

**PAGES
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The Poor Way

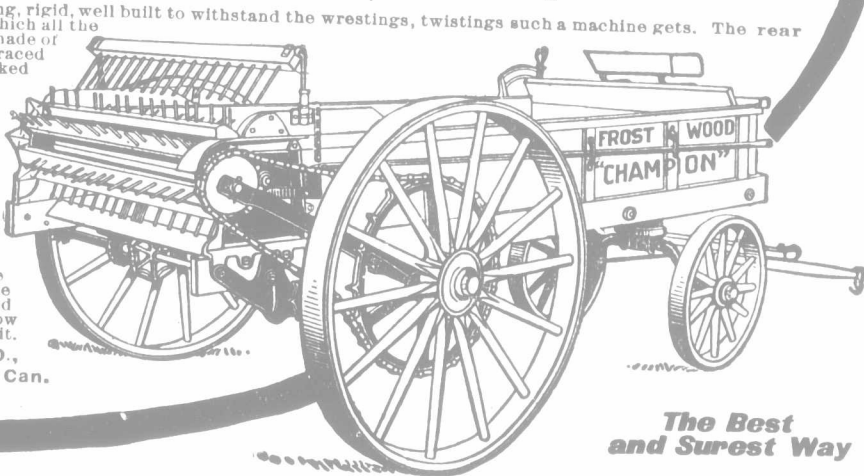
power is derived is 2 1/2 inches in diameter, made of cold-rolled steel. The frame is heavily braced and sills continuous. The apron can be locked in any position and will not move any faster than you wish, whether going uphill or down. The feed from apron to beater through pulverizing rake is even and uniform—no ground is skipped and left bare. Harpoon teeth on beater prevent clog. Direct chain-drive from big sprocket wheel gives certain and uniform spreading, makes light draft, and prevents breakage. But we can't tell all the good news about the "Champion" here. Why the "Champion" is convenient, strong, durable, rigid and practical; why it can be successfully handled by your 12 year old son; why it's just the machine for your work and your demands—all these and a score more "whys" fully answered in our Catalog "F" and Booklet "How to Feed Your Crops." Send for it.

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PEDLAR ART STEEL CEILINGS

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The Gilson Gasoline Engine—Air, Oil and Water Cooled,

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Because it is the best that brains and money can build. It has a world-wide reputation and deserves it. Fully guaranteed. The Gilson Engines combine power, economy, durability and reliability in an unequalled degree. Simplest in construction. Easiest to operate. Thoroughly up-to-date. A money-saving investment. Write now for catalogue. All sizes. Get our introductory Free Trial Offer and **save money. Agents Wanted.**

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BOYS FOR FARM HELP

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

"I guess," said the Yankee who had been asked to admire an echo, "I guess you don't know anything about echoes in this country. Why, at my country place up in the Rocky Mountains it takes eight hours to hear the echo of your voice. When I go to bed I put my head out of the window and shout: 'Time to get up!' and the echo wakes me in the morning."

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For steep or flat roofs, waterproof, fireproof, easily laid, cheaper than other roofing. Send stamp for sample and mention this paper.

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Positively one of the best farms in York county. Lots 9 and 10, in 5th con., Scarborough, contains 140 acres 4 miles from Markham G.T.R., 3 miles from Locust Hill, C.P.R.; 1 1/2 miles from O. church and school; two-story brick house; barn 40 by 90 feet; stone stables, 6 m.e.; 4 floors; 18 horse gasoline engine and 60 feet of shafting; water in stables; hay forks, slings e.c., complete; 4 acres orchard small fruits. Farm thoroughly drained and fences first class, as in a high state of cultivation; 3 1/2 miles from Locust Hill creamery. Bell telephone connection. Everything first-class. Address:

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On Every Winter Drive with a **Clark Carriage Heater**

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at your feet in wagon, sleigh or carriage. These heaters are made of metal throughout; they are attractively covered and lined with asbestos. They will not bend or break, and give a strong, comforting heat on the coldest day. Every one guaranteed to please or money refunded. They burn Clark coal at a cost of only 1 cent a trip of 5 hours or more. They cost so little you can afford to keep warm.

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Every cold drive can be robbed of discomfort and made warm and cheerful through the use of a Clark carriage heater. It is foolish to be without one of these comforting devices. They are inexpensive, durable, attractive and cost practically nothing to operate. They are manufactured by the Chicago Flexible Shaft Company, and are advertised in a special offer in this issue. Order one, or write for the catalogue mentioned.

CANARIES.—We have pleasure in drawing the attention of our readers to the advertisement of canaries now running through these columns. These birds are offered by W. Rudd, Bird Specialist, Norwich, Eng., whose aviaries are the market-place of Norwich—the canary market of the world. Mr. Rudd makes a specialty of export orders, and can supply every variety of canary, as well as cases and bird-room requisites, at lowest prices for the quality. Write a postal for illustrated catalogue and breeder's handy diary. Please mention this paper.

GOSSIP.

PATIENCE.

It takes a heap o' week days
To prepare for Sunday's rest;
It takes a heap o' ripenin'
Till the fruit is at its best;
It takes a heap o' practice
Till you learn to sing a song—
A lot o' patience is required
To push this world along.

It takes a heap o' weather
Goin' every kind o' way,
Before we see the splendor
Of a truly perfect day.
An' it often takes long sorrow
Ere you earn the right to smile,
But it sure is worth the waitin'
To be happy for a while.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS.

During the period from July 26th to October 12th, 1907, records for 93 cows were accepted by the American Association; six of which were begun more than eight months after calving. All made seven-day records, two made fourteen-day, one a fifteen-day, and four made thirty-day records.

Eighty-seven of these animals of all ages, of which three-fifths were heifers with first or second calves, produced in seven consecutive days 32,291.3 lbs. of milk, containing 1,124.07 lbs. of butter-fat; thus showing an average of 3.48 per cent. fat. The average yield for each animal was 371.2 lbs. of milk, containing 12.92 lbs. of butter-fat; equivalent to over 53 lbs., or 25 quarts of milk per day, and over 15 lbs. of the best commercial butter per week.

In the list are the following cows, owned in Canada:

Inka Josephine Abbekerk 96015, age 7 years 17 days; days from calving, 52; Milk, 579.4 lbs.; per cent. fat, 3.03; fat, 17.570 lbs. Fourteen-day record—Days from calving, 45; Milk, 1,146.7 lbs.; per cent. fat, 2.98; fat, 34,203 lbs. Owner, W. W. Brown, Lyn, Ont.

Clothilde De Kol Waldorf 96014, age 4 years 1 month 15 days; days from calving, 50; Milk, 445.9 lbs.; per cent. fat, 3.18; fat, 14,193 lbs. Owner, W. W. Brown.

Inka De Kol Waldorf 96017, age 3 years 11 months 22 days; days from calving, 66; Milk, 414.7 lbs.; per cent. fat, 3.51; fat, 14,552 lbs. Owner, W. W. Brown.

Countess De Kol Josephine 96016, age 2 years 10 months 27 days; days from calving, 78; Milk, 291.6 lbs.; per cent. fat, 3.36; fat, 9,807 lbs. Owner, W. W. Brown.

Sara Jewel Hengerveld 2nd 96018, age 1 year 11 months 24 days; days from calving, 29; Milk, 332.1 lbs.; per cent. fat, 3.32; fat, 11,019 lbs. Owner, W. W. Brown.

Beauty Hark 2nd 82002, age 2 years 18 days; days from calving, 26; Milk, 307.1 lbs.; per cent. fat, 3.21; fat, 9,847 lbs. Owner, W. W. Brown.

Inka Josephine Abbekerk 96015, age 7 years 17 days; days from calving, 252; Milk, 371.2 lbs.; per cent. fat, 3.28; fat, 12,170 lbs. Prior record—17,570 lbs. fat from 579.4 lbs. milk. Owner, W. W. Brown.

An Ideally Perfect Piano.

Exquisite in Tone.

Full in Volume.

Artistic in Design.

Which may be operated in two different ways.
That is what you get when you buy a

GERHARD HEINTZMAN
PLAYER PIANO.

The accomplished pianist will find the instrument perfect in scale and responsive to every demand put upon it.

To the lovers of music unable to play a piano, the mechanism within the "Gerhard Heintzman" places the art of piano-playing within their reach. The self-playing attachment can be used instantaneously, and makes accessible to everyone all that is best in the world of music.

Write for catalogue and particulars as to terms.

Your present instrument taken as part payment.

Hamilton Salesrooms:
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Gerhard Heintzman, Ltd.

97 Yonge Street,
TORONTO, CAN.

535

THE SPICE OF LIFE.

"Chumpley's auto got away from him and ran fourteen miles on a country road." "I'll bet he was mad." "No," he was tickled. He said it was the best run his car had made without adjusting."

In the studio of Guzun Borglum, the sculptor whose female angels of the Annunciation and the Resurrection had recently to be destroyed, a woman was taking an interested look around.

"Tell me, Mr. Borglum," she cried, impulsively, "is sculpture very difficult?" "No," replied the artist, smiling, "it is very simple and easy. You have only to take a block of marble and a chisel, and knock off all the marble you don't want!"

In a little Ontario settlement the Presbyterian church was discussing the matter of more modern improvements. One of the newcomers remarked that he thought it would be a good idea to have some cuspidors installed, meaning thereby to convey a gentle hint to certain members who were addicted to the use of tobacco.

A canny Scot, whose great love for the church outran his knowledge, immediately expressed himself as pleased with the suggestion, and said:

"I heartily agree wi' the remarks of the last speaker, and in order to breeing this matter to a vote, I now move that John McTavish and Alexander Macpherson be appointed cuspidors for the ensuing year."

SLOW-ACTING JOKES.

Observation leads us to the conclusion that the Scotchman's proverbial reputation for cranial density is misunderstood. However, there are enough pawky Scots to furnish plenty of fun for the jesters and keep the reputation alive. We have all heard the story of the Scotchman who awoke in the night to laugh at the wrong end of a joke. The following yarn is about one into whose head it evidently required nearly a day for the point of a sally to penetrate: A Scotsman up for the week end had been asked by his friend to go to a music hall—"Na, na, man! D've no ken I never visit a music hall on th' Saturday, for fear I should laugh in th' kirk on th' Saw-bath?"

ODD USE FOR THE TONGUE.

The brakeman groaned and sighed, a cinder in his eye.
"I'll tongue it out for you," said the conductor, and he bent over his associate, ran his tongue over the pupil of the man's eye, and in a jiffy had out the cinder.

"On railroads, in foundries, in stoke-holes," the conductor said, afterward, "wherever cinders get continually in the eye, there everybody extracts them in one way—with the tongue. The tongue removes things better than any instrument would do—it sweeps the eye clean as a flood sweeps clean a riverbed. Further, it is painless; its passage over the eyeball is, indeed, a rather pleasant sensation. As regards the sensation of the owner of the tongue—well, to do good we should be willing to undergo a little nastiness."

The public-spirited lady met the little boy on the street. Something about his appearance halted her. She stared at him in her near-sighted way.

The Lady.—Little boy, haven't you any home?

The Little Boy.—Oh, yes'm; I've got a home.

The Lady.—And loving parents?

The Little Boy.—Yes'm.

The Lady.—I'm afraid you do not know what love really is. Do your parents look after your moral welfare?

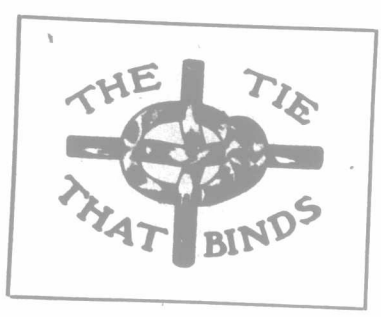
The Little Boy.—Yes'm.

The Lady.—Are they bringing you up to be a good and helpful citizen?

The Little Boy.—Yes'm.

The Lady.—Will you ask your mother to come and hear me talk on "When Does a Mother's Duty to Her Child Begin?" next Saturday afternoon, at three o'clock, at Lyceum Hall?

The Little Boy (explosively).—What's th' matter with you, ma! Don't you know me? I'm your little boy!



DID YOU EVER EXAMINE

The Standard Woven Wire Fence

and farm gates? If not, you should before giving an order for your requirements. The fact that others are trying to imitate it is proof of its superiority.

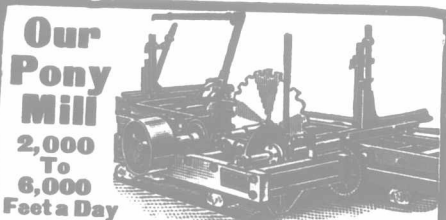
THE TIE THAT BINDS

will not slip, and is really the strongest lock on the market. Note how it hooks on the line wire.

Write for catalogue and sample lock. Address;

The Standard Wire Fence Co.,
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Our Pony Mill 2,000 To 6,000 Feet a Day SAW MILLS

From this size up to largest, standard mills with variable friction feed. Favorites in every lumber district. Cut most with least power, easy to handle. Edgers, Trimmers, Lath Mills, Shingle Mills, Cut off and Rip Saws, etc. Send for free catalogue.

American Saw Mill Mch'y Co.,
113 Hope St., Hackettstown, N. J.,
621 Engineering Bldg., New York City.

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This Seal is Your Guarantee of Quality When Buying Linseed Cake

EVERY bag of *Sherwin-Williams Screw Press Linseed Cake or Meal* (ground cake) contains a certificate, showing the percentage of oil and protein in the contents, stamped with our seal. It is your protection in buying. We stand behind this guarantee.

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is unquestionably the highest quality on the market. The "screw press process," which we control exclusively in Canada, enables us to make better oil and better cake than that made by any other process. The seed we use is No. 1 Northwestern, the largest and richest procurable. We exercise unusual care in manufacture and guard against impurities at every stage. It will pay you in economy, results and satisfaction to feed only the best cake—the cake with a guarantee.

Write for our booklet (B-237) which tells much about linseed cake and how to feed it. If you request, we shall be glad to quote you prices on S-W. Screw Press Linseed Cake when the booklet is sent. Address:

THE SHERWIN-WILLIAMS Co.

LARGEST PAINT AND VARNISH MAKERS IN THE WORLD

LINSEED OIL DEPT.

641 Centre Street

Montreal, Que.

Comfort with Economy



Attach a **Winnipeg Heater** to any stove pipe or furnace pipe, and it fills the place of another stove without any additional fuel. It radiates an even, humid, pleasant, healthy heat, and draws the cold air from the floor.

Mr. P. M. MacKay, General Agent of the Lake Erie & Detroit River Railway, writing to his General Manager, said: "I would much prefer the heater to another stove, apart altogether from the consideration of saving in fuel."

Ask your stove dealer at once, or write for full particulars to

THE 1900 WASHER COMPANY,

Dept. A.

355 Yonge St., Toronto.

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THE WILKINSON PLOUGH CO., Limited, Toronto, Canada:

GENTLEMEN.—Please send me (free) the book, "Practical Experience with Farm Manures."

Name..... P.O.....

Province.....

Have you a Manure Spreader? Answer.....

The Farmer's Advocate and Home Magazine

"Persevere and
Succeed."

Established
1866.

Vol. XLII.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1876
LONDON, ONTARIO, OCTOBER 31, 1907.

No. 788.

EDITORIAL.

DAIRY EXHIBITIONS, U. S. AND CANADIAN.

All who hold progress of the dairy industry to heart are pleased to hear that the promoters and organizers of the National Dairy Show succeeded in drawing together, at Chicago, this month, a vast and representative exhibition, exponent of the resources, achievements and tremendous importance of dairying on the North American continent. Those lines of animal husbandry which have for their end the making of meat and the production of equine perfection and power, have, of late years, had fitting representation at the International Live-stock Exposition in December, but, until two years ago, the United States dairy industry has had no such exposition. To include it with the December International was impossible, owing to the already behemoth proportions of that institution, hence a separate dairy show became necessary. The first attempt, in 1905, was but moderately successful. This year, profiting by experience, energetic effort succeeded in assembling a display of dairy stock, dairy apparatus and dairy products, which, for extent and representative character of exhibits, easily outclassed any previous attempt at dairy exhibition in America. In fact, the successful exhibition of Canadian Ayrshires by Messrs. Ness and Hunter lent an international aspect.

Attendance from out of town was not large, of course, as compared with State or Provincial autumn shows, but was considered very satisfactory by the management, being officially estimated at 25,000. The city paid admissions fell below expectations, one reason, doubtless, being poor transportation facilities to the Stock-yards. All prize-money was paid in cash October 19th, and exhibitors of machinery and cattle are said to have gone away well pleased. We understand there will be another National Dairy Show held next year, probably in New York, Milwaukee or Chicago.

