Ed.]

Contagious Abortion in Cows.

The prevalence of abortion among cows is, we believe, on the increase in this country, and it is one of the most serious difficulties the stock-breeder and dairyman has to contend with. Prevention is so much better and cheaper than cure, that the utmost vigilance should be used to avoid the trouble. Much has been written upon this subject, and not a few cattlemen have confidence in the carbolic-acid treatment outlined by Mr. George Rice, in the FARMER'S ADVOCATE of January 15th in the present year, for prevention, which treatment consists in giving 20 to 30 drop doses of carbolic acid (according to size of cow) daily in a pint of water to cows exposed to the contagion, or of which there is reason for suspecting that they are predisposed to abortion.

Prof. Norgaard, of the U. S. Bureau of Animal Husbandry, has published an article on this subject, that so well commends itself that we herewith reproduce it, with the hope that it may prove helpful to some of our readers who may be troubled with this scourge, as it seems to us that the hints might well be adopted, in part, at least, if not in full:

"Infectious abortion is a disease which is caused by the introduction into the vagina of a specific micro-organism which causes a chronic catarrh of the mucous membrane of the uterus and results in the expulsion of the fetus before the normal time of parturition. It has recently been asserted by some authorities that the infection is almost exclusively introduced by the bull, and that a thorough disinfection of the prepuce and penis before service will prevent the cow from becoming infected. It is recommended to inject one quart of lukewarm solution of lysol, of a strength of one and one-half per cent., into the prepuce, immediately before the bull serves the cow. The cluster of hair at the opening of the prepuce should be shorn quite short, and the region thoroughly cleansed with the same solution. The injection is made by means of a common fountain syringe with a long nozzle. The latter is inserted into the prepuce, which is folded closely around it in order to prevent the fluid from running out again immediately. By elevating the reservoir, the solution may be forced to the upper end of the prepuce and the entire penis disinfected.

"It is also necessary to keep the stable as clean as possible by disinfecting the gutter regularly with one per cent. solution of sulphuric acid, and when a cow shows signs that she is about to abort, she should be immediately removed to another stable and her fetus and afterbirth should be burned.

"When a cow has aborted, it is necessary that at least two or three months be allowed to pass before it is taken to the bull again. During the first part of this period, the cow should be kept in a separate stable and treated with injections into the vagina of one per cent. lysol or creolin solution. This is done by the use of a piece of a common gray gas or rubber hose, about 4 feet long, to the end of which is attached a common one-quart funnel. The hose and the funnel should be thoroughly cleansed with boiling water before they are used, and the region around the vulva, including the root of the tail, should be washed with soap and water and irrigated with the lysol solution. The operator's hands and arms should be similarly treated. If the afterbirth has been retained, it should be removed at once and the uterus washed out, first with warm water, and then with about a gallon of the disinfectant. These injections should be continued once a day until the cow is thoroughly clean and all secretion has stopped.

"If these precautions are neglected and the bull is allowed to serve the cow as soon as it comes in heat again after aborting, the uterus will not have recovered, and the fetus will be expelled when quite small, and in due time the cow come in heat again. These very early abortions are, as a rule, not noticed, but as the system of the cow adapts itself to the infection, the period of the fetus' retention becomes longer and longer, until finally the cow is immune and carries the fetus the full term of gestation. It generally requires from two to three years for the cow to become immune, and

the bull which during that time serves the cow will carry the infection to all other cows he serves if the above precautions are not taken to prevent it. For this reason it is not advisable to sell or otherwise dispose of the cows that abort and to replace them with fresh ones, as such are very likely to become infected. Only those which, after treatment, prove to be permanently sterile should be prepared for the butcher."

Our Scottish Letter.

The past three weeks have been chiefly occupied attending shows. The weather has been very changeable, and it is far from pleasant standing out in an exposed show-yard during the time of judging. There are far too many shows in April, but, although almost everybody admits this and regards the situation as capable of amendment, no one seems able to decide who should begin. The centers where shows have been held during the past three weeks have been Castle-Douglas, Kilmarnock, and Glasgow, in Scotland, and Dublin and Belfast across the Channel. But many local and parish shows have also been held, especially in Ayrshire. The backward weather has militated against the success of the shows, as a good day naturally suggests to a farmer that he should stay at home and attend to his sowing and planting. On the other hand, if a show is to be a success it must have a good day, and none of those that are past are likely to leave a big profit to their managers.

So far, Ayrshires have made most stir in the show-fields, and quite a large number of first-rate animals of that breed have been exhibited, while two high prices have been paid for three-year-old queys in calf, but not due for some weeks yet. One of these, Mary II. of Burnhouses, was sold by her breeder, Mr. Wm. Howie, Burnhouses, Galston, to Mr. Andrew Mitchell, Barcheskie, Kircudbright, for £100, and so far she has been first at Castle-Douglas, Kilmarnock, and Glasgow. She is a brown and white quey, showing great style and carriage and promise of a tight vessel. She is not popular with some farmers, as they regard her as a bit too strong in the bone, and there may be some basis for the criticism. She was champion female of the breed at Glasgow, and reserve at Kilmarnock, being there beaten by another cow from Burnhouses, the grandly-framed White Rose, which won the championship at the Highland last year. The other dear quey of the season is Lady Margaret, not unlike Mary II. of Burnhouses in outline, but finer in the bone. She was sold by her breeder, Mr. Charles Duncan, Little Kilmony, Rothsay, to Mrs. Myles Paisley, for £60, and was second at Glasgow in the Derby. Mr. Wm. Kerr, Old Graitney, Greta, and Mr. John McAlister, Ardyne, Toward, are notable exhibitors who this season have made their mark with Ayrshires in milk or calf; while Mr. Matthew Hunter, Adamhill, Craigie, is exhibiting a trio of three-year-old queys of his own breeding, whose sire was the Burnhouses bull, Flora's Chief. The dam of this bull, Flora of Burnhouses, was unquestionably the grandest Ayrshire cow exhibited during the past ten years, but, curiously enough, Mr. Hunter's queys, while showing first-rate vessels and teats, lack the scale and substance of their grandam. In the other section of Ayrshires, what is called the old section, Mr. James Howie, Hillhouse, Kilmarnock, a brother of the tenant of Burnhouses, and his neighbor, Mr. Thomas Barr, Montland, Kilmarnock, are well-nigh invincible. A strong exhibitor of bulls this year is Mr. Robert Osborne, Wynholm, Lockerbie, who has long been known as a breeder of high-class stock. His bull, Gigantic Stunner, was champion male at Glasgow. One of the best young Ayrshires of the season was bred by Mr. James Robb, Hindsward, Old Cumnock. She has been bought by Mr. James Howie, and so far has had an unbroken career of victory.

The Dublin and Belfast Shows are strong in Shorthorns and Aberdeen-Angus cattle, and in both show-yards very fine animals of both breeds were in evidence. Scottish-bred Shorthorns made the running at Dublin, and the champion at Belfast, a prime bull, named Caledon Stamp, from the Countess of Caledon's herd in County Tyrone, is full of Scottish blood. He was reserve champion at Dublin to the Scottish-bred bull, Inspector, whose breeder was Mr. Alexander Crombie, Summerhill, Aberdeen. This is a great, fleshy, wealthy bull, but there is much to be said for the theory that Caledon Stamp is a better one. I understand he has been hired by Mr. Duthie for next season. He was purchased last year for exportation to South America, but the Argentine ports were closed to British cattle before he was sent off, so he remains in this country meanwhile. We don't suppose the Argentine men will leave him here altogether. Aberdeen-Angus cattle are making good progress in Ireland, especially in the north and east, but they will not take very well in the West, where the rainfall is so heavy. Galloways do better there: indeed, no breed does as well as Galloways in a wet, exposed region. Ireland boasts at present a very fine A.-A. bull, Baron Inea. He is owned by Mr. Coey, Larne, and it takes a very good one to get past him. He has been three times in succession first and champion at Dublin and Belfast. Mr. Arthur Owen, Shanvaghiey, Queen's County, has a fine herd of these black cattle, and with animals out of it he took a fair share of the prizes at Dublin. Mrs. Cambridge

Grubb has a good herd at Dumnurry, near Belfast. She owned the first-prize cow at both places. This cow was bred by Mr. A. R. Stuart, Inverfiddich, Dufftown. The Government is spending money lavishly in Ireland these times, and breeders are having rather a good time. They are getting 1,000 premiums, of £12 each, divided amongst them for bulls to be planted out amongst the smaller tenant-farmers, and the Royal Dublin Society is going one better and giving a large number of premiums, of £15 each, for the same purpose. All this should, in the end, improve the general store stock of Ireland, and thus materially further the best interests of feeders everywhere. It is generally admitted that Irish cattle have greatly improved during the past twenty years, and these new schemes should accelerate the ratio of advance.

Clydesdales are looking well this season, and the shows that have passed have shown a large number of first-class young stock. Baron's Pride 9122 remains the most successful sire, almost all the leading winners in the younger classes, of both sexes, being got by him, and at Glasgow the champion mare, Mr. Alexander Guild's Lady Margaret, and other two of the first-prize winners in the female section were got by his sire, Sir Everard 5353. Mr. Guild, who is an Edinburgh solicitor, with a farm at Aberlady Mains, in East Lothian, was also owner of the first three-year-old mare at Glasgow, named Topsy Pride. She is a very handsome black, got by Baron's Pride 9122, and both as a yearling and a two-year-old has had a wonderful career. At Castle-Douglas and Kilmarnock, Mr. Thomas Smith, Blacon Point, Chester, showed a fine three-year-old mare named Cedric Princess, which gained first prize, and two yearling fillies, rare beauties, all of them got by Baron's Pride. At the same shows, the Messrs. Montgomery, Netherhall, Kirkcudbright, showed several choice animals got by this sire, but there can be no doubt of the pre-eminence over all of their yearling colt which won at Kilmarnock. He has rather much white about his face and legs for a Canadian's taste, but he is the biggest, most handsome and best-moving colt of his age seen for many a day. Mr. James Kilpatrick, Craigie Mains, Kilmarnock, has a capital two-year-old colt named Lord Dundonald, which last year was unbeaten, and this year it seems as if he would repeat the performance. He has been first both at Kilmarnock and the two Glasgow shows. At the April show, held this week, the male championship went, without any hesitation, to Mr. Matthew Manhall's Marcellus, a magnificent horse, which won in February; he was got by the renowned champion horse, Hiawatha 10067, and is undoubtedly a superior animal.

Two Canadian buyers of Clydesdales have been here this season. Mr. Paterson, Millbrook, Ont., sailed first with a first-class colt named Sir Hedderwick (10645), bought from Mr. Wm. Taylor, Park Mains, Renfrew. He is a big, straight, useful horse, this, and he should make a big season in Canada. Mr. John Duff, Everton, Ont., a veteran importer, is sailing to-day with a pair of good young horses, bought from Messrs. Montgomery. One is the four-year-old Fickle Prince 10344, and the other the two-year-old Auldgirth 10962. The former makes his second trip across the Atlantic, as he was bred by Colonel Holloway, Alexis, Ill., by an imported sire, from an imported dam. Both are uncommonly well bred, the sire, Cedric 1087, being one of the best breeding horses on either side of the ocean, and the dam, Fickle Fortune, is one of the best-bred mares in the Studbook. Her sire was the big Darnley horse, Knight o' Lothian 4489. The two-year-old Auldgirth is own brother to Palmerston, which gained first prize both at the Royal English Show at York and at the recent Chicago show. Fickle Prince was good enough to win the Auchtermuchty district premium last season.

"SCOTLAND YET."

Why Not Keep Sheep?

No class of stock is neglected by so large a proportion of farmers as are sheep. Considering the cost of keeping, the labor of attending, the rate of increase, and the annual dividend of wool declared, no class of farm stock is more profitable. No meat is more wholesome nor more generally in demand in the markets at good prices. Sheep help keep the farm clean by eating many weeds that would otherwise go to seed and spread, while the sheep in summer pick up most of their living, in the lanes and by-places of the farm, from grass that would otherwise be worse than wasted. A short nibble suits them better than grass to their sides. No great skill is required to manage a flock, and yet no stock will pay better for intelligent care and management. A little attention at the proper time, and that not very often, keeps them in good health and brings out the best that is in them. Their winter care is simple and inexpensive, being nearly paid for by their fleece of wool. No elaborate or costly buildings are required for them. Open sheds are best for them. Fed twice a day, sheared once a year, and treated twice for ticks, they eat, rest, increase, and are contented.

To fatten them in the fall, sow a few acres of rape in June or July; and for their best development in winter, an acre or two of turnips, though these are not essential if a light ration of oats and bran is substituted. Attend at the proper time to the docking and castration of the lambs. Wean at four months old, and have a field of fresh clover or early rape for the lambs to keep them going on, and they will feed themselves and fatten, growing into money as the days go by.

Military Tournament and Horse Show.

(Continued from page 301.)

CLYDESDALE MARES.

Out of five entries, there were four present: Mr. O. Sorby's Sonsie Lass and Diana MacKay, and A. G. Gormley's Kitty Tyrall and Rose of Burdennet. The Sorby pair, bred by N. P. Clark, Minn., are of the best Scotch pattern, not quite as heavy as their rivals, but better at the pasterns. Sonsie Lass, forward in foal, won 1st, her mate second, and Kitty Tyrall 3rd. The Gormley mares, by Lord Lieutenant, are a massive pair, weighing about a ton each, and are well formed. In harness, the same positions were retained; Geo. Moore, Waterloo, coming 3rd with a pair of powerful geldings, and had his high horse been well mated, he would probably have stood higher.

SHIRES.

A much larger class of this breed was expected than appeared, as three firms making entries evidently changed their minds about showing. This was disappointing, as some of the best stallions that have left England had their names in the catalogue. Bawden & McDonell, John and J. M. Gardhouse were forward with good representatives of the breed. Belshazzar, the low-set, deep, broad, mature horse, with excellent quality and quantity of bone, that was imported from England in the fall of 1899 by Bawden & McDonell, Exeter, Ont., and shown by them several times since without a defeat, had for rival Wilcot Thumper, owned by the same firm, a massive four-year-old, of the useful type. John Gardhouse showed a colt foaled in 1899. He is by Pride of Hatfield, to whom he bears a close resemblance, being rangy, smooth, brown in color, and furnished with a set of good legs. John Gardhouse also showed a pair of mares, four and five years old. These, too, were by Pride of Hatfield, but they had worked hard and therefore were not fitted. A mare, Victoria, by Darnley, foaled in 1899, and bred and owned by J. M. Gardhouse, was the first choice of the three. She is black in color, well grown, round ribbed, and a good filly generally.

HACKNEYS.

The mature stallion class in this breed dwindled to a single horse this year, but had there been a larger entry the same member of the breed would have likely worn away the red ribbon. Robert Beith's Squire Rickell was the representative, in his usual first-rate form. This son of Cadet retains his remarkable quality and dash of action in a high degree, although he is taxed with considerable stud duties. He had keen competition for sweepstake honors, both for the English medal and for the Canadian Hackney Society's prize, but he defeated them all, and got no more than he deserved. A newcomer made his appearance in three-year-olds, a recently imported son of Lambton Connaught, brought out by Bawden & McDonell. He is a chestnut, known as Connaught Heir, and was bred by the Earl of Durham. His rivals were Mr. Crossley's sensational Rosseau Royal Oak, bred from Royal Standard and Lady Cocking, and Mr. Sorby's Guelph Performer, from Square Shot and Miss Baker. They were indeed a strong trio in quality and action, and the judges, Messrs. R. Gibson and Alex. Galbraith, spent considerable time in deciding as to their relative positions. The newcomer was considerably the heavier, lacked nothing in quality, and carried himself high, rapid and gracefully. The Crossley colt is quality to a fault, and carried the audience with his airy action, but he could not get above 2nd place, this being his first defeat, although he has shown many times. Mr. Sorby's colt is nearer the cob type than either of his rivals, and is very catchy in his manner.

There was a good class of mares, seven in number, made up of four three-year-olds and three two-year-olds, and with the exception of Mr. Crossley's Countess Josephine, from Fireworks and Althorpe Duchess, and Mr. R. Davies' Lady Minto, from Barthorpe Performer and Lady Lynn, Mr. Beith supplied the lot, and they were all bred by himself. They were indeed a beautiful lot, bred in the purple, well grown, schooled and brought out. Beith's Hermia, by Royal Standard, and out of Cherry Ripe, possesses her sire's color, form and ways, which are hard to fault. She goes high, with an ease, dash and courage that compels one to wish to drive her. She won 1st and was followed by the younger daughter of Squire Rickell and Mora's Queen, a chestnut much like her sire in form; in fact, this horse seems to stamp them all alike; and then she is half-sister to Jessica and the late Banquo, so she has a right to be good. Mr. Crossley's Countess Josephine is a particularly sweet filly, two years old, inclining to the cobby type, and quite a goer. She won 3rd and afterwards the English medal for best mare or filly from imported sire and dam, both registered in the Hackney Horse Society Studbook of Great Britain.

Mares and geldings by Hackney sires were shown in harness. This class called for high-steppers, not less than 15 hands high. Six entries were all that competed, and a dashing lot they were, all fitted

and schooled and shown to near the limit of their capacity. South Africa, the daughter of Jubilee Chief, that was so successfully shown last year by Messrs. Crow & Murray, was a prominent figure. She is now owned by Mr. Geo. H. Gooderham, who has kept her up to form and won with her on this occasion. A handsome gray mare, sired by The Shah, and owned by S. B. Fuller, was next in place, and she was followed by Doan Bros.' Defender, by Lightning, and H. N. Crossley's Rosseau Jewel, by Rosseau Performer.

THOROUGHBREDS.

More interest than usual centered around this breed, of which there were three classes this year. They were judged by John Hanning, of New York, and Chas. McEachren, V. S., Montreal. There were four competitors in the open class, and all useful horses, from the saddle point of view. Dr. Andrew Smith, Toronto, admires a Thoroughbred, and usually has a good one. This year he showed the winner, Kapanga, by Spendthrift, a breedy chestnut of considerable substance. His conformation is well represented in his illustration in last issue. While he is of the race-horse type and highly thought of from that standpoint, he fills the bill well to sire remounts, as he stood for a long time a tie with the winner for that purpose in competition for King Edward VII's prize. William Hendrie, Hamilton, showed Gold Car, by Goldfinch, a right good stamp, 16.1 hands and not leggy. He won 2nd, followed by a get of Uncle Jesse, owned by Edmund Bristol, Toronto. He is called Knight of Sherwood, stands 16 hands, and is full of quality.

mixed pedigree, from a trotting sire, but a good individual, of dashing action, shown by Crow & Murray, Toronto, won 1st, defeating McCartney's German Coach, Graf Bremer, that has been the victor for several years. John Rogers, of Thornhill, won 3rd on General Watson, by Sim Watson. He is a big horse, 16.1 hands, of good parts, but he could not move with his competitors. J. T. Reid, Derry West, and Albert Hewson, Grahamsville, each showed a bay 3-year-old, and both called Lord Roberts. Reid won the award, and stood reserve to Performer, the aged victor, for gold medal for best stallion any age.

STANDARD-BRED ROADSTERS.

There were five mature and one 3-year-old stallion shown. In the former class there was a great variety of form and action. Judging them on the line for conformation and action, the very handsome and nice-moving Pavonia, by Jersey Wilkes, exhibited by Heslop & Williamson, was the favorite outside the ring. He stands 15.3 hands, is round as an apple, carries a good depth of body, and is a typical roadster sire. His strongest rivals were Dalton McCarthy, by Bryson, and owned by McLaren Bros., Winnipeg; and Altoner, by Sphinx, owned by Fisher & Button, Ringwood. Neither of these was in high flesh, but in good stud form. Dalton McCarthy was in racing form, and is fitting for a number of important stakes the coming season. As a race-horse he was considered the choice, and consequently won 1st award, the well-known Altoner 2nd, and Pavonia 3rd. Jim Bryson, by Bryson, was the colt shown. He is a good mover and quite like his paternal brother, Dalton McCarthy, to whom he came 2nd in the sweepstakes contest.

HORSES IN HARNESS.

Horses in heavy leather are shown singly in three sizes, viz., over 14.1 hands and not exceeding 15.1, over 15.1 and not exceeding 15.3, and those exceeding 15.3 hands high. Pairs are classed 15.2 hands and under, and over 15.2 hands. There is also a class for tandems and four-in-hands. In all of these competitions, the Hackney form and action predominated, and the more of it the horses possessed, other things being equal, the better were their chances of winning. Education, too, was an important factor, so that it was of little use to show a green horse, however good he may be. Mr. G. H. Gooderham, Toronto, was a successful competitor in several sections, with horses formerly owned by Messrs. Crow & Murray. The mare, South Africa, by Jubilee Chief, that won numerous good awards last year on both sides of the line, and again won this year in Boston, was a hard rival to butt against. She is now owned by Mr. Gooderham, who also showed Always Ready and Just Ready, a plain pair on the halter, but extravagant actors under the reins. Mr. Crossley's Hackney, Rosseau Jewel, did well in the small class. Yeager & Curzon, Simcoe, also Charles Head, Guelph, had forward some good things, that won in fierce competition.

SADDLE HORSES.

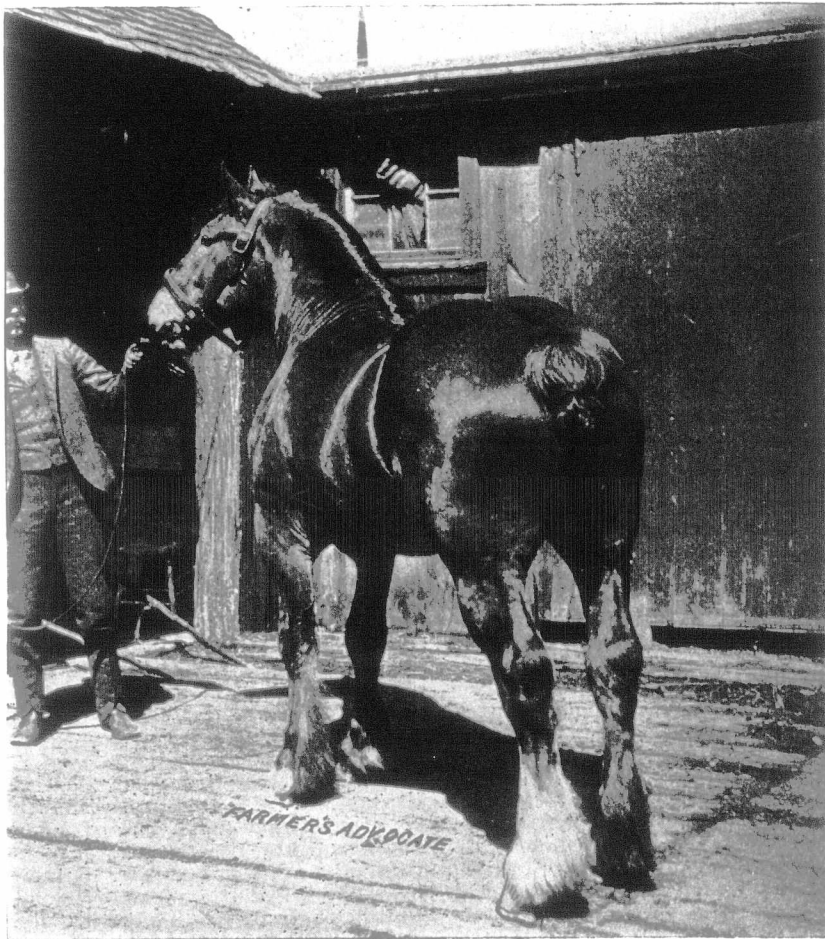
The various classes of saddle horses were heavy, running up to 29 entries in the section for combined saddle and harness, and 28 for mare or gelding over 15.2 hands and up to carrying 160 pounds. They were judged by quality, manners, paces, conformation, and ability to carry the weight in their respective classes. As might be expected, the Thoroughbred type predominated, and the finer, the better, when accompanied with substance. The dual-purpose class was an exceptionally good one, there being about a score of good saddle horses that would hitch up well and show a deal of style. The 1st award was won by Queen Bertha, a fine gray mare, 16 hands high, owned by George Pepper. Adam Beck was a conspicuous winner in saddle horses, and L. Meredith won some good victories.

HUNTERS AND JUMPERS.

Hunters were divided into qualified and green, and again into heavyweight and lightweight, the former up to carrying 180 pounds, and the latter up to 150. Qualified hunters must have been fairly and regularly hunted with a recognized pack of hounds for more than one season, and a green hunter for one season only. The competitions were fairly keen, and the animals in hard flesh and good jumping form. They were, as a rule, a well-bred lot, of the Thoroughbred type. Adam Beck and Geo. Pepper were the largest contributors, but good horses were shown by other exhibitors. The exhibits of the former gentleman were, as a rule, better schooled to clear the jumps, and in other ways obey the commands of their riders. Jumpers were open to all, and ran over a score of entries in the first class. Performances over fences was the test, and, as a rule, good-looking animals won, the winners in several cases being identical with the best hunters. This is an interesting contest to witness, demanding trained riders as well as schooled, well-bred horses. Many a horse refused his jumps, and many hurdles were turned over and broken, but seldom did a rider leave his seat.

ROADSTERS.

There were three classes for roadsters: those in single harness, under 15.3 hands, and 15.3 and over,



LIPTON [2950] (10681).

Three-year-old Clydesdale stallion, son of Sir Everard [5383], and brother of the famous Baron's Pride [9122]. Fourth prize at Military Tournament and Horse Show, 1901. Imported by Bawden & McDonell, Exeter, Ont.

OWNED BY JAS. HENDERSON, BELTON, ONT.

A. Frank & Son's (The Grange) Terremont, by Dandie Dinmont, a race-horse type, was the fourth entry.

Stallions qualified to improve the breed of saddle horses and hunters made up a class largely of new blood, including three horses of Lt.-Col. Dent's selection in England as suitable sires of army remounts. They are termed Thoroughbred-Hunter stallions, and, from their form, should fill that purpose well. They were imported and exhibited by the Telfer & Climie Co., Montreal. The winner in the class was Ballymore, bred in Ireland, and sired by Hollywood. He is bay in color, with white on face, stands almost 16 hands, is powerfully built, and very breedy. The 3rd and 4th awards went to this firm on Rotherval and Halifax, bred in England; the 17-year-old Billetto, exhibited by W. Barbour, Toronto, winning the 2nd award. This old horse is fresh and in fine form. He has many good sons and daughters to his credit in sections where he has traveled. What was formerly known as the Prince of Wales' prize, was this year designated King Edward VII's prize, and was for best Thoroughbred stallion any age. The winners in the two former classes met here, and for a long time it seemed a draw between them. After repeated close examinations and measuring with a line, it was decided that the newcomer, Ballymore, was entitled to the honor. While Kapanga is a chestnut and Ballymore a bay, they are very much alike in size, form of bone and body, and both well disposed and free of blemishes.

CARRIAGE OR COACH.

Style and action were conspicuous in this class rather than uniformity of breeding. A horse of

and for pairs. They were not necessarily Standard-bred, although most of the best entries were recordable. A comparison of the number of entries in the various sections indicates that good small ones are more common than good large ones. In the first case, a dozen entries were forward, all good smart road horses, suitable for light conveyances on good roads. As a rule, they were a good-looking lot, showing fine quality. Six entries competed in the bigger class, and three in pairs. To a practical mind, it is a real treat to see at a horse show a lot of good-looking horses that make time first and display afterwards, having long, flowing, well-carried tails, and harnessed for their work rather than display. These features characterized the roadster class, as compared with the other harnessed classes, that are calculated to attract admiration by extravagant rather than utility action.

There were two well-filled classes of ponies, 12.2 hands and under, and between 12.2 hands and 14.1. These were the blocky, strong-boned Shetlands, the finer and fleetier Welsh ponies, and the produce of these from Hackney sires; and it was the last of these, from Welsh mares, that fill the eye of a horsey boy.

CAVALRY HORSES.

The Governor-General gave a first prize of \$50 and a cup or medal worth \$25, and the Dominion Minister of Agriculture gave a second prize of \$20 for the best 4-year-old gelding or mare for riding or cavalry purposes, not less than 15 hands and not over 15.3, and sired by an approved Thoroughbred stallion. This seasonable offering was the object of considerable interest, there being 14 competitors for the regal prize. The winning horse, owned by Mr. L. Meredith, London, is a bay gelding, named Cre-morne, 15.2½ hands high, and sired by Ranalagh. Scottie, a chestnut gelding, 15.2, from Gold Fox and a Whistle Jacket mare, and owned by R. Porteous, Simcoe, won 2nd; and a chestnut mare, Lady Athol, 15.3, by Gold Fox, shown by Stewart, Craig & Galloway, Guelph, won third. These horses were breezy, stout-backed, good-legged specimens of the Thoroughbred type.

"The Holstein Interest in Canada."

Kindly allow me a short space for reply to an editorial in the April number of the *Holstein-Friesian Register*, under the above heading. Commenting on the remarks made at our last annual meeting by our worthy President, the editor has gone entirely astray when he came to the conclusion that the Canadian Holstein breeders most keenly felt the disadvantage of maintaining their own herdbook. I can assure him that Canadian breeders never regretted the step they have taken, and that the establishment of our own registry has done more for the interest of the breed in the few years of its existence than the Americans would have done for us in twenty years. Our President only expressed his indignation at the *small, mean and unbrotherly* stand the Americans are showing towards us fellow-breeders. Canadians are not clamoring for any undue advantage or favors, but just what is fair between neighbors. (All we ask is that they recognize our registration, as we do theirs.) This, the editor says, is out of the question, as our Association was not on a parity with the American. Pray, will the editor enlighten us wherein it is not! Our Association is incorporated under a government charter; our standard of perfection, our by-laws and system of registration are almost identical with theirs—the standard of our record of merit is placed even higher than their own. It is true that our registrations numerically are not one-tenth as great as theirs. But what of that! Has not the worthy editor got their own herdbooks? How do they compare with ours? It took them years to get out their first few volumes, and then they were much smaller than ours are, of which we publish one nearly every year. We are a different nation, under different laws and circumstances, and are quite capable of running our affairs without American aid. What drove us away from them was simply the fact that their affairs were run for the benefit and in the interest of a few large and selfish breeders (which also led to the establishment of a rival herdbook association in their own country). Their membership and registration fees were placed so high that the beginner and smaller breeder (the very man whom they had sold their stock to at enormous prices) was practically shut out from either, so that they could have the entire field to themselves. They seemed to want to own the whole world and a patch to plant potatoes on besides, as the saying is, and it now appears that Canada should be this potato patch. We charge a small membership and registration fee, which is enough to manage our affairs and still leave a surplus to be spent yearly in the interest of the breed, in prizes at the different dairy tests; whereas, they charge high fees, put the money (which they don't spend in salaries) into the bank, and when such chances as the Columbian World's Fair and Pan-American come to demonstrate the superiority of our breed of cattle, they do a lot of jangling with other breeds, and finally drop out of it. If the editor of the *Holstein-Friesian Register* lives to see the day that the Canadian Association fails to exist, he will live to a greater age than is allotted to us mortals generally.

Oxford Co., Ont.

H. BOLLERT.

Various Breeds of Cattle at the Union Stock Yards, Chicago.

BY D. E. SMITH.

Time has lavishly scattered, in this immense Western country, a vast variety of cattle. There can be seen among the herds that graze on hillside, plain and valley, representatives of all the best-known breeds of cattle in the world. These, from time to time, find their way to the Chicago market, and are quickly bought up. Besides grades of most of the breeds and natives, there are the following breeds found on the market almost every week: Shorthorns, Herefords, Polled Angus, Holsteins, Jerseys, Guernseys, Galloways, Ayrshires, Devons, etc., etc. These all are used for beef purposes, although milkers, springers, stockers and feeders are also sold here. To the casual observer, there is a great difference in the cattle that come from the different States, and the production of beef animals is a sure indication of the progress and prosperity of the State or country from which they come. First, let us look at the cattle that come from Tennessee. They are small and thin-fleshed, as a rule; in fact, all Southern cattle seem to be somewhat smaller than in the North. These are mostly grade Jerseys, with a fair percentage of low-bred grade Shorthorns, and an occasional Holstein. The class of cows that find their way here are thin to medium fleshed, that weigh from 700 to 900 pounds. Many of them appear to be old, broken-down cows, that are no longer of any use. The cattlemen down there seem quite conservative in their breeding, and lack enterprise, so that but little improvement has been noticed in recent years.

Everybody has heard a great deal about the Texas steer. The old-fashioned long-horned steer is rapidly becoming extinct. The enterprising Texan, while he admired the long horns and odd shape, did not see much money in him, so he soon introduced pure-bred sires, and, as a result, there has been a marked improvement in the class of cattle that come from there now. Quality is the watchword that is sent from one end of Texas to the other. In the selection of sires, a preference has been given to the Herefords, as they seem to meet the requirements of that vast country better than any other breed. They are strongly prepotent, and impress upon their offspring their own color and individuality, so that a great change is noticeable. To-day (April 24th), Texas steers brought in Chicago \$5.40 a hundred, live weight, which goes to show that they possess quality, and were fat. The Herefords adapt themselves best to that warm climate, and keep in better condition than any breed yet tried there. Many of these grade Herefords are sold as yearlings, and are sent North to be fattened in Montana or the Dakotas, and from there come to the Chicago market. Besides these, there is a good class of cattle raised on the ranges in Montana and the Dakotas, but they are wild and do not get so fat as those that have been in the feed lot. From Wisconsin and Michigan come a class of cattle that are largely of the dairy type, and, as a result, do not bring a high price. Many cows come from these States which have been used for dairying and then fed for a short time and sold for beef. From Iowa and Illinois come the choice cattle of the West. They have been bred for beef for years, and many of them are in the middle of the corn belt, and an immense quantity of corn is grown and fed. All the best steers get corn, and many are finished with the addition of oil cake. The prevailing breeds are Shorthorns, Herefords, and Polled Angus, but Shorthorns far outnumber all the other breeds together, and they are evidently holding their own. They are distinctly a beef breed, but they also combine in themselves more general qualities and are filling the requirements of these States better than any other breed, although they have strong competitors in the Polled Angus and Herefords. One of the choicest loads of cattle that ever came to the Chicago market was a cross between the Shorthorn and Polled Angus. The dams were high-grade Shorthorn cows, and the sire was a pure-bred Polled Angus bull. The result was most satisfactory, as the cattle were black and without horns, and of superior quality. The breeder of these cattle said they took on flesh rapidly and evenly and were a very desirable kind of steer in every respect. I also saw another choice load from a cross between the Shorthorn and Hereford. These also were of excellent quality and were much admired by all who saw them. From observation and from what I learn from up-to-date breeders, I can safely say that excellent results are obtained from the first cross of high-bred grades by a pure-bred sire of another breed; in fact, many go so far as to say that such a cross is superior to the pure-bred of either breed, and from what I see, I can endorse that opinion. It goes to show what a pure-bred sire will produce on high-grades, and, reasoning along the same line, it indicates what a pure-bred bull will produce, even if crossed on an ordinary grade. It may not be out of place to make some remarks on the three leading beef breeds as we find them here:

Shorthorn steers of good quality, and fat, are always in demand on the Chicago market. The buyers consider them an excellent breed, and when they hang up on the hooks in the packing-houses they look very well, and the beef is always salable. The feeders consider them excellent, and the best quality meet with ready sale at satisfactory prices. They make an excellent cross on the grades and natives all through this country, as they impress

their beef characteristics on their offspring. The Herefords are also a good beef breed. They excel in the South and out to pasture, but there is a tendency to bunching the fat, and the carcass has not so smooth and fine an appearance as is desired, and, as a rule, they do not, when slaughtered, produce so much beef to the carcass as the other two breeds.

The Polled Angus, for beef alone, are very good. The carcass hangs up white and smooth, and the appearance is certainly in their favor. They fatten well, but there is a tendency to wildness in many of them. They must be ripe to give the best results. Buyers like them very well.

There are some lessons which we can learn from what we see here. To get the best results, corn must be fed freely and the cattle must be made ripe. Herefords should be sent to market as yearlings, for then they do not become bunched. All should be put on fall feed for a long period in order to get the best results. Exercise and plenty of outdoor air conduces to firmness of flesh. Oil cake added to the corn is a great help in finishing a steer properly. It is almost impossible to finish a steer on grass alone.

Raising and Feeding Steers for Profit.

To the Editor FARMER'S ADVOCATE:

SIR,—There appears to be a general opinion among farmers this year, that any person who is lucky enough to own a number of steers cannot fail to make a profit out of his stock, either for stockers or by feeding them for the export market. No doubt there is a greater opportunity to make a profit on stockers this season than for a number of years. The prospects for those who stall-feed cattle are very encouraging for the coming winter. But there are a few matters to attend to in the breeding and feeding of steers. The dairy industry having proved so profitable throughout the country has induced many farmers to breed and feed their stock in such a way as to develop milking qualities of the herd. It has been found that beef breeds are usually unsuitable for their business, and cows of various dairy breeds and crosses have been substituted to a great extent. Our only remark is, "Proceed with the good work." But while doing so, remember that steers of dairy breeds are just as unsuitable for beef. By this, we mean grades of the dairy breeds, for we do not suppose there are many pure-breds raised for this purpose. Steer calves of this class may be kept as slick and as good-looking as those of beef breeds for the first three months; afterwards they begin to show the breeding, and if beef is the object, they are kept at an expense to the owner, as they make very good veal, and that is a suitable time to dispose of them. Then arises the question, how can farmers raise young stock to consume the coarse feed of the farm. In the years past, it has been a custom with a number of farmers who raised grade stock of beef breeds, to destroy when young, or send to the block at six or eight weeks old, their surplus of calves, especially if engaged in mixed farming or dairying. If this system is continued, which is not probable, owing to the shortage of stockers at present, it will be an opportunity for those who handle the dairy breeds to procure calves to raise for beef. Otherwise it will be advisable to purchase grades of beef breeds to consume the surplus food and convert it into beef. Although they are rather scarce just now, still there are numbers of lean cattle sent to the shambles each week, many of which might be fed for beef and thus avoid glutting the markets with inferior stock. Many of them are grades of various dairy breeds; these are what dealers usually class as "scrubs." It is almost certain they are not a profit to any person, from the man who raises them, until they are served as second-class fare on the tables of the inhabitants of towns and cities. It is estimated that two-thirds of a full ration is required for the food of support. This being the case, it shows how unprofitable it is to sell lean stock, as they have received too little beyond the food of support, from which the profit, if any, is derived. In order to leave a fair margin for profit, they should realize the same price per pound as exporters. But only in times of scarcity do they command anything like beef price, except for first-class animals. Under proper management, the practice of purchasing stockers is a profitable business. Of course, the man who raises stockers for others to make profit on seldom succeeds in life he may rest with an easy conscience that he is only to be remembered in the next generation as a philanthropist.

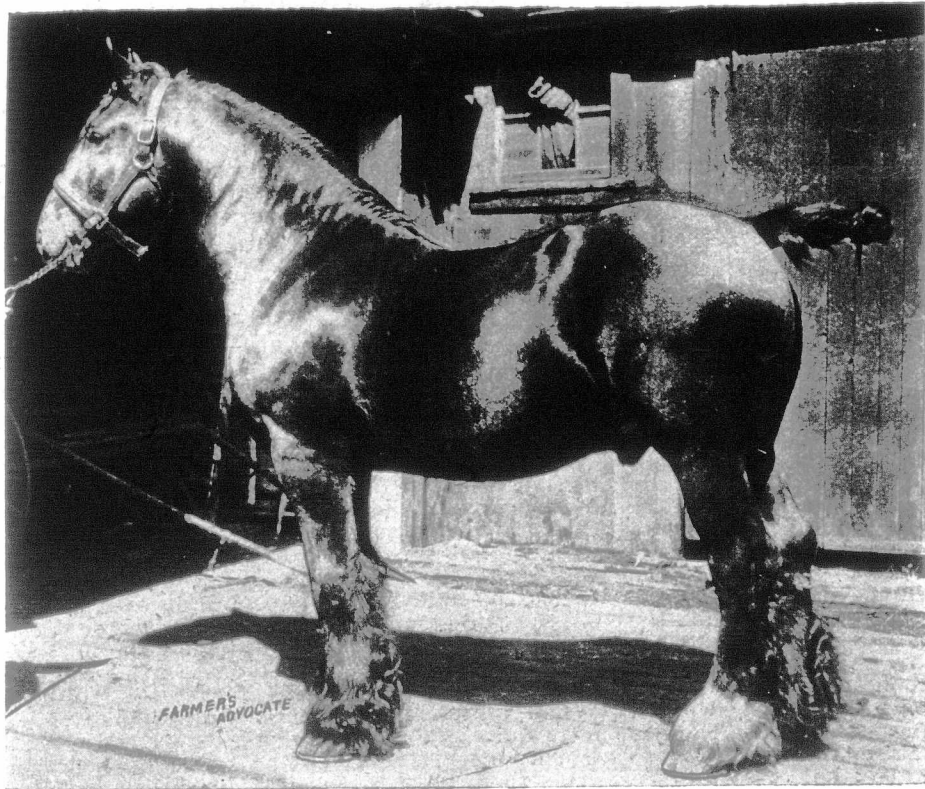
It is an undisputed fact among the best stock-raisers, that the system of early maturity is the way by which success may be attained. The stock needs to be kept in a healthy condition, and kept growing steadily. It is not advisable to feed strong grain until cattle are being fed for export. The greatest importance should be attached to feeding a ration suitable to secure rapid growth. The bulky part may consist of oat straw, corn fodder and chaff, with enough roots to aid the animals' appetite and the digestion of the food. Clover may be fed to advantage in place of oat straw for one or more daily meals, especially in case of yearlings. In fitting for beef, much of the same feed may be used, in addition to ground oats and peas. The grain should be fed sparingly at first, increasing to full amount. This is the critical period. The greatest gain in flesh and weight is now required at the least possible cost. There is a difference in the constitutions of individual animals, and one pound too much grain may put one off its feed, and if this is done, it will not thrive so well afterwards.

Kent Co., Ont.

HENRY SMYTH.

The British Embargo on Canadian Cattle.

In the House of Commons, Ottawa, on May 9th, Lieut.-Col. Hughes, M. P., asked whether any steps had been taken to obtain permission from the Imperial authorities to land Canadian cattle at Belfast? There was no reason why, under existing regulations, that Canadian cattle should not be landed at Belfast and Dublin and slaughtered there, instead of Liverpool and then shipped back to Ireland.



WILCOTT THUMPER (18452).

Shire stallion. Second prize at Military Tournament and Horse Show, 1901.
IMPORTED AND OWNED BY MESSRS. BAWDEN & M'DONELL, EXETER, ONT.

Hon. Mr. Fisher, Minister of Agriculture, replied that the Imperial authorities had flatly refused to open up new ports for the importation of cattle. However, a strongly-worded memorandum was on the way to England on the subject of the scheduling of Canadian cattle. He intended visiting England shortly, and would follow it up by the most strenuous representations against the injustice and unfairness of scheduling our cattle, the result of which is not only to affect our trade with Great Britain, but to cast an aspersion and almost a libel against Canadian cattle. He believed that it could be proved there has never been a case of contagious pleuro-pneumonia in Canada. The scheduling was done in 1892, upon the finding of English veterinarians that three head of cattle were affected, but Canadian veterinarians, after examining the lungs, declared it was not a contagious disease which afflicted the animals. Of the 800,000 cattle which had been sent to Great Britain since 1892, not a single case had been found, and if it had existed here, it could not possibly have failed to show itself. Upon the merits of the case, the Imperial authorities have not a leg to stand upon, and he proposed to present, in the strongest possible manner, the case of Canadian breeders against this injustice and the aspersion which it casts upon the health of our cattle.

Mr. Henderson (Halton) thought a golden opportunity was lost for obtaining the abrogation of the regulations scheduling our cattle when in 1897 a preference in our market was given to British manufactures. The farmers had suffered a loss of \$6,000,000 in this one item alone.

Mr. Jabel Robinson said the Canadian farmers suffered severe loss owing to their cattle being slaughtered immediately upon landing, and the Canadian Government will be to blame if they do not make a great effort now to have the regulation removed. The Government should also take steps to induce capitalists to start abattoirs in this country, and this would pay better than to send the live cattle across.

Our readers will await with great interest the result of the effort which the Minister of Agriculture is now making to have the embargo removed.

Sore shoulders are common nowadays. Watch the harness, that it fits the animal wearing it. You might bathe the shoulders with cold water in which some salt has been dissolved, or a dram of tannic acid to the pint of rain water.

Draft Horse Breeding.

I will try to give a few points on horse-breeding to show those who are unconcerned what the market is doing for, which is a draft horse with plenty of size, quality, and of a good color—bay, brown or black. I think there was never a time in history when the general breeder could raise colts with as much assurance of a fancy price as last season and the one approaching, if he is careful in making his selections and has a higher motive in view than just simply breeding to please some clever fellow that happens to have a stallion. I think one of the greatest causes of common horses is that too many breeders' only object is to raise a colt, regardless of what its future will be, realizing that the breeding season is a very busy time for farmers, and thinking that they cannot afford to give a day or two in order that they might be able to find just such a sire as is producing the kind of stock the market is paying long prices for—and not until too late do they find out their mistake.

And now let us consider this important question and use our very best judgment in selecting sires this spring. If we do we shall surely reap a reward for our trouble, and in a short time will have an inducement for buyers to come to our homes. We will feel proud to show our stock, and we can truthfully say it well paid us even if it did cost a trip into another county. After we do raise good horses of the right type, we won't be satisfied unless our names are on the list as successful horse-breeders. One of our greatest mistakes in horse-breeding, I think, is in not sticking to a certain type of horse. I am sure the cross breeding is one of our greatest errors. It does not make so much difference if of different breeds of similar type, but I think it does make a great difference when we go to crossing draft horses with roadsters, as the offspring is neither a drafter nor a roadster. This sort of breeding is a great source for the chunks that are flooding the market and causing a good many would-be horsemen to think it does not pay to raise horses. I have in mind a successful horse-breeder that claims he made more money in breeding horses than in anything he ever undertook, and says he owes his success largely to the selection of sires and always keeping his stock in show condition. He has quite frequently gone forty miles to a stallion, and has the last three years been going twenty miles, owing to the fact that he is unable to find his model horse any nearer. It would be wise for us who are not expert judges to pattern after this same breeder, breed good mares and take good care of the colts, especially the first year of their lives. Their future depends largely upon their care the first winter and never being neglected thereafter.

Good Stock Water Scheme.

Mr. J. W. Fagner, a progressive stock farmer, built a 1,000-barrel brick and cement reservoir, which was arched over like a cistern. Then he plowed and scraped the dirt up over it, making a mound perhaps a dozen feet high. The water is pumped in by windmill, and, no matter how cold the weather, is always at the proper temperature for watering stock. He has it piped to the hog house, cattle stable, and all the feed lots, and does away with the necessity of tank-warming devices. It works like a charm, and Mr. Fagner says he does not see how he could get along without it.

FARM.**Farm Siftings.**

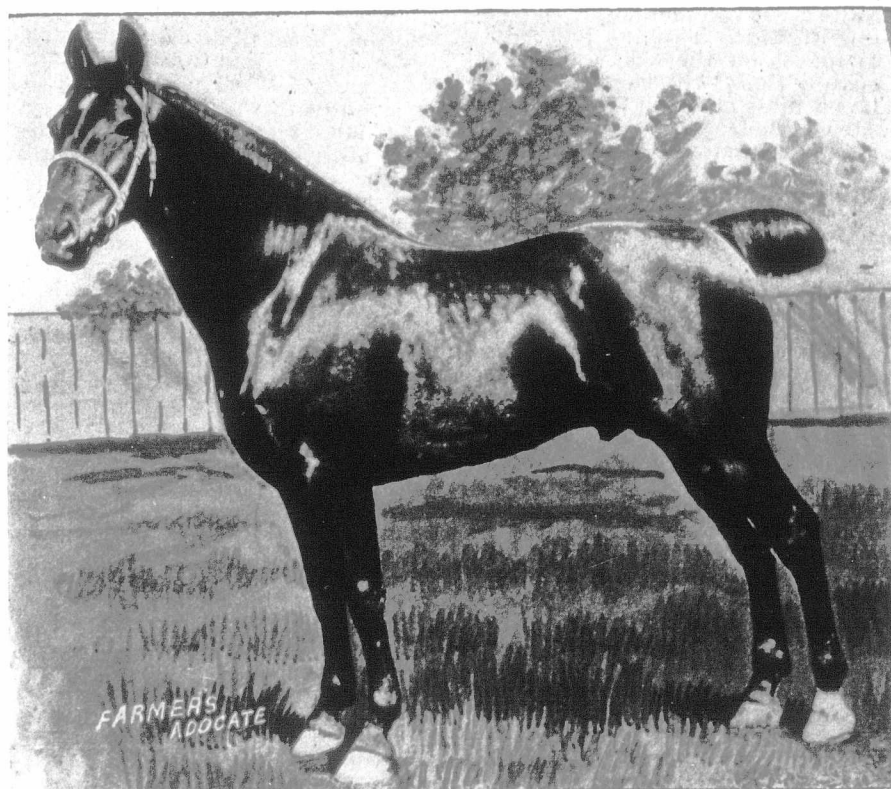
Building is one of the farmer's summer diversions: it may be a house, a barn, granary or other outbuildings. The farmhouse should be planned for comfort and convenience, care being taken that its arrangement is the handiest possible. Most people like a good cellar; the getting to that cellar is not always by the easiest route possible. In this connection, for the convenience of the housewife, have a dumb waiter (a miniature elevator from cellar to kitchen) installed, and thus save the endless running up and down steps, one of the hardest forms of work a woman has to do. The soft-water cistern should be connected by a pump with the kitchen sink. Hewing of wood and carrying of water is not woman's work.

The source of the summer's meat supply is often a serious one on the farm. Some patronize the butcher (not the most economical way from the farmer's standpoint), others belong to a beef-ring, while the majority depend on the cured pork they have stored away. Variety in diet tends to aid digestion, so that the following method of curing mutton hams might be tried and found beneficial:

The legs of mutton are first dressed into the required shape, and then have well rubbed into them a mixture of equal parts of salt and brown sugar; after this they are left to drain for about 24 hours. At the end of that time the hams are placed in pickle made by dissolving 2 lbs. each of common salt and bay salt, 6 ounces of saltpetre, 1 lb. of brown sugar, and 1 oz. of sal-prunella, all slowly boiled together in a gallon of water for about two hours. After cooling, this pickle is poured over the hams, which are allowed to remain immersed in it for a period of from 10 to 12 days. At the end of that time the hams are removed and hung up to dry, after which they are smoked in order to give them the requisite flavor. Mutton hams cured in this manner keep for a long time, and though somewhat troublesome to prepare, they are such a novelty that in many places they are considered well worth the trouble of curing.

To the farmer that milks cows for the sake of the money to be made from the work incurred, the project of Prof. Grisdale, Agriculturist at the Central Experimental Farm, Ottawa, is worth taking note of. Few realize as yet that their cows are only paying cents where they should pay dollars! It is time for a change, to use the hackneyed political expression, so get a spring balance, find out what each cow is doing, and thereby enable yourself to have a balance on the right side of your ledger.

Speaking of balances, brings up the question of farm bookkeeping. Many a one will not start to keep farm accounts because they are afraid it re-



SQUIRE RICKELL —74—.

Hackney stallion, by Cadet —15—, First prize and sweepstakes at Military Tournament and Horse Show, 1901.

OWNED BY R. BEITH, BOWMANVILLE, ONT.

quires the training of an accountant. This is not so: a set of farm books can be kept by almost any farmer, that will show him at the end of each financial year how he stands with the world. Prof. Reynolds, of the O. A. C., Guelph, had a very suitable system of farm bookkeeping, so I am told. Wm. Rennie, in "Successful Farming," also outlines a system. Give farm bookkeeping a fair trial and you will always keep books afterwards.

Springtime on the Farm.

What pleasure it is to live on a farm! There are so many things of interest surrounding the life of a woman on the farm, which our town and city sisters are lacking at this season. To be sure, there are privileges which they enjoy, of which we are deprived. There is one thing which, we believe, the city and country woman possesses in common—house-cleaning in spring. It is a grand revenge on pent-up dirt and cobwebs, to be able on some sunshiny day to open windows and doors, and turn all inside out. Men, occasionally, appear to object to the reign of the mop and the broom: but we put that all down as mere pretense on their part, for sure we are that if a spring passed by and they saw no sign of a "clearin' up time," there would be more grumbling, and with good cause.

What a difference between a breath of country air and city air in springtime! We will not attempt to describe or analyze the spring air of a city in the early dawn. But the country air in the early spring morning! When the housewife opens door or window and draws in a long, full breath, she feels that it brings her a new lease of life. It is filled with a mingling of odors of budding life in tree and plant. It waits to her the sounds of bird and beast, and the music of the Canadian water band. Everything animate is preparing for a new year of busy, useful life, and she cannot resist the feeling that she is one member of a great whole, born to assist in doing her part to work out the great scheme of the universe. As she goes around during her day of homely duties, every now and then her eye or her ear catches some new proof of spring freshness and beauty. The songs of the birds beguile her into recollection of some long-forgotten song or hymn of her childhood. Ever and anon, perhaps, one of the children of the home rushes in with tidings of some discovery in flower or animal, or may be it is a treasure of last summer which they have found just uncovered from its blanket of snow, which to them is quite as interesting and valuable as the city child's expensive toy.

Mothers, do not grudge a little time and show of interest to the boy or girl when they bring to you some thing of nature to exhibit its wonder or beauty. Look at the streaks on that pretty stone brought from the creek—or the snail shell—and take a few moments to tell them what you know of the soft wee thing who carries his house on his back. Take the beautiful anemone out of his hand, and show him the downy wrappings of the bud, which protects it as the baby is wrapped in its blanket. Tell your wee girlie where to find a "nice big ant hill," and let her go and lie in the sun beside it, and afterwards come and tell you what she saw there.

Oh, there are hundreds of things that foster a healthy, true idea of life in the country boy and girl, if only their parents will take a little pains to inculcate the love of them. Those very interests may save the children from drifting in after-life into impure thoughts and into wrong actions. Once imbue a child with a true love for nature and nature's works, and it is a rare exception that he loses it, and if his mind is filled and his thoughts are intent on the works and plans of the Great Creator, there will be no room for baser matter. The business men and the city housekeeper too can instruct their children along these lines, but it requires a greater effort; while to those who live in the country, the means are all around, and it is wilful and almost criminal neglect if they refuse to take advantage of their surroundings for themselves and their children.

Assiniboia.

Care of Sugar Beets During Their Growth.

After seeding, the soil should be gone over with a roller, so as to obtain a compact surface. This rolling has for its effect the facilitating of the germination, and offers a firm strata of soil for the ascending root to penetrate. It is under these circumstances firmly held in position from the very commencement of its existence. After the appearance of the young root above the surface, hand hoeing must be resorted to. The upper crust being thus broken, there is no danger of the soil caking, and the weeds are eradicated during the operation. Hoeing should be repeated after a few days' interval, and thinning or spacing should be done by hand or machine. Experience shows that the best results are obtained during a cloudy or damp day, when the plantlets are about two inches high. The advantage of hand spacing is that a certain amount of intelligence may be introduced into the work being done, as the strongest plants alone should be allowed to remain. The hoeing from this time forward should be repeated every two weeks, until the leaves reach a size rendering the operation impossible. It is important that each hoeing be deeper than the preceding one. When these hoeings are finished, the beets are left alone until harvesting.

Regarding thinning of the beets, a well-known agronomist declares that the largest plantlet at the time of thinning generally corresponds to the largest beet at the period of harvesting. This is attributed mainly to the vital energy of different germs contained in the same seed cluster. The loss through thinning is consequently considerable—approximately: hence the importance of conducting the operation with considerable care. *The Sugar Beet.*

Rape as a Forage Crop.

It will pay every farmer who keeps sheep or hogs to sow a few acres of rape for pasture. There is no crop which can be more cheaply grown or that will produce more wholesome and fattening stock food. It requires but little labor, and can be successfully raised by any farmer who will give it a fair trial. It does not require rich land, though, of course, the richer the land the heavier the crop that may be grown. It is generally used for fall pasture for sheep and young cattle, and for this purpose a good time to sow it is about the last week in June. Sown at that time, it is generally well advanced and fit for pasturing by the middle of September. As pasture for hogs, it may be sown early in May and pastured while young, as it will spring up again when eaten down, and the leaves are most relished by hogs, while sheep prefer the more matured stalks, and fatten rapidly on them. An overturned sod makes a very good preparation for a rape crop, if it is rolled and harrowed immediately after plowing to make a fine seed-bed and retain the moisture in the land. Land plowed the previous fall and cultivated occasionally in the spring, without plowing, makes a good preparation. Even stubble ground, plowed in May or June, may do very well if it is in good heart and care be taken to roll and harrow immediately after plowing and to bring the land into a fine tilth. A fair crop may be grown on good clean land by sowing broadcast at the rate of 4 or 5 lbs. of seed per acre, and covering with a light harrow. But the best crops are grown by sowing in drills, or low ridges, 26 to 30 inches apart, with a turnip drill, 1½ lbs. per acre, and cultivating with the horse hoe to clean the land and hasten the growth of the crop. The seed may be sown in drills on the level with the grass-seed attachment of the grain drill by closing part of the openings and sloping the rubber tubes into the shields of two or three of the hoes. The rows in this case will, with the ordinary drill, be only about 21 inches apart, which is rather too narrow to work a horse hoe to best advantage, but if worked narrow at first, to keep down weeds till the rape plants get high enough that they are not liable to be covered, the horse hoe may be worked wider later on and a good purpose served. There is no forage crop which will fatten lambs and sheep so fast as rape. It is well to give them the run of a grass field, as well as the rape, till they get used to the latter, and it is also wise to keep the sheep off the rape at first till the dew is off in the morning, or when it is wet from a rain, as they are liable to bloat from eating freely of rape when it is wet. But when they get used to it they may be safely kept on it continuously right up to winter, as the frost does not injure its feeding qualities.

The Turnip Crop.

Let not Canadian farmers and feeders give up the growing of turnips for winter feeding. For the best results in feeding of cattle or sheep, turnips cannot be left out of the list of foods. Great Britain's fame as the breeding ground to which all the countries of the world turn for fresh blood and the material to improve and strengthen their herds and flocks depends largely upon the liberal feeding of turnips to the young and growing stock, while cattle are fattened with little more than straw and turnips.

The sterling quality of Canadian-bred stock, so eagerly sought after by our corn-feeding neighbors of the United States, is largely due to the succulent turnip which is grown and fed in abundance by most of our breeders of pure-bred stock. Even dairymen should grow turnips for their young stock and dry cows. Some good dairymen claim that they can, by proper management, feed them in moderation to milking cows without tainting the flavor of the milk, but it is perhaps wiser to grow mangels for the milking cows, leaving the buttermakers no excuse for complaint on this score.

The secret of successful turnip-growing lies in the preparation of the land, bringing it to a fine tilth after the application of manure to give it fertility. This, together with frequent cultivation after the plants appear above the ground and are thinned to the proper distance apart, fills the bill, and it is not considered a difficult crop to handle by those accustomed to it. A clover sod or stubble field, manured, plowed and cultivated the preceding fall, is the ideal preparation to begin with, but if sufficient manure has not been on hand in the fall, fresh manure from the barnyard may be spread on the land in May or early June and worked in by shallow plowing and cultivation, the roller being freely used to crush all lumps and reduce the soil to a fineness fit for a garden. Ridge the land up in drills, 26 inches apart, and sow with a turnip drill, at the rate of 2 pounds to the acre, any time from the 10th to 25th of June, not more than 1 to 1½ inches deep. Roll with a light roller, and if there is any moisture in the land, the plants will show up in a few days. Start the horse hoe as soon as the "braird" is seen, to kill weeds while young, working it narrow at first, and wider each successive time it is used. If a dash of rain packs the land and forms a crust on the surface, preventing the plants from coming up, run the roller over the ridges lengthwise again to break the crust. A hand wheel-hoe, which cuts close to the row of plants, loosening the soil and killing young weeds, gives the crop a great start; but if this is not available, work the horse hoe for all it is worth, as often as you can find time. Thin with the hand hoe to single plants, 10 to 12 inches apart, as soon as they are large enough. They will stand a good deal of knocking about and be no worse for it. It will

pay to hoe the second time by hand and to horse-hoe once a week, especially in a dry time, and always after a shower, as soon as dry enough.

Training a Collie.

The Scotch collie is well equipped by nature for his calling; his shaggy coat protects him from the cold storms on the mountains, and also from being scratched by the rough heather. His long bushy tail is used as a helm to steady and assist in sudden turns on the mountain-side. A bobtailed dog cannot stop and turn quickly on steep ground without whirling over.

In the north of Scotland, black with a white ring around the neck and a white breast is the favorite color: this on account of the ease with which they can be seen on the mountains, and the shepherd can tell when they are looking at him by the white breast.

In Scotland the dog has to work often at a great distance from his master entirely by signs.

The training of a young collie is a very delicate undertaking, and few men are fitted for it. The trainer must be firm, kind, patient, persevering, and NEVER SCOLD. You may chastise a young dog severely and hold him till the fright has passed, then look kindly at him as you let him go, and he will love you; but if you scold him, you have lowered his dignity, and he will skulk away, NEVER to look you in the eye again with that loving, friendly, companionable, intelligent, trusting look of a noble shepherd dog.

When I was over in Scotland in 1896, I visited a cousin (Adam Riddell, of Greenleas), famous in that part of Scotland as a dog trainer. Though a man of 80 years, he had his dogs under fine control. If a sheep ran away, most dogs would try to stop it by turning close in front, but he trained his dog to run wide and away beyond the sheep quite a distance, then turn suddenly and drop, with his eyes fixed upon the sheep, and it was a rare thing for one to attempt to pass as long as the dog lay there.

I have had some very good dogs in this country, though trained principally for cattle and hogs. When railroads were scarce we had to drive our hogs quite a distance to market. I had a collie which I often sent even with strangers to help them drive their hogs to the station, a distance of ten miles. He was more help than three or four men. If a hog attempted to run back, he would catch it by the ear and swing it around two or three times, then, with its head turned in the right direction, he would let go and drop behind it; if it went right, all was well, but if the hog still persisted, he would repeat the operation until he conquered, without ever losing his temper. One day a drove of hogs was driven into town, among which was a large Berkshire boar so fierce that he drove every team off the road which he met. The boar seemed to fear neither man nor beast. His owner wished to rope him, but how to catch him was the question. Some proposed turning two bulldogs out to catch him, but the owners said he would kill them. A neighbor said my sheep dog would hold him. The crowd jeered and offered to bet money that no dog could handle him, but he said: "Get your rope ready and I will show you." Then, calling my dog up, he said: "Shep, watch him." He caught the boar by the ear as the savage boar gave a terrible side stroke with his tusks, expecting to rip the dog open. The movement only threw Shep over his back behind the shoulder, where he sat with the boar's head twisted around and his nose up in the air, perfectly helpless. "Now rope him and he is safe," came the order. Then went up such a cheer for old "Shep" as was never heard on that square before or since.

A man almost gets a fellow feeling for a faithful shepherd dog.—H. H. Oliver, in *Live Stock World*.

Avoid Extremes.

The attention of horsemen is frequently called to the importance of breeding horses with long pasterns, but that this good quality may be overdone is emphasized in the following extract from the *Farmers' Gazette*:

"Length of pastern is a point to which great importance is attached by some Clydesdale breeders. It is thought that long pasterns impart to the animals possessing them a better style of action and freer movement than is displayed by animals with shorter 'connecting links' between the arm and the hoof. The craze for long pasterns is not without its disadvantages. In the course of a paper on 'Bog spavin,' which he read at a recent meeting of the South Durham Veterinary Association, Mr. J. G. Deans, M.R.C.V.S., of Bishop Auckland, made special references to the great liability of Clydesdales as at present bred to suffer from this disease. Mr. Deans said: 'In trying to produce a type of animal to suit the tastes of Clydesdale fanciers who require great length of pastern, breeders have rendered their horses far more liable to bog spavin than they otherwise would be. There is a medium in all things, and although I am partial to the Clydesdale breed of horses, I most thoroughly condemn this excessive length of pasterns which has been aimed at. When you get those long pastern joints, you as a consequence find that the position of the joints of the hind limbs are all altered, and that you in conjunction with the above find straight hocks, which I assert is the cause of bog spavin in 60 per cent. of the cases to be found in young animals. Some other cases are produced by want of exercise, but when caused in this way they are only temporary, and can be removed without surgical treatment.'"

A Lightning Enquiry.

Prof. J. B. Reynolds, of the Department of Physics at the Ontario Agricultural College, has made a new departure, instituting an enquiry into the question of the destruction occasioned by lightning. We understand that at a recent underwriters' meeting the advisability of raising rates for rural risks was discussed, it being held that the losses from lightning in country districts are on the

Give the Boys a Chance.

I would like to ask the farmers of this great Dominion, Are you doing your duty towards keeping your boys on the farm? Don't think because you never had a fine horse and carriage or a bicycle, that your boys must go without. Nay, if your boys are ever to enjoy life, is it not when they are young? They will grow old far too soon. I firmly believe the cause of most boys leaving the farm can be traced to the father. He is apt to think his boys should not spend money for this thing or that. He never heard of such things when he was a boy. I knew a man who found considerable fault because his son paid twenty cents a week for laundry bills, when he himself spent twice the amount for tobacco. Then, too, I think fathers should consult their son's opinion, not only for seeing how correct his ideas are, but to sometimes follow them as well. For instance, there is a fine colt in the stable. A buyer comes along and offers a good price for it. You never gave it to Tom or Fred, but they have taken care of it, curried, fed, and broke it. Now, don't sell it without consulting them. They are good boys, and, perhaps, would never say a word of objection. But they have a love for that colt—you have not—and if you could hear them talk it over when they were alone, what would you hear. Tom says to Fred: "That colt ought to have been ours, and I always thought father intended it for us, though he never said so, and I think as little as he could have done would have been to give us twenty-five dollars each. I know he put it in the bank, and we will get it

some day, but a fellow would feel better to have a little to call his own now." Fred vows he will, as soon as he is old enough, go where he can earn good wages. If Tom is foolish enough to stay home, he is not going to be. My idea of how a farmer should deal with his boys is this: He should consult their likes and dislikes. Early in life, when mere children, they usually form them. One will be very fond of horses, another may have a special liking for sheep or poultry. Encourage them all that lies in your power, for we all know if we are to make a success of anything we must have a liking for it. If it is poultry, see that he has a good warm house for his chickens—it need not be expensive. Give him a start in some pure-bred stock, whatever variety it may be. He will perhaps like to try more than one. Don't think this extravagant. Be thankful you have such a boy. It seems out of place to have to say the boy should have the profit derived from his flocks. Yet there are men, and I am sorry to say I know one, who lets his boy raise turkeys, pay for the feed he feeds them, then takes half his profit besides, the boy working hard on the farm at the time feeding and caring for his turkeys. Just such little mean dealing with your boys is what drives them to the city. They know what they earn there they can spend as they see fit. In traveling around, it is astonishing how many farmers one meets who want to hire good boys to work on the farm. These same men, many of them, have boys in the cities either in Canada or the States. Why are they there? I am confident in most cases the father is to blame. I believe that very few boys brought up on a farm would have left it for the city if the right inducement had been held out to them to remain. There is no occupation more varied than farming, and it is an excellent plan for each member of the family to have some special line of work outside the usual routine.

Fathers, you are making a great mistake by not allowing your boys to handle money when young. A boy who grows to be twenty-one, having always had father do all the buying and selling, even to the clothes and shoes he wears, has been terribly wronged. No wonder, if left to fight life's battles alone, he fails. Don't have moneymaking your highest aim in life, sacrificing every other interest for the purpose of adding to your bank account. No one will think any more of you in this world, and, as you cannot take a cent with you, might you not better enjoy what God has given you, making those around you happy and contented?
R. F.

DAIRY.

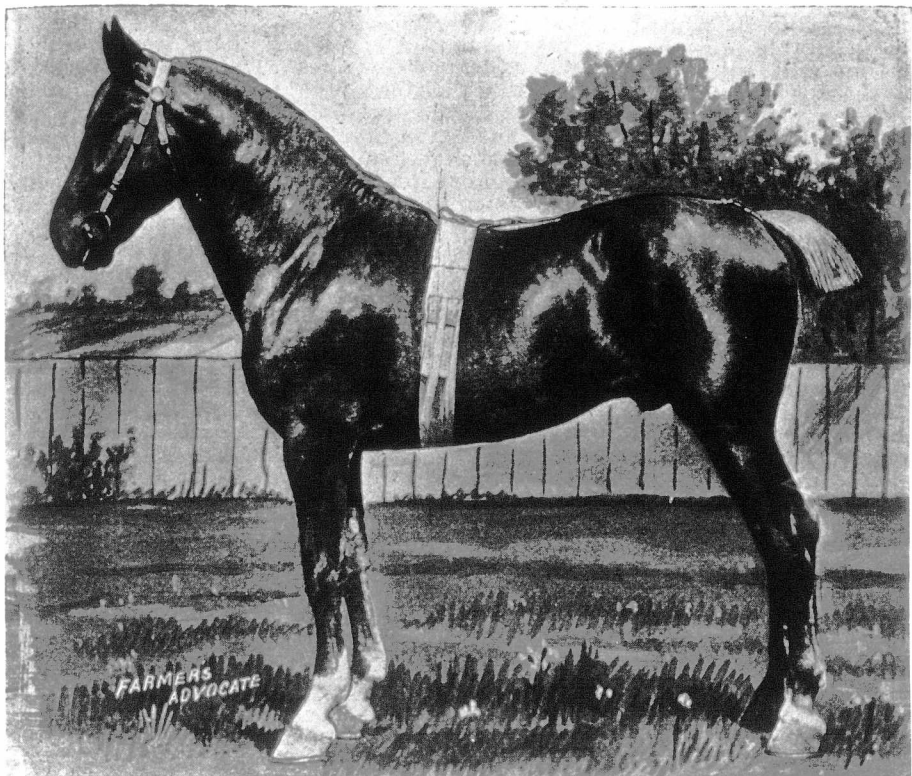
The Score Card in the Judging of Butter.

The use of the score card in the judging of butter seems to give satisfaction where used. In the hands of the expert it embodies the educational feature, as by reference to the score the maker gets a hint of the deficiencies in the article manufactured by him. The following is the form of score generally used, the possible points being 100:

Flavor.....	45
Grain.....	25
Color.....	15
Salt.....	10
Finish.....	5
	100

It will be noticed that 45 per cent. is allowed for flavor, consequently it behooves the maker to see that his product has the right one. Experts speak of the nutty flavor, a quality only to be obtained when cream is ripened properly by the maker. Such being the case, we see how important it is that the patron's cream should be in the best possible shape on arrival at the creamery. It is almost impossible for a buttermaker to manufacture a first-class article if the raw material—the cream—may have ripened before coming under his care. So important is flavor, that bacteriologists have devoted a great deal of time to identify germs responsible for good and bad flavors. Twenty-five per cent. is the maximum allowed for the grain. Nothing shows the manual dexterity of the maker more than the grain of the butter, shown by breaking off a piece, when the fracture shows flinty edges like a piece of broken steel. The grain shows, among other things, whether churning was continued long beyond the breaking point—that is, past the granular stage—and, also, as to whether the butter is overworked or not. If the trier is used, it should pull out smooth, not stringy or greasy, and should show just a bead of water on the back of the trier.

Fifteen points are allowed for color. The scoring may vary slightly with the judge and with the market demands. Faults such as a mottled or streaky appearance are due to overworking. Particles of curd or a mixture of different churnings will cause a heavy cut in points.



CONNAUGHT HEIR —116—

Hackney stallion, three years old. First prize at Military Tournament and Horse Show, 1901. Will stand at his own stable this season.

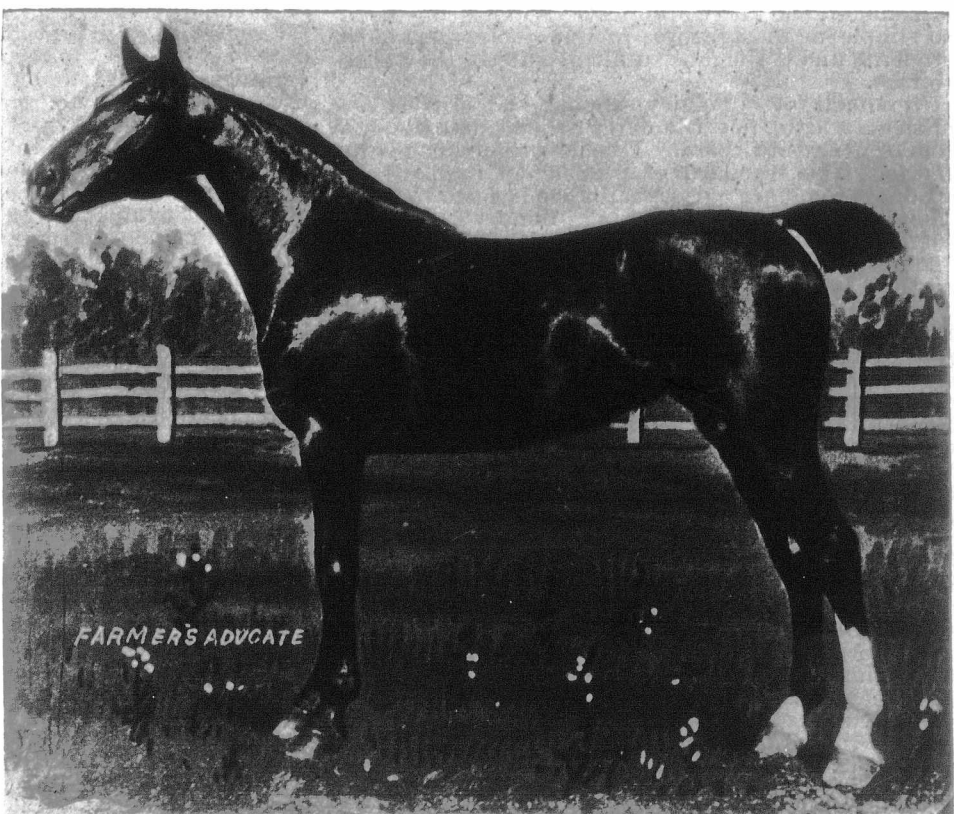
IMPORTED AND OWNED BY MESSRS. BAWDEN & M'DONELL, EXETER, ONT.

increase. Prof. Reynolds is collecting from a list of three or four trustworthy observers in each county a report on cases that come under their actual observation. A list of printed questions to be answered is furnished each, so that full and accurate data as to conditions will be secured regarding each case, whether of buildings struck or burned, live stock struck in the field, or trees. Among other points, the question of lightning-rods is enquired into. The experience of the London Mutual Insurance Company, to which reference has been made in these columns, was strongly in support of the value of rightly-constructed rods as a protection against damage by lightning. We heartily commend the investigations which Prof. Reynolds has undertaken, believing that it will be the means of collecting information, which, when properly digested, will prove of very great benefit to the agricultural community by suggesting means whereby the dangers from this destructive natural force can be very greatly reduced or avoided.

Charlock Spraying.

Mr. E. B. Hadley's report on spraying for the destruction of charlock (wild mustard) on thirty-two farms in Wiltshire, carried out by the Agricultural Committee of the County Council in 1900, shows that the most successful results were obtained by spraying twice with 50 gallons per acre of a 2-per-cent. solution of sulphate of copper (2 lbs. to 10 gallons of water). A single spraying in most cases killed at least three-fourths of the weed, and weakened the rest; but the double spraying is declared to have destroyed all the charlock in several instances. Mr. Hadley thinks that 60 or 70 gallons per acre would be better than 50 gallons.

One frequently sees what would be funny things, if they were not bound to be disastrous, in horse-breeding. A case in point: In a livery barn one day there happened to be two stallions—one, a trotting horse, a Nutwood, so his driver said. If the statement was correct, that noted old sire would, I am certain, neigh in disgust at his light-limbed, shallow-middled, lath-like descendant. It is doubtful if this degenerate had a record; anyhow, it's dollars to doughnuts that one mile would suit him better than three or more. The other stallion was a Hackney, well put up, a thick fellow, and a pretty good actor. The third party was a little broncho mare, ewe-necked, with a scary look, a fair middle, and a drooped, peaked rump; but such was the irony of fate, that the mare was bred to the Nutwood degenerate instead of to the shapely horse, and one chance, however small, of improving the broncho stock was forever lost. It does not, however, follow that all Standard-bred stallions are bad sires, or that all Hackney stallions are good ones. Conformation, as well as breeding, must be taken into consideration.



HERMIA —90—

Hackney filly, three years old. First prize at Military Tournament and Horse Show, 1901.

BRED AND OWNED BY R. BEITH, BOWMANVILLE, ONT.

Ten points are allowed for salting, and here the quality of the salt tells the tale. Poor salt or too much salt means a lowering of the score. Only the best dairy salt should be used, which should be sifted onto the butter, whether in the churn or on the worker. There should not be a rough, gritty feeling when a piece of butter is placed in the mouth.

While only five points are allowed for finish, the ambitious person will want them all. If tubs or

crocks are used, fill flush with the top and have that top perfectly smooth. Artistic (?) designs will lower the score. Use the best parchment paper (which should weigh 50 lbs. to the ream), and good tubs, and there will likely be no cut for finish. Prints should be put up in one-pound bricks and wrapped in moistened parchment paper. In order to keep the butter package clean, burlap should be used to wrap it, and thus avoid soiling of the box or tub.

A Dairy School Education.

BY AN EX-STUDENT.

Is a dairy-school education necessary for the production of a first-class dairyman? In answering this question myself, I would certainly say "Yes" with emphasis, for I am strongly of the opinion that a dairy-school education is not only necessary, but that it should be made a compulsory requirement of all cheese and butter makers.

Many of our makers who have never availed themselves of the advantages to be gained from attending a dairy school are very unwilling to admit that knowledge of the trade can in any way be increased by a three-months' course in some of our dairy colleges. Undoubtedly, some of these same men are good makers, and have probably been successful in manufacturing a good article for a number of years. They have the practical part of the trade mastered almost to perfection, but it must be remembered that in cheesemaking practice alone does not make perfect. Practice is all right, and a man must have it before he can manufacture cheese, but theory is of no less importance. In these days of advancement in every line, we must know all there is to be known about our trades or occupations if we want to keep abreast with the times. A cheesemaker should know the "whys" and the "wherefores" of his trade, or he cannot be a first-class cheesemaker. He knows that certain results will follow if he pursues a certain course, but he also should know why these results follow this course of action.

To my mind, the knowledge obtained in the bacteriological and milk-testing departments alone will repay the time and cost of attending a dairy school. A cheesemaker is not a cheesemaker at all unless he understands the action of bacteria. The art of cheesemaking is simply knowing how to control the different forms of germ life which you have at your command; that is, to retard the growth of the undesirable, and to encourage that of the desirable to the extent to which they are wanted. Cheesemaking is but a side-issue of bacteriology, and a knowledge of the one is absolutely essential to the thorough mastery of the other.

In the milk-testing department a knowledge is obtained which cannot otherwise be procured. The term milk-testing is generally misunderstood. When you speak of this process, most people understand that you are referring to operating the Babcock tester to determine the fat content of milk. This is certainly true, but it is only partly true. Milk-testing in all its branches has a much wider meaning. We have adulterations to contend with, and these require a great deal of extra knowledge to that required to operate the Babcock tester. A thorough drill is given in all the various uses of the lactometer, and also the oil test. Milk-testing is not so simple as most people imagine. In fact, most students find it the most difficult subject they have to face.