The success of the second show, and the hearty support it has quite properly received from the American agricultural press, will no doubt revive the agitation for a similar attempt in Canada, for it is freely conceded that a more comprehensive winter dairy exhibition than we now have is desirable. There is, however, no call to imitate the American example. Imitations are generally failures, and in the present case there are special reasons for avoiding the attempt.

In the first place, geography declares that a special dairy exhibition in Canada could not possibly be more than Provincial as to attendance, and largely so as to exhibits. Discretion points to the unwisdom of attempting to make such an exhibition serve a larger sphere than the present winter fairs at Guelph, Ont.; Ottawa, Ont., and Amherst, N. S., respectively. That being the case, there is nothing to be gained and much to be lost by divorcing the dairy features from these shows, which are unique institutions, admittedly superior from the standpoint of practical educational value to either the National Dairy Show or the International Live-stock Exhibition in Chicago. The Canadian Winter Fairs are institutions to be proud of, and capable of large extension and development with advantage to each and all the branches of husbandry they represent. To detract from them would be a species of child's play, to which we trust no Government, Federal or Provincial, will ever become a party. There is need, however, for an extensive development of the dairy feature at all of these, and the first step should be to double or treble the present representation of the dairy interests on the boards

of control. This done, and the anticipated steps taken toward enlarging the housing space at Guelph, it will then be in order for dairy breeders and dairy manufacturers to demonstrate their faith in the feasibility of a winter dairy exhibition by exhibiting more freely than they have felt disposed to do in the past, and they may rest assured that a Department of Agriculture which has already done so much for the dairy industry as that of the Hon. Nelson Monteith during his brief term of office, will gladly meet all reasonable requests for increase of facilities and accommodation.

THE CLOVEN HOOF PROTRUDES.

"Office and Field," a Toronto journal devoted to the interests of insurance, has, ever since the report of the Royal Canadian Life-insurance Commission, been seeking to discredit the recommendations of that body, chiefly by alleging that they savored too strongly of the Armstrong law of New York State. Thus, under the guise of jingoistic patriotism, it has persistently attacked practically every recommendation which was suggested by the Canadian Commission to guard against the evils which had grown up in the American insurance business, and which threatened to develop in the Canadian field. A chief reliance in the programme of insinuation has been the publication of cartoons, which "The Farmer's Advocate," in common, no doubt, with other papers, has been invited to reproduce. At least, all summer long we have been receiving marked copies of newspapers containing one or another of these cartoons, with articles to correspond. The numerous papers which were duped into republishing these cartoons are respectfully referred to the following exultant headlines from the October issue of Office and Field:

"THE CAMPAIGN OF EDUCATION.

"Hearty Co-operation of the General Press.
"About Two Hundred and Twenty-five Canadian
"Newspapers Have Reproduced Our
"Cartoons, Absolutely Without One
"Penny of Payment as Ad-
"vertising."

"Education," indeed! And note the phrase, "Absolutely without one penny of payment as advertising." We trust the publishers which proved "easy" enough to give this free advertising in the interests of "Education" feel properly proud of themselves, but to the general public they will look like thirteen cents. Such a campaign and such a boast indicate plainly the organized effort behind the scenes. The cloven hoof protrudes through the thin veil of patriotic sentiment behind which it would fain conceal itself. But the Canadian public is not so easily deceived.

It is not contended that the Insurance Commission's report is perfect. No doubt it will be modified before being crystallized into Federal law. But ridicule is not argument, and the kind of discussion which bitterly criticises so much, and finds practically nothing to commend, does not strike anyone as animated by a candid spirit. As a matter of fact, we do not believe the best insurance companies find their business very hard hit by the insurance investigation, nor will they, we judge, by any legislation likely to be enacted as a result thereof. Judging from the recent insurance conventions in Toronto, and from interviews we have had with the agents of reputable companies, "Office and Field" does not correctly represent the sentiment of fair and reasonable insurance men, who have no fear of publicity and no object in surrounding their business with a haze of mystery. In the long run, strict Government

supervision, with constant publicity and reasonable safeguards as to investments, will redound to the benefit of reliable companies, and keep the business generally on a safe financial footing.

SCIENCE AND PRACTICE OF ECONOMICAL FEEDING.

In the whole field of agriculture there is probably no study more absorbing or more profitable than that relating to the feeding of domestic animals, yet there are few less perfectly understood by those who should be informed concerning them. This fact, combined with the comparative scarcity and present extravagant values of feedstuffs, render opportune the discussion on stock-feeding which we propose to institute through our columns this winter. For this discussion, the services of expert contributors have been enlisted to supplement editorial effort, and, in addition, correspondence is invited from practical men in all branches of live-stock husbandry, from poultry-keeping to dairying and horse-raising. Theoretical dissertations are not desired, but inquiries and articles based on practical experience in economical feeding are always in order.

To many farmers, articles on the science of feeding, embracing such terms as "balanced rations," "protein," and "carbohydrates," seem hopelessly technical and complex; yet, when one comes to read up a little, he is surprised to find how few formidable terms there are, and how easy these few are to understand. It is true the feeding of animals is a complex study—more complex than some laboratory chemists and classroom professors have realized. It must be complex, because it has to do with the wonderful phenomena of life and natural law. There is far more in feeding than ever was learned in a laboratory, although the chemist has been of immense assistance in working out the science of feeding; and when we find a man who combines knowledge of animal chemistry with practical experience as a stockman, we have the makings of the genuine feeding expert.

Without attempting, in this limited space, to enumerate all the important factors of animal nutrition, it may be pointed out that the first thing a beginner has to take in is the fact that there are four distinct elements which should be present in approximately definite proportions in all classes of feeds. These are (1) protein, (2) carbohydrates, (3) ether extract (consisting of various vegetable fats and oils), and (4) ash or mineral matter. Each of these has its own particular function to fill in the animal economy. Protein the most important element of all, and the one deficient in most kinds of ordinary farm roughage, is chiefly concerned in the production of muscle, skin, horn, and the vital fluids of the body. It is especially demanded by young, growing animals, and by cows yielding milk. Carbohydrates (sugars, starches, cellulose and the like) are employed in producing animal fat and heat, and ether extract is devoted to similar purposes. Ether extract has more than twice the heat-yielding capacity of carbohydrates, hence it is customary, in estimating the heat and fat producing value of a food, to group the carbohydrates and ether extract together, multiplying the pounds of ether extract by 2.3, adding the product to the pounds of carbohydrates, and expressing the sum in terms of carbohydrates. When the proportion of protein to carbohydrates and fat in a daily ration is in the relation which experiment has determined to be the best for any specific purpose, it is called a "balanced ration." In considering the "balance" of a ration, the amount of ash is not taken into consideration, as there is usually

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
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JOHN WELD, MANAGER.

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

It is impartial and independent of all cliques or parties, handsomely
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men, gardeners, stockmen and home-makers, of any publication
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agrade. Contract rates furnished on application.

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arrears must be made as required by law.

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sible until all arrears are paid and their paper ordered to be
discontinued.

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Money Order or Registered Letter, which will be at our risk.
When made otherwise we will not be responsible.

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side of the paper only.

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of address should give the old as well as the new P. O. address.

12. WE INVITE FARMERS to write us on any agricultural topic.
We are always pleased to receive practical articles. For such as
matter, Criticisms of Articles, Suggestions How to Improve THE
FARMER'S ADVOCATE AND HOME MAGAZINE, Descriptions of
New Grains, Roots or Vegetables not generally known,
Particulars of Experiments Tried, or Improved Methods of
Cultivation, are each and all welcome. Contributions sent us
must not be furnished other papers until after they have
appeared in our columns. Rejected matter will be returned on
receipt of postage.

13. 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.

enough of this in an ordinary ration to serve all
necessary purposes. An occasional exception oc-
curs in the case of young animals, which need an
extra amount of ash for bone-building pur-
poses, and, in feeding these, care should be taken
to supply a reasonable quantity of such feeds as
bran, which contains a generous percentage of ash
for bone-building, as well as of protein for muscle-
making.

In the past, one of the chief aims of scientific
investigation has been to establish what propor-
tion of protein to carbohydrates and ether extract
would constitute "balanced rations" for various
purposes. The first standards formulated were
the German standards, which called for rations
with a considerable percentage of protein. Later,
American researches have established that good
use can be made of rations containing consid-
erably larger relative percentages of carbohydrates
than were formerly considered admissible. As
rations rich in carbohydrates are usually more
economical to raise, and generally cheaper to pur-
chase than those rich in protein, this is an im-
portant saving.

The reader must not run away, however, with
the idea that a ration is all right so long as it
is "balanced." While an approximately "bal-
anced" ration is generally the most profitable,
precise balance is not necessary, because, to a cer-
tain extent, an excess of protein may compensate
for a deficiency of carbohydrates, while, on the
other hand, an excess of carbohydrates may often
be utilized to advantage, even though the per-
centage of protein be somewhat below that re-
quired for an ideal ration. Besides, numerous
practical considerations, such as digestibility,
palatability, wholesomeness, bulk and economy
(which varies with localities and the range of
prices) must all be given due weight. These will
be discussed in later issues. Meantime, we ad-
vise those who wish to post themselves on the im-
portant subject of feeding to select one or more

of the following excellent standard books: "Feeds
and Feeding," by Henry. "The Feeding of Ani-
mals," by Jordan, or Prof. Shaw's new work,
"Feeding Farm Animals." Every farmer needs
such an authoritative treatise on this subject, giv-
ing tables of the percentage of digestible nutrients
in all the staple feeds, and time spent in perusing
it during the winter evenings will be amply re-
paid, not only in interest, but in dollars and
cents.

HARVEST HOME ON THE COAST.

The Pacific-Slope country has been holding its
fares the past few weeks, amid ordinarily favor-
able weather conditions, and attended by large
crowds of exhibitors and interested spectators.
Agricultural work on the coast is peculiarly of a
class that easily contributes to the holding of ex-
hibitions. There is no long-continued pull to
gather in a crop before frost sets in, as in prairie
farming. The crops of the Western coast are
those which are naturally suggested by the term
"harvest home"; fruits, vegetables, field roots,
hay and grain, all grown in such quantities that
their handling does not demand prolonged exer-
tion. Stock, also, is a prominent feature of
Coast agriculture. The farms there closely re-
semble those of Eastern Canada and parts of
Great Britain. An attempt is made to raise
practically everything of which a soil is capable
of producing. The nature of the distribution of
population in British Columbia and the natural
resources of the country make it imperative that
this shall be the case. The cities constitute the
larger part of the market, and the first aim of the
farmer is to supply what his nearest city demands.
Agricultural products, if we except fruits, are not
exported in very large quantities. The system of
farming is intensive, and each farm is somewhat
of a demonstration plot of the possibilities of the
country. The cultivated areas of British Colum-
bia increase slowly, for many very good reasons:
First, because the area suitable for cultivation is
not extensive; and, second, because it requires a
lot of labor to prepare the land for crops. Hence,
although the Province is growing rapidly, her con-
suming classes keep pace with the producing, and
good markets are a usual circumstance. Fruit is
one of the largest commodities produced, and al-
though the export surplus has to bear an enormous
charge for express and freight before it reaches its
market, it still is one of the most profitable prod-
ucts grown. The agricultural and horticultural
potentialities of British Columbia may be said to
be scarcely discovered. The valleys already set-
tled and planted have not reached their maximum
yield, and there are others whose fertility is still
locked in forest fastness. The opening up of the
interior of British Columbia will be one of the
great agricultural pioneering tasks of the present
century.

DRAG THE ROADS IN AUTUMN.

Reports coming in from members of the split-
log-drag brigade amply sustain the claims ad-
vanced on behalf of this simple means of main-
taining and improving earth roads. It would be
premature, at this date, to foreshadow the report
of the judge, but it will not be out of place to
remark that, to the question, "Is the split-log
drag a successful means of keeping earth roads in
condition?" every competitor who has so far re-
ported answers "Yes," and those who have had
previous experience with the single-stick, iron-shod
scraper or leveller, pronounce the split-log drag a
decided improvement over it. A light drag is
much better than a heavy one. Cedar appears
to be a good material to use.

We mention this much just now by way of en-
couraging the construction and use of drags for
the purpose of smoothing the roads in autumn,
thus preventing, in part, the excessive rutting and
roughening of the road surface. Few people ap-
preciate how much injury is done highways by
water collecting in hoof-prints and ruts, percolat-
ing into the subsoil, and there, by frost expan-
sion, disrupting the bond of the roadbed, honey-
combing the foundation as well as the surface,
and producing conditions which spring thawing
and traffic reduce to an unutterable mire. Every
reasonable effort that can be put forth in autumn
to keep the road smooth and well drained and

frost seals the surface will be richly repaid by the
immediate smoothness and permanent betterment
of the highway. We plow fields in autumn to
give King Frost a chance to disintegrate the
particles of soil. Conversely, the road should be
kept smooth, hard and compact, to avoid such
disintegrating effect. To this end, clean out ob-
structions from the ditches, look to the culverts
and drainage outlets, and then drag the road
after every wet spell, and especially before a
prospective freeze-up. Practically all kinds of
roads should be dragged at this season—sand,
gravel and clay, but particularly the clay. Opin-
ion has been expressed that, in localities where
the winter is open, a split-log drag could be used
to excellent advantage, not only in fall, but dur-
ing winter break-ups. For such work, especially,
the split-log drag would be far superior to the
single-piece leveller, as, if not of too heavy ma-
terial, it can be used right in the mud; and, in-
deed, requires, for best results, that it be used be-
fore the road is dry. We must keep the drags a-
dragging, and build more.

OUR MARITIME LETTER.

THE NEW COLORED WEED BULLETIN.

No greater pleasure has been ours for many a
day spent in the upbuilding, as best we knew, of
agricultural sentiment in the country, than that
which the perusal of the new farm bulletin on
weeds, with its rich and accurate descriptions, its
splendid illustrations in all the glory of the nat-
ural colors, and the invaluable advice as to ex-
termination, has afforded us. Most mortals enjoy
much more intensely the works, public or private,
to which they have been a contributing factor.
Whilst this color-page of Canadian noxious weeds
and their seeds is something altogether new in the
free literature of the country, and whilst we can
only claim special contribution to one or two of
the subjects contained within these covers, of
which due credit is given, we have had the great
satisfaction of being the first, we believe, to urge
upon the distinguished and especially capable and
devoted Dominion Botanist, Dr. Fletcher, in sea-
son and out of season, the great value of a work
such as this to Canadian agriculture, since it
would enable the farmer to identify his plant
enemies everywhere, and, especially, make it easy
for the rising generation to gather a fund of
knowledge in which their forebears were lament-
ably deficient. Decidedly, the work has been
carried out on a scale much more magnificent than
we could have planned; undoubtedly, it has cost
the country a considerable penny, but certainly it
is worth all the money expended, and more, too.
It is, perhaps, the first monument in our agricul-
tural literature which will endure for much time—
the veritable "monumentum aere perennius" of
the poet.

Already a favorable word of this work has
reached your readers. Its special timeliness to
this Maritime community, and the personal part
in it for us, will admit of this further reference
here. We are proud of the publication as a Cana-
dian one, and proud, also, of the special copy
which reached us before the general distribution,
inscribed as follows:

To My Good Friend
The Reverend A. E. Burke,
Who has done so much to develop the re-
sources of Prince Edward Island
JAMES FLETCHER.
Ottawa, Sept. 20, 1907.

We receive many kind testimonies in our pas-
sage through life, some of them merited, some of
them unmerited; but certainly there is none we
appreciate higher than those which have special
reference to our little and imperfect efforts in
favor of the agriculture of the Dominion in gen-
eral and that of our own fertile Island Province
in particular. And the regard of such men as
Dr. Fletcher and his associates in the official work
of the special branch having to do with this basic
source of the country's activities, is the best re-
ward which the disinterested can possibly covet
for any little sacrifices and hardships which they
may have to endure. We shall cherish this copy
of "Farm Weeds," then, in this special sense,
among our most precious possessions.