So much for our dairy schools, and now let me criticize a little, not the dairy schools, but the system of operating them. I believe that this has its faults. The standard of proficiency required by students to obtain a pass certificate is much too low. There is not enough "plucking" done. The papers set for the examinations are certainly difficult enough, but the percentages required to obtain a pass on these papers is much below what it ought to be. According to present regulations, all students obtaining 45% of total marks given are entitled to a pass certificate; from 60% to 75% are accorded 2nd-class honors; and from 75% upwards are in the 1st-class honor list. I think that all those who do not come up to the present 60% mark should have the certificate withheld from them. This is the reason we have so many graduates who do not prove a credit to our dairy schools. These are the young fellows who have gone to Guelph, or some other of our dairy-school centers, for the purpose of putting in a "good time" for the winter, and who have barely managed to creep in at the end of the list, obtaining the necessary 45%, thereby obtaining a certificate as cheaply as possible. This is the reason these certificates count but very little with people with whom they should have some influence. They have met some of these tail-enders, seen the result of their work, and judge the rest accordingly. Take our collegiate institutes, or any other of our institutions of learning, and you will find that from one-third to one-half of students writing on examinations will fail. This should also be the case in our dairy schools, but we find that it is not so. In the 1900 term at Guelph, when 45 students wrote on the final examinations, one only failed to obtain a certificate. Our dairy schools cannot afford to be so liberal. If their reputation is to be sustained, and if these certificates are to count for anything, they must not be given so cheaply.

A common deformity in hand-fed calves is potbelliedness, due to the milk fed them being cold or sour. The use of the cream separator (not the aquatic or dilution fake) will tend to dispose of the first cause; clean pails, in place of swill buckets, will aid in overcoming the second cause.

The Farm Separator in Home and Creamery Buttermaking.

To the Editor FARMER'S ADVOCATE:

SIR,—If a farmer has ten cows, and is using the old-fashioned milk pans, and his herd averages three pounds of butter per one hundred pounds of milk, it is safe to assume that with any of the standard makes of cream separators his yield would be increased by about one-quarter or more. The same thing is true regarding the deep-setting system. The gain by deep setting over the shallow pans is not so much in an increased yield as in quality of butter. In summer the deep-setting system will yield more butter, while in winter or in cool weather it is a debatable question as to whether the deep-setting will equal the shallow pans or not? Both these systems have had their day, however, and the question now is, not which system shall the farmer adopt, but, having decided to produce butter, will he patronize the nearest creamery, or, by the aid of a farm separator, manufacture his own product? It rests with the individual to decide this question.

While many creameries give perfect satisfaction to their patrons, perhaps, on the whole, not more than one-half are satisfied. There can be no question about the ability of many farmers' wives to produce as good or even better butter than the average creamery. Their difficulty is not in producing, but in marketing their butter. They must find customers who appreciate a good article and are willing to pay for it. If they take their butter to the grocer and sell at current market prices, they accept less than they are entitled to. They can only hope to cater to the home market, as the shipper cannot procure enough butter of uniform good quality to make up a shipment. The patron of a creamery properly conducted stands in a much better position to secure a market than does the individual producer. But this advantage is to some extent counterbalanced by the cost of the service rendered by the creameryman. If you hire a man to do your work, you must pay him. That is only fair, provided the price is not too high. What, then, is a fair price? Where the creameryman pays for gathering the cream—not milk—three cents per pound is a fair price for making and marketing the butter. We have never known one to succeed at a less rate, and would feel disposed to make very frequent tests of our cream if sending to a creamery the owner of which professed to be working for less. Where the whole milk is gathered and separated at the creamery or at separating stations, the cost is considerably more, as the cream, being only one-eighth of the whole, eight-eighths have to be gathered and seven-eighths returned, which make fifteen times as much labor as to gather the cream only. Add to this the cost of keeping up a number of costly power separators and power and attention, especially where customers are few and far apart, and it puts this system practically out of the running, especially if charged with the difference in the value of milk skimmed and fed fresh from the cow, and that which has been drawn some miles to the separating station, heated and returned in bulk, making it impossible to feed in good condition and in proper season. It is a matter for regret that this system should have so many drawbacks. Many enterprising men have invested considerable sums in building and equipping factories for this system, and have been instrumental in educating our farmers to the necessity of adopting modern methods into what is fast becoming the most important branch of the farming industry. But the farm separator has come to stay. No amount of sympathy for the unfortunate factoryman will induce a farmer to lose a large percentage of the product of his dairy for long, and a little thought on the subject will soon convince him that he cannot patronize a milk-gathering creamery without loss.

The writer knows a farmer who asserts that by making and marketing his own butter he receives from forty to fifty per cent. more money from the product of his dairy than by patronizing one of the best-equipped milk-gathering creameries in Ontario—and he is a close figurer. The most sensible thing, then, is for the factoryman to make a virtue of necessity and accept the farmer's cream separated at home, and retain his custom. We leave our readers to decide for themselves as to what make of farm separators will best fill their requirements. There are several first-class separators on the market which should satisfy any farmer, and it is safe to give the "faker agent," who claims that he has the only "perfect machine," the go-by. The difference in the yield of butter from the various makes of standard separators is so slight that this item is of less importance than to get a machine that will fill the bill in other respects. The importance of a cream-gathering creamery is not less than the need of the farm separator, for by this means only can the best markets be reached. A uniformly first-class article must be sent to the English market at a minimum of cost to the farmer to make dairying a complete success, and the farm separator and the cream-gathering creamery are the proper means to this end.

ECONOMIST.

[NOTE.—There can be no doubt as to the advantages to the farmer derived from mechanical cream separation, either for home buttermaking or for the creamery, as then he gets the full value of his skim milk, as well as more and higher-priced butter, and also saves a deal of labor over the use of pans or cans for home dairying. The use of the separ-

rator is also commendable from the creameryman's standpoint, provided his is a cream-gathering creamery, but the operator of a separator creamery cannot readily be induced to accept separated cream from patrons, because it is sure to lack the uniformity of the cream separated by himself in the creamery, and lacking uniformity, the ripening is therefore less within his control, and the result is an uncertain quality of butter. We would welcome a discussion of this practical subject from a patron's as well as a creameryman's standpoint.—Ed. F. A.]

Successful Calf Feeding.

Success in raising calves by hand feeding may be summarized in a few lines. The calf may be taken away from the cow a few hours after birth, or left with her till her milk is fit for use. The calf, in any case, should have a reasonable quantity of the first milk of the cow, and it should have a small quantity (not more than one quart at first) of its mother's whole milk, warm and fresh from the cow, three times daily till it is two weeks old, increasing the amount gradually to two quarts three times a day at that age, when one-half may be skimmed milk, and the quantity may from this time be gradually increased till at four weeks old skim milk may form the whole ration, and four quarts twice a day be fed, and later six quarts at a time may be fed as the calf grows older, but always fed sweet and warm. To be absolutely safe, the buckets from which the calf drinks should be scalded after each feed, as decaying milk generates poison germs which are apt to set up the disease of diarrhea, which is one of the greatest difficulties in raising calves, and the principal causes of this are sour milk, cold milk, irregularity and over-feeding, or feeding meal mixed with the milk. Calves will learn to eat hay and dry meal at two to three weeks old, if a little is put in the mouth after feeding them milk. At four weeks old they will eat half a pound per day, and with the moderate amount of milk recommended above will grow and thrive from the start, and if kept in dry, clean quarters will almost certainly be exempt from scours or other setback.

A Hint from Abroad.

The *Scottish Farmer*, commenting on the evidence recently given by Prof. Jas. W. Robertson, Agricultural Commissioner, before the Parliamentary Committee on Agriculture, at Ottawa, draws lessons for the British dairymen, pointing out that the latter, owing to alleged shortcomings of Canadian produce, have now an opportunity of which good use can be made. Among the points to which attention is called is first in regard to butter, that there has been a cessation of improvement in the equipment of Canadian factories necessary to turning out increased quantities of the finest product, and secondly, that there has been a slackening off in regard to the quality of cheese arriving in England from Canada. Special attention is called to deficiencies in boxing and in regard to the ventilation of cars and steamships. We learn also that in several localities, owing to the brisk demand and good prices prevailing last year, factorymen and makers became less strict in regard to the character of the milk received, and at a number of annual meetings it was freely stated that patrons were to have practically a free hand this season in feeding turnips, a practice which had been systematically fought down for years past and which was thought to have been stamped out. Last fall we heard of cases where both turnips and tops were hauled out in great piles for the cows to consume without stint. Thoughtful men in the dairy business predict that this sort of thing bodes ill for the future, and the reference from the *Scottish Farmer* should be a sufficient hint for the Canadian dairyman, instead of slackening on his oars, to be on the alert for the adoption of plans that will lead to improvement all along the line in view of the keen and tremendous competition now to be faced.

Clean Milking Important.

One of the things "worth doing well" is milking the cows. Why a cow ought to be milked clean every time is too old a story and has too many arguments to back it up to make a lecture necessary every time it is mentioned. But its importance can not be brought out too frequently. It looks like a little thing to some men to slight a cow because she is a "tegius" milker; and it may be more convenient to leave a quart of strippings in the udder than to put up with the side-stepping and tail-swinging agitation of a "nervous critter"; but the owner of a good cow might better have a "hand" who will steal from him than one who doesn't milk the cows clean. He not only loses much of the richest milk—that is perhaps the least of the objections to such neglect—but the practice of leaving milk in the udder has a deteriorating influence on the capacity of the cow. The longer it goes on, the less milk she gives. And the small yield soon becomes chronic.—*Jersey Bulletin*.

The weather conditions during the past month appear to have been exceptionally favorable in nearly if not quite all the Provinces of the Dominion for the work of seeding, the germination of seed, and the progress of vegetation generally. Occasional rains and warm weather during the May month have given grass a great start, and the prospect for good pastures and meadows is excellent.

The rectly Colume most fo apiarist the clas pest. the bee larva is colored inch in wings, inches wings slope st up at th female darker wing, e be obsce combs,

little a very di sary to occasio The is on th enterin in crevi so that, to thei and ree little c hatch o or gnaw their m the wo it spins thread. its groo Its foot subista founda compa combs

BER. M

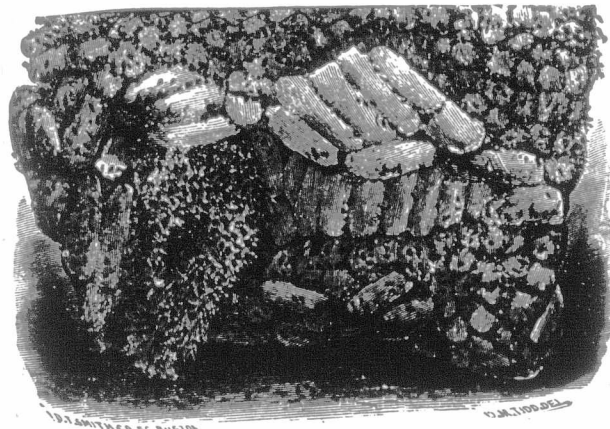
skins le in or h feeds, which by wa almost whose able to tunnel lery, i head a helme bee. their f seek a shrou coloni often betwe mass pupal five o the se of pa issues or Au in Oct unpro for m Ita black

APIARY.

Bee Moths.

BY MORLEY PETTIT.

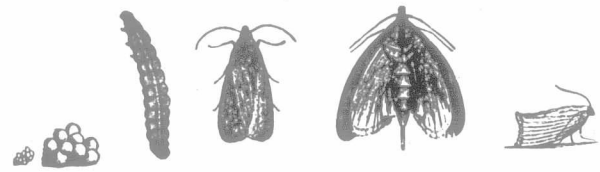
The bee moth, or wax moth, as it is more correctly called, is mentioned by Aristotle, Virgil, Columella and other ancient authors as one of the most formidable enemies of the honeybee. The apiarist of modern times does not need to consult the classics for knowledge of the work of this little pest. In the time of Swammerdam it was called the *bee-wolf*. The egg from which the destructive larva is hatched is laid by a dull or ashy-gray colored moth, from five-eighths to six-eighths of an inch in length from the head to the tip of the closed wings, and one and one-tenth to one and four-tenths inches from tip to tip of expanded wings. "The fore wings shut together flatly on the top of the back, slope steeply downwards at the sides, and are turned up at the ends somewhat like the tail of a fowl. The female is much larger than the male and much darker colored." They are seldom seen on the wing, except at dusk and on dark days, but may be observed lurking about the hives or stored combs, and if disturbed, "they open their wings a



COCOONS SPUN BY LARVAE OF BEE MOTHS.

little and spring or glide swiftly away, so that it is very difficult to seize or hold them." It is unnecessary to recommend their destruction on all possible occasions.

The wax moth's favorite place for depositing eggs is on the comb of honeybees, but if prevented from entering the hives by the bees, she leaves them in crevices under the cover or about the entrance, so that, coming in contact with the bees, they adhere to their legs or bodies, are carried into the hive, and reach the combs in this way. The eggs are perfectly round and very small, and are deposited in little clusters. The larvae from those eggs which hatch on the outside of the hive endeavor to crawl or gnaw their way in and reach the goal attained by their more fortunate brothers. "As soon as hatched, the worm encloses itself in a case of white silk, which it spins around its body. At first it is like a mere thread, but gradually increases in size, and during its growth, feeds upon the cells around it."—*Bevan*. Its food consists largely of beeswax, but it cannot subsist on that alone, and for this reason comb foundation or new combs containing no pollen are comparatively safe from its ravages. Its favorite combs are those containing pollen and the larval



BEE MOTHS.—Eggs (natural size, and magnified), larva, and moths.

skins left by developing bees; i. e., combs which are in or have been taken from a brood chamber. As it feeds, it cuts through the comb a passage, or gallery, which it lines with a strong web of silk, reinforced by wax and its own excrement, making a tunnel almost impenetrable to the stings of the bees upon whose domains it is intruding. The larva is also able to advance or retreat very rapidly through this tunnel when attacked. While extending this gallery, it never exposes any part of its body except its head and neck, both of which are covered with stout helmets, or scales, impenetrable to the sting of a bee. Under favorable conditions, the larva attain their full size in about three weeks, stop eating, and seek a place "to encase themselves in their silky shroud." In stored combs or in weak or queenless colonies they build their cocoons almost anywhere, often piling them one on top of the other in and between the combs, until the whole hive becomes a mass of webs and cocoons. They remain in the pupal state anywhere from ten or eleven days to five or six months, according to temperature and the season of the year, this being their normal way of passing the winter. The first brood of moths issues in late April or early May, the second in July or August, and there is often a third in hot weather in October. Still, it is never safe to leave combs unprotected at any time when it is warm enough for moths to fly.

Italian bees guard their hives much better than black bees; in fact, if each hive has a fairly well

bred Italian queen, and especially if no hives are left queenless, there need be no fear of bee moths doing any damage in the hives. The only danger is with combs which have been removed from the hives and stored. There should be as few such as possible. Leave all extracting supers on the hives until the middle of September, when the danger is pretty well past. Store combs in the hive or super to which they belong, properly spaced. Select an even spot on the honey-house floor, or lay down a queen-excluder, with the rim upward, and place on it two thicknesses of newspaper, to exclude moths. Pile the supers on this, taking care to leave no crevices where a moth can crawl through, and cover the pile with paper, to make the top tight. Combs stored even thus carefully should be examined occasionally to make sure of their continued safety. If at any time found to be infested, they should be overhauled, the galleries torn down, and the worms taken out with a sharp-pointed knife, or they should be fumigated with sulphur or carbon bisulphide. As sulphur fumes do not destroy the eggs, carbon bisulphide is better. Place the combs in a barrel or box that can be closed up tight, and put a quantity of carbon bisulphide inside in an open dish. As it is a liquid which evaporates like chloroform when exposed to the air, the fumes soon fill the whole box and destroy every form of life within it. As soon as one dead worm can be found in the combs, you may know they are all dead. Even comb honey may be treated in this way without injury. *Too much care cannot be taken to guard stored combs against moths.*

GARDEN AND ORCHARD.

Horticultural Society Notes.

BY G. C. CREELMAN, SUPERINTENDENT OF ONTARIO FARMERS' INSTITUTES.

We expected that our delegates visiting the different horticultural societies would be well received, but we were hardly prepared for the enthusiastic gatherings which greeted them at almost every place.

School Children Pleased.—Mr. W. N. Hutt, who, in company with Miss Maddock, of Guelph, visited the eastern portion of the Province, reports that the plan of addressing the school children is a most excellent one. Mr. Hutt is an old school teacher himself, and having built upon that foundation an Agricultural College education as a superstructure, he is especially qualified for this class of work.

At Cardinal, in Grenville County, the hall was decorated with plants and flowers, and the only regret felt was that the time of the speakers was entirely too short.

The care of the lawn, pruning and trimming of trees and shrubs, cultivation of the home garden, were some of the subjects discussed by Mr. Hutt, while Miss Maddock took up the subject of "Fruits and Vegetables as Articles of Diet" and "Window Gardening."

Mr. MacNeill and Miss Rose in the West.—Miss Rose writes from Mitchell: "You will be glad to hear that so far our meetings have been most successful, with the exception of Paris, where the attendance was small. Not only the officials of the horticultural societies, but the school boards and the teachers themselves are most enthusiastic in the work. Even in holiday time the people of Woodstock were enterprising enough to call the school children together to hear Mr. MacNeill and myself speak on horticultural matters."

At Elmira we had a most delightful afternoon. Over 300 school children were marshaled to the assembly room, where they sang several pretty songs before we were called upon to address them. The school and the hall, again in the evening, were brightened with many beautiful blooming plants.

In Mitchell.—Here the children marched from the school to the town hall, which they filled completely. I never saw so much interest shown in any gathering. They seemed to drink in every word that was spoken. The teachers explained to the children that they would be required later to write a composition on what they had heard, and in conversation with the teachers afterwards, they told us that our remarks were right along the lines they had been endeavoring to teach, and they were much pleased with the meeting. At night the hall was crowded. The entire room was beautifully decorated with plants and choice cut flowers, enough to inspire anyone to speak along the lines for which we were advertised. The musical programme was beyond the ordinary, and every minister in town, besides other prominent men, were present, and took seats on the platform.

"I find in this work, as in all others in which I have been engaged, that the success of the meeting very largely depends upon the officers in charge. Here (Mitchell) Mr. Race, the secretary, is a worker."

Mr. MacNeill Doing Grand Work.—To show the kind of work that is being done by Mr. MacNeill, I will just enumerate his duties for one day: "Before reaching Woodstock last Wednesday, he wrote to the secretary of the Society, Mr. Scarff, who is also mayor of the town, and asked him to devote the whole of the next day to horticultural work in Woodstock. Mr. Scarff complied, and together they visited each of the newspaper offices, saw the reporters, and gave them some items on horticultural matters that should be interesting to the townspeople, and also some instructions in reference to the evening meeting. Mr. Scarff then introduced Mr. MacNeill to every man, woman and child to whom he thought a word might be said to help along the city improvement work. They visit-

ed all the well-kept grounds in the city, and, where accessible, saw the owners, and Mr. MacNeill himself writes: "On this trip I must confess I have had a chance to give more useful information directly to the point than I ever had before." After a personal inspection in this way, Mr. MacNeill was prepared in the evening to give advice and suggestions bearing directly upon the improvements needed in the town. He had also the views of the best local men, and much good is bound to result from this kind of work.

In Hespeler and Guelph.—Meetings in both these places were well attended, and the daily papers of the latter place devoted more than a column the next day to reporting the meeting."

Gardening for Profit, Pleasure, and Health.

Again we hear the cheerful hum,
The robin sings, "I come, I come!"
And Earth, in seeming joyousness,
Has thrown away her winter dress.
Soon, very soon, she will be seen
Clad in bright robes of purest green,
While on her bosom she shall wear
Sweet-scented bouquets, fresh and fair.

Welcome, beautiful spring. We see new life springing up almost where'er we tread; while the birds, and every living thing, seem to rejoice and welcome the spring. The busy season is on. The men are plowing and sowing, for the wise farmer knows there is nothing like pushing ahead and getting in the crop early. It is time to turn our attention to gardening, too. Every farmer should have a garden, and raise at least enough vegetables for family use. There is nothing adds more to the beauty of the farm than a tastefully laid-off, well-kept garden. And there is profit in it, too, if properly managed. First, select good seed, for like produces like. Second, cultivate your garden thoroughly, and manure it well. New plant your seeds. But this is not all you have to do, by any means. If you pay no more attention to your garden, it will be a miserable failure. You must wait, and watch, for a while. Wait until the vegetables come up, and then watch for weeds. You must keep the vegetables free from weeds if you want them to thrive. Early vegetables are always in good demand. Radishes, lettuce, butter beans, peas and onions sell readily in the market. So do beets, parsnips and carrots. I have been surprised to find that there are farmers who do not believe in gardening. I think they make a great mistake. I would advise every farmer (who has not already done so) to start a nice patch of garden strawberries. Why can't every farmer have an abundance of this delicious fruit? Strawberries are not hard to raise. Only we must take care and not let the frost kill the plants in the fall, or the hens destroy them in the spring. There is money in strawberries. It doesn't take many of the big beauties to fill a quart measure. Yes, there is profit in gardening. The reason some farmers do not succeed in gardening is that the fault lies in themselves, not in the business. Industry, patience and perseverance is required in order to attain success.

But leaving the profit out of the question altogether, we cannot help thinking that there are those who engage in gardening simply for the pleasure and healthfulness of the work. It is work especially adapted to women and children. Women's work necessarily keeps them indoors a good deal, but as a general rule women do not take enough outdoor exercise in winter. Consequently, when spring returns, many of them feel weak, languid and nervous, after being shut up in a hot house all winter. Like the plants, we need fresh air and sunshine. Do we not almost envy the men, who are out enjoying the pure air and sunshine nearly every day all summer? "But the cooking and housework must be done," some tired woman says. Of course it must, but this work may be lightened by a little forethought. Don't cook any more than is absolutely necessary. Use plain, wholesome food, and during the summer, at least, dispense with pies, puddings, cake, cookies and doughnuts. Use plenty of fruit, vegetables, milk and eggs. Live outdoors as much as possible.

Now, there is a poor, delicate woman to whom I want to give a bit of advice. She has been trying to cure herself, judging from the number of medicine bottles and pill boxes in her room. She has been staying indoors dosing herself, but her health is not improving. She has headache, weak stomach and poor appetite. Now, sister, you want to be cured, don't you? Well, I'll tell you what to do. In the first place, just gather up your tonics, pills, plasters, powders and capsules, throw them away, and give your long-suffering, much-abused stomach a rest. You have been taking too much medicine. Eat only plain food in small quantities, and drink plenty of water. "But what shall I take?" you ask. Take three hours' exercise in the garden every fine day for three weeks. You laugh, as if you haven't much faith in my prescription. But give it a trial for three weeks. At the expiration of that time your health will be so much improved, and you will be so much interested and in love with your work, that you will want to repeat the prescription. Follow it up, and you will be entirely cured without the aid of drugs. Our Creator never intended us to become chronic medicine-drinkers. Gardening, or outdoor exercise, is a preventive as well as a cure for disease. Ye delicate ones, try this elixir of life, which is free to all, and enjoy health and happiness.

Now, farmers' wives and daughters, see what a beautiful garden you will have this summer. Take an interest in it. Try to excel. How proud you will feel when travelers stop to admire it, a little

later on in the season. Plant some flower seeds early in May, and some in June or the first of July, so that you can have flowers blooming all summer. What an Eden of delight your garden will be in a short time.

When cinnamon and ivy vine
Around your doors and windows climb,
And sweetest flowerets, out in bloom,
Shed all around their sweet perfume.

A. R.

Profitable and Unprofitable Apple Growing.

The prospect for a crop of orchard fruits, so far as one is able to judge at this early date, is excellent, so far as the northern section of Ontario is concerned. The trees are full of fruit buds, and the winter has been the mildest for many years, twenty below zero being the coldest recorded here, and, what is equally important, we seem likely to have cool, seasonable weather throughout the spring months. When growth is retarded by cool weather, the blooming is usually delayed until danger of any serious injury from frost is past. And, in fact, this applies to all kinds of crops. A cool springtime almost invariably presages a prosperous year. Much good advice has been given, through the agricultural and horticultural journals of this country, as to the care and culture of orchard fruits. Just to what extent this advice and instruction has been put into successful practice it is impossible to estimate, but the fact is patent to anyone who travels through the country that there are yet many neglected orchards. Where a slipshod, careless system of culture prevails, there is not likely to be any profit, but, in the case of those who have given good care and cultivation and have attended to the details of cultivation, pruning, spraying, fertilizing, etc., the most important question to-day is how to make the most of the crop after it is produced. Seasons like that of last year, when growers were only offered 40 to 60 cents per barrel for good winter apples, are somewhat discouraging, and the question arises, is it advisable for the farmer engaged in mixed farming to grow any more fruit than he requires for his own use? For my own part, I do not believe that we have reached the point of over-production of apples of the best quality by a very long way.

Last year the press all over the country reported an enormous crop. The Americans were reported to have a record-breaking crop. Apple brokers in the Old Country advised that apples must be bought at a low price, or there would be no profit in shipping them. And yet apples never realized better prices the season through in the British markets than last year. And this spring they are worth from \$3.00 to \$4.50 per barrel for best varieties.

We have not half exploited our own home market yet. Our own Dominion should absorb a very large percentage of our surplus stock. With the great development going on in Algoma, and the rapid settlement of our millions of acres of fertile lands in the Northwest, it seems to me that the prospects of a home market for a great part of our surplus fruit is very encouraging indeed.

Sometimes it pays well, where a man has suitable storage, to hold his apples over until spring and sell at a very satisfactory price in our own cities and towns. Of course, if this plan were generally adopted, there would probably be too much thrown on a somewhat limited market in the spring, and prices would vary accordingly. Then, very few have the proper facilities for storage, and there is considerable waste. About the worst place to store apples is in the cellar of a house you are living in. The best way to keep apples is to fill the barrels, head them up tight, and lay the barrels on their sides in a cool, dry place, where a uniform temperature can be kept, as near the freezing point as possible without actually freezing. Apples picked at the right time, carefully handled and stored in this way will come out crisp and fresh in the spring. And anyone who was fortunate enough to have his apples properly stored this year would be right in it. In most orchards there are far too many varieties. This is one of the worst troubles in connection with the marketing of our apples. And people who are planting now should take stock of this and avoid the trouble. An orchard to be profitable should not contain more than half a dozen varieties. These should be Spy, Baldwin, King, Greening, Snow, and Ben Davis. Some might criticize this list and say, Why not include Stark, Mann, Pewaukee, Gano—all good winter varieties? Yes, very good varieties, I admit, and if one were planting 25 acres it might be well to extend the list and take them in. But for the average farm orchard there would be too many varieties and not enough of any one of them to attract buyers. Besides, it is best to stick to the varieties that are most in demand, and the man who has a nice, well-cared-for orchard of the first-mentioned varieties will be pretty sure to get the top price. And, of the six varieties, all but the Snow should be top-grafted on Tallman Sweet to get the best results. Of course, one should have a tree each of summer and fall varieties for home use, and also for home use one or more trees of a choice dessert variety, especially where there is a family of children growing up. They will appreciate them, and they are better than medicine for them. A variety that will be at its best through the fall and

up to Christmas, such, for instance, as McIntosh Red, or Gravenstein, or Chenango, will fill the bill till the winter dessert varieties are mellow enough to be toothsome. But, for commercial purposes and for profit, the six varieties recommended cannot very well be amended or improved upon.

The average orchard we find through the country now contains a number of early summer varieties, then probably not less than four varieties of fall apples, two or three trees of each, and perhaps much more. Then there will be a quantity of late fall or early winter kinds that are not very good shippers, and when you come to look for Spys, Baldwins and Kings, perhaps there are none, or only a minimum of these. To the packer who is buying for export, this is not an attractive orchard, and if he buys it will be only at a low price. Those who have watched the reports of account sales sent out by the brokers in the Old Country, know what a sorry showing these mixed-up lots make in the British market. The total result is a loss to the packer and a poor price to the grower; while well-grown apples of our best commercial varieties, if handled properly, will command a premium in any year and in any market.

The question arises, What is to be done with the great quantity of early and fall varieties already growing? What is the best that can be done with them? They are usually more prolific bearers than the later and higher-priced kinds, and they bear earlier, but up to the present they have usually been a drug in the market. I believe the time is close at hand when not a bushel need go to waste, but may be turned into money, for I firmly believe there is a market for it, both at home and abroad. But we have not had the facilities available to place it where it is wanted at the right time and in proper condition. It is a question of cold storage and transportation, a question fraught with great possibilities for this country, in the marketing of our perishable products and the prevention of waste. And I hope to deal with it fully in a future issue.

Simcoe Co., Ont.

G. C. CASTON.

Watermelon Raising.

There are but few people in Canada who go very extensively into the raising of this delicious product, and many say they never "bother" with them. I have had a good-sized patch for the last four or five years, and I find that, if properly cared for, they will pay well, besides having plenty of them to use. Just before the first picking the watermelon patch is a beautiful sight. Why should we not supply our own market more extensively, instead of importing them from the South? We have plenty of good land, and in many parts the climate is well adapted for this purpose. The soil should be a rich sandy loam, and, as they do not grow deep or seek far for food, it is best to apply the manure in the hill. Well-decayed barnyard manure is, I consider, better than commercial fertilizers. After working up the ground well, I mark it off into rows and plant the hills about eight feet apart. This may seem too far, but if corn is planted too thick it grows small, and does not ear well; so it is with melons: there may be plenty of them, but they will be small and of inferior flavor. The vines should cover the ground, and thus keep the sun from baking it. I plant about the first of May, or when danger from frost is over, or the seeds may be started in boxes and then transplanted. I plant eight or ten seeds in a hill, and cover about an inch and a half deep. There is generally danger of the young plants being destroyed by bugs. To prevent this I sift soot, ashes or land plaster over the vines, and draw the soil close up to the stems. Liquid cow manure is also good, and it helps their growth as well. When the danger of being destroyed is over, or about the time they have four leaves, I thin to two or three plants in a hill. Cultivation is begun as soon as the rows can be seen, and kept up as long as the cultivator can pass through. I pinch off the ends of the vines before they get too long. This makes them set fruit earlier. When the melons are small I go over the patch and cut off all the ill-shaped and unpromising specimens. I always make sure they are ripe before I pick them, as they must be in good condition in this respect, or your trade will not be good. I average about fifteen cents apiece for them, and have sold some for fifty cents each. They should be kept on ice before eating, just long enough to cool. I keep the seeds from my best and largest melons, for planting, and I plant them in a different place every year, as they do better. Muskmelons may also be grown in much the same way, but one does not feel very much interested unless they have an appetite for them.

J. R. B.

The Horse Hoe for Grain Crops.

English farmers horse-hoe their grain crops as well as their root crops. The implement used for the purpose takes the same number of rows as the seed drill, the blades of the hoes having a cutting width of about 5 inches for wheat, and when they get somewhat worn they answer well for barley. The two outside blades are narrower than the others, as the rows they work in are likely to be narrow in places if the drill has not been guided particularly well. If hoeing be good for roots and corn, why not for grain? We need not be surprised to find this principle extended in the culture of Canadian farm crops in the not distant future.

POULTRY.

The Spring Chick.

The great difficulty poultry culture is compelled to overcome, until it is admitted into full fellowship with other branches of farming, is prejudice. The business must be admitted to the same opportunities that are extended to agriculture and the raising of stock. No man or woman can expect to succeed in a business for which they are unprepared and of which they are ashamed. The production of eggs depends upon the person managing the flock. In my childhood days it was no uncommon thing for a hen to steal her nest away and lay 11 or 13 eggs, become broody, and finally come back with a little brood of chicks. The same chicks would follow the hen until next fall. Those eggs were fertile and the chicks were strong, because they were the first and very often the only eggs the hen laid. If we could have had access to that nest and taken the eggs away as they were laid, the hen would have laid more eggs.

Every hen in a flock does not become broody when she has laid her litter of eggs, but she does quit for awhile, but nature soon supplies her with a new desire to bring out a brood of chicks, and in a short time you will notice the hen looking fine in appearance, and ere long she will be contributing her share towards filling your egg basket. Following this thought, we find, by removing all the eggs from the nests, feeding the right kind of feed, etc., we have brought our fowls up to the standard they now occupy. We have all read of the hen in its wild state in the jungles of India, where they laid only nine eggs a year. Now they have been brought to a state of civilization, where some of them have been known to lay over 250 eggs in a single year. The first nine Brown Leghorns I ever had produced nine eggs every day for two weeks. I give you this instance simply to show you what may be done.

Some breeds become broody sooner than others. I never had one of my Leghorns to set. I keep Plymouth Rocks and common hens for incubation purposes. Every farmer's wife has taken the old sitters off the nest and thrown them out of the hen-house with a vengeance, shut them up in a box where they could sit down comfortably, put a piece of an ear of corn—or, perhaps, only the cob—under them, and they would sit there as contentedly as if they had a dozen good eggs. A little thought and study would have taught a woman or man that what the hen needed was a good cooling off. I have seen poultrymen have a light lath box and swing it up overhead in the poultry house, put old biddy in, and let her swing where the fresh air could strike her from all sides. Feed and water well, and she will soon be laying again. I do not have to use one of these boxes, as my chicks are non-sitters, and when the Plymouth Rocks want to sit, I give them eggs.

When you set your hens, endeavor to set as many at once as you can. It will require but little more time and care to look after four or six hens than it will one, and then one hen can brood from 20 to 30 chicks, if all the same age.

Do not disturb the hen during the first 48 hours, as it takes just that time to start the chick on its life voyage. Fair-sized hens could be given 13 eggs, but 11 is better, I find. On the twentieth day the chick has drawn the last nourishment from the egg, and is anxious to get out of its prison. It always breaks the egg at the largest end, because it is always less moist and more brittle at that end. Then, too, the head of the little chick is turned there for air, and the beak breaks through the rotten walls, finds more air, and presses hard and soon breaks away from all feeble resistance, and thus ends the period of incubation.

We notice that the first 36 hours the hen sits quietly brooding her chicks, never once offering them food or water. The first necessity, then, is not food, but warmth and a good dry place for the hen and her family.

Bear in mind their gizzards were given them to grind their food, and if you keep their crops full of soft food, you are apt to derange the system and invite disease. In my opinion, chicks should never be fed corn meal raw. If you must and will feed corn meal, mix it with boiling water, or, better yet, put a little salt and pepper with it and bake it well. I find the best possible food for the first week is hard-boiled eggs chopped fine, shell and all, and fed to them in small quantities. Some farmers will think this is too expensive, but I find it pays for a few chicks, and it would be just as profitable for a greater number. What would your wife think of you if you gave that newly-born calf a bundle of hay or some corn meal instead of a pail of nice new milk right from its mother. The egg is the most natural food for the chicks and consequently the best. When they are a week or ten days old, feed them some whole grain. Wheat is the best. Let them have all the grit they need, and keep good, clean, pure water always before them. It appears natural for them to want a variety of food and to be all day collecting a crop full. You may feed liberally of anything they like in the morning, repeat it at noon, and feed again at night; but they will not do nearly as well as when fed little and often. They will pick up plenty of insects in the spring if they are allowed to roam. Let them have free access to the garden and they will pick up all the meat they need. They will pick the insects that infest growing plants, but will not molest any of the plants until they become good-sized birds. FARMER'S WIFE.

The Battle Against Lice in Poultry.

It will soon be time to resume the war against lice. A great many people are very sure that their poultry have no lice, and perhaps they have not, to the extent of doing them much harm. Very few flocks are entirely free from them, and it is quite probable that they exist in small numbers wherever there are fowls. I find so long as my fowls are healthy and active lice cannot increase rapidly enough to seriously annoy them. On sick and injured or scaly-legged fowls, sitting hens and very young chicks, they thrive when the general flock is comparatively free. Quite frequently they are introduced by new fowls, and it should be made a practice to treat all newcomers to a good sprinkling of lice powder of some sort. This should be attended to as often as additions are made to the flock.

There are several methods of treating houses and fowls for lice. Some will have success with one system, and others will fail owing to lack of thoroughness in doing the work. Fumigating the house, when fowls are out, by burning sulphur in it is a very good plan to rid the house of such lice as hide in the roosts and the crevices of the walls. Most insect powders in the market are good, but I have used the Persian Insect Powder for several years and like it better than any other I ever tried. I have succeeded in keeping my fowls free from lice by using this insect powder thoroughly in the house, nests, roosts, and on the fowls. Dusting with insect powder is no good unless thoroughly done. The way to dust a hen is to catch her by the legs and let her head hang downwards, holding her over a paper to catch the surplus powder, and give her a good dusting, letting the dust work itself into the feathers next to the skin. It is not a poison at all, but kills the lice by getting into their breathing apparatus, which is through openings in their bodies. The person doing the dusting should work the powder well into the feathers, and see that it goes to the "right spot."

Kerosene is the commonest remedy for lice. It is death to lice, but it is very often used too sparingly. Of course, it will not do to use it indiscriminately on fowls, and especially on chicks. In nest boxes, on roosts and all places where lice are liable to hide it can be used freely. It is a good plan to apply kerosene once a month to the roosts, nest boxes, and sides of the henhouse. For the walls of the poultry-house kerosene emulsion is the best. It is made of hot soap suds with kerosene mixed by agitating it with a spray pump, and the latter implement is a splendid thing for applying it to the walls. It is far ahead of the brush, being more conveniently and more quickly done.

A different warfare will have to be made on lice on chicks; sitting hens ought to be dusted well when they are put on the nest, and the nest boxes well doctored with kerosene or lice paint of some kind, and it may be well to give the chicks a good dusting when taken off with the hen. The easiest, surest and quickest way to treat chicks for lice is when they are in their boxes in the morning, before they are let out. They are all huddled together, and may be placed in box made for that purpose and the extra powder saved, but the dusting should be thorough. A few poultrymen rub a little lard on the heads and under the wings of chicks as a means of destroying lice. This is a very effective way to do it, but do not put on too much grease or you will have no chicks in a few days.

FARMER'S WIFE.

Duck Raising.

Ask farmers why they do not raise ducks, and nine out of ten will answer that they eat more than they are worth; and so they will if you do not understand feeding them. I keep four ducks and one drake, and feed them principally on roots during winter. If kept in clean, dry quarters, disease seldom attacks them. Apoplexy sometimes attacks grown ducks when they are very fat. If attacked by large gray lice on their heads, they will appear well, and suddenly turn over on their backs and die. Cramps occur from being chilled in cold water. I find it better to keep them away from ponds of water, and to arrange their drinking water so they cannot get in it.

Breeds.—The Pekin is the largest breed and also the most profitable to raise. The feathers, being a creamy white, are also worth more than dark feathers. I always select four of my best early-hatched ducks and mate them with a two-year-old drake in December. They should not be closely related. It will pay to buy a good drake and give a few dollars for him. Your ducklings will be stronger, larger and easier to raise.

Care during winter.—I feed principally on roots (pulped), silage, steamed clover hay, and at night a good feed of meal moistened with sour milk, and once a week a little meat. They are kept in an open shed, with plenty of litter on the floor, their feed trough being arranged so that they cannot get into it, for ducks will, if not prevented, waste as much food as they eat. My way is to have it arranged so that they have to put their heads through between slats to reach their feed and also their drink. Always have water where they can go to it at all times. They will start to lay early in the spring and often lay until June or July. They will lay a hundred eggs each, with proper food and care. As soon as the grass starts, I allow them to run in the orchard, and feed only once a day, at night, a liberal feed of moistened meal. (They will

eat any kind.) They come to their pen regularly for this. I then fasten them in until morning.

Setting.—I set the eggs under hens, eleven being the number given, always setting two hens the same day, giving the ducks all to one when hatched. I set them away from other fowls. Keep feed and water before them, and see that they get off every day. I place an old sod turned upside down under the nest in a box, then three or four inches of chaff on top. Often every egg will hatch.

Care of young.—The hen is placed in a large coop with a yard six feet square in front of it, made of poultry netting one and one-half feet high and covered over the top with netting. This protects the young ducks from cats, dogs and other enemies, and prevents any other fowls from stealing their feed. You do not have to run out to your pen a dozen times a day to see if your neighbors' cats or dogs are carrying off your ducklings. A trough is kept in the yard, one end used for feed, the other for water, with narrow slats all around for them to put their heads through between, the same as the large ones feed. I fill the trough twice a day with water, and feed five times a day: the first two weeks bread, soaked in milk, squeezed dry, or curd; after that oatmeal, corn meal moistened with milk, some dandelions, onions, cooked vegetables, mixed with it—anything for a change. Try and keep them full, but on no account feed whole grain to ducks. When a month old they will do just as well without their old mother hen, so set her free and move the yard to a clean grassy plot. I find the orchard an ideal home for ducks. Never allow ducks in the hot sun. It is not good for them. There should always be a spot in their run that the sun does not shine on, and when not busy eating you can depend on them sleeping there in the shade. Feed just as well as you can, all they will eat up five times a day. Keep their appetites keen by continually changing their feed. Variety is the spice of life—remember this while feeding ducks. Angleworms are excellent feed for young ducks. If you have no meat convenient for feeding, get the children to dig some worms for them. Twice a week is often enough to feed meat.