Seed Commissioner Clark, in transmitting the
volume to the Minister of Agriculture, says: "The
text of this bulletin is by Dr. James Fletcher,
Entomologist and Botanist to the Dominion Ex-
perimental Farms, and the illustrations were made
in water-color from actual specimens under his
supervision, by Mr. Norman Criddle, of Aweme,
Man., while employed by the Seed Branch." It
contains 56 plates, 4 of which are devoted to the
illustration of noxious weed seeds, each of these
plates containing some 20 examples in their na-

tural colors. The 52 plant illustrations cover the whole range of weed enemies, at least one specimen of a family being reproduced from nature. Plate 28, for example, is painted from a vigorous plant of Ragwort (*Senecio Jacobaea*), the redoubtable source of the Pictou Cattle Disease, and the illustration is so perfect that one instinctively attempts to pick it up and destroy it. The treatment of each subject is exhaustive. Take this Ragwort again, in which we are all so interested; the letterpress gives the generic, botanical and local names; it describes the plant in every particular; it gives the flowering time, the method of propagation, its occurrence, the injury it does, and the remedy to be employed against it. Speaking of its history, we find the following: "The history of this plant has been worked up by Dr. W. H. Pethick in Nova Scotia, and by Rev. Father Burke and Mr. L. W. Watson in Prince Edward Island; and good work has been done by all these investigators in pointing out the danger of neglecting this weed. It would appear as if the Ragwort had been imported into the two Provinces independently, to Nova Scotia from Scotland, and to Prince Edward Island from Ireland, where it is known under the same name, Baughlan, as is used in its new home."

Dr. Fletcher accepts without reserve the findings of the Antigonish investigators into the Pictou Cattle Disease, declaring this plant, when ingested into the stomachs of cattle, to be the cause of "a curious and fatal disease of the liver (hepatic cirrhosis)," which, however, is not, as was long supposed, contagious. To get rid of the Ragwort, we are quoted—and quite correctly—as saying that a couple of mowings will usually destroy it; and, as domestic animals do not feed on it in the green stage, all are advised to adopt a short rotation as a sure way of being debarred of it entirely.

We have held the opinion, too, that it is not the plant, but a fungus which grows upon it, when dried with other grasses, which sets up "orange liver" in animals. The Dominion Veterinary Director-General, Dr. Rutherford, is now looking into this side of the case, and we hope for a positive pronouncement upon it within a reasonable period. Meantime, the repeated warning given to farmers everywhere to extirpate the ragwort is having its effect. This new and striking presentment in farm weeds will still further help on the admirable work. And this beautiful, permanent bulletin, intended for the libraries of our farmers and for the schools and colleges, can be had free for the asking. It is certainly worth five dollars of anybody's money. Let every farmer apply for it early, peruse it carefully, and preserve it for continual reference. Thus will the learned author give noxious weeds in Canada their surest death blow.

A. E. BURKE.

CANADIAN PRODUCE IN ENGLAND: LIVERPOOL'S INVITATION.

Improved facilities are being provided at Liverpool, England, for the reception of farm produce from Canada. The other week an extensive cold-storage warehouse was opened in connection with the carrying business of the C. P. R. steamship line, close to the landing-place, and adjoining branches of the several British railway systems. The new structure is a spacious building, and has a capacity of 60,000 square feet, equal, it is estimated, to the accommodation of 1,500 tons of produce. There are four separate chambers, with temperatures varying from 40 to 13 degrees, and with provision for the further extension that merchants prophesy will soon be required. The plant is equipped with apparatus which insures the renewing of the air in the cold chambers every few minutes. Produce can now be conveyed from the West right across the Atlantic to the doors, almost, of the Liverpool merchants, at a uniform temperature.

According to Mr. J. E. Worrall, President of the Liverpool Provision Trade Association, this installation makes Liverpool second to none other port in facilities for handling dairy and farm produce, and all that is wanted now is a bigger supply from Canada. The head of the Bristol Association, Mr. George Spear, said that Canadian supplies at present are quite inadequate for the demand, with the single exception of cheese. They wanted more butter, bacon and eggs to render them independent of the United States, and stated that his city would be glad to co-operate with Liverpool in encouraging the importation of Canadian farm produce.

IMPLEMENT PRICES IN CANADA.

With regard to the reported advance of from ten to fifteen per cent. in the price of farm implements in the United States by reason of increased cost of labor and raw materials, which is general throughout America, Canadian farmers will appreciate the fact that the advance in Canada is only to amount to from three to five per cent.



Ragwort.

The plant which causes the Pictou cattle disease.

HORSES.

THE VALUE OF HORSE TIME.

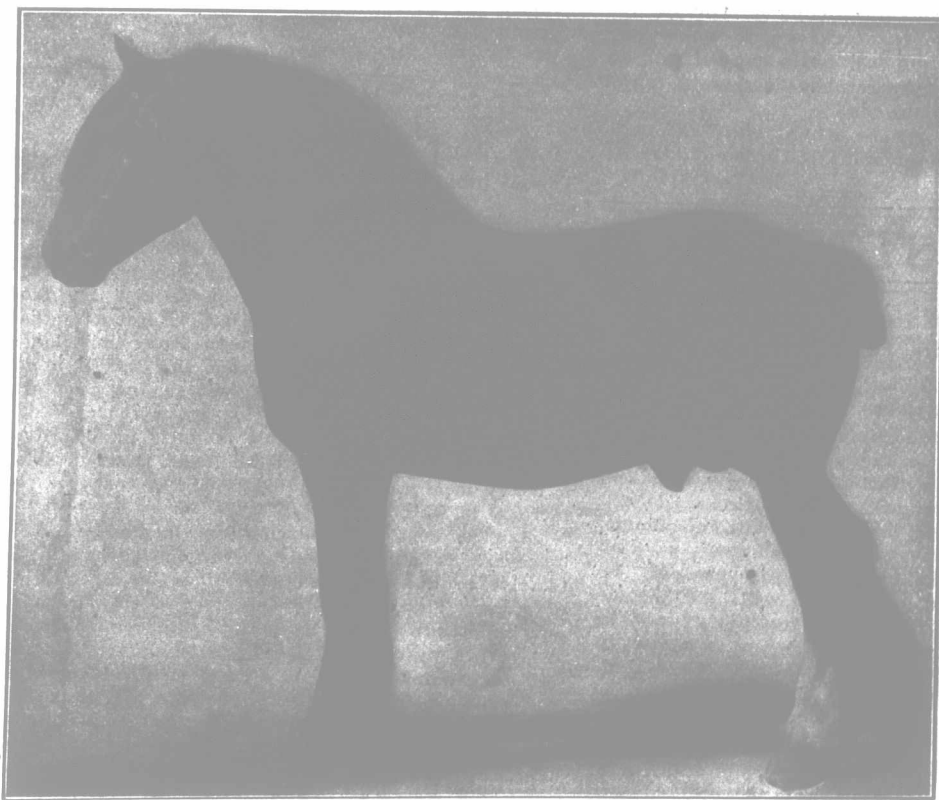
Four dollars and ninety-five cents a week is a London, Ont., merchant's weekly expenditure for the keep of a pair of delivery horses, this not counting the labor of attendance at all. Of course, on a farm the cost of maintenance is not so high, but even there the feed bill, if fairly reckoned up at wholesale prices, would bulk large in the course of a year. Yet, there will be thousands of horses out in the country trying to eat their heads off during the winter for lack of a little enterprise on the part of their owners in finding jobs of teaming at which to make them earn their board. There is far too little emphasis placed by many of us on the value of horse time. Yet, on the other hand, if the munic-

day's time of men and teams, and generally they can earn most if working together. Figure out some team work to go at when the fall plowing is over, and keep the hired man busy all winter. The provision of profitable yearly employment is one of the best ways of solving the labor problem.

ECONOMICAL METHODS OF WINTER FEEDING.

Owing to the shortage and consequent high prices of mostly all varieties of stock food, in most, if not all, sections of the Dominion, economy in wintering horses becomes an important matter with most owners. Horses that have to perform regular work, either heavy or light, must, of course, be fed as working horses demand, and, notwithstanding the high prices of oats and hay, these must form the major part of the rations; but horses, either young or old, male or female, breeders or non-breeders, that are not to be called upon to perform regular work, may be kept in good condition on mixed rations, with only a percentage of the more expensive foods. All foods being high in price, we cannot expect to winter horses cheaply, but a little consideration and time in mixing foods will lessen the cost considerably. It must be understood that sudden or violent changes in food must not be made with any animal, as such is liable to cause digestive derangement, entail a veterinarian's bill, or probably cost the life of an animal, and thereby defeat its own object, viz., economy. For instance, horses that have been worked, and well fed on hay and oats, if, when work ceases, the ration is suddenly changed to straw, roots, and a little grain or other mixtures, are very liable to suffer from indigestion or constipation in a few days after the change has been made. This danger exists in animals of all ages; hence, when there is to be a change made, it should be made gradually. The change from hay to straw should be gradual, by gradually reducing the hay ration and giving a little straw, the supply of hay being reduced and that of straw increased daily, until, in 10 days to 2 weeks, a full straw ration can safely be given. The digestive organs of an animal become accustomed to performing certain functions or to digesting certain foods, and if a sudden change be made, even to foods that are, under ordinary circumstances, as easily or even more easily digested, the change is so sudden there is danger of disease. The same rule, of course, applies to all changes in all classes of stock, but probably more particularly to horses than to ruminants. In regard to weanlings, I do not think it is economy to limit the supply of the

very best food that can be obtained. The first winter is a very important period of a colt's life, and his development and future usefulness to a very great degree, depend upon his care and thriftiness during this period. If through want of proper food or other causes he is not kept in a healthy, thrifty condition, he does not develop properly, and he will not make as good an animal as he would have under more favorable conditions, notwithstanding his treatment during the following years of his development. Hence, we consider that he should have all the good hay (well-saved clover preferred) and oats (rolled or chopped preferred) he will eat, and also a carrot or two or a turnip or mangel daily, with a feed of



Croome Cardinal 21305.

Noted prizewinning five-year-old Shire stallion, included in the Canadian consignment of R. Moore & Sons, Beeston Fields, Nottingham, Eng. See "Gossip."

ipal council or a company wants to hire some teaming done, we suddenly become seized with a high sense of the worth of a day's team work, and, unless a good round price is offered, the horses remain in the stable. That is, we would rather board idle horses for nothing than a working team at from a dollar to a dollar-fifty per diem over and above the man's wages. And the chances are the boy or man who might have been doing the driving will be choring around to small purpose, or perhaps killing time in the village store. In these days of high wages, effort should be made to realize money's worth from every fair

bran at least twice weekly, and all the salt and good water he will take. We think rolled oats better than whole, and also consider it is well to practically cook them by putting in a pail or other vessel, pouring boiling water over them, then covering the vessel and allowing to stand for a few days before feeding. This treatment of the oats renders them more palatable and gives good results, and if the colts be turned out for a few hours every fine day, or in other ways be given regular exercise, there are very few cases in which there is danger of their eating too much. Our observations and experience have taught us that,

with few exceptions, it is both safe and wise to allow weanlings all the oats they will eat, especially if treated as above, and the colt given regular exercise.

Colts over one year, idle or comparatively idle horses, brood mares and stallions, can be treated differently as regards food. Of course, horses that will be needed for work next spring, stallions that are needed for stud service, and brood mares nearing full terms of pregnancy, should be well fed on first-class food for a few weeks before these functions will be required.

During the winter months, a mixture of foods, many of which if given alone would be neither palatable or satisfactory in results, can be given with reasonable satisfaction. Straw is generally of good quality this year, roots a fair crop, and in many sections silage corn a fair crop, and many farms have full silos. While silage is not generally considered a suitable food for horses, a reasonable quantity can be used in a mixture of foods. It is palatable, and tends to make dry foods moist and palatable, but it should not be fed pure, or even in large quantities in a mixture. In mixtures, of course, all food, as hay, straw and corn, should be cut, all grain chopped, and roots pulped. A mixture of, say, 1 part by bulk of silage, 1 part pulped roots (turnips, mangels or carrots), 2 parts cut hay, and 4 parts cut straw (oat or wheat straw preferred, but barley or even good pea straw may be used), with a quart of chopped oats or its equal in weight of other chopped grain, to about every one-half bushel of the mixture. Where bran is a reasonable price, the addition of as much as of the grain can be added with advantage. For the average-sized horse, a half bushel of this mixture three times daily should suffice and keep him in good condition, small or young animals being fed in proportion. In cold weather, sufficient of this mixture can be made to last three or four days. Experience will teach the feeder how long it will remain sweet. Of course, it must not be mixed in sufficient bulk to become too hot, nor allowed to stand long enough to ferment too much and become too sour. The length of time it will remain fit for food will depend largely upon the weather and the temperature of the compartment in which it is kept. Of course, it must not be allowed to freeze. Where silage cannot be procured, cut cornstalks may be substituted; and when neither can be had, a larger percentage of roots may be used, and, when roots are absent, of course, the mixture must consist of cut hay and straw and chopped grain, in which case it is probably wise to moisten with water, in order to insure a more thorough mingling of the food. Sufficient moisture is supplied by silage or roots when present. It is good practice to vary the monotony of the ration by occasionally giving a light ration of whole hay or straw occasionally, but full feeds should not be given, as we must never forget the danger in making violent or sudden changes.

We might add that, where wheat chaff is procurable, it will give better results than cut straw. "WHIP."

LIVE STOCK.

ECONOMIC CONDITIONS AFFECTING THE PURCHASE OF FEEDERS.

Address by Prof. G. E. Day at the Ontario Winter Fair, December, 1906.

There are at least four important factors to be taken into consideration in the purchase of steers for feeding, viz.: (1) Breeding (including conformation and quality); (2) age; (3) weight; (4) condition.

The importance of the first point will, no doubt, be conceded. It is true that a well-bred steer, possessing superior quality, may not make any cheaper or larger gain in weight than one not so well bred and decidedly lacking in quality. Such a result may not be the case, or may be the case, but when it comes to selling the steers, the steer with quality always commands a premium. If we are looking forward to the time of marketing, therefore the question of quality is of very great importance. The man with steers of high quality, properly finished, does not need to peddle his cattle, for there are seldom enough of such to go round.

As to the question of age, it has been demonstrated on many occasions that young animals make cheaper gains in weight than older ones. Age, however, is only one consideration, and the case may be stated as follows: Quality, weight and condition being equal, young steers are preferable to older ones, in that they make better use of the food consumed.

The items of weight and condition are of the greatest importance, so far as feeding is concerned. To illustrate the importance of these factors, we shall refer to an experiment conducted at the College last winter with short-keep and long-keep steers. By a short-keep steer we mean one which has sufficient weight and flesh at the time of purchase to admit of his being finished for export in from two to three months of stall feeding. By a long-keep steer we mean one which requires five or six months of stall feeding before being ready for export.

In the experiment mentioned, the short-keep steers

were divided into two groups, the heavier ones being put into one group, and the lighter ones in another. There were 11 steers in each group. The object was to market the heavy steers first, and they were, therefore, fed a heavier meal ration than the lighter steers; but, as it turned out, both groups were ready for market at practically the same time, and both went away together. They were fed for a period of 60 days.

To represent long-keep steers, a lighter and thinner group was purchased. The steers of this group were fed the same kinds of food as the others, but the meal ration was increased much more slowly. There were seven steers in this group, and they were fed for 153 days.

Foods were valued as follows: Meal, \$20; hay, \$8; roots, \$2, and silage, \$2 per ton. This method of valuing foods may be open to criticism, but the values given will answer just as well as any others for the purpose of comparing the different groups of steers.

The following table gives particulars of experiment:

TABLE SHOWING WEIGHTS, GAINS, FOOD CONSUMED, COST OF GAIN, ETC.

	Group I. 11 steers. Heavy short-keep.	Group II. 11 steers. Lighter short-keep.	Group III. 7 steers. Long-keep.
Average weight of steers at commencement of experiment ..	1451.1 lbs.	1267.7 lbs.	1053.5 lbs.
Average weight of steers at close of experiment ..	1550.9 lbs.	1357.7 lbs.	1302.1 lbs.
	In 60 days. In 60 days. In 153 days.		
Average gain per steer ..	96.8 lbs.	90.0 lbs.	248.6 lbs.
Average daily gain per steer ..	1.61 lbs.	1.50 lbs.	1.62 lbs.
	Lbs.	Lbs.	Lbs.
Food consumed ..	Meal, 6025 Hay, 4820 Roots, 9560 Silage, 13100	Meal, 4905 Hay, 4700 Roots, 9280 Silage, 12910	Meal, 6181 Hay, 10529 Roots, 23563 Silage, 19970
Value of food...	\$102.18	\$90.04	\$147.46
Cost of 1 lb. increase ..	9.5c.	9.09c.	8.47c.
Average meal consumed per steer per day per 100 lbs. live weight.	.607 lb.	.566 lb.	.489 lb.

EXPLANATORY NOTES.

1. It will be noticed that the gains are not large. This is probably due to some trouble we had with the steers. The silage on the top of the silo contained very little grain; but, after about six weeks, silage was reached that was rich in grain, and the result was that the steers commenced to scour. The proportion of silage in the ration was reduced, and the trouble stopped in a very short time, but we feel sure that it interfered very materially with the gain in weight.

2. It will be noted, also, that the cost of a pound of increase in weight was highest in the case of the heavy short-keep cattle, and lowest in the case of the long-keep steers. This result is quite in accord with previous experiments, where we found that, invariably, a heavy meal ration resulted in higher cost per pound increase in weight.

3. The cost of producing the increase in weight, however, is not the only factor in determining the relative profits or losses in feeding the different kinds of steers. The weight of the steer when purchased is an important factor, as is also the condition of the steer when purchased. This can be shown by working out an example. Let us assume that all these steers were sold at the same price, say 5c. per pound, and that the long-keep steers cost 4c. per pound. This assumption happens to fit the facts of the case, as the long-keep steers cost 4c. per pound, and both long- and short-keep steers were sold at 5c. per pound. Let us take the average long-keep steer (weight, when bought, 1,053½ lbs.; weight when sold, 1,302 lbs.) and determine the profit or loss according to the values we have attached to the foods:

Cost price of steer, 1,053½ lbs. at 4c.	\$42.14
Value of food ..	21.06
Total cost ..	\$63.20
Selling price, 1,302 lbs. at 5c.	\$65.10
Profit above market value of food ..	1.90

Now, let us take an average heavy short-keep steer, and determine what we could afford to pay for him so that we can sell him at 5c. per pound, and get back the value of food, and a profit of \$1.90 above the value of the food, as in the case of the long-keep steer. Thus:

Selling price, heavy short-keep steer, 1,551 lbs. at 5c.	\$77.55
Deduct: Value of food, \$9.29; profit, \$1.90	11.19

Value of steer when bought, to give same results as long-keep steer.\$66.36

That is to say, we could have paid \$66.36 each for this bunch of heavy short-keep steers, and have secured the same profit per head above value of food, as we did in the case of the long-keep steers.

But these heavy short-keep steers averaged 1,454 lbs. when bought; therefore, if 1,454 pounds are worth \$66.36, 100 lbs. would be worth \$4.56. In other words, if we had paid \$4.56 per cwt. for the heavy steers, and \$4 per cwt. for the long-keep steers, in this particular case, and sold them all at 5c. per pound, we would have had exactly the same profit per steer above market value of the food.

When we work out the lighter short-keep steers in the same way, we find that they would be worth \$4.55 per cwt., as compared with the long-keep at \$4 per cwt., and the heavy short-keep steers at \$4.56 per cwt.

4. The results of this experiment, and the discussion up to this point, suggest two important questions which should be perfectly understood by every man who buys cattle for feeding. The questions are as follows:

(a) Why is it that though the lighter short-keep steers were fed more economically than the heavy ones, and made their increase in weight at a lower cost per pound, they would still have to be bought at a shade lower price per cwt. than the heavy steers in order to give the same profit?

(b) Why is it that there should be such a difference (55c. per cwt.) between what a farmer could afford to pay per cwt. for the long-keep steers and the lighter short-keep steers, and such a narrow difference (1c. per cwt.) between what he could afford to pay for the lighter short-keep and the heavy short-keep, considering that the long-keep steers made their increase in weight 62c. per cwt. cheaper than the lighter short-keep, whereas the lighter short-keep made their increase in weight only 50c. per cwt. cheaper than the heavy short-keep steers?

The answer to question (a) is simple if we remember that the feeder's profit is made by increasing the value per pound of the original weight of the steer. Thus, if he increased the value of the original weight of the heavy short-keep steers by 1c. per pound, the increase would amount to 14.54 per head; whereas, in the case of the lighter short-keep steers, an increase of one cent per pound in the value of the original weight would amount to only \$12.67 per head, making a difference of \$1.87 per head in favor of the heavier steers. The more economical method practiced in feeding the lighter short-keep group, very nearly wiped out this difference, but there would still be a slightly larger profit on the heavier steers, if both groups had been bought at the same price and sold at the same price per pound.

Question (b) is more complicated. In the first place, the short-keep steers were heavier, and this fact counted in their favor as explained under question (a). But another important factor enters into this problem, viz., the long-keep steers had to be increased in weight 248.6 pounds per head before they were finished; whereas, the short-keep steers were finished by increasing their weight only 90 pounds per head. If this increase in weight could be sold for as much per pound as it costs, it would make little difference whether the steer were thin or fleshy when bought, but such is not the case. If both these lots were sold at 5c. per pound, there would be a loss of 4.09c. per pound of increase in the case of the short-keep steers, and a loss of 3.47c. per pound of increase in the case of the long-keep cattle. (See table for cost per pound increase.) Let us see how this works out:

Total loss per head incurred on increase in live weight necessary to finish cattle for export:

Long-keep steers, 248.6 lbs. at 3.47c.....	\$8.63
Short-keep steers, 90 lbs. at 4.09c.	3.68
Difference.	\$4.95

Thus, while the loss is less per pound of increase in the case of the long-keep steers, yet the total loss is greater, owing to the fact that more pounds of increase were necessary to finish them.

Now, the only way to make up this loss is to increase the value per pound of the original weight of the steer, and, therefore, the greater the loss to be made up, the greater must be the increase in the value per pound of the original weight of the steer.

From what has been said, it will be seen that the light short-keep steers, as compared with the heavy short-keep steers, labored under only one disadvantage, viz., they were lighter in weight; but the long-keep steers, as compared with the short-keep steers, were under a double disadvantage, in that they were both lighter and thinner.

5. The points brought out by this experiment may be summarized as follows:

(1) To feed steers cheaply, the meal ration should be kept as low as possible, consistent with securing a reasonable gain in weight.

(2) Heavy, fleshy (short-keep) steers may be fed a heavier meal ration per 100 lbs. live weight than

lighter and thinner steers, and give an equal profit, making allowance for their greater first cost per pound.

(3) The lighter and thinner the steers, the greater the need for economizing in regard to the meal ration.

(4) Conditions being equal, heavy steers are worth more per pound to buy as feeders than lighter ones, the selling price per pound being the same.

(5) Weight being equal, a fleshy steer is worth more per pound to buy as a feeder, the selling price per pound being the same.

(6) The lighter and thinner the steer, the greater the "spread" between the buying and selling price per pound necessary to compensate the man who feeds him.

(7) In this experiment, steers which weighed 1,053.5 pounds each when bought, which are increased 348.6 pounds each in weight, and were sold at 5c. per pound, required a spread of \$1 per cwt. between the buying and the selling price to give a profit of \$1.90 per head above value of food; whereas, a "spread" of only 45c. per cwt. between the buying and selling price gave an equal profit per head on steers sold at the same price per pound, which weighed 1,267.7 pounds each when bought, and required to be increased in weight only 90 pounds per head in order to finish them.

(8) The results of this experiment must not be regarded as conclusive. They indicate, however, what may happen in feeding steers, and seem to be in accord with the best practice in feeding.

THE CATTLE-FEEDER'S PROBLEMS.

Editor "The Farmer's Advocate":

This being more of a dairying than a cattle-feeding district, the answers to your questions submitted are necessarily more personal than gathered from those engaged in the business about here. The opinion, however, is prevalent that present prices of fat cattle are not encouraging enough to coax any new hands into it. For some years past the margin of profit, if any, has been so small that numbers have gone out of it, and, this year, all feeding material is so expensive many will be tempted to market a certainty rather than speculate on futures in beef.

The right kind of feeders, breedy two-year-olds, weighing 1,200 lbs., are always difficult to get at any price, but there are plenty of the 900- to 1,000-lb sort and unfinished three-year-olds. The export trade being so little influenced by our product, possibly this winter something to supply our local trade, some nice butchers', will make as good a return as anything.

The way Chicago packers are taking care of the enormous runs of cattle on the market, and filling their refrigerators, may indicate they are looking for dearer beef next spring.

Undoubtedly, it is best to start stabling early, and turn out during the day, thus avoiding any loss of flesh and less shrinkage by the gradual change of feeds. No rape is grown in this district for cattle. I avoid buying, in the fall, cattle that are not dehorned, and prefer feeding them in loose boxes.

For bulky food, our main reliance is ensilage mixed with an equal quantity, in bulk, of cut hay and straw, to which is added a few pulped roots.

For carrying steers over, the above ration is sufficient, except, perhaps, for the addition of a little bran; and, for finishing, I like to start on the foregoing with bran, for six weeks, then gradually beginning with two quarts of grain a day, increase it up to six quarts. My corn is planted in hills; is matured when cut, and would husk anywhere from 60 to 80 bushels shelled corn.

With bran at \$24, and shorts at \$27, they are entirely beyond their feeding value. Wheat, in comparison, at \$33.50 a ton would be far more economical. Oats at \$35 a ton are out of the question, and barley is not to be had. Corn, oil cake and wheat are what I would go into the market to buy.

Middlesex Co., Ont.

ROBT. McEWEN.

SILAGE FOR ECONOMICAL FEEDING.

Editor "The Farmer's Advocate":

In reply to your inquiries about cattle feeding, I will answer your questions as fairly as I can judge at present time. The number of cattle fed here will be half that of last year. The number of feeders available are considerably fewer than last year. We find it very hard to get heavy cattle with flesh enough. Light cattle are plentiful, because of the scarcity of feed, and, also, on that account, prices are lower. From \$3 to \$3.50 per cwt. is being paid. Perhaps the most economical cattle to buy are the short-keep fellows, if you can get them fleshy enough.

There is no better way, that I know, for preparing the bullock for economical gains than by having a few weeks on rape.

I like to buy cattle dehorned, otherwise I would not dehorn. We follow the tied system.

We feed corn silage, mixed with chaff and cut clover hay; mixed in equal parts; two feeds mixed at one time, and fed twice a day; corn silage about 25 lbs. per head per day.

In running cattle over winter, we give two pounds grain per day. In finishing, start with two pounds, and increase to eight or ten pounds.

At present here, we can buy nothing cheaper than middlings, barley and corn.

It's a pity there were not more silos this year, as I think the only one who is in a position to feed is the man with a silo full of corn. There will be more next year.

GAVIN BARBOUR.

Waterloo Co., Ont.

FROZEN WHEAT AS FEED FOR STOCK.

Judging by press and other reports, some of the most fertile districts of the West have suffered from early frosts. It is probable, therefore, that considerable grain, more or less frozen, may find its way to our Eastern markets to be offered for feeding purposes. In view of the exceedingly high prices maintaining for all feed stuffs, it is safe to say that the average farmer would welcome, and gladly buy, frosted wheat did he know, or think, it to be of any appreciable value for stock-feeding purposes.

It is now some years since frosted grain, in any large quantities, has been on the market, hence data as to its feeding value are not very recent. In the later eighties, however, and in the earlier nineties, more or less feed of this character had to be utilized, and some interesting data of feeding experiments conducted during that period are available.

COMPOSITION.

A glance at the composition of two grades of frozen wheat of the same variety, grown the same year, as well as of a sample of bran, shows very little variation in composition, so far as valuable food constituents are concerned. The analyses given are taken from the report of the Chemist of the Dominion Experimental Farms for 1892.

RED FIFE.

	Water.	Albu- minoids.	Fat.	Carbo- hydrates.	Fibre.	Ash.	Dry matter.
No. 1 Hard.	9.08	18.83	2.03	71.51	1.94	1.61	90.92
Frozen A.	14.75	18.50	2.22	64.57	8.31	1.65	85.25
Frozen B.	11.14	18.69	2.57	66.57	4.32	1.71	88.86
Wheat bran	8.42	15.22	4.27	56.68	9.81	5.60	91.58

ITS VALUE FOR PORK PRODUCTION.

Being a highly-concentrated feed, its value as a feed for swine naturally claims precedence. Experiments conducted at Ottawa and at the Western branch farms show it to be a highly-satisfactory feed for this class of stock. Not to go too much into the details of the various experiments conducted, it may be said, in a general way, that frosted wheat proved to be a satisfactory feed in every case. In the first place, it appeared to be quite palatable to the pigs, whether fed whole or ground, soaked or dry, alone or mixed with other grains. In the second place, the animals so fed appeared to enjoy uniformly good health, and never went "off feed."

Where fed alone (ground), a bushel produced about 11 lbs. live-weight increase, and about 9 lbs. when fed alone, whole or unground, and soaked for 42 hours in cold water. Where fed alone, from 5 to 5½ lbs. produced 1 lb. increase in live weight; fed along with equal parts of barley, about 4½ lbs. produced 1 lb. increase in live weight; fed along with equal parts of barley, rye (all ground) and bran, about 4 lbs. of the mixture produced 1 lb. increase in live weight. In an experiment where skim milk was added to the mixture of equal parts frozen wheat, barley, rye (all ground) and bran, 3 lbs. of the mixture and 2.32 lbs. skim milk produced 1 lb. gain in live weight. Similar pigs fed on mixed grains (oats, peas and barley, ground) required from 4½ to 5 lbs. of the meal for 1 lb. gain in live weight.

It is evident, therefore, that frozen wheat compares very favorably with the coarse grains for hog feed, and it may be added that the frozen wheat proved to be almost as valuable as properly-matured wheat for this purpose.

BEEF PRODUCTION.

As to the value of this feed for beef cattle, not so many experiments are on record; but, at Brandon in 1892, Mr. S. A. Bedford, then Superintendent, fed steers on (1) frozen-wheat chop and cut straw, (2) frozen-wheat chop, turnips and cut straw, and (3) barley chop, turnips, hay and cut straw. The first lot made a daily gain of 1 3-10 lbs. per day; the second lot, 1 7-10 lbs. per day, and the last lot, 1 9-10 lbs. per day. Mr. Bedford, at the time, estimated the value of the wheat when so fed at 56c. per bushel in the first case, and 61c. in the second case, where fed along with turnips and hay. Steers were bought at 2½c. per lb., and sold at 4c. per lb., live weight. The steers in lot (1) were occasionally "off feed," indicating that unless some succulent feed were fed along with the chopped frozen wheat ration, it would be better to add some other meal to the ground wheat. It would probably be wise to use bran, or, if available, some crushed oats as a feed to mix with the ground wheat. If corn were at hand, it would be of value, but had better be accompanied by some opener or loosener. A mixture of equal parts corn, oats or barley, or bran and frozen wheat, would be practically certain to prove satisfactory as a meal feed. Oil meal or gluten would hardly be advisable, but for the finishing period, a small admixture of one or the other would likely prove useful.

DAIRY CATTLE.

No very reliable data re value of frozen wheat for dairy cows seem to be available, but a comparison of its composition with that of wheat bran would lead one to suppose that it would be of very considerable value for milk production, especially if it were fed along with something to lighten or open it up, as oats, corn and cob meal, or bran.

Horses, also, might be expected to do well on it, where it did not exceed one-half of the grain portion. It must, of course, be remembered that the above remarks apply to what might be called average samples of non-gradable frozen wheat. Samples might be found that would make a better showing than experiments conducted would indicate as probable. Other samples might be offered that would fall considerably short of results obtained from samples experimented with. It is safe to conclude, however, that even the worst samples likely to be offered are practically certain to prove of very considerable feeding value, and sure to be safe feeds.

J. H. GRISDALE.

Central Experimental Farm.

THE FARM.

DEMONSTRATION FARM IN NORTHERN ONTARIO

Anticipating an early influx of a farming population, during the past summer, Hon. Nelson Mon-teith, Minister of Agriculture for Ontario, selected what, in his judgment, would be a good site for the Demonstration Farm in Northern Ontario. Recently, Mr. C. C. James, the Deputy Minister, and Mr. Thos. Southworth, of the Colonization Branch, went north to inspect the location somewhat carefully, and to advise what work should be undertaken. We understand that they have recommended to the Minister that a square mile of land be transferred to the Department of Agriculture for the purpose, and this is now being done. It is situated north of the Height of Land, approximately four hundred and fifty miles north of Toronto, at a point where the Temiskaming & Northern Ontario Railway crosses the Driftwood River. It consists of lot 12, second concession of Walker, and lot 1 in the second concession of Clergue.

At present, trains are running through from Toronto to Englehart. About December 1st the Commission will take over the road from Englehart to McDougall's Chutes.

By a reference to the map of Northern Ontario, it will be seen that the Driftwood River empties into the Black River, the Black River into the Abitibi, and the latter into the Moose, which empties into James Bay. The T. & N. O. joins the Grand Trunk Pacific nearly forty miles beyond the Driftwood. Railway construction north of McDougall's Chutes has been retarded this year owing to excessive rains, and also owing to the fact that the contractors are late in putting up steel bridges over the rivers. There is a very large area of fine agricultural land adjacent to the railway, from the Height of Land north.