Marketing.—When twelve weeks old they will dress from eight to ten pounds, and return a handsome profit. Then there are feathers, which usually bring a good price as well. There is no money made by letting a flock of ducks roam all over the farm all summer, half fed, shutting them up in the fall and stuffing them with corn, as is often done, to be sold for the Christmas trade, when there is plenty of poultry of all kinds on the market and the price is low. R. F.

Wayside Hints.

BY P. F. D.

We are now in the middle of the busy season. Poultry and cows are producers. They bring in money every day.

As the warm weather increases, the lice on poultry will become more numerous, and—well, you know the rest, so get at it.

Remember the outside temperature lowers at night, and it will affect the brooder. Always aim to have the temperature a little high when you shut up for the night. It is better to have it too warm than too cold. If the chicks get too warm they will leave the hover and then return. Not only should the brooder be warm, but well ventilated, and be so constructed that the chicks can find a temperature which just suits them. Improperly-constructed brooders confining the chicks under a hover without good ventilation is the cause of loss. The man who now has a few hundred chicks nearly ready for broilers may smile at the one who could not "afford" to buy an incubator.

If you want to work the little chicks, dig up a little plot, rake in some millet seed and let them scratch for it.

It seems to scare some persons nearly to death to lose 20 chicks out of 100 in a brooder, but they think the old hen is a jewel if she raises 8 chicks in a lot of 10. Yet the loss is the same proportionately in both cases.

Laying hens should have less corn. Oats is better than corn in the warm season, as corn is very heating.

Remember that it is the early bird that catches the (gape) worm, and do not let the chickens out of their coops too soon in the morning. Always wait until the dew is off the grass. Always aim to keep the feet of your chicks dry and warm, and you will not have so many sick birds.

A sitting hen should be where she will not be bothered by other members of the flock while in the performance of her duty. Don't disturb her any more than is necessary. If she is fussy, leave her alone. The best remedies for lice are the advertised "lice killers"; they are just as cheap as homemade remedies, and much better.

Young chicks need water where they can get it at any time. It should be arranged so they can drink and not get their feet wet. The fountain made of an old tin can and a saucer is about as good a thing as you can use.

The best market is your nearest town. Go out and build up a trade for your poultry and eggs.

If you are troubled with gapes, build a pen with a board floor and keep the chicks off the ground until they are large enough to withstand the gape-worm.

Whatever you do not do, do not neglect to keep the poultry-house clean as the moist, warm spring days come in. Keep the floors in good condition, and whitewash the sides as often as you can.

Do not try to get something for nothing. When a man makes you such an offer, he is simply tempting you. Get the best always if you can. Buy good stock and you will have good stock to offer next year. The foundation of a structure is the source of its strength.

Treat your customer well. He may want another bird or setting of eggs, and you will want his trade again. Then, too, he will feel like advertising your stock among his neighbors and friends.

No poultryman with hens only as hatchers can compete with the one who has an incubator. The wholesale plan will always have the advantage.

One cause of bowel trouble is feeding young chicks green vegetables which have been kept through the winter. In most cases these contain the germs of ferment and decay, and will quickly induce bowel trouble. Feed fresh growing stuff such as lettuce, clover and green onion tops. It is wonderful how much clover they will eat when cut up fine. It is a good plan to make the brood-coop larger than the brood at first requires, so that the chickens after they are weaned will have comfortable quarters until grown.

The old hen does not care much for a parlor and sitting-room, but she despises a sleeping-room where bedbugs are lively.

Because a man does not know how to succeed is no reason for supposing that poultry does not pay.

Many consider poultry-keeping a kind of five-cent business—just a little pin-money for women; but when we consider that the annual value of the egg-production is greater than that of the silver mines, it behooves us to give more attention to them, that we may share a large portion of this immense income.

Wanted, in the poultry business, the best breed of men. Comparison judging preferred. The score-card will not answer, as the best man may be severely cut on weight.

QUESTIONS AND ANSWERS.

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

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest or which appear to be asked out of mere curiosity.

3rd.—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, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

A VARIETY OF AILMENTS.

1. What can I do for a young mare with rat tail?
2. Same mare was driven hard when two years old, is weak in front tendons, slightly swells up in front legs after being driven ten miles or so. Swelling goes down in a day or two. Would it be a good plan to wear a support, such as is used on trotting horses? Would it be a good plan to bandage tightly with dry or cold-water bandages after driving, to prevent swelling?
3. I have another mare that is slightly affected in her water, and straddles while traveling. By doctoring the kidneys, will that cause her to draw her legs under her more and travel better, or is the habit permanent?
4. Who should I address for the rules and regulations for entering stock at the Pan-American Exposition? YOUNG HORSEMAN.

[1st. As a rule, nothing can be done for a rat tail except to get the tail of a dead horse, skin it carefully and get it tanned with hair on, and then exercise your ingenuity in attaching it to the dock. This has been done so skilfully in some cases as to appear quite natural, and horses with artificial tails have been sold to unsuspecting purchasers.

2nd. The best you can do for the weak tendons is to apply cold water freely and often, and apply cold-water bandages when in the stable, especially after a drive.

3rd. I cannot answer this question without knowing the nature of the affection you mention, but my opinion is that her urinary organs are not diseased, but the gait you object to is natural. She evidently is an animal of weak physical development.

4th. Frank A. Converse, Pan-American Exhibition, Buffalo, N. Y. J. H. REED, V. S.]

ATROPHY OF THE LIVER IN PIG.

I had a pig that had been ruptured before it was weaned. I altered it and put bowels to their place and sewed it up. It has always been healthy and well, to all outward appearances. I fattened and killed it, and upon opening I found the liver covered with little sacs of water. There were some on the diaphragm and intestines too. The liver was not more than half-grown. What is the cause? Would it affect the pork? The pork does not seem to be affected; that is, there are no sacs on it.

Stormont Co., Ont.

SUBSCRIBER.

[The condition of the genital organs and the operation mentioned had no connection with the state of the liver. The atrophy (shrinking) of the organ was doubtless the result of a chronic inflammation, from which the animal never recovered. The presence of the sacs mentioned is hard to explain. We sometimes observe sacs somewhat similar in certain parasitic diseases, but as those mentioned contained fluid only, and the animal always appeared healthy, it is not probable any such disease existed. I do not think the flesh would be affected.

J. H. REED, V. S.]

ABORTION IN MARE — MARE WITH MIXED GAIT.

1. I have a mare, ten years old, about 1,200 lbs. weight; her sire was a Clyde horse; her dam a general purpose mare. Two years ago I bred her to a Percheron horse; she carried her foal eight months, then lost it. Last year I bred her to the same horse. She carried her foal five months, then lost it. Could you tell me, through the Veterinary columns of the FARMER'S ADVOCATE, the cause, if possible, or if it would make any difference if I should breed her to a lighter horse? I worked her on the farm at light work, but never any on the road while carrying her foal.

2. I have another mare, nine years old. Her sire was a French horse; her dam, a Warrior mare. She has a mixed gait. Sometimes she will trot, then break to a pace or gallop. All three in a very short distance. When she is in the blacksmith shop, she is very easily shod—all but her right hind foot, which, when lifted up, sometimes she will jerk against her body; then, again, she will lay her full weight on the blacksmith. If I should breed her would her colts be subject to the same gait? THOMAS SLOAN.
Elgin Co., Ont.

[1. It is possible abortion in your mare on both occasions was caused by accidents of which you have no knowledge. Some mares acquire the habit of aborting, but in such cases they usually abort about the same term of gestation, while in your case once it was eight months and once five months. It is not probable that the stallion was accountable for the accident; still, I think if I bred her again I would select another sire. Watch her closely at about 5 months and also 8 months after conception, exercise gently every day, and feed on light, easily-digested food. If she shows any symptoms of abortion, put her into a partially darkened box stall, give her 3 ozs. laudanum in $\frac{1}{2}$ pt. water and repeat in 3 hours, and again if necessary, and keep quiet for a few days. It is probable, by careful handling and watching, that she will carry her foal to the normal period.

2. I do not think there is anything wrong with this mare but nervousness. Her actions with right hind foot while being shod is likely only a habit. She is certainly more liable to produce a mixed-gaited foal than a true-gaited mare would be; still, if you breed her to a square-gaited trotting stallion of strong inheritance, it is probable he will overcome this tendency. J. H. REED, V. S.]

DISEASE OF LIVER IN COW.

I lost a cow recently. The first I noticed wrong was a failure of manure, next morning her appetite failed and she commenced bloating. Thinking it to be impaction of the stomach, I gave her five or six pounds of salts in as many days, together with linseed oil and tincture aloes, and used injection freely. She lived a week. I opened her and found small intestines clean as far as injection reached, the food in the stomach in a soft, normal condition, no effect of physic showing. But the liver was colored, and the gall uncommonly large, weighing 3 pounds good weight. 1st. Is there a remedy for enlargement of gall? 2nd. How can we as farmers detect the difference between enlargement of the gall and impaction of the stomach or other irregularities of that nature. By answering above in the ADVOCATE you will confer a favor, as there are a number of cows attacked in this section. C. P.

[1st. There is no known remedy for enlargement of the gall bladder. The condition is not suspected until it has reached such a stage as to interfere with digestion.

2nd. As bile is an essential element for digestion, any disease of the liver or gall bladder that interferes with its secretion or entrance into the intestines will cause indigestion, the symptoms of which so strongly resemble those of ordinary indigestion, with, in many cases, impaction of the rumen and tympanitis, that a farmer cannot be expected to discriminate. In fact, the diseases may be said to be identical, but caused by different conditions. In indigestion caused by liver disease, the skin assumes a yellowish tinge, which is not always readily recognized. In most cases also, the animal does not thrive well for a greater or less time before actual symptoms of disease are noticed. It is not material for a farmer to be able to diagnose the condition. All that can be done is to treat for indigestion. Of course, if a person could tell that the liver and gall bladder were in the state you describe he would destroy the animal at once.

J. H. REED, V. S.]

DISTEMPER IN DOG.

I have a cocker spaniel that had distemper, a month or six weeks ago, from which it recovered. About two weeks ago it took sick again; would not eat anything. One of his eyes is now covered with a film of white material, and there appears to be some inflammation. Will you kindly let me know what is best to be done? I have been giving him pills made of quinine, quassia and extract of gentian. Since he first took sick he has had very little meat, only enough to give the pills with.

Muskoka, Ont. WM. LINDSAY.

[From your description, there is no doubt that your spaniel is now suffering from anemia, and will require very careful attention to bring him around. The film covering the eye is likely to extend to both, but as that is only symptomatic of the disease, no treatment is required. You must build up the dog by good nourishing food, plenty of fat meat, a tablespoonful of cod-liver oil every day. For medicine, the following tonic: Aloes, Barb., 5 grains;

gentian powder, 10 grains; quinine powder, 10 grains; nitrate of potash, 5 grains; black pepper, 1 grain; licorice powder, 5 grains. Mix and divide into 12 three-grain gelatin capsules, and give one every day. Should chorea or St. Vitus' dance appear as a sequel, write again.

DR. WM. MOLE, V. S., Toronto.]

FATALITY IN YOUNG PIGS.

Some of my neighbors are losing pigs from four to six weeks old, and even some older. The trouble seems to be in their throats. They seem to choke up and can't swallow. They will appear all right at night, but by next morning they stand around, and if shoved over, they stretch out and die. Now, what is the matter, or what can be done for them? I have some small pigs and don't want to lose them, so if they get that way I want to be prepared for the emergency.

Welland Co., Ont.

[Sudden and acute sickness, followed quickly by death, such as you describe, in young pigs, is usually caused by constipation of the bowels. When the symptoms mentioned are noticed it is seldom relief can be given, hence preventive measures should be adopted. The pigs should have clean and roomy quarters, should get plenty of exercise and easily-digested food. It is good practice to feed daily a little of the following mixture: Equal parts Epsom salts, sulphur and powdered charcoal. Sufficient of this should be given to keep the bowels acting freely. If the pigs be noticed to be constipated, a little raw linseed oil or Epsom salts should be given. This trouble usually occurs in cold weather, when the pigs get neither green food nor sufficient exercise. It is not likely to occur in warm weather if the animals get exercise and grass. There is a form of bronchitis sometimes seen, called parasitic bronchitis, due to parasites in the bronchial tubes, but the symptoms are not so acute nor suddenly manifested as you describe. There will be a coughing and wheezing and failure to eat, apparently inability to swallow, for a few days before death, and the parasites can be seen in the tubes on holding a post-mortem. Treatment consists in administering oil of turpentine, 2 to 4 drs., in as many ounces of milk, or injecting a little turpentine into the windpipe. Repeat the dose in about 12 hours.

J. H. REED, V. S.]

HEAVES.

I have a horse twelve years old; was in good condition, and looked to be in good health. He has had a touch of the heaves for two years, but never very bad. As soon as I started spring work, the horse lost his appetite and started coughing—a dry, hacking cough—and has got thin, and hair is dry and rough. I am feeding a few oats and letting him run on grass as much as possible. He will not eat much grain. Cough is worse when working. After standing a little while then starts to work, he coughs.

Essex Co., Ont.

[The symptoms of heaves vary greatly in intensity, owing considerably to atmospheric conditions and the general state of the animal's health, and the food consumed. In many cases, without apparent cause, the symptoms become aggravated to such an extent as to render the animal practically unfit for work; and then, also without apparent cause, they frequently disappear until little or no inconvenience is caused. There is no cure for an established case of heaves. The symptoms can be lessened by careful feeding and watering. The refusal to eat may, in your case, be partially due to the condition of his teeth. You should have his mouth examined, and, if necessary, his teeth dressed. Feed little bulky food, do not allow him a full feed, even of grass. Clean wheat straw is probably the best bulky food you can give. Feed good clean oats in considerable quantities, if you can get him to eat them. If he won't eat, of course he cannot work. Give water often, and a little at a time. Dampen everything eaten with lime water. The points to be observed with a horse having heaves are: Be sure everything given is of the best quality, dampen it with lime water, and avoid overloading the stomach.

J. H. REED, V. S.]

BLACK-QUARTER IN CATTLE.

1st. What is black-quarter in cattle?
2nd. Is it infectious, or what causes it?
3rd. Is the meat poisonous? Will it cause death if eaten?
4th. Does it effect the whole carcass or just the quarter it is found in?

Wellington Co.

SUBSCRIBER.

[Black-quarter is one of the forms of anthrax, a rapidly fatal and infectious disease, due to a special bacteria, the *Bacillus anthracis*.

It prevails in rich, damp pastures, in cattle and swine, and is communicable by inoculation to other animals and to man. Black-quarter is sometimes anthrax with extensive engorgement of a shoulder, neck, breast or side, is most frequent in young and rapidly-thriving animals, and runs its course so quickly that its victims are usually found dead in the field as the first indication of anything amiss. If seen during life, there are the general symptoms of plethoria, fever, with trailing on one limb, stiffness, and excessive tenderness of some parts of the skin, to be promptly followed by swelling of such parts, with yellow or bloody oozing from the surface. Recoveries are the exception, and are slow and tedious.]

PHANTOM PREGNANCY.

I have a pure-bred sow, which, at her time for farrowing, showed signs of being with pig, and remained so until nearly a month after, when all appearance gradually disappeared. She is in good healthy condition; fed roots, bran, etc. Has had three litters, all strong and vigorous. What is the difficulty? Should she receive treatment before breeding her again? If so, what should the treatment be?

Waterloo Co., Ont.

[We should think your sow, failing to get in pig at the last service, and having bred three litters before (regularly, we presume), as the time drew near for her to farrow, had she been with pig, took on that appearance from sympathy from former farrowings, or what in the human kind is called "expectancy," having certain temporary physical effects, and which is called phantom, false or simulated, pregnancy. Would suggest that before breeding her again, she have a run at grass.]

A. S. T.

Miscellaneous.**TO KILL QUACK GRASS AND MALLOW.**

1. Would you kindly, through the FARMER'S ADVOCATE, tell me how to kill quack grass? What kind of crops will check it best?

2. How would it be best to treat manure that is infested with the seeds?

3. How would it be best to destroy low marsh mallow, which is a running weed with seeds that are without number?

G. H. G.

Simcoe Co., Ont.

[As couch grass is a surface plant, I would give as a likely successful plan to eradicate the stuff, the following: Repeated shallow cultivation; plow, harrow and cultivate alternately, once a week at least, and more, if moist weather, not to say wet, as then it would injure the soil, the plant being a native of clayey ground mostly, the frequency of cultivation being governed by the appearance or likely appearance of any growth above the surface, and be sure to let none appear from May 20 to June 24; then sow buckwheat, 3 or 4 pecks per acre, and harvest it when ripe, and do not plow till the following spring, except in case the land is inclined to be sad; then, as late in the fall as possible, rib up not too deep, and the following spring, manure and continue shallow cultivation till time to sow turnips: from the 10th to 15th or 18th of June, and keep clean; rib again in the fall, and seed down to clover and timothy the following season, with barley as a crop, or, if desired, seed to red clover, for seed, the year following the barley, and break up shallow after the clover is off; now, another root crop and then seed to alsike and timothy. In a word, thorough cultivation and enrichment of the soil, in my judgment, is all that is needed. I would recommend no cultivation the fall previous to commencing the treatment.

Wellington Co., Ont.

W. S. GROSE.

2. Turn the manure and allow it to heat well. This will cause considerable loss in the manure, but will destroy the seeds. When applying the manure, cover it very lightly, then allow any seeds remaining alive to germinate; then cultivate well before sowing or planting the crop.

3. I presume your correspondent refers to the low or round-leaved mallow or "cheeses," for the real marsh mallow grows down by the sea shore, and is not found in Ontario. The round-leaved mallow is a common weed in lawns, gardens, and roadsides. It is readily recognized by its roundish, kidney-shaped leaves on long petioles, and by its flattish, circular fruits, called "cheeses," which are often eaten by children. The flowers are white or rose-colored, and keep appearing all summer, from May to October. The seeds are small, flat, and nearly circular but for a deep notch on one edge. The root is biennial, often perennial, hence difficult to eradicate. The long, tapering form of the root enables this weed to thrive in situations which are not suited to many other plants. When present in lawns, the only method of eradication is to pull the plants out after a rain, when the soil is moist, or grub out the roots. In gardens, the mallow may be destroyed by the ordinary process of cultivation. When the ground is being dug, the roots can be readily pulled out and destroyed. If cultivated fields become infested with this weed (which is not often the case), then the owner must fall back on a rotation in which hoed crops will be of service in its eradication. As the mallow seeds very profusely, it is of importance in all cases to prevent the production of seeds, for they will, under unfavorable conditions of germination, retain their vitality for many years when buried in the soil.

O. A. C., Guelph.

W. LOCHHEAD.]

CLOSING A THOROUGHFARE.

-If a municipal council builds a road across a Government lot in Ontario not on the road allowance, say fifteen years ago, and a man buys the land from the Department of Crown Lands, and the road is not mentioned as reserved in patent from the Crown, can the party who purchased the lot compel the municipality to buy the right-of-way and build fences. If so, how is he to proceed?

W. R. B.

[No. But it would seem, from your statement of facts, that such purchaser from the Crown is legally in a position to close the road, and thus force the municipality to proceed by way of expropriation, if it intends to continue its use of the portion of lot in question as a highway. Incidentally to such expropriation proceedings, the municipality would be obliged to give compensation in respect of the land so taken.]

MUSHROOM CULTURE.

Can you give me any information regarding mushrooms? I have a suitable place to grow them, which is not used for anything. Please give me all the information from start to finish, as I know nothing about them.

E. FRENCH.

[The cultivation of the mushroom is often attended with uncertainty. It is, however, being grown on an increasingly larger scale, and the demand for it constantly increases. The conditions essential to success in growing it are a rich soil and a steady temperature of from 50 to 75 degrees. It is for the purpose of securing this latter requisite that cellars and old caves are often utilized in its culture, as light is not necessary. Horse manure is a practically indispensable material for the growth of mushrooms. If possible, it should be from animals fed on rich, nitrogenous food, and as free from straw or other litter as it can be obtained. This should be thoroughly mixed with a fourth or fifth part of good garden soil, and is then ready to go into the beds. Care should be taken that the beds are in a well-drained, damp place. They may be of any size or shape desired, but should be about 10 inches deep. Some of the largest growers use tiers of shelves or boxes, each one of which is 8 or 10 inches deep, into which they put the soil. Whatever the shape of the beds, the soil should be packed into them firmly and evenly and be left smooth on the outside. A thermometer should then be inserted in the center of the mass. As soon as fermentation sets in, the temperature will rise until probably over 100 degrees will be indicated, and when it falls to 80 degrees, the bed is ready to receive the spawn. This may sometimes be obtained from old mushroom beds, but it is best to depend on that sold by seedsmen, as it is more certain to be free from other fungi. The operation of spawning consists in putting pieces of the spawn bricks, the size of small hens' eggs, in holes, made about 2 inches deep and 10 or 12 inches apart. Afterwards, the holes should be filled with the soil and the surface firmed and smoothed off. If the work has been well done and the conditions are favorable, the spawn should commence to grow in seven or eight days; at the end of that time it should be examined, and any pieces that have not started should be removed and be replaced by fresh spawn. A failure in germination is indicated by the absence of white threads in the manure around the spawn. When the spawn has nicely started and begins to show itself on the surface the bed should be covered with a layer, one inch thick, of fine, slightly moist soil, which should be smoothed down smoothly and firmly. In damp weather, the soil should be watered, but in a tepid water, mushrooms should show in three weeks, and the bed continue to yield for three months.]

LICE ON COW.

We have a cow which has had a lot of red lice. We saw in FARMER'S ADVOCATE about ashes, but they seemed to do no good. We steeped tobacco and rubbed the juice on, but they have not all gone yet. The cow seems to be in good heart and health. What next would you advise?

Muskoka District, Ont. GEORGE DAWSON.

[When a cattle beast becomes badly infested with vermin, it is no easy matter to get them thoroughly cleaned up, because lice have great powers of hiding on parts of the body not readily treated with insecticide. We have great satisfaction in using pyrethrum insect powder, repeatedly dusting it thoroughly into the hair wherever lice-infested. We believe, however, it is a more thorough plan to apply one or other of the sheep dips or cattle washes advertised in our columns. They are prepared to destroy vermin, and full directions for use accompany every package sold. They are usually kept by druggists, or can be secured from the addresses given in the advertisements. The application should be thorough from end of nose to tip of tail and to hoofs. It should be repeated in a week in order to catch the new brood just hatched.]

FLEABANE (Egigeron) IN CLOVER.

I enclose you a specimen of weed that has come up quite thick in clover sown a year ago. Is it likely to give trouble in the future? F. B. CHARLTON.

Middlesex Co., Ont.

[The specimen submitted was dry and in poor condition for identification, but it is evidently a species of fleabane, that need not be feared to give trouble after the first year. As it is not a strong grower, the clover and grass will crowd it out, and when the field is again cultivated it will likely disappear altogether.]

PLAN OF STABLE WANTED FOR POULTRY, HOGS, HORSES AND SHEEP.

Would some of your readers send me, through your paper, a plan of a barn 40x25 feet, to run north and south, including a henhouse to the south, next a hogpen (a driveway under, that in winter can be closed up with sliding doors), a stable for four horses, and a sheep pen for ten sheep. If these dimensions are not large enough, change to suit. All overhead is for hay, except the henhouse. I want a feed room. Glangarry Co., Ont. SUBSCRIBER.

CHART FOR BEEF RING.

I noticed in the ADVOCATE for Feb. 15th a chart for a beef ring for twenty shares. Would you please put in a chart for sixteen shares? Grey Co., Ont. HUGIL TYERMAN.

[A chart for a beef ring of sixteen members was published in the FARMER'S ADVOCATE for March 15th, 1900, page 158.]

TO INVEST OR NOT TO INVEST?

I enclose you prospectus of a new company, of which there are several others of a similar type now being boomed through the daily and weekly newspapers. It promises very large dividends, and I have been urged to become a shareholder. What would your advice be in this matter?

Frontenac Co., Ont. READER.

[Let the shoemaker stick to his last," is a homely old adage, and, while there are exceptions to all rules, it is not bad advice to heed in these days of inflation and boom. Combinations and trusts, many of them over-capitalized, are being formed in all directions, and extravagant hopes held out to investors. Mr. Russel Sage, of New York, one of the oldest and most sagacious financiers in America to-day, and a millionaire to boot, writing on these wonder-working industrial combinations, in the last issue of the North American Review, makes, among other observations, the following, which our Frontenac enquirer and a good many others would do well to consider: "No one can even estimate the amount of money that has been advanced on securities of this class; but it is a conservative estimate to say that industrial loans are as ten to one compared with conditions a few years ago. This is apparent from the business offered at my office from day to day. The volume of money in the country is entirely inadequate to meet anything like the demands that are made on collateral of this class. In fact, we have gotten entirely away from the old idea of making the money of the country the basis of our trading. Instead, there is thrown into the business world, to be used as a trading medium, millions upon millions of new stocks, the real value of which is yet to be determined. As soon as this is thoroughly realized, we may look for trouble, pending a readjustment. This can be predicted with perfect safety."]

LYE FOR SPRAYING TREES.

Kindly tell, through your valuable columns: 1. Could common leach lye be used with safety in spraying apple trees—(a) before buds open, (b) after leaved out?

2. If so, what strength?

3. Would it do mixed with Bordeaux mixture?

Wentworth Co., Ont. A. M. SHAVER.

[1 and 2. Members of the FARMER'S ADVOCATE staff have repeatedly applied strong lye to the trunks and limbs of trees before the leaves were out, with the effect of cleaning them up in a remarkable degree. It is well to scrape off the rough bark before applying the wash, so that scales and other insects may be exposed to the material. About six parts of lye from a bushel of hardwood ashes is a proper strength to apply before the leaves appear. After the foliage is out, three parts water to one of lye would be best.]

3. We have not heard of anyone applying Bordeaux mixture and lye mixed together, but the chemical composition of the two would not when mixed cause any harmful chemical. Care would have to be taken, however, to not apply the lye too strong after the leaves have opened out.]

WIEWS OF THE CANADIAN WEST WANTED.

Would you kindly tell me where I could get books or pamphlets of the scenery, farming, mining, etc., of Manitoba, Northwest Territories, and British Columbia? W. E. H. Toronto, Ont.

[Write, mentioning the FARMER'S ADVOCATE, to Hon. John A. Davidson, Parliament Buildings, Winnipeg, Man.; Hon. G. H. V. Bulyea, Regina, N.-W. T.; Hon. J. H. Turner, Victoria, B. C.; and Hope, Graveley & Co., Vancouver, B. C., asking for the descriptive matter you desire.]

MARKETS.

Chicago Markets.

Chicago, May 15—Cattle, 1,500; hogs, 18,000; sheep, 8,000. Receipts for the week so far, compared with a week ago, show a decrease of 4,500 cattle, a decrease of 13,500 hogs, and an increase of 10,500 sheep. Compared with corresponding time a year ago, show an increase of 7,000 cattle, an increase of 17,500 hogs, and an increase of 13,000 sheep.

Receipts at Chicago Stock-yards for 1901 to date, including to-day's estimate, with comparative figures:

Table with columns: Cattle, Calves, Hogs, Sheep, Horses, Cars. Rows for 1901, 1900, and Increase/Decrease.

Beef Cattle.—A small bunch or two that were good enough to meet the requirements of an exporter sold steady, at \$5.25 to \$5.45. The bulk of the small receipts were of the kinds that sell around and below 5c. The yards will perhaps be pretty well cleared by the close of the week, but the fact is there is a dull tone to the trade at present.

Butcher Stock.—The market was rather dull, not many fresh arrivals. Buyers had light orders, and trade did not show strong tone. Good beef cows and heifers suitable for export sold at a range of \$4.10 to \$4.85, chiefly at \$4.25 to \$4.50; good cows of fair quality, showing fat, \$3.50 to \$4; medium, \$3.15 to \$3.40. The bull market holds steady, at \$3.90 to \$4.35, according to quality; bolognas and feeders, \$3.15 to \$3.75; medium and light, \$2.40 to \$3. Veal calves are at the lowest price of the season, the big bulk now selling at \$4.50, not many above that figure; good ones at \$4.25; common and heavy, \$3.25 to \$4.

Stockers and Feeders.—This trade was quiet. Common and medium kinds are some lower than early in the week, but good kinds, both light and strong weight, are selling fully firm. Among sales of late yesterday was one lot of 20, averaging 1,080 lbs., that sold at \$5. Fair to good feeders quoted at \$4.50 to \$4.85; fancy, around \$5; common to fair, \$4 to \$4.50. Hogs—Mixed and Butchers.—There was a very bearish sentiment to the trade to-day. In the mixed trade \$5.70 was a stopping point, the bulk of strong weight mixed landing around \$5.65, with an extreme range of \$5.60 to \$5.65 for landing. A good quality mixed, running largely to butcher weight, sold at \$5.65 to \$5.67. Sheep and Lambs.—Receipts were moderate, and the mar-

ket was steady to strong. Woolled lambs sold at \$4.75 to \$5.20, largely at about \$5 to \$5.10. Export wethers quotable at \$4.52 to \$4.55; yearlings and good fat sheep, \$4 to \$4.55; ewes, \$3.50 to \$4. Feeding ewes, \$3 to \$3.50; feeding lambs, shorn, \$3.65 to \$4.

Toronto Markets.

The Western cattle market has been taxed to its utmost capacity the last few weeks. The demand for best cattle is still very good. All the better class of exporters offered are quickly sold; range of quotations is high. All the cattle sold quickly, and demand not satisfied. The run of cattle was 61 loads (1,000 cattle), 157 sheep, and about 1,000 hogs. Everything sold by noon.

Export Cattle.—The best quality of export cattle are held at firm prices, and exporters are holding out until the prices have a downward tendency. The drovers say that farmers are tired of seeing their cattle in the stall, and compel all purchases to be cleared. We are inclined to the opinion that this is one great factor in keeping down the prices, as dealers are quite aware of the action of farmers unloading all their cattle on the market at this time of year. Mr. Snell had five loads of Chicago cattle feeding and resting here. These were about the most inferior class of States cattle that have been on this market for some months. Prices were from \$4.85 to \$5.25 per cwt. for choice. Light export cattle were quoted at \$4.50 to \$4.85 per cwt.

Butchers' Cattle.—The offerings of choice mellow butchers' cattle were small. Only two loads of this class on offer, and sold at \$4.40 to \$4.65 per cwt. Choice butchers' cattle, equal in quality to exporters, are worth from \$4.30 to \$4.60. They must average 1,150 lbs. weight. Good butchers' cattle, suitable for local trade, are worth from \$4.00 to \$4.35 per cwt. Mixed loads of cows, heifers and steers are worth \$3.85 to \$3.90 per cwt. and \$4.00. Common butchers' cattle sold from \$3.20 to \$3.60. Inferior cows and bulls sold down to \$3.00 per cwt. The butchers' trade is very active. Choice cattle are much wanted for outside districts. Buyers from outside points are in regular weekly attendance for supplies, which is quite unusual. Drovers are reporting good sales, at firm or advanced prices. We are of opinion that butchers' cattle will go still higher than our previous forecast indicated. Picked loads are selling at \$4.20 to \$4.50; choice at \$3.90 to \$4.20. This is an advance of 10c. all 'round over previous quotations. Good to common from \$3.00 to \$3.25 per cwt.

Bulls.—Choice heavy export bulls sold at \$3.85 to \$4.25 per cwt.; average weight, 1,300 lbs. Light export bulls ensier, at \$3.40 to \$3.50 per cwt. Cables are weak and trade dull in export bulls.

Stockers.—Yearling steers, 500 lbs. to 600 lbs. average, sold at \$3.25 to \$3.50. Mixed colors grade Holsteins, all those of inferior quality, sold at \$2.50 to \$3.00 per cwt.

Feeders.—Heavy steers, weighing from 1,100 lbs. upwards, of good breeding, sold at \$4.25 to \$4.65 per cwt. Several farmers who wanted feeders could not obtain a supply; very few on offer. Light feeders quoted at \$3.85 to \$4.10 per cwt.

Sheep.—The supply not equal to the demand. Prices advanced, and are now quoted at \$4.50 to \$5.00 per cwt. for ewes, and at \$3.50 to \$4.00 for rams, per cwt.

Lambs.—The first of the season were on the market. Two very choice Shropshire lambs, 8 weeks old, fed by Mr. W. S. Fraser, of Bradford, would dress about 40 lbs. for \$6.00 per head. Barnyard lambs are selling at \$5.00 to \$5.00 per cwt.

Calves.—Trade quiet for anything but very choice veals for which there is a good demand. Prices have a wide range, from \$1.00 to \$10.00 per head. Only 60 on offer.

Milk Cows.—Enquiries are for good choice milkers, at from \$45.00 to \$50.00. Any others are quoted at from \$25.00 to \$35.00 per head. Bryce purchased a Jersey cow, 10 lbs. milk per day, for \$35.00.

1,000 on offer, and sold at \$1.00 per cwt. for pig, lean bacon, 100 lbs. to 200 lbs. live weight. That is, not fed and watered. Mr. James purchasing agent, and is giving satisfaction. Unculled car lots of hogs sold at \$6.60 to \$6.75 per cwt. There is likely to be a shortage of hogs, as the sows have not done well this season. Our enquiries have led us to the opinion that only those who provided artificial heat and warm feed have had good farrows. Those who neglected exceptional care and shelter have small litters and crippled hogs, causing paralysis and rheumatism.

Dressed Hogs.—Very few on offer. Prices steady. Mr. Wm. Harris, Jr., bought 90 dressed hogs at \$8.50 to \$8.75 per cwt.

Grain Markets.—Receipts of grain on the St. Lawrence street market very small. Wheat.—About 500 bushels of wheat at 73c. per bushel, 200 bushels of red at 72c., and 300 bushels of goose at 69c. per bushel.

Oats.—Two loads of oats at 35c. per bushel. Barley.—One load of barley at 47c. per bushel. Rye.—One load of rye sold at 41c. per bushel.

Hay.—Fifteen loads of hay sold at an advance of \$1 per ton, and now quoted at from \$13.50 to \$15.50 per ton.

Straw.—Two loads of straw sold at \$8.00 and \$9.00 per ton. Butter.—Dairy rolls offered freely, at from 13c. to 15c. per lb. Creamery is steady and unchanged, at 18c. to 19c. for pound rolls. All contracts for milk supply to the city were made on the basis of \$1.00 per can, delivered, each can holding eight gallons and one quart, delivered f. o. b., Toronto Union station.

Eggs.—Supplies large and demand good. Prices steady, at 10c. to 11c. per dozen from farmers' wagons.

Dressed Beef.—A cable received from Mr. W. Harris to-day reports that business is not very brisk in the Old Country, but there is a great change of sentiment towards Canada, and business is likely to be favorable towards the dressed-beef trade.

Poultry.—The prospects for the season's poultry trade is exceptionally good. Mr. Alfred Boulton has returned from London, England, having been successful in disposing of the last season's supply at very advantageous prices. He has also made arrangements to ship an unlimited quantity, up to 1,000 tons, of chickens and ducks during the ensuing summer and fall. The Canadian Produce Co. desire us to state that they have no connection with the company of a similar name who are advertising for farmers to take stock in exporting dressed poultry. They did a very successful business with the farmers last year, and again offer 20c. per lb. for broilers, and will ship crates on receipt of advice.

Table with columns: Extreme comparative prices to-day, 2 weeks ago, Same date last year. Rows for Export cattle, Butchers' cattle, Bulls, Stockers, Feeders, Sheep, Hogs, Lambs, Milk cows.

Buffalo Markets.

East Buffalo, May 10.—Cattle.—Steady. Calves.—Fair demand; sold on the basis of \$5 to \$5.25.

Sheep and Lambs.—Easier, with 47 loads sale; lambs, choice to extra, \$4.90 to \$5; good to choice, \$4.50 to \$4.75; common to fair, \$3.50 to \$4.75; sheep, choice to extra, \$4.25 to \$4.50; good to choice, \$4 to \$4.25; common to fair, \$2.75 to \$4.

Hogs.—Opened slow and 5c. lower, and a total of 40 loads on sale; heavy, \$5.85 to \$5.90; mixed, \$5.85 to \$5.87; Yorkers, \$4.10 to \$5.85; pigs, \$5.60 to \$5.70; roughs, \$5.30 to \$5.45; stags, \$4 to \$4.50.

POOR COPY



THE GUILD OF THE BRAVE POOR THINGS.

BY NORA ARCHIBALD SMITH.

"It is to be called the Book of Poor Things, mother dear. It's a collection—a collection of Poor Things who've been hurt, like me; or blind, like the organ-tuner; or had their legs or their arms chopped off in battle, and are very good and brave about it, and manage very, very nearly as well as people who have got nothing the matter with them. Father doesn't think Poor Things is a good name. He wanted to call it Masters of Fate, because of some poetry. What was it, father?"

"Man is man, and master of his fate," quoted the master of the house.

"Yes, that's it. But I don't understand it so well as Poor Things. They are Poor Things, you know, and of course we shall only put in brave Poor Things, not cowardly Poor Things."

If you ever happened to meet a little lad named Leonard, who lives in the pages of Mrs. Ewing's "Story of a Short Life," then you will remember, with misty eyes and an ache in the throat, that chapter wherein the hero directs from his wheeled chair the ruling and printing and illuminating of his Book of Brave Poor Things.

The child has been the victim of an accident, which not only makes him a cripple, but racks him with distress and pain, and, under the nervous strain of the affliction and the consequent "spoiling," he has become capricious, tyrannical, a torment to himself and to others. Fortunately, when things have reached a climax of wretchedness, his wise mother comes to the rescue, and, appealing to the boy's courage, his sense of honor, and to his passionate interest in soldiers and soldierly qualities, teaches him that, though a military life can never now be his, he yet may be "a brave cripple." The ancestral motto of the family, *Lætus sorte mea*, is so interpreted to the child that he begins to feel it a matter of duty to be happy, perhaps there begins to think that other people are "lots of brave afflicted people," and perhaps there never was anybody but him who wasn't so.

Leonard has a touching interview with a hero of the Victoria Cross, in which, true to his great life-interest, he is intent on finding out whether, if he is very good and patient about a lot of pain in his back and his head, that would count up to be as brave as having one wound if he'd been a soldier; and whether being ill in bed might count like being a soldier in a hospital.

"I suppose nothing—not even if I could be good always, from this minute right away till I die—nothing could ever count up to the courage of a V.C.?" questions the boy wistfully; and the brave, tender-hearted wearer of the priceless bit of iron answers tremulously, "God knows it could, a thousand times over!"

Leonard, and the Book which he thought out so carefully, suggested to Sister Grace the formation in the Bermondsey Settlement, South London, of the Guild of the Brave Poor Things. It is an association of men, women and children, of any creed or no creed, who are crippled, blind, or maimed in any way. Any one is eligible for membership if thus afflicted, and if, at the same time, he is resolved to make a good fight in life. *Lætus sorte mea*—Happy in my Lot—is the watchword of the Guild; and its hymn, the one which Mrs. Ewing's hero called the Tug-of-War hymn, because, at the military chapel which he often attended, the soldiers sang the verse beginning, "A noble army, men and boys," with such tremendous impetus and vigor that, after a brief contest, they invariably pulled away from the organ and the whole choir.

The deepest purpose of the Guild, says Sister Grace, is found in this verse of the hymn:

Who best can drink His cup of woe,
Triumphant over pain;
Who patient bears His Cross below,
He follows in His train.

It is by "awakening the heroic that slumbers in every heart," and by teaching its members that the courage to bear and the courage to dare are really one and the same, that the Guild lives up to its motto; for its founder believes that it is not enough patiently to accept one's life-burden, but that one must also learn to bear it cheerfully.