One hundred acres of land on the farm will first be cleared, and later on tenders may be called for the erection of the first farm buildings. Clearing will be commenced on the south-west quarter of the square mile. The farm buildings will be located on the west bank of the river, and a station will probably be located on the east bank. At present there is a fairly good contractor's bridge across the river.

A California stockman reports that many severe cases of white scours in calves are cured by castor oil, with a few drops of camphor, succeeded in a couple of hours with two or three eggs, then changing the milk by putting the calf on another cow.

NOTES FROM IRELAND.

When Sir Horace Plunkett resigned the Vice-Presidency of the Department of Agriculture, the hope was widely entertained that Ireland should not be altogether deprived of his services. A movement is on foot which, if successful, will lead to the continuance of his work on behalf of the industrial welfare of the country, viz., the founding of an institution which would provide headquarters and the general machinery for giving practical effect to the views and plans for Ireland's betterment, with which his name is associated. Money is now being collected towards the sum of £10,000, which is required to establish what is to be known as the Bureau of Rural Social Economy.

Sir Horace has written a letter expressing his opinions as to what the Bureau—when it comes into existence—might do. For instance, it could form a connecting link between the various voluntary associations at work in the country, and arrange conferences between them; it could further advise and suggest as to the development of industries, and the investing of money therein.

IRISH WHEAT-GROWING.

It may be merely a coincidence, but it is nevertheless significant, that the visit recently paid to Ireland by the Canadian Grain Commissioners has been followed by an unusual amount of attention being paid to the possibilities of extending the area under wheat in the country. Doubtless the inquiries of the Commissioners set some of our home millers a-thinking, patriotically-like, and the revival of interest in the wheat crop was the inevitable result. We happen to have in this country an Irish Flour-millers' Association, and the members of this body have been organizing conferences about the country, at which they have met the local farmers and talked the matter over. They have expressed the opinion that it is improbable that wheat will again be as low in price as it was a few years ago, and have told the farmers that if they would grow ten or twenty times as much of the right kind as at present, they (the millers) would buy it from them. The movement is likely to lead to an extension of wheat-growing, a favoring circumstance being the increasing demand for Irish-milled flour, as well as for other native products, which is accompanying the present industrial-development movement. Another influence at work in the same connection is the discontent among farmers with the poor prices paid for barley by the brewers. In some places matters on this score have come to a crisis, and the local Farmers' Association at Athy, representing an important area in Co. Kildare, have agreed that, unless the brewers paid a minimum price of 17s. per barrel for this season's barley, they would, in the future, abandon the growing of that crop and devote the land to wheat, which the millers were showing such anxiety to encourage.

Dublin.

"EMERALD ISLE"

LIKES THE CEMENT SILO.

Editor "The Farmer's Advocate":

Cement silos have been in use in this section four or five years, and are giving good satisfaction. There are dozens of them, and not one that I have heard cracked. The contractor who builds put up thirteen this year, and he had more if the farmers' corn had not failed. This man has a splendid outfit. In regard to wooden silos, they are short-lived. We had one. Have a cement one now. Its cost was not more than three wooden silos, and then I think I would prefer cement. When you have a cement one, it is there for all time. Wood will rot no matter what care is given it.

J. F. BETTRIDGE.

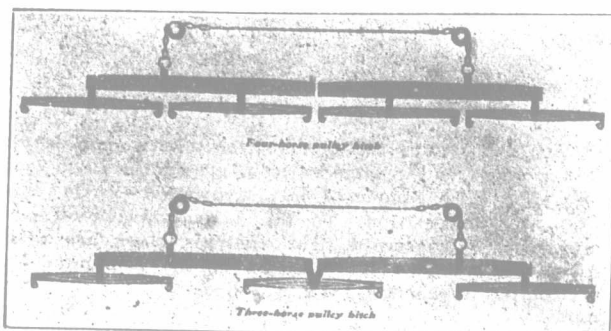
Perth Co., Ont.

SEED FAIRS IN THE WEST.

A recent communication from H. McFayden, the representative in Saskatchewan of the Seed Commissioner's Branch, Department of Agriculture, Ottawa, states that up to the middle of October twenty-two agricultural societies in the Province had announced their intention of holding seed fairs, and some of them intend having a seed-judging competition and a weed-seed-identification contest along with the fair. Prospects for a good winter's campaign in the movement for good seed are very bright. Western farmers are awakening to the fact that they can no longer afford to sow shrunken, frosted, unmarketable wheat, dirty with screenings and weed seeds. The work of the Dominion Seed Branch in the Prairie Provinces is bearing fruit.

FOUR-HORSE PULLEY HITCH.

From the number of inquiries coming in for designs showing the best way of hitching three and four horses so as to work together, it appears that a good many farmers are wisely meeting the labor problem by seeking to have one man do the work of two, driving three or four horses per teamster, instead of a pair. There are many styles of three-horse and four-horse hitches, quite a few of which have already appeared in our columns. The accompanying illustration shows the pulley-hitch, as used on the McCormick disk and shoe drills. It is not patented, as a great many other manufacturers of seed drills use practically the same device. The illustration shows:



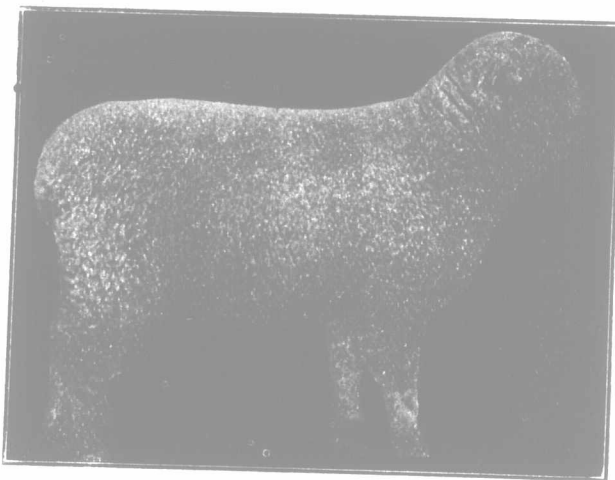
1. The four-horse pulley hitch as used on the twenty-marker McCormick disk and shoe drills.
2. The same hitch adjusted for use with three horses.

THE DAIRY.

MORE ABOUT THE TRANSPORTATION OF BUTTER

Editor "The Farmer's Advocate":

Publicity is one of the greatest safeguards in a democracy. Where we have "government of the people, by the people, for the people," the "people" have a right to expect "a dollar's worth of service for a dollar's worth of pay." It was with the object of calling attention to the fact that the creamerymen were not getting a dollar's worth of ice for a dollar's worth of the people's money, that the comments on Weddel's review were written for a recent number of "The



Shropshire Ram Lamb.

First at Toronto and London, 1907. Imported and exhibited by Oak Park Stock Farm Company, Brantford, Ontario.

Farmer's Advocate," and to which exception is taken by W. W. Moore. With the object of throwing a little "Mo(o)re" light on the subject, may we give the following facts, and allow readers to draw their own conclusions?

A creamery located in Western Ontario made shipments to London, England, during the past season (1907), and we give the date of shipment from the creamery and date of account sales in London, which, to our mind, is a better index of the time required to market butter in London than the "sailing date" and "arrival date" of boats, which to us tells nothing about the point in question. However, we may have a "hatful of fog" on the point, hence must allow readers to judge which data will be of most service to them in calculating time required to get butter to customers in London:

Date of shipment from creamery.	Date of account sales in London, Eng.	Number of days between.
June 15, 1907.	July 13, 1907.	27
June 22, 1907.	July 20, 1907.	27
July 13, 1907.	Aug. 9, 1907.	26
July 20, 1907.	Aug. 16, 1907.	26
July 27, 1907.	Aug. 23, 1907.	26
Aug. 10, 1907.	Sept. 10, 1907.	30
Aug. 24, 1907.	Sept. 18, 1907.	24

The London firm to whom the foregoing consignments were sent, in one of their letters, dated London, Sept. 17th, 1907, remarks: "We suppose

we cannot expect from Canadian butter, at least three weeks old, as good an aroma as we get from Danish or Irish, which are only three or four days old when they reach this market." It would seem, from the experience of this firm, which is one of the largest importers of butter in England, that "at least three weeks old" is their experience in handling Canadian butter.

We did not happen to strike any of the cars enumerated in the list given by Mr. Moore, but if he has the data, we should like to hear about car No. 40086, G. T. R., which passed through Baden and Guelph on July 20th, 1907. We took the following notes in Guelph on this car: Temperature of air outside, 82 degrees; temperature in west end of car, 72 degrees; temperature in middle of car shortly after car door was open, 74 degrees; temperature in east end, 76 degrees F. There were three blocks of ice in each of three of the ice boxes, and two blocks in the remaining ice box; estimated weight of each block, 50 to 60 pounds. Car doors opened on south side; sun shining directly into car, as doors cannot be closed until engine is through shunting in another part of the yard, to have car from platform, so that doors may be closed. Temperature of air in middle of car when writer left car, 78 degrees, or 4 degrees higher than when car was opened. Engine still shunting in yard. Large number of boxes of Baden butter in west end, which had apparently cooled the air in this end of car.

It may be objected that when the car door was opened the warm air entered from outside, hence temperatures given are incorrect. In answer to this, we should say that warm air does not readily displace cold air, and it was only after the direct rays of the sun had been shining in the middle of the car for some time that a rise of temperature was noted. Anyone who has had any experience with a hot-air furnace for heating houses, knows the truth of the foregoing.

That the experience here noted is not uncommon, is indicated in a letter from one of the largest firms handling butter in Montreal. In a letter dated Montreal, June 25th, 1907, this firm states: "We have had several instances of supposed refrigerator cars where butter has actually been shipped without a particle of ice." This firm reports on a shipment sent to them from Western Ontario on June 22nd: "Your butter arrived in a more heated condition than it should." We could give more extracts from correspondence along the same line, but these are sufficient for readers to judge whether or not the conditions we referred to in our previous article were "actual," or "did not exist outside of his own imagination." If the writer (W. W. M.) would get his feet from under an office desk and get out to the stations along the railways at country points, he possibly might not write such "twaddle" as characterizes some of his statements.

From our own observations, it is useless to "cuss the railroads," but when a grievance exists, if they (the railways) are approached in the right spirit, they are usually willing to remedy matters so far as possible. In many cases they are the victims of a bad system, or of careless and indifferent employees. We have proof of the foregoing, but the present is not the time or place to discuss the matter. There will never be much improvement so long as those whose business it is to get an improved refrigerator-car service tell the public and the railroads that everything is all right at present. It is useless to cry "ice" when there is no ice, or very little. H. H. D.

COW-TESTING IN SCOTLAND.

In a report just received of some cow-testing operations in Scotland during 1906, the following figures occur, and will be read here with interest:

In the Stewartry Association, comprising twelve herds and 600 cows, the average yield of 10 per cent. of the heaviest-milking cows in each herd during 214 days (26th of March to 31st of Oct., 1906) was 6,850 lbs. of milk, testing 3.9. The average yield of the poorest cows was 4,230 lbs., testing 3.6. This indicates a difference of 2,620 lbs. Six of the best heifers, three-year-olds, in this association averaged 6,030 lbs. milk, testing 4.1.

The Dumfriesshire Dairy-farmers' Association comprises 22 herds, 742 cows. From April 2nd to Nov. 10th, 1906, 11 of the poorest cows (ages, 4 to 11) averaged 2,790 lbs. milk. Fifteen of the best cows had an average of 7,600 lbs. milk.

In the Fenwick Society, embracing 18 herds, the average yield in 51 weeks of 1906 from 451 cows was 6,481 lbs. milk. Only 12 cows have 10,000 lbs., or over, to their credit, their average being 10,540 lbs. Ten of the poorest cows averaged 4,770 lbs.

The dairy industry at large is indebted to John Speir, Esq., of Newton Farm, Glasgow, for a conscientious compilation of milk records of five district associations since 1902.

Mr. Speir has the following remarks, which will be of interest to members of cow-testing associations in Canada. Note his last sentence:

"The Fenwick Society is principally composed of farmers in the parish of Fenwick, between Kilmarnock and the borders of Lanarkshire. The district lies at a rather high altitude, much of it being from 400 to 600 feet above sea-level. Cheesemaking used to be

the principal industry of the district, but, with few exceptions, all the farms now send their milk direct to Glasgow, or to the two collecting milk depots in the district. Breeding is largely followed on every farm, and in a very few years the milk records should exercise a material influence on the herds in this district. The farmers here have entered into the movement not simply because they were asked to do so, or because one or more were wanted to complete the number sufficient to make a good group of herds, but because they think it will pay them to do so. The work has now

been carried on without any break for over two years, and the more experience the people have of it, the more highly they appreciate it." C. F. W.

HEATING WHEY TO DESTROY DISEASE GERMS.

Quoting the article on heating whey at cheese factories, which appeared in "The Farmer's Advocate" of October 10th, over the signature of Frank Hens, Chief Dairy Instructor in Western Ontario, the New

York Produce Review adds, by way of editorial comment, that in its opinion one of the strongest arguments in favor of heating whey at the cheese factory before returning it to the patrons is the prevention of the spread of communicable diseases, notably tuberculosis, among the calves and pigs on the patrons' farms. Whey is not considered as important a vehicle in transmitting this disease as factory skim milk; but the chances of infection from its use, unpasteurized, are alone sufficient to warrant the expense of the operation.

A Canadian's Observations in Holland and Belgium.

Editor "The Farmer's Advocate":

Having been appointed Canadian Government representative to the third International Dairy Congress, recently held at The Hague, and also at the "Gouttes de Lait" Congress at Brussels, I had, in common with other delegates, special opportunities of seeing something of the agriculture of these countries and of the conditions which surround the Netherland farmer in competing with other countries in the markets of the world.

The organization under whose auspices the International Congress of Gouttes de Lait was held, has for its object the protection of infant life, and Section 1 dealt with questions relating to the control of the production and distribution of milk.

The Third International Dairy Congress at The Hague was held under the auspices of the International Dairy Federation, of which the writer is a member. The following countries were officially represented: Great Britain and Ireland, Canada, New Zealand, Australia, New South Wales, Victoria, Argentine Republic, Switzerland, Denmark, Norway, Sweden, Hungary, Holland, Belgium, Roumania, France, Spain, Austria, Russia, Italy and Germany. Other countries were represented unofficially, and there were fully 400 voluntary delegates, some representing various organizations, and others because of private interest in the matter. The international character of the gathering is well shown by the statement that twenty-six countries were represented at the Congress Banquet, and the chairman of that function spoke in seven languages. Four languages were allowed at the Congress, namely, French, Dutch, German and English. I have only this further to say about the Congress at the present writing, and that is that the chief interest appeared to center around the question of providing ways and means for the control of the manufacture and export of dairy produce in countries where adulteration is carried on. That being so, I did not have, as Canadian delegate, very much interest in that phase of the discussion, because, happily, all such questions were effectually settled in Canada years ago by the enactment of our dairy laws.

The Governments of both Belgium and Holland were very energetic in their efforts to make the stay of the delegates as pleasant and profitable as possible, and numerous excursions were arranged throughout the country, with a view of seeing something of the rural life of the people. One sees in this part of Europe many contrasts and a curious blending of the old and the new. Some of the methods in vogue appear to be very old-fashioned, but I do not think a people are to be judged by the methods which they employ, so much as by the manner in which these methods are carried out; and, for thoroughness, for economical management, and for superiority of product, Canadians might learn many things from the Dutch and Belgian peasant farmers. 'Tis true I saw a farmer threshing his grain in Belgium with a crude sort of mill, which was turned by hand, a man and a woman providing the power. But, on the other hand, I also saw some of the finest market gardens and the most extensive glass houses for the growing of grapes and other products which are to be found in any part of the world. I travelled over country roads which are paved like city streets, thus reducing the cost of



Old Dutch Farm Building.

The dotted line behind the cow stalls shows a partition erected when the cows are not being housed, but removed in winter.

transportation to a minimum, in a country where roadmaking is extremely difficult. Further, I saw the finest dairy stable and the most attractive creamery buildings which it has ever been my privilege to inspect.

One of the interesting sights in connection with the Dairy Congress at The Hague was the large agricultural exhibition. Unfortunately, owing to



Cheese Covered with Tarpaulin.

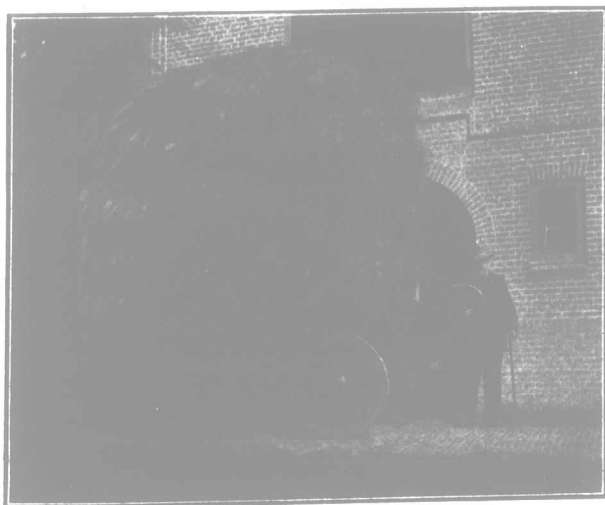
a severe outbreak of the foot-and-mouth disease, the Government would not allow any cattle to be exhibited, much to the disappointment of all concerned; but, as dairying is the national industry of Holland, the exhibits of dairy produce and of dairy machinery naturally occupied a very large place in the exhibition. Two varieties of cheese, the Edam and the Gouda, are practically the only kind of cheese made in that country, but the production is a very large one. The production of butter is very large, also, to say nothing of margarine and various blends of the two. In connection with the cheese exhibit, it will be of interest to Canadians to know that in the foreign class Canada took the highest honors, competing with New Zealand, Italy, New South Wales, and Great Britain. The Canadian cheese was exhibited by a London importer. The manner of exhibiting the butter, while not making an attractive display, seemed to be well conceived to prevent the judges from identifying any of the exhibits. The packages containing the butter were placed under a sort of enclosed counter, the doors of which were securely locked after the butter was placed therein. Each package was placed directly under an opening in the top of the counter, about 8 inches in diameter, giving sufficient room for testing the butter, but making it absolutely impos-

sible to see anything of the package. The opening was covered with a piece of glass.

The exhibit of dairy machinery was the finest that I have ever seen, especially that intended for buttermaking purposes. The various styles of cream separators, butter-workers, tinned copper coolers, and other vessels for the handling of milk, made a very interesting display. It is a point which Canadians should note, that these continental dairymen, who are our competitors, are bound to have the best machinery, no matter what it costs, and the manufacturer of dairy machinery who wishes to successfully dispose of his wares, considers more the question of durability and suitability than he does the question of cost, because he knows that it is upon these lines that his machinery will be judged, cost being a secondary consideration.

During one of the excursions into the country, we were shown, at Oud Bussom, the fine example of a modern dairy stable, already mentioned. A herd of 200 cows is kept for supplying milk to the City of Amsterdam. The floor of the stable is constructed of slate tiling. The walls are of brick, smoothly finished in white enamel-cement, giving no opportunity for the lodgment of dust or dirt of any kind. It is well ventilated, and kept as clean as it is possible to make it. The manure from this stable is removed by a car which passes along a tunnel underneath the floor of the stable. The roof is thatched, with a view of keeping the stable cool in summer and warm in winter. We were not allowed to enter the stable in which the cows were standing, some reason in connection with the foot-and-mouth disease being given for the exclusion, but there was no difficulty in seeing the cows and the interior of the stables from the windows and half doors which were open. There are no stalls, but simply an open framework of iron pipe on the line between the manger and the space allowed for the animals. The cows were fastened to this framework with a chain, which allowed the greatest possible freedom. I noticed that the cows were well bedded with straw, although the weather was quite warm. The illustration of the curious-looking wagon loaded with hay was taken at this stable. It will be observed that the pole of this wagon is short and curved backwards towards the load. The horse or horses are connected with the wagon by means of a chain attached to the base of this horn-shaped contrivance, which is used to assist in steering the wagon when necessary; but, owing to the smoothness and evenness of the roads, there is very little difficulty on that point. Some of your readers may probably recognize in the figure beside the wagon the well-known cheese-buyer of Glasgow, Scotland, Mr. Andrew Clement, Sr.

What will probably be considered the other side of the picture of Dutch dairying, is to be found on the farms where one building forms a combined house and stable. The accompanying diagram shows a plan of one of these farm buildings which was visited. The cows are not kept in the stable during the summer months, but during the winter only. The fodder is stored in the loft of the building. While the idea of having one roof cover the cows as well as the living apartments of the family, is not in accordance with our ideas of either sanitation or comfort, I am bound to say that this stable was a model of cleanliness.



A Dutch Wagon.



Cheese Market at Alkmaar.

The floors are made of tile, and the mangers and other feed boxes of glazed earthenware. In fact, tiling enters pretty largely into the construction of the stable.

The Edam cheese factory, which was visited, in North Holland, is conducted on lines very similar to those of a Canadian factory. The milk is delivered by the patrons once a day. There is a demand for these small 4-pound Edam cheese having a firm, dry quality which will stand hot climates. The factory was equipped and arranged very much like a small Canadian factory, but was better built than the average factory in Canada. Cement and brick were the two materials entering mostly into its construction, very little wood being used.

The cheese market at Alkmaar, one of the largest and oldest in North Holland, was a most interesting sight. The accompanying photograph does not give a fair idea of the size of the square in which the cheese were stacked. The town seemed to be full of the curious Dutch wagons in which the cheese had been brought to the market that morning. Each salesman stacks his cheese in a heap on the pavement, and, if necessary, covers them with a tarpaulin. When they are sold, they are loaded on a sort of hand barrow and carried into the weigh-house, and there weighed by the public weigher, and then removed from the market by the purchaser. The weigh-house seems to be a very ancient institution in Holland. The men employed on the market, who attend to the weighing of the cheese, form a picturesque feature in the picture, owing to their quaint and characteristic dress. Every town in Holland and Belgium appears to have its market place, and in some places there are several of them. The markets are what may be styled temporary markets. For instance, in Brussels, on certain mornings of the week, a large vegetable market is held on the vacant space in front of a celebrated church, but by eight o'clock everything is cleaned up, the pavement thoroughly flushed and all traces of the market removed, and the gardeners or hucksters, in their quaint costumes and nondescript vehicles, very often hauled by one or two dogs, have taken their departure, but in many cases not before saying a prayer in the old church near the market. On the "Grand Place," or great market of Brussels, surrounded by the medieval buildings which are such a feature of this part of the city, there are vegetable markets on certain mornings of the week. On Friday mornings there is a great live-bird market, and in the afternoons a flower market, where one will see the most beautiful collection of the various blooms for which the Low Countries are noted. The markets disappear one after another, every trace being removed, and in the evening a large, temporary covered bandstand is erected, and is occupied by one of the many excellent bands or orchestras which are to be found in the country. Before morning the bandstand has disappeared, and one or another of the markets is again in evidence. During the intervals, the space is more or less filled with cabs waiting for fares. Half an hour after the time for closing these markets, one would never know that anything of the kind had taken place, because all traces are so effectively removed. The Dutch passion for cleanliness makes it possible to have such things done. They seem to be constantly cleaning windows and scrubbing the walks in front of the houses and shops, and even scrubbing the pavement itself.

I might dwell at some length on the superiority of the Dutch creamery buildings which I saw in some parts of Holland. There is an evident desire to make these buildings attractive in appearance, as well as useful. They are constructed with strict attention to sanitary details, and the architecture, coupled with the neat surroundings, makes them an ornament to the landscape, rather than a blot thereon, as is too often the case, and I would take this opportunity of again pointing out to Canadian dairymen that they must give more attention to the character of their dairy buildings if they wish to keep pace with the rest of the world in this respect.

J. A. RUDDICK.

FOUND RECORD-KEEPING PAID.

Editor "The Farmer's Advocate":
During two years I kept individual records of the conduct of our cows at the milk pail, by weighing the yield of each animal and taking a composite sample, so as to arrive at the fat contained in their milk. I started keeping these records to see which of our cows were just boarding with us. It was surprising what information it gave us. The very animals we were of opinion were doing the best, opened our eyes, much to our surprise, as to their poor milking qualities. No man should ever go into the dairy business without his spring balance, test bottle and record sheet, which are the best means of finding out whether his cows are paying him for his trouble or not. There being no market for butter in this district, other than the grocer's store, who only gave very low prices and groceries in exchange, it paid me better to put my land under wheat than keep cows. N. J. DAVIES.
Sask.

BELIEVES IN THE RECORD SYSTEM.

Editor "The Farmer's Advocate":

In regard to keeping cow records, I might say that I have kept a record of fifteen for a year, and find the work both pleasant and profitable. The time, per cow, required for weighing is very little indeed. I took samples once per day from each cow. I started the record, because when I attended the O. A. C., at Guelph, I was taught that this was the proper way to test cows, and then, from travelling, wherever I found a man who used the scales and test, I always found an up-to-date man, with cows that were all paying profits. The good they have done me is made clear in many ways. A good-looking cow may be a very poor cow, so far as milk production is concerned. Secondly, that a cow that we think is paying us well, may be really a boarder. To a man that is taking as good care of his cows as he knows how, I would say that the milk records would be to him a series of surprising facts, and the source of double and trebled income, if their teaching were followed.

Westmoreland Co., N. B. FRED FAWCETT.

PAYS TO KEEP RECORDS.

Editor "The Farmer's Advocate":

I found, by keeping a milk record, that I built up a herd of good cows, got more milk, and of better quality; the cows got fed better, and a person will take better care of his cows. It will pay any man that is dairying to keep milk records.

Carleton Co., N. B. C. H. ESTEY.



Jewel Sylvia (2195).

Holstein cow. First in class, senior champion and grand champion female, Canadian National Exhibition, Toronto, and the Dominion Exhibition, Sherbrooke, Que. Owned and exhibited by Logan Brothers, Amherst Point, Nova Scotia.

GARDEN & ORCHARD.

IN BRITISH COLUMBIA FRUIT VALLEYS.

From the columns of our Western contemporary, "The Farmer's Advocate & Home Journal," of Winnipeg, we reproduce the following editorial correspondence, descriptive of fruit-farming or ranching out in the Pacific Province:

TOPOGRAPHY AND AREA OF FARMS.

The first point for a man from East of the Rockies to grasp, when considering the purchase of a ranch in British Columbia, is the absolutely different state of conditions prevailing in the Western Province. In the first place (speaking now of the three main inland valleys, the Okanagan, Arrow Lake and Kootenay), farming is essentially intensive, as opposed to extensive. A square foot of waste land in these districts is as much loss to a ten or twenty acre lot as a waste acre in a large farm or ranch in the Northwest. Every foot of space that can be utilized by the Okanagan or Kootenay or Arrow Lake farmer must be considered almost as carefully as inches are in the demarcation of lots in a huge city.

Secondly, whilst in the prairies one quarter section is, broadly or generally speaking, as good as its neighbor, in British Columbia a first-class ten-acre or twenty-acre plot may be bounded by rocks and cliffs which no sane man would dream of attempting to cultivate. This consideration makes its practical imperative for an intending purchaser to view through his own eyes or those of a thoroughly trustworthy friend the lot which it may be proposed to acquire. If this is an impossibility, then one should insist upon answers to such questions as: What is the mean altitude

of the lot? What is the greatest drop or difference in altitude occurring on the lot? What is the aspect? Does the slope face north, south, east or west? Does the mountain rise immediately from the confines of the lot, and on which side or sides? Another most important consideration is the access to water and a main route of communication, either a lake or a road leading to a town or a railroad depot. Once at either a town or depot, little or no difficulty should be experienced in getting to market.

The third point on which to make up one's mind is the physical impossibility of farming, with very rare exceptions, large tracts, for such rarely exist, and, if they did, the nature of the crops, like strawberries, and such soft fruits, demands a larger number than is available of pickers, per acre, at the time of harvest. Taken all through, then, one should make up his mind to be content with, at the most, a one-hundred acre ranch, and on that not more than ten should be under soft fruits and vegetables, and the balance be planted only with trees bearing apples, plums, cherries, and so on. But a ten to twenty-acre ranch is the more general size.

PRICE.

Lands are offered at all prices, from \$16 up to \$500 per acre. Think of it! Five hundred dollars for each acre! And, in general, you will find, upon examination, that the lands are worth, from a producing point of view, about the price demanded. The ten-dollar lots will be covered

with trees, and probably an appreciable portion will be rocky and useless, thus in reality raising the price per acre of that which is available. The \$500 lot, on the other hand, will be a choice one, every inch good to plant, and with a stock on the ground of trees or plants already in bearing. How one can possibly make any profit in such high-priced land appears at first beyond the ken of a novice, but when it is remembered that \$600 worth of strawberries have been sold off an acre and a third, or that a single cherry tree will yield \$25 to \$30 worth of fruit, it begins to dawn upon one that the value is not excessive. But such prices are exceptional, and the average for good tillable land which requires clearing and breaking is from \$50 to \$100 per acre, according to the amount of clearing necessary, the nature of the soil, and the proximity to markets. More land seems to be on offer at \$100 an acre than at any other figure, and it may be as well to state here that these figures are all for small holdings of ten to twenty acres.

IRRIGATION.

There is a hazy notion in the minds of many Easterners that irrigation is a necessity all over the inland valleys, but this is entirely erroneous. It all depends upon the nature of the soil. Some parts are blessed with a subsoil of clay beneath a light loam, and here irrigation is generally not required, because the average rainfall and the seepage from the neighboring mountain ranges give sufficient moisture for all purposes. The man with irrigated land, on the other hand, has generally a sandy soil overlying gravel, and this must have a practically continuous supply of water ready to hand all through the summer. Which is the better, it is difficult to say, for the cost of irrigation, which is considerable, must offset any advantages over good, naturally moist, unirrigated soil.

BETTER THAN IT LOOKS.

From the general appearance of the country as one travels in either railroad or steamer, there hardly appears to be any arable land in sufficient extent to be worth notice, but the best orchards of the present day were at one period, not entirely remote, supporting large timber and tangled masses of undergrowth which effectually concealed the ground beneath, and made the good appear almost as rough and uninhabitable as the worthless. Again, there are excellent ranches located on the "benches," at anything from 30 to 150 feet up what appears from a distance to be the steep

side of a huge mountain. Such ranches are frequently not visible from the level of the lakes which form one of the chief lines of communication.

CLEARING AND PLANTING THE RANCH.

The newcomer, having finally selected his location and cleared a portion of this ground, must next consider what to plant. Several plans are adopted, and each has its own advantages.

One practice is to plant apples, pears and cherries at twenty-five-foot distances, making seventy trees to the acre, and in between to sow clover, in order to prepare the soil well for small fruits and vegetables. The clover yield the first year is not worth considering, and it is left to itself to come up in the second year, when two or three tons per acre are taken off, the clover plants plowed in, and the ground, after being well worked, is now ready for the paying crops.

More frequently, because most men like or have to get some return as quickly as possible, the order is to clear, break and crop to vegetables or strawberries right off. These crops, of course, are planted between the orchard trees, as in the alternate plan above.

Having then arrived at the stage of putting in the strawberries, the subsequent treatment is to be considered. Most go on cropping the plants as long as possible, give one change to any root crop or garden stuff, and then resume with strawberries. But a few advocate the plan of Kellogg, the American strawberry-grower, who lays out his plants, say in 1906, takes a crop off in 1907, and then either scythes them down close to the ground or covers them with a dry mulch and burns them off. This drastic treatment is said to produce new growth of roots and enable the plant to make up for the waste of tissue due to such early cropping as the first year, and to yield a fine crop again in 1908. Similar treatment in 1909 is followed in 1910 by plowing under and a rotation for one year.

The Kellogg plan, which appears to answer well on the American's ranch, has not yet been thoroughly tested in British Columbia (so far as we can discover), so that we cannot say whether it would be equally suitable here.

SELECTING KINDS AND VARIETIES.

Now as to selection of species. Some localities will grow good grapes, some peaches, and some cherries. All lands that can be farmed at all will grow apples, plums and pears. It is for the individual to make careful inquiry and to get around to his neighbors (who are generally perfectly willing to help the newcomer with sound advice born of practical experience), and discover which of these three first seem most likely to suit his particular plot. The suitability will depend upon soil, aspect, moisture and altitude.

Having decided to grow one of the three first-named species, in addition to apples, plums and pears, the next point for consideration is the particular varieties of each. Here it is well to warn the intending rancher against the very common failing of purchasing a number of varieties from the first stock salesman that happens along. By so doing, many valuable square yards are cumbered with trees which, whilst they may yield fruit, are yet not the best commercially, and a large number of little lots will be more difficult to market than a few decent-sized consignments. By all means, if space allows, get one or two trees each of a few varieties which you cannot discover to have been already tried and found wanting by your neighbors, but let your chief space and your chief energies be concentrated on not more than six varieties of apples, three of pears and two of plums, and two of anything else. Some men consider even six kinds of apples twice as many as is necessary. Of the six, let one be an early variety like Red Astrachan, two fall apples like the Wealthy or Gravenstein, and three winter kinds, such as Cox Orange Pippin, Yellow Newton Pippin, McIntosh Red, Ribston Pippin, Grimes Golden Pippin, or Northern Spy.