It is inherent in the very idea of the Guild that it should bring light and brightness into cold, gray lives; and so, in every room in which it meets, the walls are draped with the Union Jack, and high above shines out in brilliant scarlet letters the watchword, *Lætus sorte mea*. There are badges, membership cards, and banners, all in red, the soldier's color, and the true military spirit is insisted upon.

"It is important," says Sister Grace, "to guard against anything like a sentimental glorification of suffering; and, to shut out such a possibility, the Guild must have a knowledge of the conditions of life of all its members, and must be ready to do everything that can be done to minimize their actual distresses." It is not a charity, however, and does not give relief; it is merely a friendly organization of afflicted persons meeting frequently, with leaders who are interested in their troubles and who can give strength and courage to bear them more bravely. Where relief must be given, it is done through other societies, and so there is no asking nor giving here, save in the things of the spirit.

The Guild of Brave Poor Things was organized in 1894, and so great a need has it apparently met, and so well has it taken advantage of the "together" spirit of the age, that it now has six branches, with a membership of more than five hundred. It is a pitiful thought that there are so many persons in one locality who belong by right to such a club, but even more pitiful would it be were nothing done to lighten their double woes of poverty and disease.

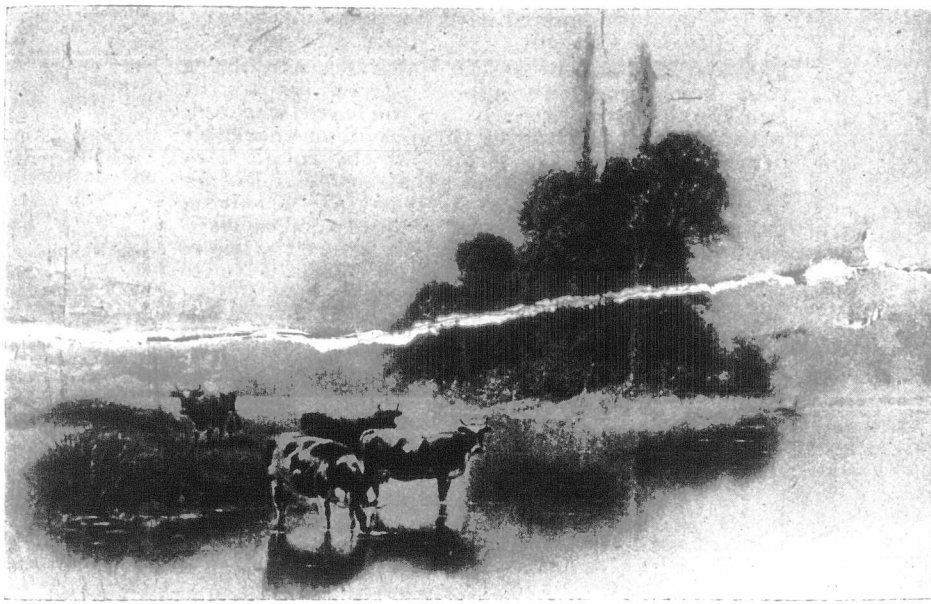
The various things necessary to a successful conduct of the Guild are thus stated by Sister Grace:

1. To visit members in their own homes and establish personal links between the workers and members.

2. To hold regular meetings at stated intervals for games, singing and social intercourse.

3. To bring, as far as possible, technical classes and suitable lectures within the reach of members of the Guild; to arrange for periodical excursions, concerts, etc., for them, together with any other means of widening their necessarily restricted lives.

The Guild's rules are few and simple: merely that the name, motto and hymn shall be the same in all branches, that flags shall always be used in the decoration of the rooms, that the soldierly



"ON THE THAMES."

virtues of loyalty and prompt obedience be cultivated in every way, and that records be kept of the name, address, and condition of each member.

And what are the proceedings at the Guild meeting? you ask.

These may be held either in the afternoon or evening, and so great is the interest in them that many of the members gather at the entrance long before opening time, reminding one of that even in Capernaum when the sun did set and when they brought unto Him all that were sick of divers diseases, and all the city was gathered together at the door.

There are blind people here; there are deaf-mutes; there are paralytics who can drag themselves along, and others who must be pushed in chairs or perambulators; there are as many phases of distress and deformity, perhaps, as there are persons, and all ages are represented; but there is much good-fellowship and constant helpfulness.

Tables are set in the Guild-room, where books and papers and magazines are scattered for those of seeing eyes; there is a piano for the blind; there is a lending library from which books may be taken home; there are toys for the younger children; and there is always a painting table, for it seems that mottoes and pictures to color are in great demand the year round.

Many of the blind women bring their knitting or other handiwork, and chat quietly together as their busy fingers move; the men fall into conversation over the games and pictures, and thus the grace of friendship is added to these lives of deprivation and suffering.

In many of the Guilds weekly half-hour lectures on science, history and travel are given, and seem to be greatly enjoyed; and always when games and lectures and conversation are over there is the ever-delightful singing practice. If any of the members are found to have special musical ability, or a knack at recitation, they are encouraged to help in entertainment, and considerable talent is thus discovered and a new value given to the self-estimate of the possessor.

At the close of the exercises the roll is always called, each soldier of the army, from baby to gray-beard, answering to his name, and then comes Leonard's "Tug-of-War" hymn, for which all stand, or at least assume as nearly an erect position as weak limbs and twisted spines will allow.

It is their battle-hymn, and if with its echoes ringing in their ears they can go back to their poor homes and quit themselves like men, if they can fly their scarlet banner with its joyous motto, if they can fight the battle of life with courage, heavily weighted as they are, then indeed may they be called the bravest army that ever went forth to warfare.

"On the Thames."

The hour is evidently one drawing towards evening, as is shown by the lengthening shadows and by the expectant attitude of the cows as they listen for the call into the sweet pasturage of their own home meadow close to the water's brink. Milking time over, they will lie amongst the long grass and buttercups all through the summer night, to awake at early dawn for another day of blissful inactivity by sweet Thames-side, all unconscious of the beauty of their surroundings, or that they themselves add the living touch, failing which no picture of mere still life can be perfect. On one side of the picturesque, well-wooded little island is a man fishing from the inevitable punt, without which no artist could dare attempt to portray even the quietest nook of loyal old Thames, whilst to one who knows it well, the very sound of the frothing water as it falls over the weir near by seems to come as an echo by merely looking at the deceptive sweep of quiet water, which is all our picture shows of the big downpour for which it is gathering its forces.

There are rivers and rivers, and although the historical Thames, even if they only know it on paper, must always have a charm for every loyal subject of England's Sovereign, in whatever part of Canada their lot may be cast, yet with what pride of ownership can they point to the big rivers of our Dominion, with sheer precipices for banks, with torrents for cascades, and with a wealth of water-power which the whole civilized world might envy. Still, each has its beauty, and each its source of usefulness.

H. A. B.

Recipes.

DANDELIONS WITH EGGS.

Pick over, wash and drain six quarts of dandelions, throw into two quarts of boiling water, add one tablespoon salt and one-quarter teaspoon soda; cook forty-five minutes; drain in a colander, turn in a large serving dish, cut across several times; have ready hard-boiled eggs, remove shells and halve lengthwise, place the halves over the top of the greens; melt two large tablespoons of butter, pour over the greens and eggs, add a dash of pepper, and serve.

DANDELION SALAD.

The white, crisp leaves of the dandelion make excellent salad, without cooking. Tear apart one quart of the crisp leaves, using the white parts; mix through the leaves two tablespoonfuls of horse-radish root grated; dress with the following mayonnaise: one egg, three tablespoons water, two tablespoons vinegar, butter size of a nutmeg, half saltspoon salt, half teaspoon made mustard, one dessertspoon sugar; boil five minutes, stirring constantly; when cold, pour over the dandelions.

ENGLISH SPRUE AND EGGS.

Boil till tender, in salted water, two pounds of asparagus, cut in inch pieces, drain thoroughly; beat two eggs, whites and yolks separately, adding a tablespoon of cream to the yolks, half as much butter and a seasoning of pepper and salt; mix with the asparagus, stir in the whites, and shake the saucepan over the fire till hot; serve in a deep dish with points of toast.

ASPARAGUS SALAD.

Boil the asparagus, not too tender, lay in cold water to preserve its plumpness; serve with a dressing of oil, vinegar, pepper and salt, mixed in the following manner: to four tablespoons of salad oil add one teaspoon of salt and a dash of white pepper; beat well, add slowly, drop by drop, two tablespoons of vinegar.

"Fate."

Two shall be born the whole wide world apart,
And speak in different tongues, and have no thought
Each of the other's being, and no heed;
And these o'er unknown seas to unknown lands
Shall cross, escaping wreck, defying death:
And, all unconsciously, shape every act
And bend each wandering step to this one end—
That, one day, out of darkness, they shall meet
And read life's meaning in each other's eyes.

And two shall walk some narrow way of life
So nearly side by side that, should one turn
Ever so little space to right or left,
They needs must stand acknowledged face to face;
And yet, with wistful eyes that never meet,
With groping hands that never clasp, and lips,
Calling in vain to ears that never hear,
They seek each other all their weary days
And die unsatisfied—and that is Fate!

—Susan Marr Spalding.

THE QUIET HOUR.

The Bondage of Fear.

"Think not I dread to see my spirit fly
Through the dark gates of fell mortality.
Death has no terrors where the life is true;
'Tis living ill that makes us fear to die."

Someone has described a picture of a churchyard through which there is a path on which a little girl is walking. A dying man, who is leaning against the gate-post, says, "Do you not fear the churchyard path?" "It is my way home," is the fearless answer.

There is one subject in which we all have reason to be interested. Young and old, rich and poor, the happy and the miserable, are all steadily moving on to the same goal—*death*. As this is a matter of such great importance to every mortal, would it not be as well to think about it a little? Some people never seem to realize that death is in their path. Death is not in any of their thoughts, and yet, no matter how full of life they may be, they will hardly escape the last enemy. Other people do think of death, and are terribly afraid of it. Surely there are many to-day who, through fear of death, are "all their lifetime subject to bondage." The slavery of fear! What right have we to be in bondage to an enemy which our Master has conquered? Those who know nothing of God may well tremble when stepping out into darkness; but when a Christian submits to the bondage of fear he dishonors the Lord who has given him the victory over death. We are often very inconsistent: singing joyful hymns about the life after death and our desire to reach that better world, professing to believe that the pleasures of this life are not worthy to be compared with those of the next, and all the time clinging with frenzied clasp to the smallest possibility of a chance of prolonging our life here. We shrink with shuddering dread from the meeting with our God. It is not only a physical shrinking from a physical death—that is natural enough; and even our Lord, in Gethsemane, seems to have endured that human dread. The fear we should try to overcome is deeper, more like spiritual fear. If all, or nearly all, our pleasures, aims and ambitions are centered here, of course we shall prefer to stay here. Where the treasure is the heart will be. Think of a man who has devoted all his talents, time and opportunities to the making of money. What has he to look forward to in the next world? The money he has so persistently raked together must all be left behind, and he cares for nothing else! What are heavenly joys to him? Spiritual riches are not to his taste, and he only pretends to think they are worth more than the gold and other treasures he must leave behind. It has been said: "Not to fear death is a slight to Him who made it our special punishment. Not to desire death is an indifference to Him whom we can only reach by passing through it."

"This life of ours doth but our life begin,
Is but outside the porch of the abode;
And death the going home—the entering in,
The stepping forth on the wide world of God."

This slavish fear of death is very common, I am afraid. Think of the panic report of diphtheria or smallpox in our midst produces! Where is the fearless trust in God which is so vividly described in that beautiful 91st Psalm? "Thou shalt not be afraid for the terror by night, nor for the arrow that flieth by day; nor for the pestilence that walketh in darkness; nor for the destruction that wasteth at noonday. A thousand shall fall at thy side, and ten thousand at thy right hand; but it shall not come nigh thee." This glad fearlessness is promised to those who abide under the shadow of the Almighty. If we do not possess it, then surely our faith must be very weak. If we really trusted God He could not fail to be our "refuge and fortress."

But even the physical pains of death are often anything but terrible. Dr. Hunter expressed what might have been the wish of many thousands of dying men and women, when he said: "If I had strength to hold a pen I would write down how easy and pleasant a thing it is to die." Think of all the people whose last hours you have witnessed or heard of, and I feel sure you will confess that the soul very, very often departs from the body peacefully and painlessly. How young the still, cold face looks! The tired lines and wrinkles are so often smoothed out, and the look of peace and rest ought to stop at once the common habit of applying the epithet "poor" to those who have left sorrow and pain behind. "Poor!" Surely we are poor, not they.

"Weep not for death!
'Tis but a fever stilled,
A pain suppressed—a fear at rest,
A solemn hope fulfilled.
The moonshine on the slumbering deep
Is scarcely calmer. Wherefore weep!

Why are we so sorry for those who die? Why are we so afraid to die ourselves? Do we think God can take care of us here, but not there? Do we really think that those who have passed within the veil are "poor," and that we who linger here, oppressed by fear and care, are rich?

Some sentimental Christians are very eager to die a rapturous and dramatic death. In fancy they leave dying messages which will convert everyone within reach. But true heroes don't wear their heart on their sleeve. They are not given to parading their most sacred emotions, or boasting about their

religious feelings. As Robertson says: "Every day Christ's servants are dying modestly and peacefully—not a word of victory on their lips, but Christ's deep triumph in their hearts. They die, and the world hears nothing of them, and yet theirs was a true victory. They came to the battle-field and found no enemy to fight with—no foe was in sight."

"Weep not for death!
The fount of tears is sealed.
Who knows how bright the inward light
To those closed eyes revealed?
Who knows what holy love may fill
The heart that seems so cold and still?"

HOPE.

THE CHILDREN'S CORNER.

"Convalescent."

I wonder whether any of you children understand, by experience, the delights of convalescence. The long, weary days of sickness and pain are over. You are out of bed at last, and find yourself the pet of the whole family.

The little girl in the picture must have been very ill, for she still has a trained nurse in attendance. I fancy she must be an only child, with every luxury within reach, except the luxury of a jolly lot of brothers and sisters. What do you say? Don't you think young companions are worth more than picture-books? I do.

C. D.

PRIZE COMPETITIONS.

I want everybody to try and win a prize this time—everybody, at least, who is under sixteen



"CONVALESCENT."

years of age—for our subject is both interesting and easy. Prizes will be given to the writers of the best essays on "Interesting Animals." You can describe animals you have known, or those you have heard or read of. The competitors will, if possible, be divided into classes according to age. All MSS. must be posted before the end of June. Write your name, age, and address on the back. My address is as usual: Box 92, Newcastle, Ont.

Cousin DOROTHY.

PRIZE ESSAY III.

"How Queen Victoria Won the Love of Her People."

We were in mid-Atlantic, aboard the Seagull—my uncle and myself. It chanced one morning that we were on deck very early, and were the only passengers there, save a Frenchman, who sat reading a newspaper. Soon, however, he threw it down, and exclaimed, impatiently: "It is full of 'The Death of Victoria,' that English queen. Of course, this paper states that all her people loved her, but why so much, I don't see!" And, then, to my uncle he said: "You are English, monsieur, explain this, please." So to please him, my uncle began:

"Victoria had been well taught by her mother in her early years, but she herself said, 'I will be good,' and she has surely performed enough good acts through her long reign to show us that this was no idle resolution.

"All through her life she lived up to the highest Christian ideals, and, although exalted in position, was always humble in heart. She loved the commonest of her people, and often visited the sick and needy ones among them. Many of these people never knew that it was the Queen who was ministering to them: she was always so kind and humble, and dressed so plainly. Yet they loved her as 'Her Majesty,' and if afterwards they happened to see her for 'Her Majesty,' they loved her more.

"But Victoria thought not only of these common people, but of them all. She remembered her soldiers in foreign lands, and did not forget to send a word of praise to their brave leaders and themselves. Nor did she forget the wounded soldiers in

the hospitals at home. The little children and other unfortunates of those same places often saw her. Whenever she went among them all she scattered cheer as well as flowers.

"So that, although her reign was one of great progress in science, literature, and inventions, you see, my friend, that it was not these that made all her people love her. It was her Christian character, her never-ceasing kindness, her humility, and because she sympathized with her people: for when they had sorrows, she sorrowed with them, and when they were joyous, she was also. Such," concluded my uncle, "was the life of Victoria, the model mother, wife, and queen."

"Ah," said the Frenchman, "they had reason to love her; but she has surely won her reward and exchanged her earthly crown for one of glory."

Then he arose and went off deck, leaving us to think that his last opinion was certainly correct.

Alvinston, Ont. MARY COLHOUN (aged 15).

Ingle Nook Chats.

MY DEAR GUESTS,—

Of course, we are all duly sensible of the loveliness that everywhere surrounds us, but we shall not wait to comment upon it now, as I want to have a "chat" this time in real earnest. First, I extend a hearty welcome to all who have honored us by visiting our Nook, but I have an especially snug corner for the old friends of puzzle days. "McGinty," little man, I was very glad to hear from you. Studying, are you? For one of the "learned" professions, or to be an educated farmer? Happily, the latter is not so rare as he formerly was. "Eugenie," I applaud your ambition to "keep up with the times," in order that you may assist your "bonnie laddies" in the future. It is somewhat of a task to keep pace with the shooting of the young ideas nowadays, is it not? And parents too often overlook the necessity of so doing. I reciprocate your good wishes, "Eugenie," and shall be pleased to hear from you again.

J. F. M.—I have not the selecting of the prizes sent out. When you win, you must take your chance like the rest. "Old Maid," the W. P. B. can do very well without your contribution till the contest is over. To you and all others who have asked admission to the Nook, I repeat that there are no restrictions as to age or otherwise—whosoever will may come.

E. A. C.—The Ingle Nook certainly seems to interest a far greater number than the puzzle column did, although I frequently receive regrets that it was discontinued. The aim of the ADVOCATE being to please the majority, I think the present course is the more successful one. "Whitfield," the contest herein announced is another form of puzzle. I hope all who have expressed themselves as interested in that art will show their appreciation by sending in good lists in answer to it. "Minnie May" and "Madge" I believe that the information gleaned while working at literary puzzles is a fair reward for the labor bestowed upon them, or borrow a quotation:

"The reward is in the doing,
And the pleasure of pursuing
Is the prize the vanquished gain."

I enjoyed your pleasant notes; am pleased to find my guests growing more genial. J. L. F. is a very clever little girl, but I find cleverness very common among you Maritime people. I have only spoken to a few of my guests, and I find space growing small, so I must forego the pleasure of further conversation, and direct my attention to

OUR COMPETITIONS.

Time is up for No. IX, and result will appear next issue; meanwhile, I hope you are all at work on "Canadians who have become famous." Prove, now, that a prophet may be honored in his own country, by sending in some good essays. The very generous response to Contest IX, induces me to give another of a somewhat similar nature. Therefore, for Contest XI, we offer three prizes for the three best lists of names sent in answer to the following puzzle. This contest will be open until July 5th. In case of ties, neatness, spelling, etc., will be taken into consideration. Sign name (or pen-name) and address to your work, as well as to any communication which may accompany it, thereby guarding against mistakes.

CONTEST XI.—Our Library (partly phonetic).

- 1.—Makes and mends for first-class customers.
- 2.—Pilgrims bend low to kiss.
- 3.—The dwellings of civilized beings.
- 4.—Is worn on the head.
- 5.—Not one of the points of the compass, but inclining towards one of them.
- 6.—What an oyster heap is likely to be.
- 7.—An American manufacturing town.
- 8.—An internal pain.
- 9.—An important part of the body.
- 10.—A worker in precious metals.
- 11.—A mean dog.
- 12.—A manufactured metal.
- 13.—Is very fast indeed.
- 14.—A slang expression.
- 15.—A kind of linen.
- 16.—Very painful companions.
- 17.—Unpleasant on your foot.
- 18.—Certainly not a dwarf.
- 19.—Not far off.
- 20.—Our Corner, and the sound made by a domestic animal.

There, my puzzleistic friends, is something to amuse you. The sand man has been throwing dust in my eyes for the past half-hour, so I shall say "good night." Yours cordially,
Ingle Nook Chats, Pakenham, Ont. THE HOSTESS.

Two Things to Learn.

Learn these two things: Never be discouraged because good things get on slowly here, and never fail daily to do that good which lies next to your hand. Do not be in a hurry, but be diligent. Enter into the sublime patience of the Lord. Be charitable in view of it. God can afford to wait; why cannot we, since we have Him to fall back upon? Let patience have her perfect work and bring forth her celestial fruits. Trust in God to weave your little thread into a net, though the patterns show it not.—
G. McDonald.

The Farmer's Wife.

Our last home topic, "Why Some Women do Not Get Married," has brought out of the corner of an old desk a clipping yellow with age and written at least twenty-five years ago, but which, if only for the inspiration of the thought conveyed in the last verse, we are pleased to reprint for the benefit of the readers of our Home Magazine. Twenty-five years is a long stretch of time, and it has borne witness to much steady progress and to many changes—changes which cannot have been without their significance to the farmers' wives of our land. There have been wonderful improvements in farm machinery. The work has been eased to the worker in field, barn, and stable; in fact, "the changed conditions of agriculture," we are told, "have practically revolutionized the work on the farm." Combination and organization have solved many a problem for the farmer of to-day which sorely puzzled the farmer of over two decades ago.

How about that part of the homestead presided over by the wife and daughters? What has been done to oil the wheels of the domestic machinery for them? Doubtless, amongst the more farseeing, and perhaps more wealthy, of the farmers, due consideration has been given to the subject. But is it so everywhere? How many of the wives still have to make the best of badly-planned and poorly-equipped dwellings, when a remedy might easily be found? We venture to think that the same enlightenment which has borne such fruit when practically applied outside, would be as fruitful of results if brought to the test of home application, and is it not as true an economy to save labor within as without doors—to save the strength of the willing worker within, as it is to save the strength of the willing worker without? And then, to bring us back to the subject of our last home topic, has not the recognition of the need to have a more thoughtful consideration for the "weaker vessels" of the farmer's homes an important bearing upon the whole matter? There would be, perhaps, fewer mere home drudges like that wonderful Lucindy, but the young farmers of Ontario would have for their mates women of intelligence and culture, who need not be the less admirable housekeepers or homemakers because, the details of their work having been made more easy of arrangement, they could have leisure to cultivate their minds, beautify their surroundings, and, by keeping abreast with the educational opportunities of the day, be not only more companionable to their husbands, but wiser and more judicious mothers to the children God may give them. From homes so mothered the daughters would be less likely to be attracted away into the so-called wider sphere of a city life; nor

would the sons consider the honorable "profession" of a farmer not good enough for them. But it is time to introduce to you

An Ontario Farmer's Wife of Five-and-Twenty Years Ago.

"Up with the birds in the early morning,
The dewdrops glow like a precious gem:
Beautiful tints in the skies are dawning,
But she's never a moment to look at them.
The men are wanting their breakfast early,
She must not linger, she must not wait,
For words that are sharp, and looks that are surly,
Are what men give when the meals are late.
"Oh, glorious colors the clouds are turning,
If she would but look over hills and trees,
But here are the dishes, and here is churning,
Those things must always yield to these:
The world is filled with the wine of beauty,
If she would but pause, and drink it in;
But pleasure, she says, must wait for duty—
Neglected work is committed sin.
"The day grows hot, and her hands grow weary;
Oh, for an hour to cool her head,
Out with the birds and winds, grow cheery!
But she must get dinner and make her bread.
The busy men in the hay-field working,
If they saw her sitting with idle hand,
Would think her lazy, and call it shirking,
And she never could make them understand.
"They do not know that the heart within her,
Hungers for beauty and things sublime,
They only know that they want their dinner,
Plenty of it, and 'just on time.'
And after the sweeping, churning, and baking,
And dinner dishes are all put by,
She sits and sews, though her head is aching,
Till time for supper and 'chores' draws nigh.
"Her boys at school must look like others,
She says, as she patches their frocks and hose,
For the world is quick to censure mothers
For the least neglect of their children's clothes.
Her husband comes from the field of labor,
He gives no praise to his weary wife,
She's done no more than has her neighbor,
'Tis the lot of all in country life.
"But after the strife and weary tussle,
When life is done, and she lies at rest,
The nation's brain, and heart, and muscle,
Her sons and daughters shall call her blest.
And I think the sweetest joy of heaven,
The rarest bliss of eternal life,
And the fairest crown of all will be given
Unto the wayworn farmer's wife."
—Name of writer unknown.
H. A. B.

Pretending to Know Everything.

A FAD OF THE TIMES.

One of the most absurd fads of the day is the prevailing mania we all have for affecting to know everything. It is the fashion to be wise, and we are solemnly attitudinizing in the misfit role of savants. No subject is sacred any longer to the specialist, and if we have not gone to the bottom,

we have at least skimmed the cream off the pan of knowledge on every topic.

Nowadays it were better never to have been born than not to have seen the last play, read the last book, heard the last thing. If we have not universal culture, we have what has been aptly described as culturine, and not one in twenty knows the difference.

So we rave over classical music and go to hear Paderewski, and applaud in the wrong places. We discourse about feeling and values in pictures, when we can't tell a chromo from a lithograph. We go into ecstasies over old Chelsea and Royal Worcester, when the only way we know it from brand-new china is by the price-tag; and we pay down good money to see foreign plays, by foreign actresses, in a language of which we do not understand one single word, and try to maintain an expression of enjoyment while we suffer agonies of boredom.

No one has the courage to say "I do not know" any more, though there is nothing in the world more charming than intelligent ignorance. What a pleasure it is to describe a play, a quaint bit of scenery, a historic spot, or recount a tale or legend to some one who is not acquainted with it, but whose quick fancy follows, enraptured, your every word!

Alas, that delight is denied us now. Everybody has been everywhere and seen everything, or, if they haven't, they pretend they have. If Diogenes were on earth now he would not go about with his dark-lantern, seeking an honest person. He would be on a still-hunt for a man or woman who would let him tell them something they didn't know.

If it is a mistake for a man to pretend to universal knowledge, it is nothing short of deliberate suicide for a woman. The most casual observer must have noticed that the girl with an artless air and an inquiring manner, who is a good listener and has little knowledge, can marry seven times to the clever girl's once. She never swells the ranks of the girl bachelors. No man in his senses ever desired to espouse either an encyclopædia of facts or an arguing machine.

What he looks forward to is the pleasure of enlightening the ignorance of a dear little creature and having her look up to him as the fountain of wisdom and light. When a woman begins every sentence with "John says," it is a guarantee of domestic felicity so strong you can draw money on it at the bank.

Desirable as the dissemination of information is, there's entirely too much of the good thing now. It has left us no listeners. Ignorance is still bliss—in other people—and among the most agreeable of our acquaintances are those who do not know it all and who will let us tell them the things we know.



FOR PRIZE LIST AND FURTHER INFORMATION,

— APPLY TO —

F. W. HEUBACH, WINNIPEG,
GENERAL MANAGER. CANADA.



We beg to call your attention to a new and indispensable article in

Barclay's Patent Attachment

FOR THE CURE OF BALKING AND KICKING HORSES.

Will control any vice known to a horse. Invaluable for breaking in colts. Can be adjusted in two minutes, and used with any harness, vehicle or implement. Sent, charges paid, to any part of Canada, with full directions for use, on receipt of price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.

Rapids Farm Ayrshires.

REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900.

Come and see or write for prices.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

GOSSIP.

A. B. Armstrong, Codrington, Ont., writes: I would like another change in our advertisement, as we have 3 fine litters of Yorkshires that will be ready to ship by the 1st of June. Orders still keep coming in for both Yorks and eggs for hatching.

J. B. Hogate & Son, of Sarnia, write that they have sold the Clydesdale stallion, Tinwald St. Clair (8359), to James Dodge and Wm. Chapman, Warick, Ont. This is a fine type of a draft horse, with plenty of action and good flat bone, and one that will weigh about a ton. He will travel for this season around Wyoming, Ont. They also sold to Geo. Brechberger, of Cargill, Ont., a bay three-year-old colt, Lord Hastings, Vol. XXIV., with extra good action, a fine mover and with plenty of quality. He is the making of a horse that will weigh a ton when he gets his growth. These, with other sales which they have made during the past six months over the United States and Canada, are the last of the horses they have on hand for sale this season. Mr. J. B. Hogate will start shortly for Scotland, and it is the intention to make a large importation of English Shires and Clydesdales, which they expect to land about the last of July, at Sarnia, Ont.

R. Mitchell & Son,

Burlington Jet. Station, Nelson, Ontario.

Large herd of Scotch and Scotch-topped Shorthorns of the most popular Aberdeenshire tribes, including 4 imp. bulls, 12 imp. cows and heifers. Also a number of home-bred yearling and two-year-old heifers, and 7 good, thrifty home-bred bulls, from twelve to fifteen months old. Write for catalogue.

As will be seen by referring to our advertising columns Mr. Robert Glen, of Owen Sound, P. O. and R. R. Station, is offering for sale eight fashionably-bred Shorthorn bulls, ranging in age from eight months to three years, from such noted sires as *Mungo* and *3036*, by *Janitor* 2385. Mungo's dam was *Isabella* of Sarawak 2335. Also *Scottish Bard* 2312, by *Conqueror*, etc. Mr. Glen's cows trace directly back to such noted families as the *Booths* and *Bales*. The herd is headed at present by *Baron's Heir* 2884 (imp.), bred by G. Sheppard, Shethin, Tarves, Aberdeenshire, Scotland, and imported by H. Cargill & Son. *Baron's Heir* is a deep red in color, and one of those deep, fleshy fellows, with a massive, well-formed body, set on short, perfectly formed legs, and cannot fail to be a profitable stock-getter.

GOSSIP.

THE CANADIAN COMBINED SHORTHORN SALE AT CHICAGO.

The announcement, in our advertising columns, of the offering, at Chicago, on June 5th, of sixty head of choice Shorthorns selected from the famous herds of Messrs. W. D. Flatt, Hamilton; W. E. Edwards & Co., Rockland; Hon. M. H. Cochrane, Hillhurst, and H. Cargill & Son, Cargill, forecasts one of the most important disposals of the breed in America in the last quarter of a century.

One of the objects of making this sale at the present time is, doubtless, to meet the keen demand from the great grazing and corn-growing States of the West for superior cattle, and Chicago is chosen as the place of disposal owing to its being the most convenient meeting place for breeders from the vast areas of the central West, where beef breeds of cattle are most extensively raised and kept, and because of the splendid accommodation afforded at the Union Stock Yards for the stabling of stock and the peculiar shipping facilities for their ready distribution in all directions.

The animals have had no special fitting for a sale, as it was only recently that the venture was decided upon, but they are in the excellent breeding condition in which all well-managed Canadian herds are found at this season. The great majority are imported animals, selected from the most prominent herds in Scotland, representing favorite families, and sired by noted bulls of the most popular breeding while all are young or in the prime of life, and nearly all the females of breeding age have strong, which will go with them. Many of these calves were imported in dam, and were sired by richly-bred bulls in Scotland, and in many cases the cows are again in calf to the grand imported stock bulls in service in the herds represented.

Mr. Flatt's Trout Creek herd has had the benefit of the imported bulls, Lord Banff and Consul, the former an exceedingly level, thick-fleshed, rich roan 2-year-old of the Kinellar Roan Bessy tribe, sired by Cap-a-Pie, a Royal Northern prizewinner of the Augusta family, sired by Clear-the-Way, of the Kinellar Claret tribe. Consul, in working condition, was a first prize winner at Edinburgh last year, champion at the Provincial Union, and second at the Highland Society's Show, where he was first favorite with most good judges. He is a Kinellar Claret, and his sire, Watchword, bred by Mr. Duthie, was out of a daughter of Scottish Archer. Consul is the highest priced bull brought to Canada in twenty years, and has recently been sold for export to the Argentine, for the highest price at which any Shorthorn bull has changed hands in America in the same time.

Mr. Edwards' Pine Grove herd has had in service the two magnificent Missie bulls, Marquis of Zenda and Scottish Minstrel, the former a massive bull of splendid character, bred by Mr. W. S. Marr, of Uppermill, and sired by Mr. Duthie, and his dam by the great William of Orange. He is proving a very prepotent sire in the Pine Grove herd, his calves having won the herd prize for calves at Toronto and Ottawa, and a heifer calf got by him, second at Toronto and Chicago last year. Scottish Minstrel, a roan 2-year-old, bred by Mr. Duthie, is reluctantly included in the sale, owing to his being so closely related to Marquis of Zenda that it is not considered wise to breed him to the progeny of the latter. He is also by Wanderer, his dam by Scottish Archer, and grandam by William of Orange, and being of the same family on his dam's side, is closely akin. He is a grand individual, and will be a distinct loss to Canada if sold to leave the country.

The Cargill herd has had in use the three splendid imported bulls, Golden Drop Victor, Prince Bosquet (both illustrated in last Christmas number of the Advocate), and Fashion's Favorite. The latter, a rich roan 2-year-old, included in the sale list, is a massive, thick-fleshed, strong-backed bull, with straight lines, a grand head, and the character that indicates a good sire. He has for sire Prince of Sanguhar, a Cruickshank (Clipper, whose dam was by Star of Morning, and the dam of Fashion's Favorite (Fragrance 4th) was by Prince of Fashion, a favorite son of Scottish Archer. Golden Drop Victor, bred by Mr. Duthie, from the popular Kinellar Golden Drop family, and by the noted Cruickshank Nonpareil sire, Nonpareil Victor, was one of the highest priced bulls at the Duthie-Marr sale in 1898, and is regarded as one of the best, if not the very best, in Canada, a bull of magnificent proportions, true lines and grand quality. Prince Bosquet, a red 2-year-old son of Wanderer, from a Princess Royal dam by Athabasca, and his grandam by Heir of Englishman, is royally bred, and is, individually, typical of the best of Scotch-bred bulls, combining style, quality and substance in a high degree.

The Hillhurst stock bulls are Scottish Hero and Joy of Morning, both bred by Mr. Duthie. The former, sired by Scottish Archer, out of a Missie dam by William of Orange, is full brother in blood to the Royal champion Marengo; the latter, by Pride of Morning, out

Chicago Sheep Shearing Machine



1901 Model Stewart's Pat. Price \$15. Guaranteed to shear any kind of wool that grows. All gears cut from the solid metal and hardened.

BOOK ON SHEARING just published. Finely illustrated, with valuable hints for fast and easy shearing by R. M. Marquis, champion of the world, will be sent Free to any sheep owner on application. Address CHICAGO FLEXIBLE SHAFT CO. 158-160 Huron Street, Chicago, Ills.

Standard Sheep Dip (OIL OF TAR.)

Non-poisonous, cheap and effective. Destroys Scab, Lice, Ticks, Foot Rot, etc.

Write for Testimonials and Circulars.

Manufacturers: The West Chemical Company, TORONTO, ONT. For Contagious Abortion use West's Fluid. Agt. for Manitoba: W. R. ROWAN, 132 Princess St., Winnipeg.

of Jessica 2nd, by Scottish Archer, is full brother to the noted bull, Pride of Fame. But neither need depend upon his relations for a reputation, as both are superb bulls, massive, low down, level, and full of quality and character. To secure a good cow or heifer in calf to either of the nine bulls named is to win a prize worthy of being cherished.

There are only ten other bulls in the sale list besides Scottish Minstrel and Fashion's Favorite, referred to above, and the calves which go with their dams, but there are several very meritorious youngsters and richly-bred, among which mention may be made of Messrs. Cargill's bred at Collynie, imported red 14-months calf, Lovat's Heir, a substantial red 14-months calf, bred at Collynie, imported in dam (a Bruce Mayflower), and sired by Mr. Duthie's favorite stock bull, Lovat Champion, and his dam by the Cruickshank Victoria bull, Count Arthur, by Count Lavender. Missie Champion, from the same herd, bred at Uppermill, from the same sire and a Missie dam, and 15 months old, is a straight, smooth, even calf of excellent quality. Scotch Pine, also in the Cargill contribution, a roan, about the same age, was bred at Collynie, is a typical Scotch bull, of the Kinellar Rosebud sort, low down, sappy, and like making a cracker. He is a son of Scottish Champion, for which Mr. Duthie paid \$1,650 when 7 months old, and who is a son of Wanderer, the great old Brawith Bud sire.

Gen. Hutton, in the Edwards consignment, is a dark roan 16-months son of Marquis of Zenda, and from a Kinellar Rosewood dam, and is a very excellent, young bull of great substance and fine quality. Galway, from the same herd, is a symmetrical, red, 16-months, imported, Brawith Bud bull, by Mr. Duthie's Mountain Archer, a son of Scottish Archer.

The Hillhurst bulls are Hot Scotch and Scotch Blend, roan sons of imported Scottish Hero, coming a year old in May and July, respectively, the former from an imported cow, and both from deep-milking families of excellent breeding.

Time and space fail us wherein to make mention of the many meritorious females in the joint offering, and it must suffice to say that most of them are imported, having been carefully selected, and representing a large number of the best-known Scotch families. Mr. Cochrane's offering, we notice, includes among other imported heifers, two of the beautiful roan 2-year-olds so much admired at Toronto Exhibition last year—Carnation, by a son of Scottish Archer, and Mary Anne 7th, by a son of Pride of Morning; and three others of similar stamp—Rosemary 1st, Agnes 7th, and Fair Maid 3rd, all by a son of Star of the Morning; and the first number in the catalogue is a dark roan 2-year-old Hillhurst heifer, Blithesome 2nd, bred by W. S. Marr, Uppermill, sired by Mr. Deane Willis' Spicy Robin, of the Cruickshank Cicely family, while she is of the Sittytion Butterfly tribe, with four noted Cruickshank bulls as the top crosses in her pedigree.

Among Mr. Flatt's females may be noted the imported dark roan 3-year-old Daisy 3rd, the highest priced number in John Isaac's dispersal sale; got by the Duthie-bred Sittytion Style, and of the Kinellar Claret tribe; a young cow of good size, superior quality, and choice breed character. Having lost her calf when it was a few days old, a capital roan 3-months bull calf of the Cruickshank Lavender line will go with her, a son of imp. Prince Louis, of the Sittytion Lancaster sort, and the cow being bred again will make this a very attractive lot. Rosebud 2nd, a sweet, smooth, red, 4-year-old cow, bred at Kinellar, and got by the Cruickshank bull, Clan Alpine, with a strong concentration of Brawith Bud blood in the three top crosses of her pedigree, will have her sappy, deep-ribbed, broad-backed bull calf, by imp. Prince Louis, sold with her, and she being in calf again will give the buyer three strong strings to his bow. A beautiful 4-year-old Brawith Bud cow, Golden Days 5th, by the Marr-bred Capt. Ripley, will have a handsome heifer calf (imp. in dam) by her side, sired by Scottish Fancy. The red 7-year-old Sittytion Victoria 5th, with a red c. c. (imp. in dam), and got by Lovat Star, will be a tempting lot. Mayflower 4th, a red 4-year-old, full sister to Mayflower 4th, sold at the Chicago sale last August for \$2,050, and her 2-months bull calf at foot, will also be well worth looking after. A Princess Royal, in the roan 2-year-old Pauline 5th, is a young mother,

beautifully bred, with a c. c. at foot by Bapton Favorite, one of the best bulls in Britain. Pauline 5th, a smooth, straight, roan yearling, by the Duthie-bred Squire Nonpareil, by Pride of Morning, is another choice Princess Royal. Among a half dozen other handsome and well-fleshed yearlings is Scotland's Sunshine, a Duthie-bred roan daughter of Deane Willis' Bapton Conqueror, bought for Collynie at a big price and sold for a bigger to go to Australia. Her dam, a great cow, was sired by Scottish Archer. Vain Beauty, a roan Kilblean Beauty, also bred at Collynie and got by the same sire, has for grandsire Velvet Jacket, a Sittytion Nonpareil, and for g. g. sire, Touchstone, the sire of the Highland Show champion, Cornie Stone. The Trout Creek contingent comprises several other cows and heifers of equal merit, as to quality and breeding, with those above mentioned.

Reference can only be made to a few of the Cargill females, prominent among which is Meadow Perfection 2nd, a show heifer that will be hard to beat, thick-fleshed, level, and true in her lines. She is a roan that passed the 2-year-old mark on the first day of the century; bred by Col. Munro, of Perthshire, and imported last year; was sired by Craibstone, of the Bessie family, that produced the great show bull, Sign of Riches, and a son of the grand old William of Orange, and has seven straight top crosses by Cruickshank bulls of exceptional merit. Maud 5th, a big, deep-fleshed, roan 3-year-old, of the Matilda tribe, that will make a grand cow for someone, is a daughter of the Marr-bred Ruler, a well-bred Rosemary by Craibstone, and her dam by the Kinellar-bred Walter Scott, of the Miss Ramsden sort, which produced Brawith Archer, Scotland's Crown, and many more good ones. Four Cruickshank crosses appear in her pedigree, and she is well along in calf to the grand imported bull, Golden Drop Victor. Clara 5th is a rich roan Marr-bred Clara, a yearling daughter of Silver King, of the Uppermill Red Lady tribe; got by Wanderer, her dam by Spicy Robin, and her grandam (Clara 4th) was the dam of the bull calf, Wanderer's Chief, sold to Mr. Dudding, at the 1900 Duthie-Marr sale, for 185 guineas. Coral Countess, a roan 3-year-old, bred by Mr. Fletcher, Rosehaugh, and sired by Watchfire, son of Watchword, a Highland Society first-prize winner, has a pedigree built on the same foundation as the Cruickshank Duchesses of Gloster, and a splendid red heifer calf by Royal Victor, a Duthie-bred bull by Nonpareil Victor, goes with her. Imported Myrtle, a fine roan 3-year-old, of fine feminine character and grand constitution, a daughter of Mr. Bruce's Roscommon, by Beau Ideal, has a charming red heifer calf to go with her, sired by Scottish Archer. Belladonna is a bouncing roan 2-year-old, bred by Mr. P. L. Mills, Ruddington, and sired by the Cruickshank Cicely bull, Crescento, by Prince of Fashion, a son of Scottish Archer.

Mr. Edwards contributes a dozen imported Scotch-bred females, and four or five Canadian-bred cows and heifers of rich breeding, all of which are young, though a good proportion are of breeding age and in calf to his imported stock bulls, and others have promising calves at foot, to be sold with their dams. His importations have been carefully selected and his herd bred on intelligent and up-to-date lines, and his cattle will appear in the good thrifty condition in which they are always kept. A glance at the pedigrees of his contribution to the sale catalogue reveals that it comprises representatives of many popular families, such as Sittytion Brawith Buds, Secrets, Missies, and Lovelies, Kinellar Urrys, Heatherwick Mayflowers, Marigolds, etc. As samples of breeding, we mention a few of their pedigrees, among which is Flower Girl 11th, a roan 2-year-old, bred in Aberdeenshire and got by Knuckle Duster, a show bull of the Inverquhomery Augusta family, sired by Waverley, a Highland Society winner, and her dam by Scottish Victor, bred by Mr. Duthie, a Cruickshank Victoria by Scottish Archer. Minorca 2nd is a red 2-year-old Heatherwick Mayflower, by Craibstone 2nd, whose sire was a son of William of Orange, and her dam a daughter of the Inverurie Challenge Cup winner, Beau Ideal. Scottish Rose is a red 2-year-old, having for sire the Collynie-bred Earl Marshal, bred almost identically the same as the English champion Marengo, being sired by Scottish Archer, and out of a Missie dam by William of Orange. She will be sold with her nice roan bull calf got by Principal of Dalmeny, son of Sittytion Seal and of the Uppermill Vain Princess by Klocutionist. Fine Grace Secret is a roan yearling daughter of imp. Marquis of Zenda and her dam, a Sittytion Secret, is said to be a heavy milker and a capital breeder. Gustavus is a red yearling Brawith Bud by Mountain Archer, by Scottish Archer. Marigold 1th, a roan yearling, is a daughter of Diamond Jubilee, son of Lord Lovat's Red Duke, and her grandam was by Star of Morning. Rosette is a roan yearling, with British Knight for her sire, sired by prizewinning Cruickshank Clipper bull, Knight of St. John, and having in her pedigree such noted bulls as Gravesend, Roan Gauntlet and Champion of England in close succession. Lovely Maid 2nd is a roan yearling Cruickshank Lovely, got by Chevalier, by Mutineer, who was by Scottish Archer, and his dam by William of Orange. It is unnecessary to go further in illustrating the excellence of the breeding of the Edwards offering, and we are assured that the cattle are as good as their breeding would indicate.

The sale of fifty head of high-class Shorthorns, at Chicago, on June 4th, by Mr. George F. Ward, of Sioux City, Iowa, in addition to this joint sale, will make an exceedingly interesting series. Canadian breeders generally will feel interested in these sales, and as they occur at a time of comparative leisure on the farm, the probability is that a goodly representation from the Dominion will attend, as the gentlemen contributing stock to the sale have done splendid service in promoting the interests of Shorthorn breeding, and have the confidence, respect and good wishes of their fellow breeders universally.

The Weekly Examiner, of Charlottetown, P. E. I., in its issue of April 26th states that in the list of Government stock farm expenditures the price paid for the Shorthorn bull, officially reported to have been sold at the Ottawa sale at \$505, was really \$350. To this was added: B. Rogers, expenses—rug and feed—\$12.59; P. E. Island Railway freight on bulls, \$34.57. Total, \$397.16.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or blemish. Every bottle 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 free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

KEMP'S

INSTANTANEOUS Sheep Dipping Fluid kills ticks, lice and all parasites or insect life on sheep, dogs, horses and cattle; destroys mange on dogs. Immediate in action and permanent in effect. It is also a thorough disinfectant for barns, closets, cellars, etc. One gallon makes one hundred gallons of wash. Sold in half-gallon imperial tins, at 75c. The cheapest and most effective dip on the market. If your druggist does not keep it, we will express a tin (prepaid) to any address in the Dominion for \$1.10.

W. W. STEPHEN & CO., MEAFORD, AGENTS FOR THE DOMINION.

A three-year-old Shorthorn bull is advertised for sale by Hamilton Canning, Inverness, P. Q.

THE DAIRY COWS AT BUFFALO.

There are about 50 cows in the six-months test at the Pan-American Exposition. The breeds represented by herds of 5 animals each are Ayrshires, Jerseys, Guernseys, Holstein-Friesians, Shorthorns, Polled Jerseys, Red Polls, Brown Swiss, Dutch Belted, and French-Canadian. There is a prospect of adding a herd of Devons. Mr. G. W. Clemons, St. George, we understand, has the general superintendence of the Canadian cows, and there is a special caretaker for each five cows. Following is a list of the Canadian cows in the test, with the owners and caretakers: Ayrshire.—Pearl of Woodside 7420, R. R. Ness, Howick, Que.; Betsy 1st of Fairfield Mains (imp.) 12284, R. Reford, St. Anne de Bellevue, Que.; Kirsty Wallace of Auchenbrain (imp.) 8301, R. Reford; Alice 2nd of Lesnessock (imp.) 9161, W. W. Ogilvie, Laohime Rapids, Que.; Lady Flora of Orchardton (imp.) 12216, W. W. Ogilvie. (Caretaker, Thomas Bradshaw.) Holstein-Friesian (one extra to be rejected).—Meg 1207, Agricultural College, Guelph, Ont.; Inka Mercedes DeKol 1828, Matt. Richardson, Caledonia, Ont.; Hulda Wayne's Aggie 2074, Matt. Richardson; Tidy Abbecker 1492, H. Bollert, Cassel, Ont.; Beauty of Norval 1404, William McClure, Norval, Ont.; Sherwood Daisy 606, G. A. Gilroy, Glen Buell, Ont. (Caretaker, James Cooper.) Jersey.—Primrose Park's Pride 80475, W. E. H. Massey, Toronto; Mossy of Hursley 116745, Government of Canada; Maple Avenue Rexinia 109220, F. H. Neil, Lucan, Ont.; Queen May of Greenwood, F. L. Green, Greenwood; Gypsy of Spruce Grove, Government of Canada. (Caretaker, Robert Donaldson.) Shorthorn.—Rose 3rd 113205, W. G. Pettit & Son, Freeman, Ont.; Daisy D, Sanders & M., St. Thomas, Ont.; 14th Primrose of Thule 24556, A. W. Smith, Maple Lodge, Ont.; Miss Molly, R. S. & T. E. Robson, Iderton, Ont.; Queen Bess 21786, William Montelth, St. Thomas, Ont. (Caretaker, Roland Sager.) French-Canadian.—Liens Flore 3940, Longue Pointe Asylum, Quebec; Rouen 589, College L'Assomption, Quebec; Denise Championne 5330, A. Denis, St. Norbert, Quebec; Luna 4532, Joseph Dugas, St. Jacques, Montreal, Quebec; La Bouchette 5851, A. Denis. (Caretaker, Eugene Bacon.)

The cows are milked three times a day. The first test for weight of milk per day was made May 4th, and figured as below, which is not a bad showing, considering that the cows had so short time to recover from the trip and get settled down to business. Holstein average for one day, 59 lbs.; Ayrshire, 44; Swiss, 42; Shorthorn, 42; Red Polled, 39; Guernsey, 36; Jersey, 34; Dutch Belted, 33; French-Canadian, 27; Polled Jersey, 23. Tests of quality will be made in a week or so.

Out of the Ashes.—Fire may check but it cannot stop a really good thing. A short time ago, a conflagration consumed part of the premises of the International Food Co., Minneapolis, Minn., but it appears to have helped rather than hindered that enterprising concern. In their improved factory they write us:

We now occupy fifteen floors, size 100 by 22 feet each, and six floors, size 25 by 60 feet each. It requires 83 people to attend to our office work alone, including 25 typewriters. In all departments of our business we employ over 200 people and are constantly adding to this number. Our business has had a very large increase every year, but 1901 is showing a tremendous increase over any previous year. This is absolute proof that International Stock Food possesses superior merits, because stockmen would not use a preparation year after year unless it gave them paying results. We have always sold our goods on a positive guarantee to refund any man his money if International Stock Food or our other preparations ever failed to give satisfaction, and we will pay anyone \$1,000 in cash to prove that we ever refused to fulfill our printed guarantee that is on every label. We would like to have your readers answer the three questions (see advt.) and write for our finely-illustrated Stock Book. Every one is pleased with it, and they are mailed absolutely free, postage prepaid.

MAPLEWOOD HACKNEY STUD.

PROPERTY OF FREDERICK C. STEVENS, ATTICA, NEW YORK.

Champions of two continents.

The magnificent **LANGTON PERFORMER**, the peerless **CLIFTON 2nd**, and the sensational **FANDANGO**, all in service for the coming season.

Magnificent young Stallions and Mares for Foundation Stock, sired by the above champions, and out of mares equally famous, now offered for sale. MAPLEWOOD is truly "THE HOME OF THE CHAMPIONS."

FOR FURTHER PARTICULARS, ADDRESS:

E. T. Gay, Manager, Attica, N. Y.

The Horses that made Janesville Famous.

For twenty years past Janesville has been associated with all that was high-class in the line of horses, and the name of "GALBRAITH" is familiar as a household word to every horse breeder of any note on this continent. The undersigned respectfully invites an inspection of his present stock of

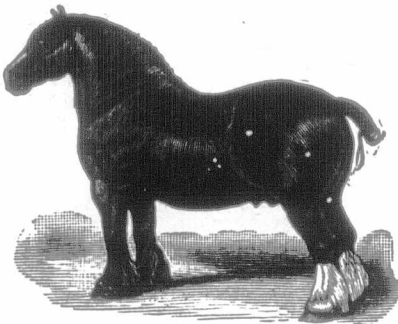
CLYDESDALES,

which are believed to be fully equal to the best ever maintained during the palmy days of the business. Ample size, superior breeding, great individuality, moderate prices, and the best of guarantees, are among the inducements offered buyers. An assortment of Percherons, Shires, Suffolks and Hackneys also on hand. The only place where the best of all the breeds can be compared alongside each other. Prominent prizewinners at the recent International Live Stock Show at Chicago. Send for catalogue.

Branch barn at Woodstock, Ont., in charge of S. P. Thompson, agent. Call and see the horses there.

ALEX. GALBRAITH, JANESVILLE, WISCONSIN.

CLYDESDALE STALLIONS FOR SALE.



A High-class Lot, of Good Size and Quality, and of Most Fashionable Breeding.

Parties desirous of securing high-class horses will do well to see these or write us before purchasing.

Dalgety Bros., 463 King St.,

LONDON, ONT.

GRAHAM BROS., CLAREMONT, ONT.

PIONEER IMPORTERS AND BREEDERS OF

Clydesdales and Hackneys.

THE HOME AND HEADQUARTERS OF THE WINNERS. The oldest, largest and most complete collection of Clydesdales in America. Established in 1871, and has been the champion stud ever since.

27 FIRST AND 9 SECOND PREMIUMS, INCLUDING 7 GRAND SWEEPSTAKES.

At the recent leading Canadian shows—Toronto and Ottawa—being three times the number won by all competitors. Our animals are of immense size, good quality and action. Prices moderate. Terms to suit customers. Visitors cordially invited. Correspondence solicited.

CLAREMONT IS 25 MILES EAST OF TORONTO, ON THE C. P. R.



LATELY IMPORTED A FRESH LOT OF

Clydesdale Stallions,

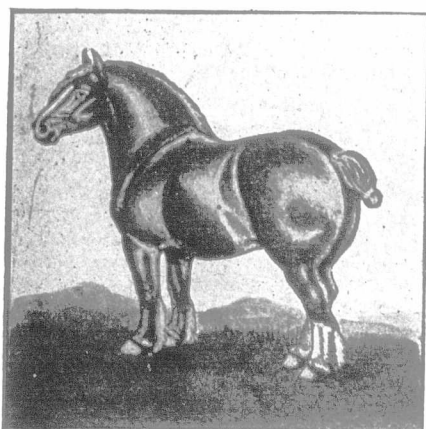
Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character. I will make further importations as the times demand. Inspection invited.

Prices consistent with quality.

ROBERT GRAHAM,

Ringwood P. O., Ont.

Stouffville Station, G. T. R., and telegraph office.



Please Mention The Farmer's Advocate.

BOOK REVIEWS.

Any book reviewed in this department may be ordered through this office, at the price stated.

Ed. Geers' Experience with Trotters and Pacers.—Admirers of the light harness horse may all take off their hats to Ed. Geers, the trainer, fitter and driver, to whom the world is largely indebted for the low records attained for the pacer during the last decade. Ed. Geers has produced a book, not all by his own pen, but the thoughts, experiences and advice contained are his, and are given with a modesty and honesty that makes him your friend at once. The work gives a general description of the most noted horses he has driven, together with a brief history of his life in Tennessee as far as it concerns his professional career. It also contains some useful advice in conditioning and caring for horses during preparation and the racing campaign. It is clearly brought out that Geers relies most on the horse and himself, and least on mechanical contrivances. The book is a valuable acquisition to the horse literature of the day, and should be in every light-horseman's library. It is not only helpful, but entertaining, liberally illustrated, and attractively and handsomely bound. The price of the book is \$2.00, for which it can be obtained through this office. We will grant it as a premium for securing 4 new yearly subscribers to the FARMER'S ADVOCATE at \$1.00 each.

Rural Hygiene.—This is becoming a "cleaning-up" age, and not before its time. Much study and expense are being devoted in the country to the better lighting, draining, ventilating and water supply of stables for our stock, while, perhaps, the dwellings of the human rural population are being somewhat overlooked so far as sanitary precautions are concerned. Polluted water supplies, over-privy vaults and many other sources of danger are, alas! too common on our farms, and the time has come for a stirring up in these important matters. We incline to go on year after year in the old rut, and should we desire to introduce changes, it is not an easy matter to know just what course to pursue. There has recently come to hand an intensely practical work, "Outlines of Rural Hygiene," edited by Harvey B. Bashmore, M. D., Inspector of Penn. State Board of Health, that is designed to fill a long-felt want in these matters. The book deals with "Water Supply," touching wells, cisterns, rivers, lakes, and springs; "Waste Disposals"—excreta, slop-waters, kitchen refuse, ashes, sewage disposal; "The Soil"—surface soil, ground-moisture, ground-water, ground-air; "Habitations"—dwellings, school hygiene, hospitals; and "Disposal of the Dead." The work contains many useful suggestions and methods of improving the sanitation of homes. It is published by the F. A. Davis Company, 1914 Cherry St., Philadelphia, Pa., U. S. Copies can be secured through this office, at the regular price of 75 cents, or for securing two new yearly subscribers to the FARMER'S ADVOCATE at \$1.00 each.

A Book for Plum Growers.—"Plum Cranks," as some of them have styled themselves, will be delighted with a new work, entitled "Plums and Plum Culture," written by Prof. F. A. Waugh, of the Vermont Experiment Station, and issued by the Orange, Judd Co., of New York, a house that has brought out so many useful horticultural and other publications. At the first glance, one might ask, why devote an entire volume of 370 pages to one fruit alone? About 1850, Henry Ward Beecher wrote, in an Indiana paper: "A few plum trees will suffice for a private family, and the fruit must be earned by careful watchfulness." * * * Plum orchards are not to be thought of. To-day there are extensive plum orchards in many parts of America, and its culture is one of the leading specialties in horticulture. A few years ago, Iowa was regarded as out of the plum belt, but that State now grows about 300,000 bushels annually. The production in other States and in sections of Canada has been equally remarkable. The all-round excellence and profitability of this fruit, along with many other commendable features, will cause it to grow in popularity for years to come, both with fruit-growers and farmers. There is, therefore, room for this work of Prof. Waugh's, and it is certain to command a large sale. A competent specialist himself, he has had the aid of such well-known authorities as Prof. L. H. Bailey, Prof. John Craig, Mr. J. W. Kerr, and others. It is beautifully and substantially printed, and embellished with over 100 engravings, including those of many leading varieties, life size. Some further idea of its completeness may be gathered from the fact that it embraces reference to over 300 varieties of plums, and deals with propagation, selection of varieties, orchard management, pruning, pollination, diseases, insect pests and remedies, and preserving and cooking. We commend this book to our readers who grow or want to grow plums successfully. Price, \$1.50.

A New Jersey Paper.—The *Jersey Advocate and Dairyman* is the name of a new, bright and ably-edited periodical, devoted mainly, as its name applies, to promoting the interests of Jersey cattle, but, at the same time, not neglecting practical dairy matters. The fact that Mr. Valancey E. Fuller is editor and manager is sufficient guarantee that it will be a *live* paper, for he has a wonderful fund of Jersey experience to draw upon and which he knows how to relate, recalling his experience in Canada, as a breeder, the part he played in the development of the St. Lambert family, the Columbian Exhibition dairy trials, and the Jersey propaganda with which he has since been identified in the United States. We bespeak for this new departure all the success which it deserves. The office of publication is 24 26 Vandewater street, New York City.

Greatest Medicine Ever Made.

Maple Creek, Ont., Sept. 14th, 1900. Enclosed find express order for \$3, for which please send me two bottles of GOM-BALL'S CAUSTIC BALSAM. Have been a constant user of this for a number of years, and think it is the greatest medicine ever made.

W. A. DOUGLASS.

REMARKABLE SUCCESS

Of a New Catarrh Cure.

A large and constantly increasing majority of the American people are catarrh sufferers. This is not entirely the result of our changeable climate, but because modern investigation has clearly proven that many diseases known by other names are really catarrh. Formerly the name catarrh was applied almost exclusively to the common nasal catarrh, but the throat, stomach, liver, bladder, kidneys and intestines are subject to catarrhal diseases, as well as the nasal passages.

In fact, wherever there is mucous membrane there is a feeding ground for catarrh.

The usual remedies, inhalers, sprays, douches or powders, have been practically failures, as far as anything more than temporary relief was concerned, because they simply dry up the mucous secretions, without having the remotest effect upon the blood and liver, which are the real sources of catarrhal diseases.

It has been known for some years that the radical cure of catarrh could never come from local applications, but from an internal remedy, acting on the blood and expelling the catarrhal poison from the system.

A new internal preparation, which has been on the market only a short time, has met with remarkable success as a genuine, radical cure for catarrh.

It may be found in any drug store, sold under the name of Stuart's Catarrh Tablets, large, pleasant-tasting lozenges, composed principally of antiseptic ingredients, Eucalyptol, Guaiacool, Sanguinaria, Hydrastin and similar catarrh specifics.

Dr. Ainslie, in speaking of the new catarrh cure, says: "I have tried the new catarrh remedy, Stuart's Catarrh Tablets, upon thirty or forty patients with remarkably satisfactory results. They clear the head and throat more effectually and lastingly than any douche or inhaler that I have ever seen, and although they are what is called a patent medicine and sold by druggists, I do not hesitate to recommend them, as I know them to be free from cocaine and opiates, and that even a little child may use them with entire safety."

Any sufferer from nasal catarrh, throat or bronchial trouble, catarrh of the stomach, liver or bladder, will find Stuart's Catarrh Tablets remarkably effective, pleasant and convenient, and your druggist will tell you they are absolutely free from any injurious drug.—Advt.

British Columbia.

Anyone thinking of farming in British Columbia should write for descriptive pamphlet of farms for sale in the Lower Fraser Valley—the garden spot of the Province.

We have compiled the largest and most complete list of farms, orchards, cattle-grazing and garden lands, and fishermen's allotments, in the Province. It has been very carefully selected, and we have a personal knowledge of every property described. Prices range from \$3.00 per acre to \$250.00 per acre, and in extent from 1 acre to 1,000 acres. In the Lower Fraser Valley, and on the coast lands around Vancouver, we rarely have more than a month of frost and snow at outside, and the thermometer has only sunk to zero twice in ten years.

WRITE

HOPE, GRAVELEY & CO.,

536 Hastings St. VANCOUVER, B. C.

4 Imp. Clydesdale Stallions

From such well-known sires as Sir Everard (5353), Prince Roberts 7135, Prince Alexander 8899.

2 Imp. Shorthorn Bulls,

4 Bulls Imp. in Dams.

2 Canadian-bred Bulls.

21 Imp. Cows and Heifers.

7 Canadian-bred Cows and Heifers.

GEO. ISAAC & BROS., BOMANTON, ONT.

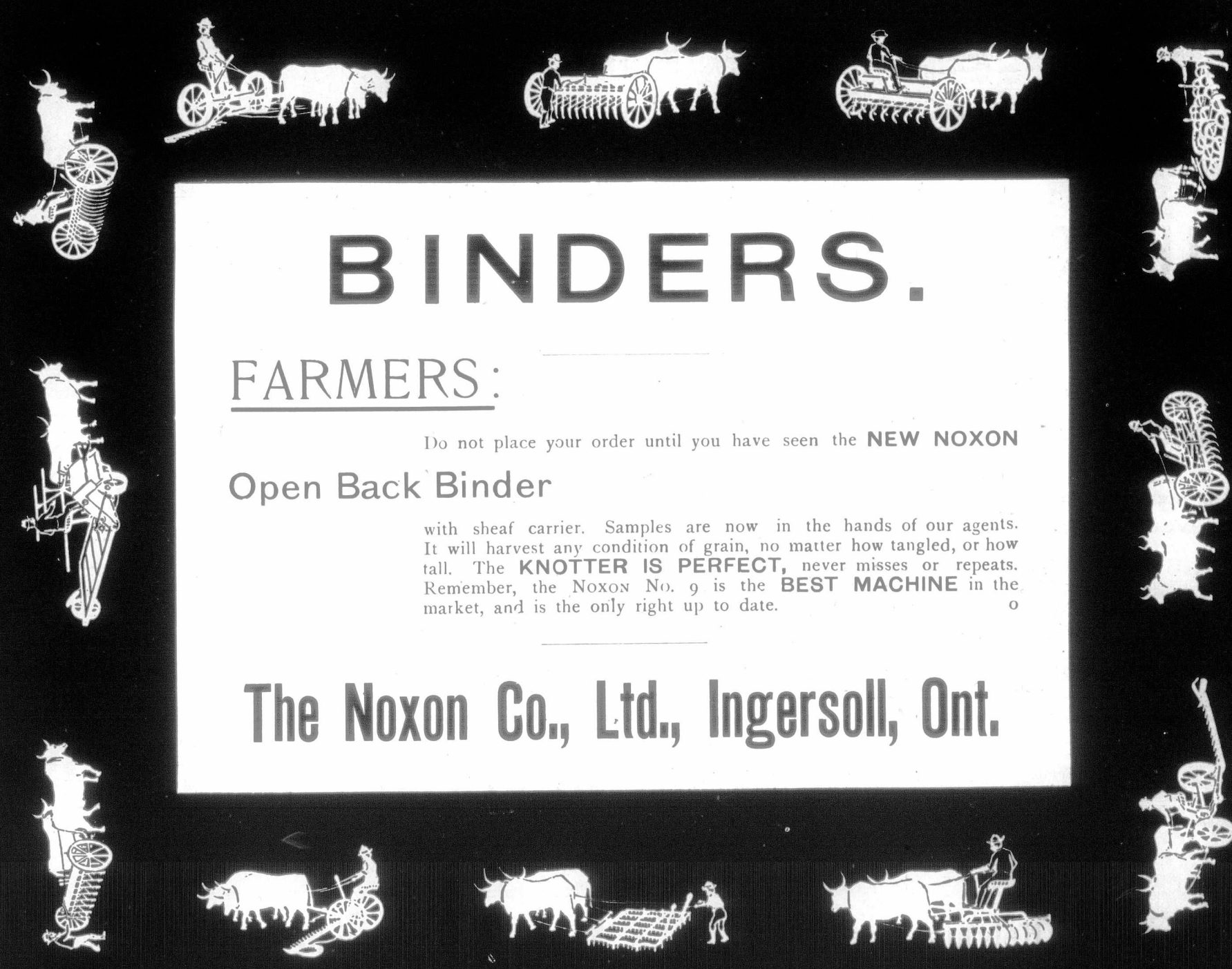
COBURG STATION, G. T. R.

The Massey-Harris Works in Toronto are very busy filling the immense orders for home and foreign trade. The factories are running from 7 in the morning to 8 o'clock at night, in the endeavor to meet the demand. It would seem that Canadian farmers are beginning to realize that it is more profitable to patronize home industry than to encourage the foreigner.—Advt.

Use Good Oil.—With the increasing use of machinery, farmers who would reduce the wear of gear to a minimum must exercise greater care in the selection of lubricants, and attention is therefore directed to the announcement elsewhere of the Queen City Oil Company, of Toronto, who commend with confidence their Rogers' "S" Peerless brand, which should be required for at hardware and general stores. There is true economy in the liberal use of first-class oil.

Tolton's Pea Harvester.—A great deal of inventive and financial energy have been expended in perfecting harvesting machinery for white-strawed grain crops, but for securing the pea crop comparatively few inventive minds have worked successfully upon it. This valuable crop, however, is, on account of its nature, one of the most difficult to lift and cut without waste. Messrs. Tolton, of Guelph, Ont., many years ago saw that a special machine was needed to harvest peas, and set to work to produce one. It was the result of this effort that put the old-fashioned scythe out of business in the pea field. That was many years ago, and since then, improvement after improvement has been made until the present Tolton Pea Harvester, in the pea field, rivals the modern self-binder, in the wheat field, for excellence of work done. This machine consists of an attachment to a grass mower that lifts the vines, which it cuts near the ground, and delivers the crop in neat bunches, with little or no waste. The buncher is so arranged that the pod-bearing portions of the vines are rolled into the center of the bunches, preserving the grain from being shelled. The machine is further referred to in Messrs. Tolton's advertisement in this issue.

The published official report of the Territorial auction sale of pure-bred stock at Calgary gave the highest price for a bull at the auction as \$350. The reporters of two agricultural papers who were present reported this same animal as being knocked down to the same buyer at \$250. Judge ye.



BINDERS.

FARMERS:

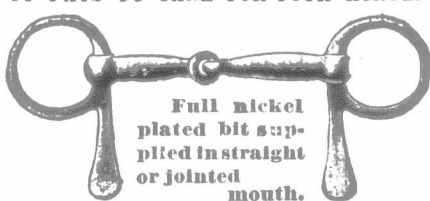
Do not place your order until you have seen the **NEW NOXON**

Open Back Binder

with sheaf carrier. Samples are now in the hands of our agents. It will harvest any condition of grain, no matter how tangled, or how tall. The **KNOTTER IS PERFECT**, never misses or repeats. Remember, the **NOXON No. 9** is the **BEST MACHINE** in the market, and is the only right up to date.

The Noxon Co., Ltd., Ingersoll, Ont.

IT PAYS TO CARE FOR YOUR HORSE.



Full nickel plated bit supplied in straight or jointed mouth.

NATIONAL GALL CURE

Is the only speedy and sure cure for **GALLS, SORE BACK AND SHOULDERS, CORNS, SCRATCHES, MUD SCALDS, ETC.**

National Gall Cure is wonderful in its effect, no other preparation in the world can equal it, and it **does its work while the horse is working.**

For sore teats on cows it gives immediate and certain cure.

OUR SPECIAL OFFER.

On receipt of 50 cents we will send **two** full sized boxes of National Gall Cure, which are sold at 25 cents each, and a full nickel plated bit as shown in above illustration for 50 cents.

Money refunded if not found satisfactory. National Gall Cure is for sale by all dealers.

When ordering from us, please write name and address plainly and enclose this advt.

ENGLISH EMBROCATION CO'Y.

337 D. ST. PAUL ST., MONTREAL.

FOR SALE.

CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnly, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (1182), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

THOS. GOOD,

Richmond P. O., Ont.

R. R. Station, Stittsville, C.P.R.

PLEASE MENTION FARMER'S ADVOCATE.

Clydesdales--Hackneys.



QUEEN.

A Few Choice Yearlings of Either Breed can be spared.

D. & O. SORBY, GUELPH, ONT.

Clydesdales and Ayrshires Imported and home-bred. Also Dorset Horned sheep, and the leading varieties of poultry. **ROBERT NESS & SONS, Howick, Que.**

FOR SALE:

Clydesdales and Shorthorns.

Young stallions and fillies bred from imported sires and dams. Also a choice bunch of Shorthorns, of both sexes and all ages, including a few extra choice young red and roan heifers and bulls. **JOHN BRIGHT, Myrtle, Ontario.**

SHORTHORNS: We are offering for sale 8 bulls, from 8 months to 3 years old, by Mungo 2nd and Scottish Bard. Also a few cows bred to Baron's Heir. **ROBT. GLEN, Owen Sound, Ontario.**

I WILL IMPORT

Shorthorns and sheep. Orders sent to me in care of Alfred Mansell & Co., College Hill, Shrewsbury, Eng., until July 1st, will receive careful attention. **ROBERT MILLER, Stouffville, Ontario.**

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Among the Shropshire lambs offered by the Estate of Jas. Cooper, Kippen, Ont., as advertised, are some really nice ones, being nicely formed and extra well covered.

T. S. Cooper, Coopersville, Pa., will sell at auction, on May 30th, at his farm there, 97 imported Jerseys, personally selected on the Island. They are said to be an exceptionally good collection.

Hon. Sydney Fisher, Minister of Agriculture, sails from Montreal for England on May 18th, to be absent about two months. He will make an effort to have the scheduling of Canadian cattle removed, will interview the War Department re the purchase of Canadian horses, visit the Glasgow Exhibition, and make purchases of some pure-bred stock for the Experimental Farms.

Mr. Robt. Miller, Stouffville, Ont., announces in an advertisement that he will soon sail for Great Britain, and will be pleased to accept commissions to import pure-bred stock for those desiring such. Mr. Miller's experience and training well fits him for making good selections, as he is regarded as one of our very best judges. See the ad. for his English address.

The entire flock of Cotswold sheep belonging to the estate of the late Mr. Robert Garne, Aldsworth, Northleach, England, is advertised in our pages for sale by private treaty. This is probably the oldest Cotswold flock in existence, and has been one of the most successful in prizewinning at the Royal and other leading English shows.

Twenty-one head of high-class imported dairy cattle have recently been received at the Dentonia Park Stock Farm of Mr. W. E. H. Massey, of East Toronto. They were selected, we believe, by Mr. F. S. Peer, Mt. Morris, N. Y. The shipment comprises a choice young Jersey bull and 14 Guernseys from the Channel Islands, and 6 Ayrshires from Scotland. These, added to the former famous herds at Dentonia Park, are a valuable acquisition to Canadian dairy cattle.

Mr. W. D. Flatt, Hamilton, Ont., in ordering change of advertisement, writes: "I have for sale, privately, the red yearling imported Shorthorn bull, Singapore, got by the Marr-bred Missie bull, Golden Star, by Golden Ray, and out of the Cruickshank Secret cow, Sensation 2nd, by the Stuyton-bred Vice Chancellor. Golden Star was first and champion at the Royal Northern Show last year. We have also for sale a very good Canadian-bred bull fit for service."



90 HEAD

High quality, Early-maturing **Herefords** Prizewinners. Young bulls, cows, heifers.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. **H. D. SMITH, COMPTON, QUE.**

Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale. Herd headed by imported Christopher 28859, and Duncan Stanley = 16364 =. Grand milking cows in herd. Also a number of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS, CALEDONIA, ONT.

Shorthorns FOR SALE:

8 Yearling and two-year-old Shorthorn heifers, in calf to imp. bull. PRICES MODERATE.

G. A. BRODIE, Stouffville Station, Bethesda, Ont.

CENTRE WELLINGTON SHORTHORNS

Herd consists of Scotch and Scotch-topped females, with Lord Stanley 4th = 22678 = at the head. Stock all ages for sale. Farm adjoins the town. **Box 66. H. B. WEBSTER, Fergus, Ont.**

FOR SALE: 7 choicely-bred

Scotch Shorthorn Bulls, 10 to 18 months; big, sappy, smooth fellows—no better, none cheaper. Also females of various ages. **DAVID MILNE, Ethel, Ont.**

J. & W. B. Watt, SALEM, ONT., BREEDERS OF Clydesdale horses, Scotch Shorthorn cattle, Leicester and Oxford sheep, Berkshire pigs.
(Post and Telegraph Office.)

Our **SHORTHORN** herd was founded over 30 years ago, and contains such tribes as the **Village Buds, Matchless, Missies, Mildreds, Stamfords** and **English Lady**, upon which we have employed such bulls as **Barrington Hero 324, Young Abbotsburn 6296, Challenge 2333, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 14381, Canada 19536, Siltiton Chief 17060, Royal Sailor (imp.) 18959, Royal George 28513, Clipper King 16293 and Judge 23419**, all of which have been first-prize winners wherever shown. **Royal Victor 34681** and **Royal Wonder 34682**, by **Royal Sailor (imp.)**, and out of **English Lady** and **Mildred** dams, now head the herd, assisted by **Roan Cloud 31317**, by **Lord Gloster 26995**, and out of **Melody 21992**, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

Farm 2 miles from Elora Station, G. T. R. and C. P. R., 15 miles north of Guelph.

HILLHURST SHORTHORNS

THREE COLLYNIE-BRED BULLS IN SERVICE:

Scottish Hero, Joy of Morning, Scottish Beau,
By **Scottish Archer. By Pride of Morning. By Silver Plate.**

The herd comprises straight Scotch, Cumberland, Gloucestershire, and Canadian strains; bred to produce the best and most economical **MEAT** and **MILK MAKERS**.

Shropshire and Hampshire Down Sheep.

M. H. COCHRANE, COMPTON CO., P. Q.,
G.T.R., 117 MILES EAST OF MONTREAL. HILLHURST STATION.

Queenston Cement.

The demand for our cement in 1900 justified us in adding largely to the capacity of our cement works. The indications are that this year's business will be still greater. We start the new century with an equipment which for the manufacture of natural rock cement is not excelled in America.

We shall be glad to assist you in making plans for new farm buildings or for remodelling old ones. Our experience should be of value to you. It will pay you to investigate our system of ventilation.

Write us for prices or for estimate of cost of any kind of concrete work.

Queenston Heights Stock Farm.

Shorthorn Cattle: Eight young bulls for sale; any age, any color. Also cows and heifers—straight Scotch crosses.

ISAAC USHER & SON, QUEENSTON, ONT.

ARTHUR JOHNSTON

Greenwood, Ontario, Canada.

HIGH-CLASS SCOTCH SHORTHORNS

(First Importation Made in 1874.)

(My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE

- 40 Imported Cows and Heifers,
- 40 Home-bred Cows and Heifers,
- 11 Imported Bulls and Bull Calves,
- 13 Home-bred Bulls and Bull Calves.

Railway stations—Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application.

For Sale: 3 Shorthorn bulls of first-class breeding, sired by such noted bulls as **Scotland's Fame (imp.)** and **Bold Britain**, bred by **John Isaac, Markham**. Also some choice cows and heifers. **F. A. GARDNER, Britannia, Ont., PERL COUNTY.**

SHORTHORN BULLS AND HEIFERS FOR SALE.

Choice quality and best Scotch breeding. Imported and home bred. Imported **Knuckle Duster (27393)** and imp. **Royal Prince** head the herd, which has furnished the Provincial Fat Stock Show champion three out of the last five years. Catalogues on application.

H. SMITH, HAY, ONT.
Exeter Station on G. T. R., half a mile from farm.

IMPORTANT PUBLIC SALE

—OF—

Imported and Canadian-bred

SHORTHORNS

—AT—

The Sale Pavilion, Union Stock-yards, CHICAGO,

JUNE 5th, 1901,

When 60 Head of High-class Cattle will be offered at Public Auction, composed of selections of about equal numbers from the herds of

W. D. FLATT, - - - HAMILTON, ONT.
H. CARGILL & SON, - CARGILL, ONT.
W. C. EDWARDS & CO., ROCKLAND, ONT.
HON. M. H. COCHRANE, HILLHURST, QUE.

These will be representative of each of the herds mentioned. The majority are imported animals from high-class herds in Scotland and England. All are young or in their prime, a considerable number being young cows with promising calves at foot, and heifers in calf to first-class imported Scotch-bred bulls. Some excellent young stock bulls, suitable to head first-class herds, will be included.

For catalogues, apply to—

W. D. Flatt, Hamilton, Ont.

On **JUNE 4th**, at the same place, Mr. Geo. E. Ward, Sioux City, Iowa, will sell 50 Head of Shorthorns.

W. G. Pettit & Son, FREEMAN, ONT.

IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep.

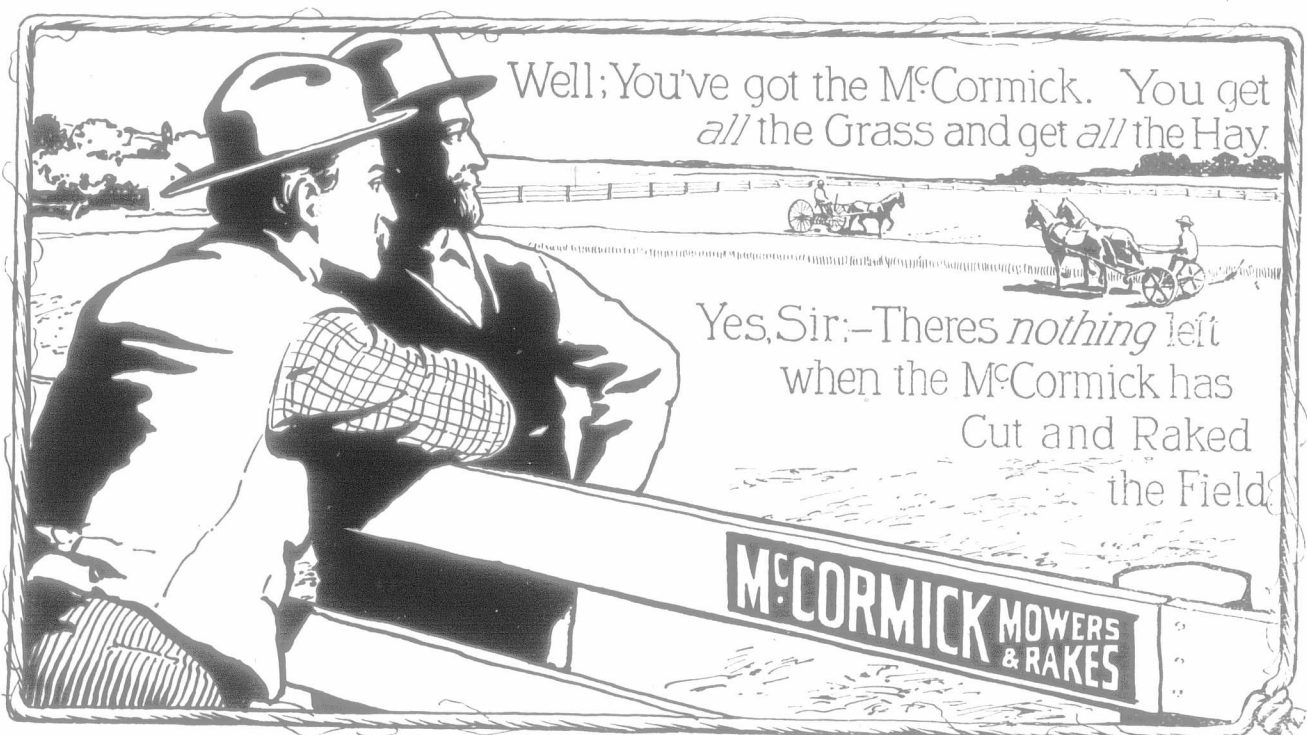
OFFER FOR SALE:

- 12 Imported bulls, 12 mos. to 2 yrs. old.
- 5 " " 9 to 12 mos. old.
- 20 " " cows, 3 to 6 yrs. old.
- 15 " " heifers, 2 yrs. old.
- 5 " " 1 yr. old.
- 6 Home-bred bulls, 9 to 18 mos. old.
- 20 " " heifers, 1, 2, and 3 yrs.