In pears, the Flemish Beauty, Louise Bonne and Clapp's Favorite appear most in vogue, but the Bartlett is good also.

In plums, the Bradshaw, Burbank's Sugar, and Peach, seem a safe assortment.

In peaches, may be suggested the Early Crawford, Crosby, and Greensborough.

Campbell's Early grapes and Moore's Diamond were about the only winners at Nelson, but they can scarcely be regarded yet as a reliable breadwinner.

Crab-apples do well. The Transcendent and Hyslop are safest.

Magoon strawberries and Cuthbert raspberries are looked upon as the best for shipping over long distances.

THE FINANCIAL RETURNS IN THE KOOTENAY.

The financial end of the business is ultimately the object of most who take up land in these districts, and we have endeavored to obtain a fair estimate of the average yield of ranches in the Kootenay (others will be given later), and before

proceeding further, let it be thoroughly understood that these figures are based upon what has been done and is being done here now, and may be accepted by a proposed incomer as his prospects in normal seasons, when the trees are at maturity, providing he chooses reasonably good land and varieties, has sense enough to profit from the experience of his neighbors, and to use his own head.

Apples may be considered to yield \$350 to \$400 per acre; pears \$400 to \$500 per acre; plums \$450 to \$550 per acre; peaches \$500 to \$600 per acre; cherries \$600 to \$700 per acre; strawberries \$500 to \$600 per acre; potatoes, as much as anywhere else. These figures are arrived at after consulting numerous growers of from two to twelve years' experience. Individual cases of \$30 worth of cherries off one tree, \$1,000 worth of strawberries off one acre, and so on, have been known, but are still exceptional.

Apples are the staple, being safest, easiest to grow, and easiest to handle and pack; and, of apples, let the larger part be winter varieties. Pears are next, and cherries, plums and peaches follow in the order named.

One of the chief drawbacks about cherries—and still more does this apply to strawberries—is the difficulty of picking, packing and marketing quickly any large quantities, for labor is scarce and dear, and the rancher must depend mainly upon his individual efforts, a Chinaman being employed to assist on some ranches. As on the prairies, the man with a large family at the working age, has a great advantage over the lone bachelor, but there is this additional consideration, that the picking and packing of fruit is much more suitable to the women folk than laboring amongst hay in open field crops.

Strawberries are generally regarded as the "stop gap" for newcomers during the years until the young trees are in fruit. The happy possessor of a full-bearing ranch does not bother his head with these and similar crops that require such continuous hard work. Tomatoes can hardly be reckoned among the commercially successful crops of the district, since more often than not they fail to ripen satisfactorily. Tomatoes are, however, grown, and some fine results are obtained from time to time, but, commercially speaking, they are not regarded with favor. Garden stuffs will grow prolifically, but must be looked upon in the light of "stop gaps" only, and the Chinamen have this trade pretty well to themselves, peddling round with small carts from house to house.

Grapes do well in places, but only in places.

[Note.—Correspondence is invited from ranchers who can give us actual results obtained in dollars and cents over a period of years, and in the subjects of varieties, insect troubles and their treatment.—Editor.]

GOOD PRICES FOR VEGETABLE CROPS.

In spite of the lateness of spring and dry weather during summer, the vegetable-growers of the Province have had a satisfactory season, report the crop correspondents of the Ontario Vegetable-growers' Association. On the whole, prices have been good. Rains in early fall caused rapid growth, although most crops matured later than usual. To offset the unfavorable weather conditions early in the season, the gardeners have been favored with excellent weather for harvesting. The outlook for prices during late fall and winter is good. With potatoes bringing fairly high prices, and high prices in some localities, all kinds of vegetables should sell well.

In many localities, potatoes are turning out better than was expected, but the yield is only average. They are more uniform in size than usual, and the quality

is good. Garden roots, such as beets, carrots parsnips and turnips, have yielded well, but, generally speaking, they will be scarce on account of the demand. The onion crop has not been much, except in the Ottawa district. Many growers complain of a large proportion of "thick-necks" or "scallions." It is probable that the marketable onions will not be hurried on to the market; a large percentage of them will be kept over winter. Celery has yielded a good crop, but the quality is not quite up to the standard. Lettuce and radish is fairly plentiful. Salsify, where grown, is plentiful and extra fine in quality. Late cabbage and cauliflower have yielded well, and are of fair quality.

BRIGHT PROSPECTS FOR APPLES.

John B. Jackson, Canadian Commercial Agent at Leeds, England, writes that later inquiries into fruit circles confirm his previous reports that there will be little apple competition from Belgium, Holland and Germany, while the English crop is anything but good. The prospect is, therefore, exceedingly bright for Canadian apples, on which the English dealers are relying, and it rests with Canadian shippers to make the most of their opportunities.

The Ontario Horticultural Association will hold a two-day convention Nov. 14th and 15th, during the Horticultural Exhibition in Toronto, with an excellent programme dealing with various phases of floriculture.

POULTRY.

POULTRY HOUSES.

OLDER AND NEWER STYLES—IMPROVEMENT ON OLD PATTERNS—WHAT HAS LED TO POULTRY-HOUSE DEVELOPMENT—A RETROSPECT.

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

To be reminiscent is human, but all humans are not inclined to be reminiscent. To properly treat this subject of poultry houses, we must go back—for a moment or two—to some years past. Twenty-five years ago the writer and one or two others got eggs, it is true, in winter, but from fowls which had opportunity to enjoy unlimited run in spring, as soon as weather conditions permitted. The poultry house was primitive in construction. The idea was to keep the fowls warm at any cost, and feed them well, if winter eggs were desired. If early spring eggs did not hatch well, it was considered only a question of a short time when they would become all right—which they did, because the hens were running out meanwhile. At that time all was amateur. There was no attempt—indeed, no opportunity—to discover reasons for this or that. Poultry-keeping was little indulged in, less understood. New-laid eggs were a comparatively unknown quantity, and a fleshy, plump Rock or Wyandotte chicken was seldom seen on the market. I remember well meeting one autumn morning at that period, an elderly resident with eight chickens tied in a bunch and held by their legs. "Do you know," he said, "I paid only a dollar for the lot on the market." But such chickens!

DEVELOPMENT OF POULTRY-KEEPING.

But poultry-keeping gradually became more good.

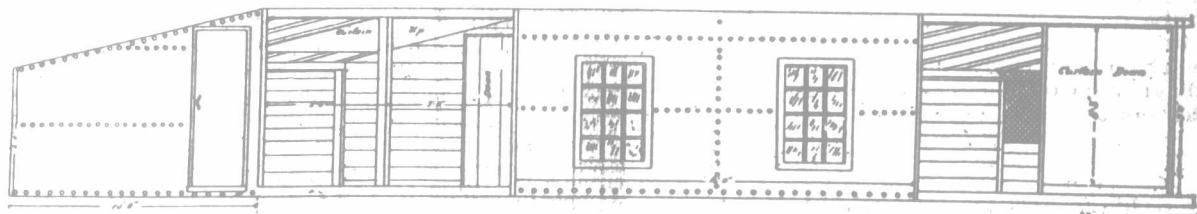


Fig. 1.—Laying House. Alternating Scratching Shed.

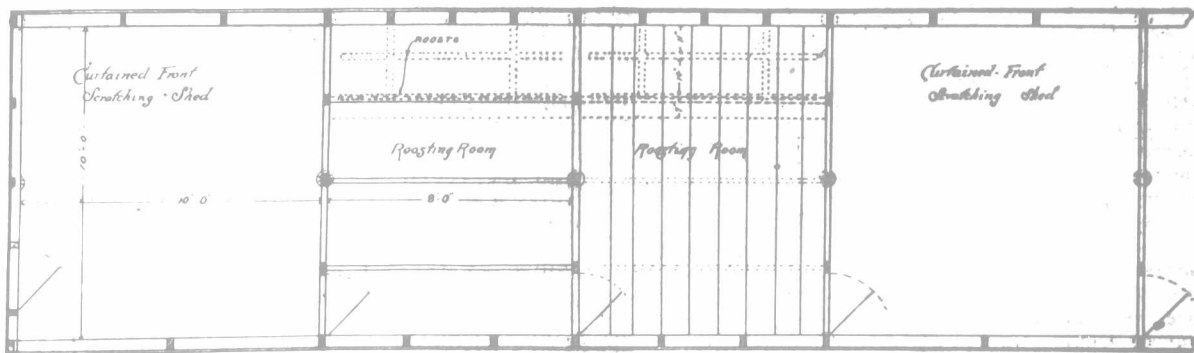


Fig. 2.—Laying House, Floor Plan.

eral. In 1888 the Experimental Farm Poultry Department was established. Eggs were obtained in plenty during the winter; chickens were hatched and reared which made weight development of one pound per month. These facts were officially published in the shape of reports, and they were certainly great incentives to others to try to do likewise. Many persons in different parts of the country went into poultry-keeping. Then came letter after letter in succeeding spring months, from various parts of the country, to the effect: "My hens have laid well during the past winter, but their eggs do not hatch well." We experimentalists were up against it (weak germs); the letter-writers were up against it. Attention in this country and the United States was focussed on the subject, and investigation followed. In the early days, as already noted, it was considered indispensable to have a "warm" or a "warmed" house. The result in the first instance was usually secured by sawdust-lined walls and poor ventilation; in the second, by artificial means. To-day the great aim is to have houses so constructed as to admit as much fresh air, without draft, as possible, and to do away with warmth of any kind. The pendulum has swung the other way. We are trying to make our birds suit the winter climate, rather than the climate the birds. Incidentally, we are endeavoring to find out what effect, if any, previous styles of houses and methods of treatment had in causing weak germs and their results in chicks dead in the shell, many at the pipping stage; weakling chicks, white diarrhoea, etc. It is of houses we write at present, not methods of treatment.

HOUSES OF NEW DESIGNS TO THE RESCUE.

As a panacea for many of the ills enumerated, houses of different patterns made their appearance. Among the first was "The House with Scratch-shed Attachment." This style of house, which came from the Eastern States, was well received in Canada, and made many friends, among them several of the farming community. It may be made singly; that is, a house with scratch-shed adjoining it, under one roof, or it may be "continuous," which means a shed and roosting apartment, then another roosting apartment, then a shed, and so on, as shown in the following admirable sketch, which is taken from a recent publication by the Cyphers Mfg. Co., of Buffalo, N. Y. Some of these houses are more open in front than others. In the above case there is a cotton or muslin curtain in the front of the scratch-shed, which curtain can be lowered or raised at will. It is really a house with a curtain-front scratch-shed. An objection to having a curtain to the whole of the shed front is that the sunlight is excluded when the curtain is down. In a single house of a similar design, at the Experimental Farm, here, the front of the scratch-shed is covered with two-inch wire mesh, and a window in the center. The curtains are hinged in two parts behind the wire netting, and on each side of the windows, so as not to interfere with the sunlight. The progenitors of the style of house as shown above, claim that the fowls will roost at night and lay eggs during the day in the enclosed apartment, which is known as the roosting and laying room, and get exercise by searching for whole grain, which is scattered among the litter, always on the floor of the scratch-shed. To keep fowls warm during cold nights, a curtain is arranged to come down in front of the roost, or roosts (for sometimes there are two), which are at the back of the enclosed room, as shown in the ground plan of the houses and sheds, a general view of which is shown on page 1711.

MODIFICATIONS OF THE FOREGOING BUILDING.

There have been many modifications of the above style of building, made from time to time, such as to permit of improved methods of ventilation, by a canvas frame at top and bottom of window or windows; no curtain front in scratch-shed, but wire netting instead (this for warmer districts). One objection to the roosting and laying rooms, as shown above, is the accumulation of moisture, which is doubtless due to lack of ventilation. Hence the cotton frames above and below the window; slatted ceiling, with straw above, to absorb moisture, etc. But, no matter how many and radical have been the changes made in the original design of house and shed attachment, the principle governing its construction remains the same. Perhaps the most radical departure from the original plan is the abandonment of the scratch-shed. But of this and the reasons therefor, another opportunity must be taken advantage of to dilate thereon.

PAT'S SOLILOQUY.

The strangest oidea in the wurruld to me,
That is taxin' me noddle at present,
Is how can a poultryman make it to be,
That a chicken is dressed whin it isn't.
—Exchange.

CANADIAN TURKEYS AND CHICKENS FOR ENGLAND.

The Canadian Commercial Agent at Leeds reports good prospects this season for Canadian turkeys in England, the supply of game birds there being short. Mr. Jackson makes the following suggestions:

"Cold-storage arrangements are essential, and appearance alone, in nine cases out of ten, decides the sale of a case of birds. The most important point, however, and one which, by the way, has created a good deal of discussion, is the killing of the bird. On this subject, dealers in the north of England declare that the only way which gives satisfaction here is that the bird should be well bled, as, by this method, when it comes out of cold storage, it is not only whiter in color, but keeps longer. If the bird is killed by the ordinary process of wringing the neck, then the heat of the blood seems to accumulate and turns the flesh a greenish color. Before being actually killed, it is also suggested that the bird should be starved for a few hours, so that the food may get digested; otherwise, this might spoil the appearance, and after it has been killed it should be hung up for two clear days before being put into the case. Canadian exporters will be well ad-

A WOMAN POULTRY-KEEPER'S EXPERIENCE.

Editor "The Farmer's Advocate":

We have been keeping poultry for the last six or seven years, and always started out every year to keep account of eggs and chickens sold, and feed bought. We would look after it well for a while; but it became uninteresting as the hens quit laying, or some of the chickens began to die off, or the weasels killed some, and the hawks started to work on them, and we would say: "I guess they will all go," and cease keeping track for that year, and so it would go.

But this year it has been different. We have been keeping account so far, and have no trouble now. I think it fine work, and made a nice sum out of the poultry last winter and this summer. They were very thin last fall, having had too much rye to eat, and, if I had not attended to them when I did, they surely would have died, but I gave them a change of food, and they were nearly all laying in January. We sold a thirty-dozen crate every week but one or two, till hatching-time; and, then, counting the settings we sold and the eggs placed under the hens, we got more eggs than ever. But we had a lot of trouble getting the hens to sit for the full time. Some sat well for a week or so, then off they would go to lay, and I would get another hen, or divide the eggs with some hen that was hatching all right. So some chickens would come

out and off would go the hen with them. Then I would put the eggs under some other hen for a few days more, so at last we got through for the season. We hatched out about 350 chickens, and I don't think we lost 25 this year. The eggs were all fertile, though they didn't all hatch. I had a good place to set them in on the ground, with a place for feed and drink, and they would dust themselves every time they wanted to. We keep all Rhode Island Reds, and I wouldn't want any better layers. Eggs, I think, are the only thing that pays with me, for the young chickens eat as much worth of feed as they bring when killed. We have been buying all wheat for feed this summer.

Our best henhouse is 24 feet by 12 feet; shingle shanty roof, with tar paper between the shingles; north-east and west; double boarded, with tar paper between, but the south side is just single boards, not very close together, with no battens over the cracks; plenty of air, but no drafts, as every wall but the south side is tight. There are two big windows in the south side, up most of the time. We have an-

other coop on the side of the hill, and we kept 130 hens last winter in these two coops, and never had a sick fowl. Everyone who saw them remarked how well they looked, and would ask for a setting of eggs at hatching time. I have received over \$1.25 per hen so far this year, and have nearly all my chickens to sell yet. The old hens were about through moulting by the month of October, and I ought to get a month or six weeks good laying yet this year, as I expect some pullets to take to business any day now.

We fed corn to our hens last winter for two months, and we could get lots of eggs, and we could feed seven hens with one cent's worth of corn by giving them plenty of roots to pick.

Elgin Co., Ont.

(MRS.) H. J. HALES.

[Note.—For letters, such as the above, describing practical everyday experience in any department of farm work, we are always glad to find space at regular rates.—Editor.]

FEED THE PULLETS GENEROUSLY NOW.

An American writer submits, as the three essentials for making pullets lay winter eggs, early hatching, liberal feeding, and regularity in attention. While these three postulates do not sum up all the requirements, they are certainly very important. The pullets at this season should go to roost with well-filled crops.