Our imported bulls are now getting in good shape. All our heifers of suitable age are bred to **Pure Gold (Imp.)**, by **Cyprus**, and **Scotland's Pride (Imp.)**, a **Cruickshank Clipper**, by **Star of Morning**.

Catalogues on application. All our imp. cattle were registered in the American Herd Book before the \$100.00 fee for recording was put on.

Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm.



W. A. CAVANAUGH, Gen. Agt.,
WINNIPEG, MANITOBA.

W. J. CUMMINGS, Gen. Agt.,
REGINA, N.-W. TERRITORIES.

WRITE FOR CATALOGUE, "PRIDE OF THE NEW CENTURY."

P. W. Stanhope, Toronto, Ontario.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

GOSSIP.

Messrs. Bawden & McDonell, Exeter, Ont., have purchased from Mr. William Riddick, Crookdale Hall, Aspatria, for importation to Canada, the well-bred Clydesdale stallion, Life-Member (10080), bred by Mr. John Wallace, Skelton Pasture, Penrith, and got by the dual Cawdor Cup champion horse, Prince of Carruchan (8151), a son of the Merryton Prince of Wales (673), and never beaten at any show at which he was exhibited since his first appearance in public at the H. & A. S. Show, Dundee, in 1890. The dam of Life-Member was got by the fine horse, Baron Scott (1936), which bred useful stock in Penrith district. His grandam was got by the celebrated Samson (741), the sire of the dams of Darnley (222), Prince of Wales (673), and Old Times (579), and his grandam was by the noted horse, Merry Tom (532), which won the Glasgow premium in 1854, and was one of the finest horses ever seen in Glasgow.

THOMAS RUSSELL'S SHORTHORNS.

When in the vicinity of Exeter, Ont., recently, a member of the *ADVOCATE* staff visited the Riverside Farm of Mr. Thomas Russell and was shown through his new and extensive stables, which have been laid out with a view to the comfort and secure care of his growing herd of imported and home-bred Shorthorns. Mr. Russell's herd is looking remarkably well, when we consider that shortly after finishing harvest last year, his barns were struck by lightning and burned, with all the feed stored in them. As a result, his accommodations for stock this last winter were meager. Mr. Russell has a strong and select herd of Scotch-bred cattle, and at present is using the imported bull, *Red Prince* 77098, by Fire King 70439, whose dam is a daughter of Mr. Duthie's noted bull, *Star of Morning*. *Red Prince*, as the name indicates, is a dark red, showing a deep, long, symmetrical body on short legs. His calves are coming the right type. Mr. Russell is offering this excellent young bull for sale, also two yearlings by *Fragrant Duke*, together with a few cows and heifers. The Riverside herd ranks high among the standard Shorthorn herds in Canada, the owner having made several select importations of up-to-date cattle from Scotland, visiting the Old Country in person only two years ago, and having made another importation last year of really choice things. Shorthorns bred in this herd have figured conspicuously as prizewinners at leading Provincial shows of late years, and Mr. Russell is regarded as one of the safest judges of Shorthorns in the Dominion. We cordially commend him and his herd to the consideration of our readers, who will do well to look up his advertisement on page 351 of this issue, and write him for what is wanted or give him a call at his farm, which is only two miles from Exeter station, on the London and Wingham branch of the G. T. R.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS, FROM APRIL 15 TO MAY 1, 1901.

During this period thirty-two such records have been received, thus bringing the total for April to sixty-four. Fifteen full-age cows during these two weeks averaged:—Age 7 years 9 months, 21 days after calving: Milk 142.6 lbs., butter-fat 14.99 lbs., equivalent butter 80 per cent, fat 17 lbs. 9 ozs., equivalent 85.7 per cent, fat 16 lbs. 6.3 ozs. Three four-year-olds averaged:—Age 4 years 3 months 29 days, 42 days after calving: Milk 372.9 lbs., butter-fat 12.463 lbs., equivalent butter 80 per cent, fat 15 lbs. 9.3 ozs., equivalent 85.7 per cent, fat 14 lbs. 8.6 ozs. Eight three-year-olds averaged:—Age 3 years 6 months, 27 days after calving: Milk 355.6 lbs., butter-fat 12.127 lbs., equivalent butter 80 per cent, fat 15 lbs. 2.5 ozs., equivalent 85.7 per cent, fat 14 lbs. 2.4 ozs. Six two-year-olds averaged:—Age 2 years 21 days, 24 days after calving: Milk 277.9 lbs., butter-fat 8.927 lbs., equivalent butter 80 per cent, fat 11 lbs. 2.6 ozs., equivalent 85.7 per cent, fat 10 lbs. 6.6 ozs. A few of the best records of the various ages in detail were as follows:—
Inka DeKol 37092, age 6 years 9 months 13 days, 15 days after calving: Milk 473.8 lbs., butter-fat 16.149 lbs., equivalent butter 80 per cent, fat 20 lbs. 3 ozs., equivalent 85.7 per cent, fat 18 lbs. 13.5 ozs.
Impatient Beauty 39627, age 5 years 1 month 11 days, 16 days after calving: Milk 495.6 lbs., butter-fat 16.099 lbs., equivalent butter 80 per cent, fat 20 lbs. 2 ozs., equivalent 85.7 per cent, fat 18 lbs. 12.5 ozs.
Lucyra 15033, age 12 years 9 months 24 days, 17 days after calving: Milk 423.2 lbs., butter-fat 15.695 lbs., equivalent butter 80 per cent, fat 19 lbs. 9.9 ozs., equivalent 85.7 per cent, fat 18 lbs. 5 ozs.
Portland Queen 26571, age 11 years 10 months, 15 days after calving: Milk 424.6 lbs., butter-fat 15.365 lbs., equivalent butter 80 per cent, fat 19 lbs. 3.3 ozs., equivalent 85.7 per cent, fat 17 lbs. 14.8 ozs.
Dorothy Pauline DeKol Wayne 45123, age 3 years 2 months 5 days, 20 days after calving: Milk 411.8 lbs., butter-fat 14.572 lbs., equivalent butter 80 per cent, fat 18 lbs. 3.4 ozs., equivalent 85.7 per cent, fat 17 lbs.
Inka Mercedes DeKol —, age 3 years 7 months 24 days, 11 days after calving: Milk 338.7 lbs., butter-fat 14.073 lbs., equivalent butter 80 per cent, fat 17 lbs. 9.5 ozs., equivalent 85.7 per cent, fat 16 lbs. 6.7 ozs.
Ringwood DeKol 47820, age 2 years 6 months 5 days, 16 days after calving: Milk 345.9 lbs., butter-fat 11.493 lbs., equivalent butter 80 per cent, fat 14 lbs. 5.9 ozs., equivalent 85.7 per cent, fat 13 lbs. 6.5 ozs.
Drosky Artis DeKol 56504, age 2 years 1 month 19 days, 16 days after calving: Milk 288.6 lbs., butter-fat 8.888 lbs., equivalent butter 80 per cent, fat 11 lbs. 1.8 ozs., equivalent 85.7 per cent, fat 10 lbs. 5.9 ozs.
A. & G. DeKol Segis Inka 52103, age 1 year 10 months 1 day, 9 days after calving: Milk 272.9 lbs., butter-fat 8.607 lbs., equivalent butter 80 per cent, fat 10 lbs. 12.1 ozs., equivalent 85.7 per cent, fat 10 lbs. 0.7 oz.
Duchess Ormsby 4th 48504, age 2 years 9 days, 7 days after calving: Milk 235 lbs., butter-fat 8.284 lbs., equivalent butter 80 per cent, fat 10 lbs. 5.7 ozs., equivalent 85.7 per cent, fat 9 lbs. 10.6 ozs.
Pledge 4th's Clothilde 51282, age 1 year 11 months 8 days, 8 days after calving: Milk 276.3 lbs., butter-fat 8.205 lbs., equivalent butter 80 per cent, fat 10 lbs. 4.1 ozs., equivalent 85.7 per cent, fat 9 lbs. 9.2 ozs.
S. HONIE,
Superintendent of Advanced Registry.

6 Shorthorn Bulls 6
Also cows in calf and yearling heifers. All of straight Scotch breeding. om
SHORE BROS., WHITE OAK, ONT.

YOUNG SHORTHORNS FOR SALE
Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.
A. & D. BROWN,
M. O. RAILWAY. -om IONA, ONTARIO.

WOODSLEE STOCK FARM.
FOR SALE: 3 Shorthorn bulls, 15 months old, two reds and one roan. Well developed, healthy, and thick fleshed.
S. G. LITTLE, Hagerman, Ont.
W. PATTON, Manager.
Unionville Station, G. T. R. -om

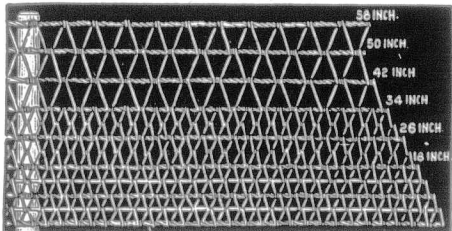
Clover Leaf Lodge HERD OF Shorthorns
A number of choice young bulls, heifers and cows, excellent milking strains. Correspondence invited.
R. CORLEY, Belgrave P. O., Ont., and G. T. R.; Wingham, C.P.R. om

Shorthorns.
We have 10 cows and 5 young bulls, their ages ranging from 6 to 18 months; colors ranging from dark red to pure white. **H. K. FAIRBAIN,**
Thedford, Ont.

SHORTHORNS.
FOR SALE.—Bulls: Two 1 year old and one 8 months. A few heifers of choice breeding and superior quality.
AMOS SMITH, Trowbridge P. O., Listowel Stn. om

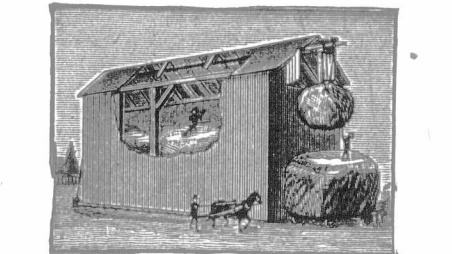
RIG. CASTRATION.
DR. J. WILSON, V. S., WINGHAM, ONT.,
Specialist in the castration of ridgelings. Terms and testimonials on application. om

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE

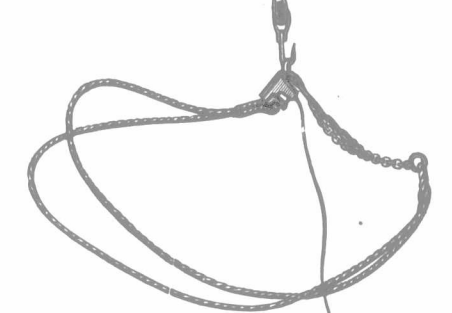


Ellwood Steel Wire Fencés
Six styles—18 to 58 inches—best steel wires, heavily galvanized. Expansion and contraction provided for. Every rod guaranteed. Sold by local agents. If no agent in your town write to the makers.
American Steel & Wire Co., Chicago or New York.

BUCHANAN'S (Malleable Improved) PITCHING MACHINE
For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



The Common-Sense Sheaf-Lifter
Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

RESPONSIBLE AGENTS WANTED
Circulars, Prices and Terms on application to **M. T. BUCHANAN & CO., Ingersoll, Can.**

6 Shorthorn Bulls 6
Also cows in calf and yearling heifers. All of straight Scotch breeding. om
SHORE BROS., WHITE OAK, ONT.

YOUNG SHORTHORNS FOR SALE
Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.
A. & D. BROWN,
M. O. RAILWAY. -om IONA, ONTARIO.

WOODSLEE STOCK FARM.
FOR SALE: 3 Shorthorn bulls, 15 months old, two reds and one roan. Well developed, healthy, and thick fleshed.
S. G. LITTLE, Hagerman, Ont.
W. PATTON, Manager.
Unionville Station, G. T. R. -om

Clover Leaf Lodge HERD OF Shorthorns
A number of choice young bulls, heifers and cows, excellent milking strains. Correspondence invited.
R. CORLEY, Belgrave P. O., Ont., and G. T. R.; Wingham, C.P.R. om

Shorthorns.
We have 10 cows and 5 young bulls, their ages ranging from 6 to 18 months; colors ranging from dark red to pure white. **H. K. FAIRBAIN,**
Thedford, Ont.

SHORTHORNS.
FOR SALE.—Bulls: Two 1 year old and one 8 months. A few heifers of choice breeding and superior quality.
AMOS SMITH, Trowbridge P. O., Listowel Stn. om

RIG. CASTRATION.
DR. J. WILSON, V. S., WINGHAM, ONT.,
Specialist in the castration of ridgelings. Terms and testimonials on application. om

GOSSIP.

His Majesty the King recently decorated Mr. William Tait, his head steward, with the Victorian Order. Mr. Tait, who manages the Royal farms at Windsor, has, as our readers know, been very successful with the late Queen Victoria's cattle at the various shows in Great Britain.

At the sale of the Taplow House Jerseys, the property of Mrs. Walter Barron, England, last month, the average for sixty-four cows and heifers was £17 17s. 10d., the highest price being 60 gs. for Lady of the Lake 8th.

Mr. D. McCrae, Guelph, Ont., has in quarantine at St. John, N. B., the imported Galloway bull, Cedric IV, the winner at Stirling, Scotland, last year, which is to succeed, as the head of the Janefeld herd, Lord Wedholme, sold for \$800 at the Chicago show and sale in December last. Cedric IV. is said to be typical of the best of the breed.

W. G. Pettit & Son, Freeman, Ont., write us, under recent date, that seven imported females that were sold at the Korns & Lee Shorthorn sale in Iowa, last month, and that averaged \$881.43 each, were from their herd. Three of them were only 15 months old. Messrs. Pettit have also sold an imported bull at a long price, to go to South America, reference to which is made in another column in this issue.

William Cooper & Nephews, the sheep-dip men, are sending out to their patrons, or prospective patrons, an attractive little souvenir entitled "Royal Winners," containing photographs of representative sheep of the leading breeds and breeders who were distinguished winners at the English Royal Show of 1900. A card to the firm, 142 Illinois St., Chicago, Ill., will secure a copy of the souvenir.

Messrs. Bawden & McDonell, Exeter, Ont., have recently disposed of the following horses: *Clydesdale*.—Lipton, a 3-year-old, by Sir Everard, to Jas. Henderson, Belton. *Shires*.—Fen Premier, a 7-year-old, to Geo. Duffield, Granton; King Charming, a 6-year-old, to John Suggett, Hillsburg, Ont.; Desford Margins, a 4-year-old, to E. C. Atwill, Godorich. These were all of stock importation and were amongst the best stock that could be secured in Scotland and England. This firm has imported and sold twenty stallions, Shires and Clydes, since Nov. 1st, 1900.

ONTARIO VETERINARY COLLEGE.
At the recent closing exercises of the Ontario Veterinary College, Toronto, the Principal, Prof. A. Smith, presided, among others present being Mr. A. Pattullo, M. P. P.; Prof. Baker, Toronto University; Manager Hill, of the Industrial Exhibition; H. S. Wende, V. S., President of the Ontario Veterinary Association; Dr. Duncan, M. D.; and others. There was a large graduating class, and Mr. Pattullo, M. P. P., in his address to the winners, said he was astonished to note in the list the large number who were scattered over all parts of the continent of America. The outlook for the profession and the horse industry was never better than at present. Principal Smith was presented with a splendid picture of the graduating class, as their parting testimonial.

STABLE VENTILATION.
We are glad to note that the subject of stable ventilation, to which we have been devoting a good deal of space for a couple of months past, is receiving more general attention this year throughout the country than ever before. Prof. J. B. Reynolds, of the O. A. C., has prepared a bulletin on the subject, and we understand that Live-stock Commissioner Hodson, at Ottawa, will shortly issue one also. Prof. J. W. Robertson commends the idea embodied in the plan used by Mr. H. S. Foster, of Knowlton, P. Q., described and illustrated in April 15th issue of *FARMER'S ADVOCATE*. Mr. Foster writes us further on the subject that it continues to work well, even on days when no wind blows. He is anxious that dairy farmers should test it this spring, before turning the cows out, as it is easily and cheaply constructed. So confident is he about it, that he offers, as an inducement, to pay them the cost of so doing if they do not find it a satisfactory plan when put in as directed.

MONEY IN ANGORA GOAT.
A farmer named Arnold, living near Geneva, N. Y., having read that there was money in Angora goats, recently purchased a small flock, including a pure-bred buck, for which he paid \$250. The goats were kept in a barn. The buck was kept alone in a large box stall. Mr. Arnold went into the box stall. He had in an inside pocket of his coat a wallet which contained a considerable sum of money. After completing work in the stall, Mr. Arnold went to the house, and a few minutes later discovered that the wallet was missing. After an extended search, the wallet was found in the buck's stall. The wallet was spread open, and the money that had been in it was gone. From marks on the wallet, it was evident that the buck had probably eaten the money. Mr. Arnold killed the buck. There was money in that goat—mutilated, but still redeemable—seven \$100 bills, four \$50 bills, five \$20 bills, three \$10 bills, one \$5 bill, and one \$2 bill: \$1,037 in all.

SOME WESTERN SHORTHORN SALES.
On April 17th, P. D. Fuller, Sutherland, Iowa, sold twenty-seven head of Shorthorns at an average of \$304. The highest price for a cow was \$700, for Red Rose, a red four-year-old, to W. J. McLean, Rock Valley, Iowa. Another cow, Rose of Sunshine, a roan six-year-old, by Imp. Royal Sailor, with bull calf at foot, brought \$655; H. W. Weiss, Sutherland, Ia., being the purchaser.
A. Carrier & Son, Newton, Ia., on April 15th sold thirty-three head at an average of \$157.40, the highest price, \$700, being reached for the red two-year-old Antoinette 5th, bought by E. S. Donahy, Newton, Ia. Twenty-seven Polled Durhams were sold at the same time and place, by F. F. Failor, for an average of \$172. The top price, \$565, was made by the red yearling bull, Commander Boy, and the highest for a female was \$280.

On April 17th, Indiana breeders held a combination sale at Indianapolis, which could hardly be called a booming success, as the average price made for the fifty-four head sold was \$152. The highest price was \$100, for Mirth Royal, a roan two-year-old heifer by Royal Hero, and W. F. Brockman, Hartsville, Ind., was the buyer. Royal Luck, a red yearling by Robert Adair, at \$315, was the highest priced bull.



To produce the best results in fruit, vegetable or grain, the fertilizer used must contain enough Potash. For particulars see our pamphlets. We send them free.

GERMAN KALI WORKS,
93 Nassau St., New York.

JAS. DORRANCE, SEAFORTH, ONTARIO.
BREEDER OF
Shorthorn Cattle and Berkshire Pigs
Young stock always for sale. -om

NEWCASTLE HERD OF Shorthorns and Tamworths.
One choice 2-year-old heifer. About a dozen boars, ranging from 2 to 4 months old; also a few nice young sows—all from Toronto prize stock. Be sure to write for prices. o COLWILL BROS., Newcastle, Ont.

SPRINGBANK FARM.
Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale. om
JAS. TOLTON, WALKERTON, ONT.

Shorthorns and Shropshires FOR SALE.
Red bull (1 yr.) by Collynie Archer (imp.), from Rosebud family. Roan bull (1 yr.) from imp. Countess family. Red and white bull (17 mos.) from imp. Rosebud family. Eight Shropshire ewe lambs, well covered.
WM. D. DYER, COLUMBUS, ONT.
BROOKLIN STATION, G. T. R. -o

FOR SALE.
SHORTHORNS—Young bulls and heifers. Leicesters and Southdowns, both sexes. Berkshires—Young boars fit for service, young sows in pig and ready to breed. Also choice seed peas. Write for catalogue or come and see.
E. JEFFS & SONS, Bond Head.

SHORTHORNS FOR SALE
Young stock of both sexes, reds and roans.
JOHN R. HARVIE, ORILLIA, ONT.

Shorthorns for Sale.
Two excellent bulls, sixteen months old; roan in color; well bred and well grown; at reasonable prices. -o
D. ALEXANDER, - BRIGDEN, ONT.

J. R. McCallum, Iona Station, Ont.
Offers young SHORTHORN BULLS and HEIFERS, of choice breeding, at reasonable prices, Iona Stn. on M.C.E., half a mile from farm.

SHORTHORN CATTLE AND LINCOLN SHEEP.
Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.
J. T. GIBSON,
DENFIELD, ONT.

FOR SALE:
SHORTHORNS AND YORKSHIRES

4 SUPERIOR Scotch-bred Shorthorn bulls, 12 to 14 months; 4 two-year-old heifers of the best strains; and cows with calves at foot. Also a superior lot of Yorkshire boars and sows from 3, 5 to 7 months old. Orders booked for spring pigs. Pairs and trios supplied not akin.

H. J. DAVIS,
BOX 290. -om WOODSTOCK, ONT.

SHORTHORNS.
6 choice young heifers, 4 imported cows. Also 16-months-old home-bred bull. -o
A. P. ALTON & SON,
Burlington Junction Station. Appleby P. O.
PLEASE MENTION FARMER'S ADVOCATE

TROUT CREEK HERD OF SHORTHORNS.

Since our Chicago sale we have imported sixty-two head, including some Royal winners; they were pronounced in Scotland superior to past importations. We try to import the best, believing that this is one of the ways to assist in improving the breed on this side of the water. Being thoroughly convinced, also, that a bull of the right sort is even more than half the herd, we have decided to keep the following choice ones:

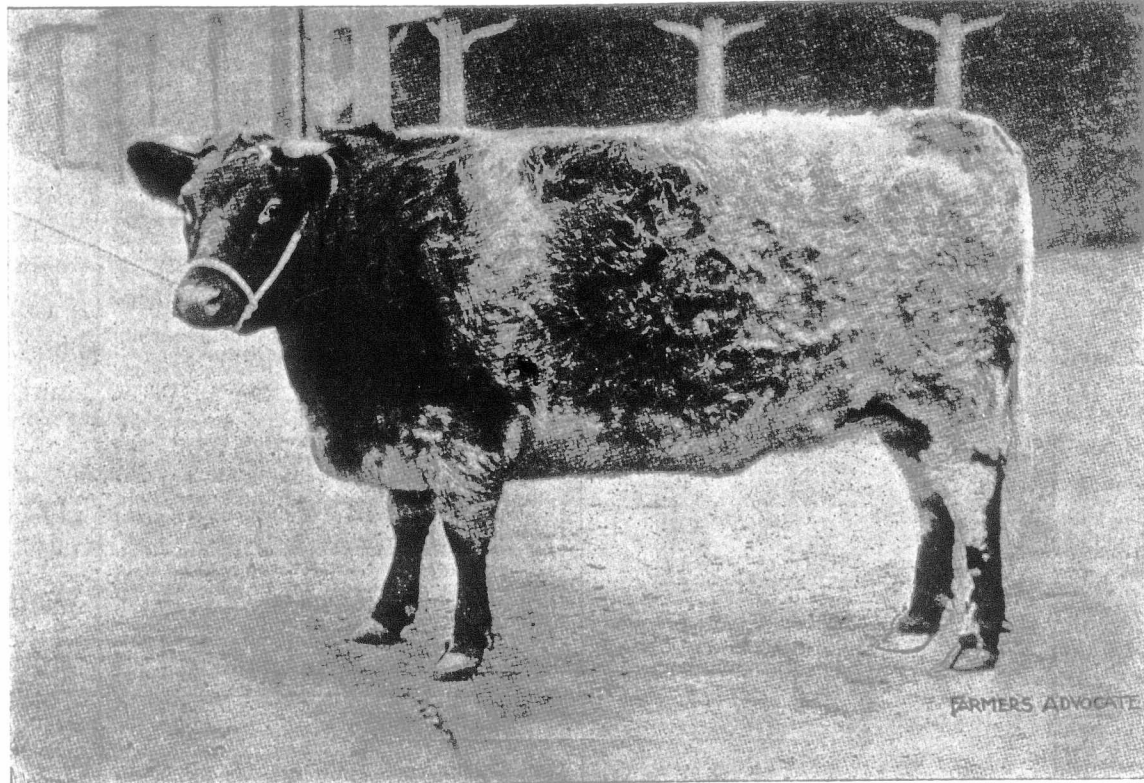
Imp. Lord Banff.

Bred by A. Watson; of the Campbell Bessie family.

Imp. Consul.

Bred by J. D. Fletcher; of the Campbell Claret family. Consul was awarded first at Edinburgh, first and champion at Provincial Union, first and champion at Creiff, and second at the Highland. His sire, Watchword, bred by Wm. Duthie, was first at the Highland in 1895 and 1896, and got by Scottish Archer. Watchfire, by Watchword, was first at the Highland, 1897. Consul is the highest-priced bull imported to Canada.

Hamilton is a city of over 50,000 inhabitants, located on main line of Grand Trunk Railway, between Chicago and Buffalo; also connected by Canadian Pacific Railway and Michigan Central Railway—branch lines.



CICELY.

Bred by Her late Majesty the Queen; undefeated in her class and many times champion; imported by W. D. Flatt.

Imp. Silver Mist.

Bred by Wm. Duthie; of the famous Missie family. He had many friends for first choice at Messrs. Marr and Duthie's sale. Mr. Beck, representing the Prince of Wales, made next to last bid.

Imp. Wanderer's Last.

Bred by W. S. Marr; also of the Missie family. Is the last calf got by that renowned Cruickshank bull, Wanderer. Mr. Marr considers this youngster very promising.

We keep in our herd a choice lot of both imported and Canadian cattle, of both sexes, from which to make selections. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains at Hamilton if notice is given. Visitors always welcome.

We have at present for sale the red yearling bull, Singapore, by Golden Star, 1st and champion at Royal Northern last year. We have also a good Canadian-bred bull for sale, fit for service.

W. D. FLATT, 378 HESS ST. SOUTH, HAMILTON, ONT.

JAS. SMITH, MANAGER.

SHORTHORNS

SCOTCH IMPORTED.

Young imported cows with calves at foot for sale. A number of the calves are imported in dam.

Some of the families represented in the herd are as follows:

160
Head

AUGUSTAS
CLARAS
NECTARS
GOLDIES
JENNY LINDS
VICTORIAS
MATILDAS
BESSIES
CROCSSES

ROSEBUDS
BRAWITH BUDS
LANCASTERS
MAYFLOWERS
AMARANTHS
BUTTERFLYS
CLIPPERS
EMMAS
BROADHOOKS

MEDORAS
MINAS
VILLAGE MAIDS
BEAUTYS
MISS RAMSDENS
FLORAS
RAGLANS
LUSTRES
GEMS OF THE VALE

160
Head

Herd headed by the Imported Bulls, **GOLDEN DROP VICTOR** and **PRINCE BOSQUET**.

IF INTERESTED, COME AND SEE US, OR WRITE

H. CARGILL & SON,

CATALOGUE FREE.

CARGILL, ONTARIO, CANADA.

GOSSIP.

Mr. W. W. Black, who maintains a choice herd of Herefords on his farm, at Amherst, N. S., shipped a fine young bull on April 13th to Bermuda.

A very successful sale of Jerseys, the property of Captain A. B. S. Fraser, was conducted by Messrs. John Thornton & Co., at West Tarring Farm, Worthing, England, on April 2nd. The highest price was 67 gs., and the average £23 10s. 4d. for forty-five head.

The celebrated Shire stallion, Harold 3703, the property of Mr. A. C. Duncombe, Calwich Abbey, England, had recently become such a martyr to rheumatism that it was deemed the kindest action to put an end to his suffering, so he was destroyed on April 2nd, being twenty years old. He was the greatest horse of the breed, a noted prizewinner himself, and sire of numerous winners.

The Shorthorn yearling bull, Patricia, sold at the Government sale at Ottawa in February to the P. E. I. Government at the reported price of \$238, was sold at auction on the market square, Summerside, April 9th, to the highest bidder, at \$185; Mr. Robert Agnew, Wilnot, P. E. I., being the purchaser. The bull reported sold for \$505 at the Ottawa sale, we understand is retained at the Island Government Farm, near Charlottetown.

R. Reid & Co., Hintonburg, Ont., write:— "Our stock has wintered well. We have a fine lot of Ayrshire bull calves by Duke of York 2301 (imp.), out of good milking cows, that we are offering at reasonable prices. We have just bought from Messrs. R. & W. Conroy, of Deschenes, Que., who have disposed of their farm, their stock of Clydesdales, also their Tamworths, some thirty head, including six brood sows due to farrow, and a fine lot of young sows of these late summer and fall farrow. Some of these sows have been bred and we intend breeding several more, and are offering them for sale at reasonable prices. Messrs. Conroy's stock won high honors at the Ottawa fair for several years, in 1898 winning the herd prize.

CANADIANS AT BOSTON.

At the recent Boston Horse Show, which is one of the leading events of its kind in America, Canadian exhibits made a good record. The exhibitors were Messrs. Crow & Murray and Geo. Pepper, Toronto, and Adam Beck, London. In harness, single, double, and tandems; Crow & Murray's brown mare South Africa and mate, and their roan mare Sunflower and mate, won several 1st and 2nd prizes in big fields of good ones. Messrs. Pepper and Beck met strong competition in hunters and jumpers, and between them won three firsts, four seconds and a number of third awards. Messrs. Crow & Murray sold most of their horses before returning, and the other gentlemen also made some sales.

WM. THORN'S AYRSHIRES AND POULTRY.

The home of Wm. Thorn, Lynedoch, Ont., was visited recently, when we were shown his choice herd of Ayrshires and his well-equipped poultry house, where we saw pens-mated of the leading varieties. At the head of the Ayrshire herd stands the worthy sire, Royal Star of St. Anne's (7916), by Glencairn 3rd (imp.), (6855), dam Margie of Williamstown. Royal Star was a first-prize winner at Toronto, first at London and sweepstakes. He possesses great merit apart from his superior breeding. He bears a grand countenance and noble disposition. His stock are a very creditable lot. Notably among the cows may be mentioned Lottie (1858), by Royal Chief (imp.), dam Jess (imp.). This cow cannot fail to attract one's attention on account of her superior quality and well-balanced udder. Mr. Ballantyne has written Mr. Thorn in regard to sending this cow to the Pan-American Exposition, to enter the milk and butter test, and it is likely she will go there if she calves soon enough. If she enters the test, she cannot fail to make a mark for herself and owner, she being a hearty feeder and persistent milker. This cow has given, on plain feed, 8 1/2 lbs. of milk per day, testing high in butter-fat. Her stock are most eagerly sought after. Her daughter, Lottie 2nd 3432, sired by Rob Brown of Barmoorhill, shows all the good qualities of her dam, being a heavy milker. Addie 2458, sire Burford 588, dam Addie 2176, an excellent dairy cow, has a fine calf two weeks old, which is already sold, to be shipped soon. Polly 2637, sire Royal Chief, dam Molly 1011, is another stylish cow of good dairy promise. Norway Rose 2158, sired by Pride of Peel 839, dam Daisy Dean, is a cow of beautiful conformation and dairy character. White Floss of Trout River 11248, by Bob Brown, dam Addie 2458, is a promising young cow, stylish, sweet, and prompt at the pail. Daisy Bell 11246, by Rob Brown, dam Princess Maud, is a young cow of superior quality, and carrying a grand udder. A few good young things might be spared, says Mr. Thorn.

Among the poultry, our attention was attracted first to a pen of White Cochins, most of them imported, and a grand pen they were, mated to produce prizewinners of a high degree. A pen of White Wyandottes, headed by a cockerel scoring 96 points, was a most attractive lot, and are sure to produce something good. A good pen of White Javas, containing many first-prize winners, are worthy of a trial by any one wishing such. Next we were shown a pen of Light Brahmas, headed by an imported cockerel, purchased at a long price, with females of the highest degree of merit. Light Brahmas from these yards have received highest honors wherever they have been shown. A pen of Golden Seabright bantams most worthy of attention was shown us, every bird in the pen fit to show in the best of company. Other noted breeding pens were shown us of the following varieties: Barred Plymouth Rocks, Dark Brahmas, Buff Cochins, Houdans, Cornish Indian Game, Golden Spangled and Black Hamburgs, Black Cochins, Black Minorcas, White Cochins bantams, Toulouse geese and Rouen ducks are also kept. We were informed by the proprietor that he has been overwhelmed with orders for poultry, having to return several orders, shipping fowls all over the Eastern Provinces and Manitoba, where they figured high in shows. He also reports good sales in Ayrshires, shipping to Nova Scotia, Quebec, Manitoba, and several places in Ontario. Any parties wishing first-class stock, either Ayrshires or poultry, will do well by calling on Mr. Thorn or writing him. The many compliments and letters from purchasers of his Ayrshires and poultry go to show that customers are highly pleased with the stock sent out.

Piles Cured
 Edward Dunellen, Wilkes-barre, Pa.: "For seven years I was scarcely ever free from the terrible torture of itching piles. I tried all sorts of remedies. Was told a surgical operation might save. One 50 cent box of Pyramid Pile Cure entirely cured me." All druggists sell it. Free book by mail on Piles, causes and cure. Pyramid Drug Co., Marshall, Mich.

T. DOUGLAS & SONS, STRATHROY, ONT., BREEDERS OF SCOTCH SHORTHORNS.

100 HEAD TO SELECT FROM. Offer for sale 8 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee = 28861 =, at head of herd. Farm one mile north of town. om

Maple Lodge Stock Farm
 ESTABLISHED 1854.

SHORTHORNS—Grand young bulls and heifers for sale. We have the first-prize milking strains. Imported Knuckle Duster and Imported Sir Wilfred for sale.

LEICESTERS—First-prize flock of Canada for past six years. Imported and home-bred for sale.

ALEX. W. SMITH, MAPLE LODGE P. O., ONT.

SHORTHORNS (imported)
 3 BULLS: 1 two-year-old, 2 one-year-olds. A few cows and heifers. om

THOS. RUSSELL, EXETER P. O.

SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstakes at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topman = 17847 =, champion at Winnipeg, Toronto, London and Ottawa, 1899. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply om



T. E. ROBSON, Ilderton, Ont.

High-class Shorthorns and Yorkshire Pigs.
 Just now three 10-months bulls, got by imp. Sirius 15281, great big massive fellows with lots of flesh and quality—away above the average. Also a few superior young cows in calf, and 5 or 6 heifers. We are booking orders now for the spring trade. Can ship some in six weeks. om

JAS. McARTHUR, GOBLE'S, ONT.
 Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met. om

JOHN DRYDEN,
 BROOKLIN, ONTARIO,

OFFERS SIX YOUNG SHORTHORN BULLS, ready for service, at reasonable prices. Strong, active, masculine. om

GOOD QUALITY AND CHOICE BREEDING.

HAWTHORN HERD
 OF DEEP-MILKING SHORTHORNS.
 We are offering 8 young bulls for sale, of first-class quality, and A1 breeding. om

Wm. Grainger & Son. - London, Ont.

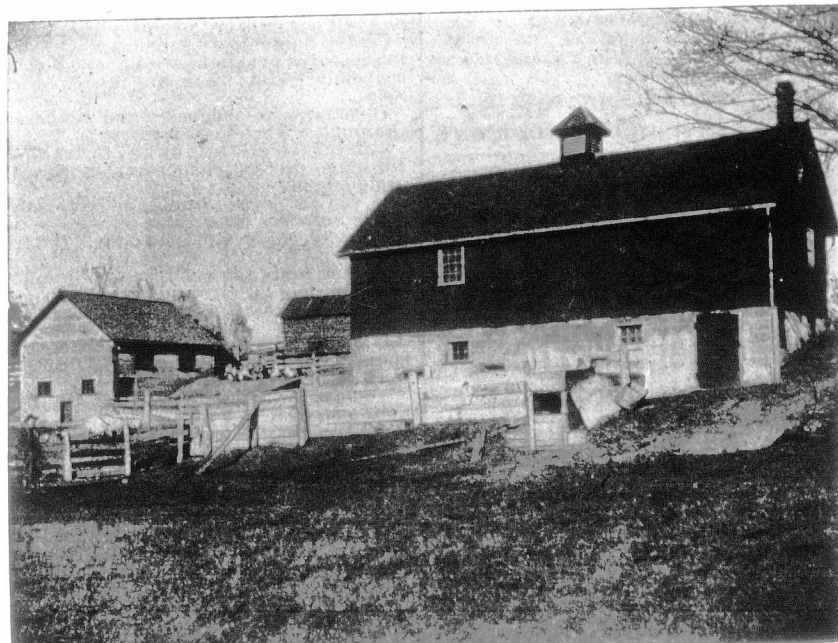
W. R. Bowman, Mt. Forest, Ont.

OFFERS FOR SALE
 3 Polled Angus bulls (choice ones); 1 Shorthorn bull, 11 mos.; Yorkshire pigs, 6 weeks, at \$6.00; Plymouth Rock eggs, 5 settings for \$2. om

Aberdeen - Angus Cattle.
 Several thoroughbred bulls for sale. Apply to the MANAGER, Grape Grange Farm, or to om

C. W. HARTMAN, Clarksburg, Ont.

Concrete Piggery and Henhouse
 OF MR. FRANK LOCKWOOD, DELAWARE, BUILT WITH
Thorold Cement.



THE HENHOUSE: Wall, from foundation to peak, built with THOROLD CEMENT.
 THE PIGGERY: Basement walls built with THOROLD CEMENT.

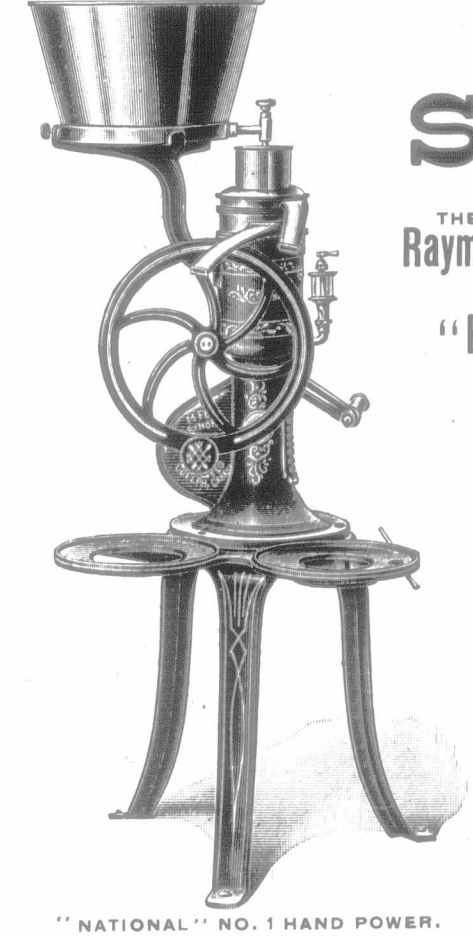
Read what Mr. Lockwood says:

DELAWARE, ONT., Mar. 16, 1900.

ESTATE OF JOHN BATTLE, Manufacturers of Thorold Cement, THOROLD, ONT.:
 DEAR SIRS—I used your THOROLD CEMENT in my building. It gave the best of satisfaction and I recommend it to all who intend building. Both buildigs are piggeries. The largest one is 20 x 40 8 ft. high, 12 in. wall next the bank, and 10-in. on other side and both ends. I do not know just how much material I used—have forgotten—but I used 5 to 1 of cement. Could not say just the time I was building it. Had five men, and six part of the time. The small building is 16 x 20, cement walls 11 ft. high at the eaves and extend to gables, walls 9 in. thick. The top story is a hennery. Took five men about 5 1/2 days to build this one. There are cement floors in both, and cement troughs also. The top story of the largest building is a granary for 20 feet, and machinery the other half. I did not keep count of how much gravel I used, as the buildings are built right on the side of the gravel hill. I supply the township with gravel.
 Yours respectfully,
 FRANK LOCKWOOD.

ESTATE OF JOHN BATTLE, THOROLD, ONT.
 MANUFACTURERS OF THOROLD CEMENT. om

The National Cream Separator,



Cream Separator,
 MANUFACTURED BY
 THE Raymond Mfg. Co. of Guelph, Can.
 ALSO MAKERS OF THE CELEBRATED
 "Raymond Sewing Machine."

REPORT FROM WATERLOO COUNTY.
 TO THE RAYMOND MFG. CO., Guelph, Ont.:

GENTLEMEN,—I wish to make a statement that should be of some encouragement to your firm just at this time when your Company is investing a large amount of capital in shops and machinery for the purpose of manufacturing the "National" Cream Separators. I bought a "National" in December, 1898, and received some practical instructions at the O. A. College, Guelph, in the way of making good butter and putting it in neat form for market. The first year I had nine cows and sold \$45.00 worth of butter from each cow, besides keeping the house in butter and having the skim milk fresh, sweet and warm for the calves. In 1900 I received higher prices for the butter, and made \$52.00 per cow from 12 cows, or a total of \$624.73. I market my butter in Toronto and Woodstock, and can find ready sale for more than I can make. Although I am a farmer, I have sold 93 "National" Cream Separators since I got my own, two years ago. The "National" is profitable to a farmer, whether he makes the butter at home or sends the cream to the creamery. I use a Babcock tester, and find the "National" cannot be beat at close skimming. Wishing you success, and hoping you will be able to supply your agents with machines as fast as we need them, I am,
 Respectfully yours,
 Tavistock, March 20, 1901. CHAS. I. ZEHM.

"NATIONAL" NO. 1 HAND POWER.
 Capacity, 330 to 350 lbs. per hour.
THE Creamery Supply Co.
 GUELPH, ONT.

General Agents for Ontario.

ASHTON FRONT VIEW STOCK FARM.
 Six Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome. A. J. WATSON, Castlederg, Ont. C. P. R. Station and Telegraph Office, Bolton; or G. T. R., Palgrave. om

FOR SALE: Registered Shorthorn bull, 3 years old; very sure stock-getter; color, red. Apply to Hamilton Canning, Inverness, P. O.; Keedsdale, Megantic. om

3 Holstein-Friesian YEARLING BULLS for sale. Apply to Wm. Suhring, Sebringville P. O., Ont. om

A \$3000. STOCK BOOK FREE

We will Mail You a Copy Free, Postage Prepaid, if You Answer 3 Questions

1st. Did you ever use "International Stock Food" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs? 2d. How many head of each kind of stock do you own? 3d. Name this paper.

THIS BOOK CONTAINS 183 FINE, LARGE, COLORED ENGRAVINGS OF HORSES, CATTLE, SHEEP, HOGS, POULTRY, ETC.

DESCRIPTION: The engravings were made by our own artists and cost us over \$3000. The book is 9 1/2 x 6 1/4 ins. and the cover is a beautiful live stock picture printed in 6 brilliant colors. In the Horse Department are fine engravings of Imported Messenger, Mambino, Abdallah, Kysdyk's Hambletonian, Nutwood, 238%, Robert J., 241%, Directum, 246%, Nancy Hanks, 254, Star Pointer, 158%, Johnson, 206%, George Wilkes, 222, Alex, 248%, and many others. It contains 20 large engravings of draft and coach breeds. Also the largest 4-year old horse in the world, weighing 2500 lbs. and 19 hands high. He is owned by International Food Co. and they also own the following stallions: **Buttonwood, 2-17** by Nutwood, 238%. **International King** by St. Vincent, 238%. **International Stock Food** by Hartford, 222%, and **International Prince** by Island Wilkes, 239%, besides their the different breeds, at the Trans-Mississippi Exposition. Also the **Largest Cow in the world**, weighing 2970 lbs. and 6 feet tall. Also largest 3-year old steer, weighing 3100 and 6 feet tall. Both owned by International Food Co., Minneapolis, Minn. In Hog Department are engravings of the different breeds and the latest scientific facts in regard to Hog Cholera. Also the **Largest Hog in the world**, weighing 1021 lbs. In Sheep Department are extra good engravings of the prize winners, of the

different breeds, at Trans-Mississippi Exposition. In Poultry Department are engravings of the different breeds. Your special attention is called to the fact that the book also gives a description and history and other valuable information of the different breeds of Horses, Cattle, Sheep, Hogs and Poultry. The Veterinary Department is very practical and contains extra fine veterinary illustrations. It gives the different diseases for Horses, Cattle, Sheep, Hogs and Poultry and tells what to do for each. The Veterinary Department will be a great addition to your live stock library and will save you hundreds of dollars. Our 2000 dealers give away this book with sales of "International Stock Food" in 25 lb. pails. You cannot buy a book for \$10 that will give you as much practical information and as many fine colored engravings of noted animals.

WE WILL GIVE YOU \$14.00 WORTH OF "INTERNATIONAL STOCK FOOD" IF BOOK IS NOT AS STATED. "International Stock Food" is endorsed by over 100 leading "Farm Papers" and is used and endorsed by over 500,000 stockmen and farmers. Established 12 years and has the largest sale. Included in the United States Government exhibit at Paris and won the highest award and medal at that Exposition, 1900. The editor of your "Farm Paper" will tell you that "International Stock Book" is one of the best illustrated books ever published. Most of the illustrations are of noted animals.

Largest Stock Food Factory in the World.
Capital Paid in \$300,000.00.

Answer the 3 Questions
and Write for this Book to

INTERNATIONAL FOOD CO., MINNEAPOLIS, MINN., U. S. A.

LIVE STOCK AUCTIONEER.

The undersigned is prepared to conduct pure-bred auction sales. 20 years' experience. References: John I. Hobson and Alfred Stone, Guelph; Jas. Hunter, Alma, and Mossom Boyd, Bobcaygeon. THOS. INGRAM, care Mercury Office, GUELPH, ONT.

EUROPEAN ADVERTISEMENTS.

FAMOUS ALL OVER THE WORLD
ALFRED MANSELL & CO.,
LIVESTOCK AGENTS AND EXPORTERS,
SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to **ALFRED MANSELL & CO.,** Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

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: FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables - Sheepcote, London.

MANSELL'S DISPERSION SALE.

Shropshires.

Andrew E. Mansell, Harrington Hall, Shipnal, England, who is settling in Tasmania, will sell by auction, without reserve, on Thursday, August 29th, 1901, his unrivalled flock of Shropshires. Sheep bought for America and Canada will, if desired, be sent in charge of Mr. Robert Mansell. Particulars and catalogues obtained from Alfred Mansell & Co., Auctioneers, Shrewsbury, England. Commissions carefully executed.

HAMPSHIRE DOWN SHEEP

GREAT ENGLISH PEDIGREE SALES,

July, August & Sept., 1901

Waters & Rawlence, Salisbury, Eng., will sell by public auction, during the season, upwards of

50,000 Pure-bred EWES, LAMBS AND RAMS.

including both rams and ewes from the best registered prize-winning flocks in the country. Commissions carefully executed. Address—

Waters & Rawlence, SALISBURY, ENGLAND.

KENT OR ROMNEY MARSH

Annual Ram Sale

The annual show and sale of registered Kent or Romney Marsh rams, consisting of selected specimens from leading flocks of the breed, will be held

ON **Friday, Sept. 27th, 1901**

AT **ASHFORD, KENT, ENGLAND.**

Catalogues and full information from

W. W. CHAPMAN,
Secretary Kent or Romney Marsh Sheep Breeders' Association, Fitzalan House, Arundel Street, Strand, London, England.

J. E. CASSWELL'S

Laughton, Folkingham, LINCOLNS

Lincolnshire, England.

Breeder of Lincoln Long-wooled sheep. Flock No. 46. The flock was in the possession of the present owner's great-grandfather previous to 1785, and is unique in having descended direct from father to son without a single dispersion sale. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged £54 each; 14 of the best averaged £63 each, this being the highest sale of the season in the Argentine. Ram and ewe hoggs and shearlings for sale; also Shire horses, Shorthorns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingborough, G. N. R.

IMPORTANT SALE OF

PURE-BRED COTSWOLD SHEEP.

Owing to the death of the late Mr. Robt. Garne, and the Aldworth farm of upwards of 1,000 acres, being given up, the 3, 2 and 1 year-old ewes of this celebrated flock are offered for sale. An unrivalled opportunity to secure registered Cotswolds of the highest quality and merit is thus afforded. Rams and ewes from this flock during the last 11 years have won 28 first, 14 second, and 12 third prizes at the Royal Agricultural Society's Shows. Apply—

W. T. GARNE,
Aldworth, Northleach, England.

Fairfield Lincolns.

The partnership heretofore existing between J. H. Patrick and Eugene Patrick, of Ilderton, Ontario, has been dissolved. J. H. Patrick again resumes full management at Fairfield, and Eugene Patrick taking charge at Lincoln Grove, Tecumseh, Idaho. —om

J. H. & E. PATRICK, Ilderton, Ont.

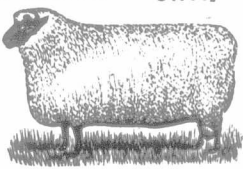
BROAD LEA OXFORDS.

We have at present a number of good ewe and ram lambs. Also some choice young ewes dropping lambs in April for sale. Correspondence solicited. Visitors welcome. —om

Henry Arkell & Son,
Phone and telegraph, Teeswater, Teeswater, Ont.

SMITH EVANS, GOUROCK, ONT.,

Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited. 6-1-y-o



WOOL, HIDES AND SKINS.

HIGHEST MARKET PRICES.

E. T. CARTER
(SUCCESSOR TO JOHN HALLAM).

At the old stand, 83 and 85 Front St. East., TORONTO.

Dorset Horn Sheep

THE largest flock in America. The most celebrated prizewinners at the Columbian Exhibition and Canadian exhibitions. Contains more Royal winners than any other. Awarded 5 out of 8 first prizes at Toronto, London and Ottawa in 1900. Flock of 300. Stock for sale always on hand. —o

John A. McGillivray, Uxbridge, Ontario.

SHROPSHIRE :

35 ewe lambs (yearlings), by imported Williams ram, FOR SALE. —o

Estate Jas. Cooper, Kippen P.O., MIDDLESEX CO.

Fairview Shropshires

A choice lot of Rams for sale. Sons of winning sires and dams. They are of good size, and best of quality. Just the kind needed to head fine flocks. —o

John Campbell, Woodville, Ont.

GOSSIP.

SHORTHORN BULLS FOR ARGENTINA.

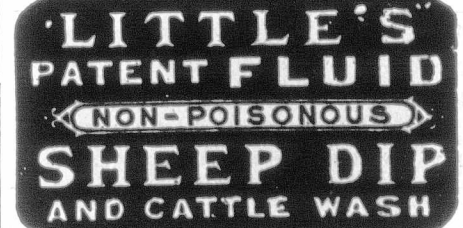
Mr. Alex. Bruce, son of Mr. Robert Bruce, of Dublin, Ireland, acting in conjunction with Mr. William Nelson, of Liverpool, recently visited Canada and the United States, with a view to the purchase of a number of high-class Shorthorn bulls for shipment to the Argentine Republic, South America. Mr. Bruce has succeeded in getting together 11 superior bulls, selected from nearly as many herds, but of nearly uniform character and quality, the whole number constituting probably the best collection that has ever left the shores of America in one shipment. Space will not admit of extended reference to each, but brief mention may be made of the individuals comprised in the exportation. And first may be mentioned the roan 2-year-old Consul, imported from Scotland last year by Mr. W. D. Flatt, Hamilton, and used by him as one of his principal stock bulls during the past winter and spring. He is a bull of choice quality and character, and was bred by Mr. Fletcher, of Rosehaugh, from the Kinellar Claret tribe, his sire, Watchdog, a son of the great Scottish Archer, being bred by Mr. Duthie, and his dam a member of the favorite Wimple family. Consul was first-prize winner as a yearling at Edinburgh, first and champion at the Provincial Union at Crief, and second at the Highland Society's Show, where he was general favorite for first place. The Argentine breeder who secures this bull may be considered a distinct loss to the Dominion. He is the highest-priced bull that has changed hands in many years in North America, and even at this, Mr. Flatt would not have parted with him had he not been anxious that the shipment should be a choice one. Fearless Archer, a massive red 4-year-old son of Scottish Archer, and bred by Mr. Duthie, was the highest-priced bull and the second highest-priced animal at the great combination sale in Chicago, on April 5th, this year. He is a grand specimen of the breed, just such as one would choose for a stock bull, and he has left numerous high-class progeny in the herd of his importer, Mr. J. F. Prather, of Illinois. Governor, a red-roan 2-year-old of great scale and substance, weighing over 2,300 lbs. at 2 1/2 years old, thick-fleshed and of excellent quality, was bred by Mr. W. K. Elliott, late of Hespeler, and purchased from Messrs. Eastwood Bros., Mimico, in whose hands he was successfully used and exhibited. He was sired by a son of imported Guardsman, bred by Mr. Duthie, and who was also the sire of the American champion bull, St. Valentine. Iowa Champion is a smooth, symmetrical, short-legged and thick-fleshed bull, of choice character, purchased from Messrs. Geo. Harding & Son, Waukesha, Wisconsin, in whose hands he has had a very successful career as a prizewinner. He is a son of Baron Cruickshank 3rd, who was got by the Collynie-bred imported Baron Cruickshank, out of the Sittytan-bred Victoria 79th, by Dunblane, and is one of the very best bulls in the consignment, and cost a long price to obtain. Pure Gold is a red 2-year-old Cruickshank Brawith Bud bull, bred by Messrs. McTae, Kinbrachie, Looshire, Scotland, and imported to Canada by Messrs. W. G. Pettit & Son, Freeman; sired by Cyprus, a Cruickshank Cicely, got by the famous William of Orange. He is lengthy, low-set, and of good substance.

Three very superior 2- and 3-year-old imported Scotch-bred bulls, whose pedigrees have not reached us at this writing, were secured from Mr. Robert Miller, Stouffville. They are *Bob Roy*, *Prince Victor*, and *Princely Victor*, the latter a lengthy, straight, smooth, and choicely-bred red bull, that has been in service at the Michigan Agricultural College, where he had been sold by Mr. Miller, and where, it is said, he proved a valuable sire. *Lord of the Manor*, bred by Mr. Jno. Gibson, Denfield, and purchased from Capt. T. E. Robson, Ilderton, is a massive and well-fleshed roan 2-year-old son of Aristocrat, bred by the Messrs. Watt, of Salem, and sired by the Uppermill Red Lady bull. Royal Sailor, bred by Mr. W. S. Marr, and the dam of *Lord of the Manor* is one of the Kinellar Roan Betty tribe. *Trout Creek Barnpton*, a straight, smooth, red 2-year-old bull, bred by Mr. Flatt, at Trout Creek Stock Farm, was purchased from Mr. Jas. Gibb, Brookdale. He is a Kinellar *Crimson Flower*, sired by Vice Regent, a son of imported Aberdeen, a Toronto first-prize winner, and his dam by the imported champion Cruickshank bull, Vice Consul. *Rosy Lad*, a roan 15-months bull, bred by Mr. Philo L. Mills, Ruddington, England, and imported in dam by Mr. Flatt, is a thick, sappy son of Solferino, son of the English Royal champion, Marengo, and is one that we predict has a famous future before him and may be heard of at the International Exposition at Buenos Aires next year. The shipment, which sailed from New York last week, goes out in the efficient charge of Mr. Thos. Wilson, of Dublin, who has had 12 years' experience in the Argentine, and in whose hands the cattle will be well cared for. We wish him and them bon-voyage, and the enterprising exporters a successful issue to their venture.

PLEASE MENTION FARMER'S ADVOCATE.

W. H. BEATTIE, Wilton Grove, Ontario,

IMPORTER AND BREEDER OF Shropshire sheep, collie dogs, White Holland and Mammoth Bronze turkeys, and Barred Rocks.



THE ORIGINAL

Non-Poisonous Fluid Dip

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

For sheep. Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

Cattle, horses, pigs, etc. Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective

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.

SENT BY ALL DRUGGISTS. SEND FOR PAMPHLET.

Robert Wightman, Druggist, Owen Sound.
Sole agent for the Dominion. —om



"Stuck on his Fence"

If you use Page Fence you will like it, but will not be stuck like the gentleman in the picture. The Page Fence is woven in our own factory, from coiled wire made by ourselves, and twice as strong as that used in other fences. Get this year's prices, they are lower than last year.

The PAGE WIRE FENCE CO. (Ltd.)
WALKERVILLE, ONT.

GET THE VERY BEST OIL—YOU KNOW HOW IT WAS LAST YEAR!

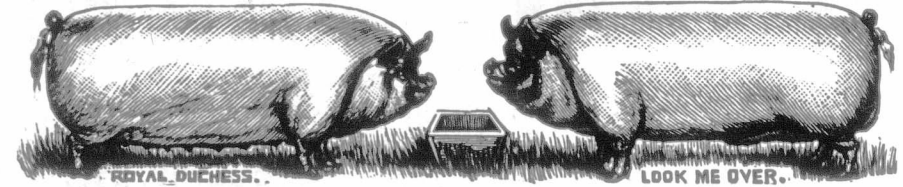
ROGERS' "PEERLESS" MACHINE

Won 12 gold medals for farmers' use on agricultural machines and general purposes. Hardware and general stores sell it to their best trade. Don't take anything else. Get "Peerless."

QUEEN CITY OIL CO., Limited, TORONTO.
—o SAMUEL ROGERS, PRESIDENT.

Summer Hill Herd

HEADQUARTERS FOR THE IDEAL BACON HOG AND EASY FEEDERS.



The largest herd of imported and Canadian-bred Yorkshires in America. Out of 121 exhibits at the leading shows in '99 and 1900, including Toronto and London, we gained 116 awards. Expert judges both at London and Toronto were unanimous in pronouncing our herd far superior to that of our strongest competitors. Won most of the best prizes offered, including first prize for best pen of pure-bred bacon hogs, also grand sweepstakes over all breeds in a class of 13 entries. The foundation of our herd was laid by personally selecting the choicest stock from the most noted breeders in England and Scotland. We have the ideal bacon type—size without coarseness, and easy feeders. Pigs of all ages for sale at moderate prices. Write us for particulars. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont.

D. C. Flatt & Son, Millgrove, Ont.

BEAVER LINE.

ROYAL MAIL STRAMERS.
Regular Weekly Service between Montreal and Liverpool.

From Liverpool, Tuesday.	Steamer.	From Montreal, Friday.
April 23	Lake Megantic	May 10
April 30	Lake Superior	May 17
May 7	Lake Simcoe	May 24
May 14	Lake Ontario	May 31
May 21	Lake Champlain	June 7
May 28	Lake Megantic	June 14
June 4	Lake Superior	June 21
June 11	Lake Simcoe	June 28
June 18	Lake Ontario	July 5
June 25	Lake Champlain	July 12

First Cabin—Single, \$62.50 and upwards; Round Trip, \$100.00 and upwards. Second cabin—Single, \$35.00; Round Trip, \$66.98 and \$68.88, according to steamer, location, and number of persons in room. Steerage Rates—To Liverpool, London, Londonderry, Glasgow, Belfast, and Queenstown, \$24.50 and \$25.50. Apply to any agent of the line, or to

ELDER, DEMPSTER & CO.,
6 St. Sacramento St., Montreal.

*Lake Superior carries second cabin and steerage passengers only.

Agents in London, Ontario: E. De la Hooke, F. B. Clarke, and W. Fulton.

Freeman's Fertilizers Free.

A GENEROUS INTRODUCTORY OFFER.
I am simply making this wonderful offer to induce the Maritime farmers to give the Highest Grade Fertilizers a trial, knowing that a customer this year will be a customer ever after. Don't fail to write for particulars to

CHAS. A. McDONALD, Poplar Grove,
Gen. Agt., Maritime Provinces. MABOU, C. B.

OHIO IMPROVED

Chester White Swine.
OLDEST ESTABLISHED REGISTERED HERD IN CANADA.

Choice young stock, 6 weeks to 6 months old. Pairs and trios not akin. Registered pedigrees. Express charges prepaid. Safe delivery guaranteed.

E. D. George, Putnam, Ont.

BERKSHIRES

A specialty. Can supply pairs and trios not akin. Various ages.

MAC. CAMPBELL, NORTHWOOD, ONT.

LARGE ENGLISH

FOR SALE.
Young boars and sows carrying the blood of Baron Lee 4th, Bright Star (imp.), Enterprise and Highclere, on Bow Park, Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 4307 heading the herd.

S. DYMENT, BARRIE, ONT.

Large English Berkshires

Windsor Model (imp.) and Royal Star (imp.) at the head of our herd. Choice young boars and sows, sired by above boars. B. P. Rock eggs, \$2 per setting of 15, from prizewinning birds. Write for prices.

H. BENNETT & SON, St. Williams, Ont.

FRESH BERKSHIRE BLOOD.

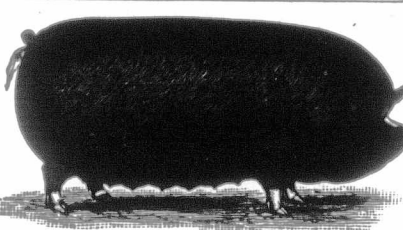
Have secured the first choice of the champion gold medal herd of America (which won over 400 prizes, cups and medals), including the \$400 show sow, Elphick's Matchless (never beaten), and other sweepstakes sows in the United States. Also 15 April, May and June boars and 15 sows of the same age, and 3 fall litters, selected to meet the best Canadian demand, being long, low, and extra good through the heart.

Farm within 10 minutes' walk of electric R. R. terminus on Kingston road.

DURHAM & CAVAN, East Toronto, Ont.

The American Antiquarian and Oriental Journal, published bi-monthly in Chicago, is in a class by itself in natural history and oriental matters, and is designed to interest students of manners, customs and conditions of ancient peoples. The number for March and April, 1901, deals with such subjects as the North American Indians, Australian Tribes, Mound-builders, Mexican and Maya Architecture, Prehistoric Earthworks in Mississippi, the Tagal Language, and the like. It is in its 23rd volume, and is well gotten up.

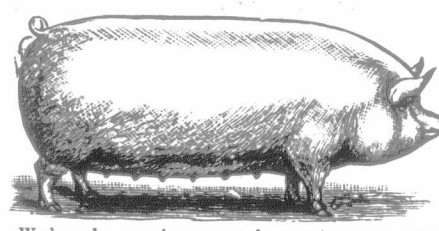
PLEASE MENTION FARMER'S ADVOCATE.



Berkshires—Large, lengthy, English type. Five first-prize boars in service. Spring pigs ready for shipment. Boars fit for service. Sows ready to breed. GEORGE GREEN, Fairview, Ont.

OAK LODGE YORKSHIRES

ARE THE CORRECT TYPE TO BRING THE GREATEST PROFIT.



We breed our winners, and we win more prizes than all other herds combined at Toronto, London, and other large shows. Sweepstakes in bacon classes over all other breeds in dressed carcass competition, also on foot, for two years in succession. Championship carcasses in bacon class at Chicago, 1900. First-prize herd at Toronto Industrial for nine years. Write for prices.

Brethour & Saunders, Burford, Ont., Can.

JOS. FEATHERSTON & SON.

IMPORTERS AND BREEDERS OF Improved Large Yorkshire and Essex Swine

We have some fine young pigs to sell, from imp. sows and by the celebrated boar, Whittan Star. He took first prize at Toronto and London fairs in 1899 and 1900. We have some more imported sows to farrow, bred to him, and have some nice young pigs from our home-bred sows, and got by the imp. boar, Nottingham Monarch, a sire of great promise.

FOR SALE: YORKSHIRES AND HOLSTEINS

Best type and quality. Young stock constantly on hand. Prices right. R. HONEY.

Brickley P. O., instead of Warkworth.

YORKSHIRES and POULTRY

Eggs for hatching (as per last issue); and we are offering 30 boars and sows, bred direct from imported stock. Ready to ship June 10th. We guarantee satisfaction.

A. B. ARMSTRONG, CODRINGTON, ONT.

Improved Yorkshires

FOR SALE, of the most popular families. All ages and both sexes now ready for immediate shipment. Write for what you want. Prices reasonable—consistent with quality.

E. DOOL, Hartington, Ont.

Yorkshires and Berkshires

Yorkshire boars and sows, 8 weeks old, from large sows of bacon type. Berkshire sows ready to breed. Barred P. Rock eggs also for sale. Prices reasonable. Write

JAS. A. RUSSELL, Precious Corners, Ont.

MARCH BOARS AND SOWS

from Thrifty Maid, the sweepstakes sow at Guelph Fat Stock Show, and from Jessie K. and Minnie F. Sired by Advance and French, my stock boars. The pigs are choice, and prices right.

NORMAN M. BLAIN, Brant Co. St. George, Ont.

SEVERAL YOUNG TAMWORTH SOWS AND BOARS

nearly ready to ship. Also a few ready for service, of both sexes.

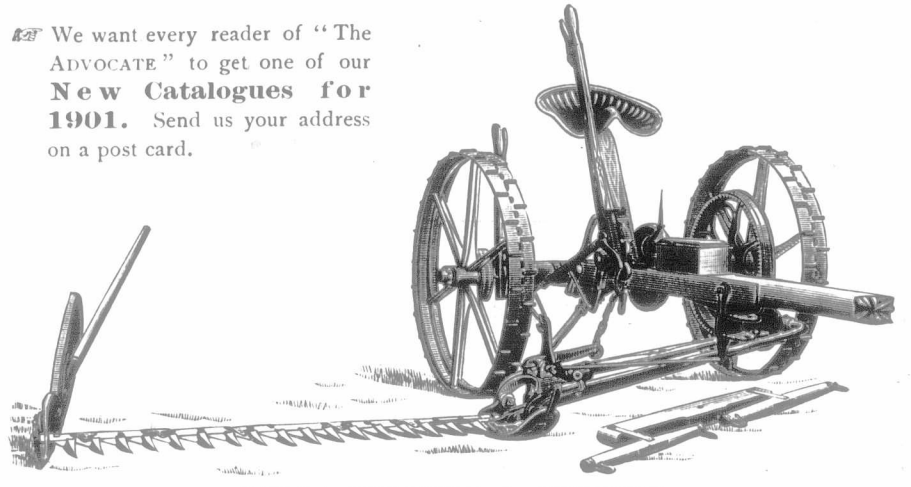
P. R. Hoover & Sons, Green River, Ont.

PLEASE MENTION FARMER'S ADVOCATE.

Does Quality Count with You?

IF SO, WE CAN INTEREST YOU.

We want every reader of "The Advocate" to get one of our New Catalogues for 1901. Send us your address on a post card.



THE FROST & WOOD

New Mower No. 8

4, 5 AND 6 FOOT CUT.

THOUSANDS IN USE AND GIVING SATISFACTION.

Our samples for 1901 are now ready. SEE THEM and get our prices before buying. IT WILL PAY YOU. Local Agents Everywhere.

THE Frost & Wood Company LIMITED.

BRANCH OFFICES—Toronto, London, Winnipeg, Montreal, Quebec, St. John, N.B., Truro, N. S.

HEAD OFFICE AND WORKS: Smith's Falls, Ont.

INCREASED CAPACITIES

1901

Improved Alpha-De Laval BABY SEPARATORS.

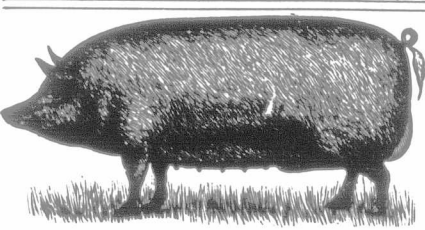
The Baby Separators have now their respective capacities increased as follows:

	per hour.	Price.
Humming Bird, instead of 225, now skims 250.	\$ 65	00
Baby No. 1, " 325, " "	450	100
Baby No. 2, " 450, " "	600	125
Baby No. 3, " 850, " "	1000	200
Dairy Turbine, " 850, " "	1000	225

30% to 35% more capacity. No increase in price.

The same standard of "ALPHA" closest skimming is preserved. Apply to local agents or to

Canadian Dairy Supply Co., 327 COMMISSIONERS ST., MONTREAL.



One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices.

H. GEORGE & SONS, Crampton P.O., Ont.

EGGS

From a pen of 30 choice Barred Plymouth Rock hens, "National strain," selected for their persistent laying qualities and perfect color. Mated with a grand prize-winning cock. Price: \$1 per 13, or 3 settings for \$2. W. C. SHEARER, Bright, Ont.

EGGS FOR HATCHING.

Barred P. Rocks exclusively. Large, strong, vigorous, well-barred birds, from imported stock, bred for utility. One setting of 13, \$1.25; two settings, \$2.00. A. E. SHEERINGTON, Walkerton, Ont.

Canada's Winners.

EGGS FOR HATCHING. Silver Gray and colored Dorkings, Indian Games, Houdans, Minorcas, Hamburgs, Leghorns, Polandas, Ducks and turkeys. Our birds win at Boston, New York, Toronto, London, Kingston, Ottawa, Montreal. Also Ayreshires (bulls and females). For full particulars, write WM. STEWART & SON, Menie P. O., Ont.

Built for Business!

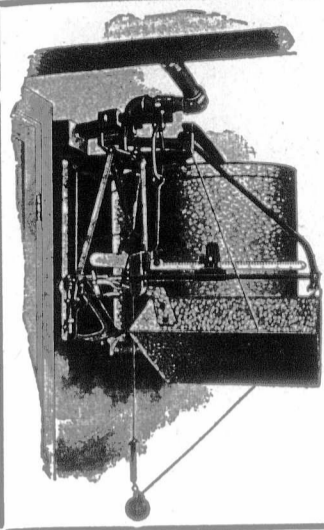
That's the idea. There's nothing fancy; nothing foolish about them; just straight, practical, lasting, honest goods. The



CYPHERS INCUBATORS

are positively warranted to last TEN YEARS, without repairs, and are guaranteed to OUT-HATCH, during three trials, any other make of incubator on the market—bar none. THIS, OR YOUR MONEY BACK. Used exclusively at Experimental Farms, Guelph and Ottawa; also six American Experimental Stations. Daniels, the universal provider in the Poultry Supply business, has the sole agency for the Cypers Incubators and Brooders for Canada. Our list of Poultry Supplies are too numerous to mention here, but just drop us a line and state what you require. We handle nothing but the best. Satisfaction every time, or money refunded. Mention ADVOCATE.

C. J. Daniels, 221 River St., Toronto, Ont.



BY WEIGHT.

YOU recognize the fact that the only uniform and accurate way to receive milk at your creamery is by weight. Your patrons are entitled to the same guarantee of accuracy in the return of the skim milk.

OUR IDEAL SKIM-MILK WEIGHER

Is constructed on this principle. It is the only machine for the distribution of skim milk that is. The large number of these weighers in use testifies more strongly than our words to their popularity. **YOU DO NOT RUN ANY RISK** in giving our weigher a trial. We allow you to use it thirty days before paying for it. If not satisfactory, you send it back. Perfectly fair, isn't it? **BETTER PUT IN YOUR ORDER NOW.**

Boilers and Engines. Australian Boxes. Refrigerating Machines. Hanson's Butter and Cheese Color. Rennet Extracts. Wells, Richardson & Co.'s Improved Butter Color. Spruce Tubs. Stearns' Style Spruce Tubs. Lusted Printers. Climax Heaters. Farrington Ripeners. Potts Pasteurizers. Parchment Paper, Etc.

Creamery Package Manufacturing Company, Cowansville, Que.
(LIMITED).

NOTICES.

Concrete for Farm Buildings.—We are fast approaching what is termed the "Iron Age," which means that wood is becoming scarcer, dearer and less economical than iron for many constructive purposes. When we look in the direction of farm buildings, we are led to apply the term "Concrete Age" to the incoming period as we see cement gradually taking the place of wood in the construction of walls, floors, etc., in all farm structures. The Thorold Cement advertisement in the FARMER'S ADVOCATE always contains some interesting and useful information about cement as a building material.

Transactions of the Highland and Agricultural Society.—The annual report of the work of this Scottish Society is a well-gotten-up book containing much well-prepared, useful matter. The Report for 1901, Vol. 13, contains some 500 pages, and is fittingly illustrated. The opening paper is an appreciative biographical notice of Her late Majesty Queen Victoria. The agricultural articles are varied and good, some of which are Eradication of Wild Mustard by Spraying, Old and New Varieties of Oats, Theory of Heredity, Famous Ayrshire Sires, Modern Calf Rearing, Forestry in the British Colonies, British Live Stock in the 19th Century, Solids in Cow's Milk, and a number of others. The volume is edited in an excellent manner, by James Macdonald, F. R. S. E., secretary of the Society.

The Finest Spray is produced with **RIPPLEY'S** Compressed Air 5 gal. Sprayers. Tested to 60 lbs pressure. Has safety valve—can't burst. Throws a continuous stream 35 feet if desired. Guaranteed the best 5 gal. Comp. Air Sprayer made, or money refunded. Made both in copper and galv. iron. Write for circulars. Nothing else so good for whitewashing poultry houses, stables, etc. We also make Lice Killers, Fly Remover and Feed Cookers. Agents make big money selling these and our other specialties. Write for special terms and prices to dealers and agents.

RIPPLEY HARDWARE COMPANY,
Grafton, Illinois.
Canada Factory,
London, Ontario.

DOMINION LINE STEAMSHIPS

PORTLAND TO LIVERPOOL.
DOMINION. VANCOUVER. CAMBROMAN.
Large and fast steamers. Electric light. Saloons amidship.

Fast trains to Portland in connection with sailings of steamers. Superior accommodation for all classes of passengers. Try the Portland route, and view the fine White Mountain scenery. The second-saloon and third-class accommodation has received the Company's special attention. Rates of passage same from Portland as Montreal. Passengers supplied with free railway and sleeping-car tickets, Montreal to Portland.

For rates of passage and all information, apply to any agent of the Company, or **DAVID TORRANCE & CO.,** GENERAL AGENTS, 17 St. Sacrament St., MONTREAL, or 10 Commercial St., PORTLAND.

BE UP TO DATE.

THE FROST

Be progressive and buy the best. Frost Fence and Gates can be had at no greater charge than inferior makes. Why not have the best? Coiled spring wire sets tight. Heavy steel stays hold up, and the Frost lock securely joins the two.

The Frost Wire Fence Co., Limited,
Welland, Ont.

Anchor Wire Fence.
(PATENTED SEPT. 7, 1894.)

The strongest and best fence yet devised. Simply and easily constructed.

It is made throughout of No. 9 Plain Galvanized Wire, both horizontal wires and cross wires or uprights. The steel clamp securely fastens the horizontal and cross wire, thus consolidating the strength so that the whole fence resists an attack on any part of it. As the strength of a chain is gauged by the strength of its weakest part, the Anchor Fence is equally strong throughout, and being constructed wholly of large wires, is much stronger than a fence in which small wires are used.

ESPLEN, FRAME & CO.,
Stratford, Ont.

BULL-STRONG!
...PIG-TIGHT...

An Illinois farmer said that after harvest he had fully 200 bushels of loose oats on the ground that he could not secure any benefit from, because the fence around the field would not turn hogs. Figure the loss for yourself. He also said, all this would have been saved if he had used the Kilselman Woven Wire Coiled Spring Fence, and the value would have gone a long way towards paying cost of the fence.

With the Duplex Machine any farmer can make it himself at the actual cost of the wire. Catalogue free for the asking.

C. C. DAVIS & CO.,
Box C-116, Freeman, Ont.

PLEASE MENTION FARMER'S ADVOCATE.

STEELE BRIGGS

ROYAL GIANT

GROWS HEAVY CROPS EASILY HARVESTED

SUGAR BEET

LARGE CLEAN ROOTS HIGHEST FEEDING QUALITIES

SEED CO. TORONTO, ONT.

Caution to Farmers.

THE strongest evidence of merit with any article, either manufactured or grown, is when imitated.

Last season we introduced a new and distinct type of Sugar Beet, which we branded and named "ROYAL GIANT," to distinguish it from any other known sugar beet, and to protect the grower from having substitutes wrongfully sold him, have adopted the sealed-package system.

Any sugar beet sold or offered as "Royal Giant," which is not done up in sealed packages and bearing our name, is not Steele, Briggs' "Royal Giant," and should be refused by growers who wish our unprecedented new variety.

Substitutes are dangerous to the grower's success, and should be avoided.

Price is the smallest consideration when a crop is at risk.

Ask your dealer for Steele, Briggs' "Royal Giant" Sugar Beet in sealed packages (see cut).

If you cannot procure it from your local merchant, send to us direct.

Price per lb., 45 cts.; in 5-lb. lots or more, per lb. 39 cts.; 10-lb. lots or over, 35 cts. per lb. (carriage free).

The Steele, Briggs Seed Co., Limited,
TORONTO, ONTARIO.

METAL SHINGLES
METAL CEILING

ASK FOR FREE SAMPLES CATALOGUE AND ESTIMATES

Use metal inside and outside and your building will be warm and dry, lightning, fire, wind and weatherproof, possessing a beautiful appearance at small cost.

METAL SHINGLE & SIDING CO. LIMITED,
PRESTON, ONT.

Low, Wide-Tire Iron Wheels FOR WAGONS
MADE TO FIT YOUR AXLES.

EVERY farmer should have a set for drawing hay, grain, corn, etc. Are lighter, stronger, and cheaper than wooden wheels. Write for price list.

Dominion Wrought Iron Wheel Co.,
9 & 11 Toronto, Ont.
Brock Avenue

\$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 419, WINDSOR, ONT.

ROCK SALT for horses and cattle, in ton and carlots. o Toronto Salt Works, Toronto.

Mr. Duthie, Collynie, Aberdeen, has hired the prize bull, Caledon Chief (74163), which won at Belfast this spring. This bull, we understand, had been purchased for the Argentine, and would probably have been exported ere this had not the ports been closed, owing to foot-and-mouth disease.

LOW PRICE IN WIRE
Fence Building is attracting farmers and agents attention. **THE CHEAPEST GOOD FENCE.**
No trouble to answer questions. Write for free Catalogue. **McCLOSKEY WIRE FENCE CO. (INC.)**, Box A, Windsor, Ont., Detroit, Mich., Birmingham, Eng., Paris, France. Agts. wanted

BUY THE... BEST

Buy a poultry netting that is big enough and strong enough to be stretched and stay stretched without rills at top and bottom. Our patent **"ACME"** POULTRY NETTING... is of this kind. It has large strong wires at top and bottom and in the middle. That makes it easy to stretch and stay stretched. Look at the graduated mesh—from 1 1/4 in. at bottom to 3 in. at top. 24 to 72 in. high. Will please anybody. We also make Lawn and Farm Fencing, Gates, Staples, etc. Write for catalogue.

THE PAGE WIRE FENCE CO., Limited, Walkerville, Ont.

Coiled Spring and other fence wire for sale at lowest prices. Also GEM Fence Machines. The GEM holds the record, 120 rods of 10-wire fence woven in 10 hours. Write **McGregor, Banwell & CO.,** on WINDSOR, - ONT.

AGENTS WANTED FOR THE **IDEAL STEAM COOKER.** REDUCES FUEL BILLS MORE THAN ONE HALF. Makes tough meat tender. Prevents steam and odors. Whistle blows when cooker needs more water. Burning or scorching impossible. We pay express. **EXCLUSIVE TERRITORY.** **U. S. SPECIALTY CO.,** 69 Adelaide St. East, TORONTO, ONT.