Bringing Home the Flock. Photo by R. R. Sallows.

vised to pay special attention to appearance, especially seeing that Canadian turkeys last season only fetched 18 cents per pound, compared with 24 cents for British. Before being packed, the birds should be plucked clean, and, as a protection in the handling, they should be wrapped round with a sheet of grease-proof paper, similar to that used in wrapping butter, which, in its turn, should be tied with a piece of white tape to keep it in position. In the packing, it is usual for one dozen cock birds to be shipped in a box, and, in the case of hen birds, eighteen; but there is a growing preference that a box should contain only one dozen of each kind.

Mr. Jackson foreshadows a big demand for Canadian chickens early next year. In the packing of chickens, it is advocated that twelve birds should be put up in a case, positions alternately reversed, and with a piece of grease-proof paper wrapped round each, and, in turn, a larger piece laid all round the inside of box. Another important point, too, is the grading. Birds of equal size and quality should be packed together, and on the outside of each case should be marked the gross and net weights. Supposing, for example, the birds are graded into 1, 2 and 3 qualities, Class 1 will perhaps average from 42 to 48 pounds; class 2 from 32 to 38 pounds, and class 3 will be composed of any mixed weights below class 2. Appearance is every-

THE FARM BULLETIN.

A SCOTTISH-AMERICAN DEFINES THE PROGRESSIVE FARMER.

With the help of improved machinery, the progressive individual farmer is producing much more than the average farmer did a generation ago, and men of this class are keeping up the productive qualities of their farms. They observe certain principles of farm management; they do not sell forage as roughage; they keep live stock, and grow feed for them; they sell animals and their products, fruits, vegetables, etc. As long as the pioneer on virgin soils grows wheat at prices that have been current, the progressive farmer grows little or none. He keeps improved stock that respond to their keeping and that put on the greatest per cent. of meat on the prime parts. He puts all manure promptly on the fields.

- He rotates his crops.
- He tile-drains his lands.
- He keeps up good fences.
- He has good pasture.
- He has a good garden.
- He breeds draft horses, and does farm work with brood mares and growing colts.
- He has a library, with periodicals and standard works, and a musical instrument.
- He helps his wife in the house when she needs it; has a spring vehicle for her to visit in, and goes to church with her himself.
- He keeps dairy cows or mutton sheep, or both.—Jas. Wilson, United States Secretary of Agriculture.

CANADA'S POSTAL BUSINESS GROWING.

The report of the Postmaster-General, for the fiscal period of nine months, ending March 31st last, shows a total revenue of \$6,535,093, and an expenditure of \$5,452,792, a surplus of \$1,082,301. The surplus for the whole twelve months of the preceding year was \$1,011,765. Of the total mail matter carried in Ontario during the nine months, nearly half was contributed by Ontario, while Toronto stands at the head of Canadian cities in revenue, which amounted to \$998,951. Montreal's revenue was \$660,217; Winnipeg's, \$374,020; Ottawa's, \$125,059; Hamilton's, \$125,711; London's, \$99,869; Vancouver's, \$111,975; Quebec's, \$87,077; Halifax's, \$77,691; St. John's, \$78,595; Brantford's, \$37,328; Guelph's, \$29,226; Kingston's, \$32,251; Peterboro's, \$26,172; Windsor's, \$25,194; Woodstock's, \$17,537; Toronto Junction's, \$11,643; Stratford's, \$16,243; Sarnia's, \$14,824; St. Catharines', \$19,335; St. Thomas', \$19,417; Galt's, \$17,033; Brockville's, \$23,970; Berlin's, \$20,490; Belleville's, \$15,637.

The total number of dead letters, etc., was 1,458,970, of which 14,700 contained articles of value, or were registered.

Some curious things which found their way to the D. L. O. were: One bark canoe, one bed tick, one bird, three bottles of whiskey, twelve cakes, one can of salmon, one football, numerous articles of jewellery, five packages of gum, one hair-brush, one hair switch, three kimono's, one lamp, one military busby, three mince pies, nineteen mortgages, seven napkin rings, thirty-six neckties, five night-dresses, one oil-cloth, four pawn tickets, two pedigrees, six packages of peanuts, forty-five pipes, twenty-one puddings, seventeen razors, six diamond rings, four rubbers, five pairs socks, thirteen stockings, one clergyman's stole, twenty-three summonses, five teeth, three pair trousers, fifty toys, one war medal, ten watches, two wigs, and one window cleaner.

Moral: Whether you send a diamond ring, a clergyman's stole or a "Farmer's Advocate" subscription, write the address clearly, and see that it is all on the envelope. Perhaps we should not be personal, but we are particularly anxious that no subscription money intended for "The Farmer's Advocate" shall find its way to the Dead Letter Office.

"HORSE SENSE" IN EDUCATION.

Editor "The Farmer's Advocate":

I am much obliged to you for sending me a copy of your magazine of the 17th instant. I have read the first article, and, to speak in agricultural language, "There is a good deal of horse sense in it." The Province of Ontario has been kept back in its educational development, because for thirty years or more we held the erroneous opinion that we were far ahead of all the rest of the world in educational affairs. However, there are many evidences that we are waking up. We are getting free from the examination craze, and we are beginning to realize that the boy's originality, and transforming power, and achieving tendency, should be developed by the schools. We are going to do more executive training and less knowledge cramming in the future.

JAMES L. HUGHES.

Chief Inspector's Office, Toronto.

Officers of the Wellington Field Naturalists' Club recently elected are as follows: Honorary President, W. E. Saunders, London, Ont.; President, J. W. Eastham, O. A. C., Guelph; Editor of Bulletin, T. D. Jarvis, O. A. C., Guelph; Secretary-treasurer, C. R. Klinck, O. A. C., Guelph.

IMPORTATION OF HORSES, ASSES AND MULES RAISE THE STANDARD OF RURAL SCHOOLS.

Editor "The Farmer's Advocate":

Several months ago I submitted for publication in your paper an article on "Rural Public Schools," which article was inserted in your issue of February 28th, and contained a true picture of the condition of things as they exist in our Province at the present time. In the latter part of my letter, I ventured to suggest, as a remedy to this faulty system of education, that the standard of education in our rural public schools should be raised; in reply to which, someone writing under the assumed name of "Mac," attempted to take me to task, and, by the way, just here let me ask what has become of "Mac."? During the months that have elapsed since my reply to "Mac," I have read, with much interest, the various editorials in your paper on the subject, as well as letters from many others along the same line, reminding me of the saying of the Apostle Paul: "A little leaven, leaveneth the whole lump."

Many of these letters appear to agree in the main with the ideas advanced by me that our "rural-school system" is faulty, and, secondly, that the standard of education in our rural schools should be raised.

Our present school system has been in vogue for so long a time that it will require persistent and united effort so to adjust matters as to bring about the desired results. Mr. Darling speaks truly, when he says, in your issue of October 17th: "It is time our rural residents were taking a little interest in educational matters." For is it not a fact that we have too long been content to leave these matters in the hands of our so-called experienced inspectors and professional educationists? There appears to be a growing conviction amongst rural residents that these officials are

not rendering a very efficient service in return for the salaries received. It seems quite natural that these inspectors and educationists should believe that our educational system is improving, and that better work is being done by our public-school teachers than in years gone by, for, from their view-point, such may appear to be the case. Living, as most of them do, in towns or cities, they see only one side of the question, and apparently know very little about how our school system is affecting the rural districts. We would just here beg leave to suggest that it might also be in order for our inspectors and educationists to take a

little interest" in educational matters, as they are affecting the rural districts. Mr. Darling says in his article that the day when a pupil may secure a high-school training, without going to the town, is rather a distant prospect, and, we believe, he is again correct, and we are glad of it, for we do not want any high schools in the country. The towns and cities are not begrudged the high schools. Indeed, they are welcome to have them. What we do object to, however, is to have the standard of our rural public schools lowered, as it has been, until they are only mere stepping-stones by which to gain an entrance into the high schools, or pass on into the responsibilities of citizenship with a tremendous lack of preparation for life's duties. Allow me, Mr. Editor, to say right here that I prize your valuable paper very much, having read it with interest for years, and find the discussions on various topics very beneficial, and think it should be in every farmer's home. Many of your editorials are very helpful, although I do not at all times agree with your ideas. For instance, a few weeks ago you were loud in your praises of our high schools having special teachers appointed to organize agricultural classes, and urged the various districts to co-operate with the teachers and make liberal grants to aid them. Some of them, however, were inclined to hesitate, and move along these new lines slowly and carefully, which, I think, was commendable on their part. I am of the opinion that we do not want these special agricultural teachers in our high schools at all. It looks to me like another false move on the part of the Minister of Education. If any of our boys in the towns or cities want to study agriculture, let them go out and engage to work for some practical farmer for a year, and they will learn practical lessons in agriculture, such as they would never dream of in studying in a high school; and, if after a few years on the farm, they want to become specialists, they can then get what they want at the Agricultural College, at Guelph. Mr. Darling advises us to take plenty of salt with the indignant charges made by Mr. Rice. We know, by experience, that many of the assertions made by Mr. Rice are too true, and shall reserve the salt to be taken along with the advocacy of special agricultural classes and other such child's play.

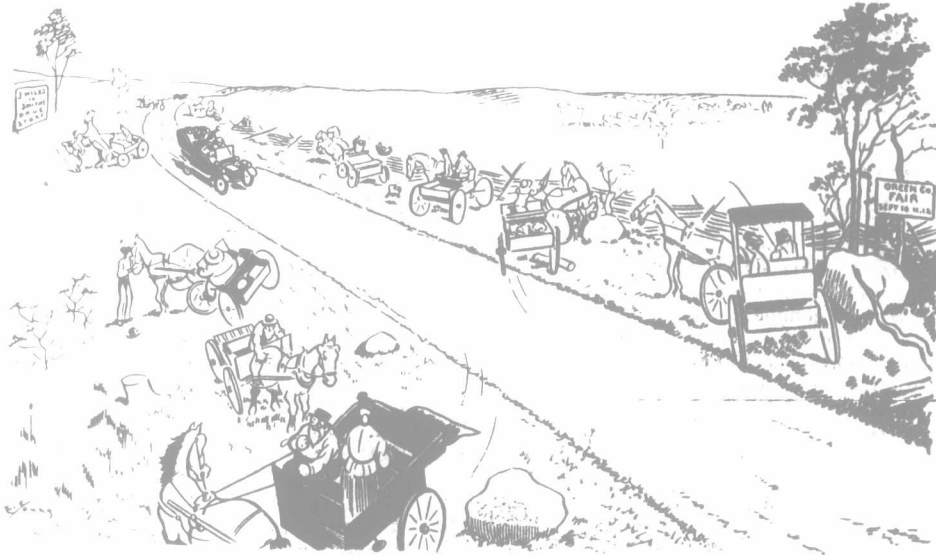
In one of your editorials, you quoted from the sayings of several eminent men to show that "No country

The British Board of Agriculture and Fisheries desire to call the attention of all concerned to the following provision contained in Article 2 of the Glanders or Farcy Order of 1907, which comes into force on the 1st of January, 1908:

No horse, ass, or mule, brought to Great Britain from any other country, except Ireland, the Channel Islands or the Isle of Man, shall be landed in Great Britain, unless it is accompanied by a certificate of a veterinary surgeon to the effect that he examined the animal immediately before it was embarked, or whilst it was on board the vessel, as the case may be, and that he found that the animal did not show symptoms of glanders or farcy.

THE GUELPH COMBINATION SALE.

The auction sale, at Guelph, Ont., Oct. 23rd, of Shorthorn cattle, from the herds of Geo. Amos & Son, Moffat, and W. R. Elliott & Son, and A. E. Meyer, of Guelph, was largely attended by breeders from considerable distances. The stock offered included a number of very good things, and they were of a creditable class, as a whole, and were in excellent condition. The best things brought fair prices. A few of the animals were withdrawn, owing to the bids not being considered by the sellers fair value for them. The shortage and high price of feed seemed to render breeders cautious about investing, but the buyers certainly got good bargains, and by good management the feed problem may be solved more satisfactorily than is



And the Farmer Pays the Road Tax.

(With acknowledgments to "Puck.")

feared. The situation in that regard is not more serious than has been overcome many times in the past, and the prospect for beef cattle is by no means discouraging.

Following is the sale list:

COWS AND HEIFERS.

- Village Lassie 6th; born Sept., 1906; John Dryden & Son, Brooklin\$200
- Golden Bud; April, 1901; John McLean, Ballinafad 160
- Scotch Lass 2nd; Dec., 1906; A. F. & G. Auld, Eden Mills 155
- Scotch Lass; Dec., 1905; Arthur Johnston, Pickering 115
- Victoria Lady; Dec., 1905; James Simpson, Moffat 100
- Violet of Maple Hill; Nov., 1903; A. F. & G. Auld 105
- Duchess of Sunny Slope 2nd; January, 1905; Dr. Bowman, Amherstburg 100
- Village Lassie 2nd; Oct., 1904; John Dryden & Son 95
- Bonnie Jean 2nd; Sept., 1904; W. J. Shean & Son, Owen Sound 85
- Ella Buckingham; Sept., 1905; A. E. Shuttleworth, Hespeler 90
- Mysie Lily; Dec., 1906; W. H. Easterbrook, Freeman 80
- Fashion's Royal; Jan., 1900; A. E. Shuttleworth 75
- Village Lassie 7th; Nov., 1906; John Dryden & Son 75
- Village Lassie 4th; Oct., 1905; J. Dedles, Kossuth 75
- Ivy 3rd; Sept., 1905; Thos. Ellis, Clifford 65
- Cecelia Miss; Jan., 1907; A. F. & G. Auld 55
- Fashion's Star; January, 1906; Dr. Bowman 50

BULLS.

- Brawth Hero; January, 1907; Prof. G. E. Day, Guelph\$120
 - Ury's Hero; February, 1907; T. W. Ellis, Clifford105
 - Fashion's Rex; October, 1902; Geo. Hillebracht, Brodhagen 90
 - Verbena Victor; October, 1906; W. J. Shean & Son 65
- Twenty-one head sold averaged \$98.

can be greater than its rural population." Now, if this be true, and we believe it is, then it becomes very important that our rural people should be an educated people. Let us, therefore, as rural residents, teachers, inspectors and legislators, unite to raise the standard of our rural public schools. W. H. KIPP.
Oxford Co., Ont.

[Note.—If our correspondent will turn up and re-read the editorials in our issues of July 11th and 18th, 1907, he will find that "The Farmer's Advocate," so far from being "loud in praise" of the agricultural high-school classes, took very moderate ground, warning against high expectations, and pointing out that the work of rural-education reform should commence in the common schools. While giving full publicity to the agricultural-high-school movement, welcoming it as a hopeful sign of the trend of educational opinion, and urging farmers to give it encouragement and support, we said nothing editorially about local grants. We pointed out that the programme mapped out was over-ambitious in what it promised its students. Time has confirmed this impression, although we still believe that farm boys attending any of these high schools will find it decidedly to their advantage to take the agricultural courses offered thereat.—Editor.]

CANADIAN PONY SOCIETY.

At a meeting in Toronto, on Oct. 23rd, the directors of the Canadian Pony Society appointed President W. J. Stock, Secretary H. J. P. Good and H. M. Robinson a committee to take up the matter of registration before the Record Board at Ottawa, and complete all the necessary arrangements for the incorporation of the Society. Twenty-five dollars was voted as a donation to the Ontario Breeders' Show, to be held in Toronto, on Feb. 12, 13 and 14. R. W. Davies, Robert Miller and Robt. Major were named as judges at the Breeders' Show. The President was appointed representative to the National Exhibition Association.

CALENDAR OF SHORT COURSES AT O. A. C.

Just to hand is an illustrated calendar of the special short courses to be put on this winter at the Ontario Agricultural College. The two weeks' course in live-stock and seed judging will commence January 14th, 1908. The special winter poultry course will commence January 14th, and continue till February 8th. (On account of limited accommodation, attendance in this class will necessarily be limited to twenty-five.) At the conclusion of this course, the annual Poultry Institute or convention will be held. For those interested in fruit-growing, but unable to attend the regular 2 years' or 4 years' course, a short course will be held from January 27th to February 8th. The dairy courses are as follows:

1.—Dairy School, for Factory Cheese and Butter Makers, and the Farm Dairy for men and women on the farm, opens January 2nd, and closes March 28th, 1908. The Factory Course will be strictly limited to those who have had at least one season's experience in a creamery or cheese factory. Students without factory experience will be required to take the Farm Dairy Course.

2.—Course for Dairy Instructors begins March 31st, and ends April 4th, 1908.

3.—Summer Course for Butter and Cheese Makers, or for those who wish to learn the business, including the pasteurization of milk and cream, begins May 1st, and ends September 30th, 1908.

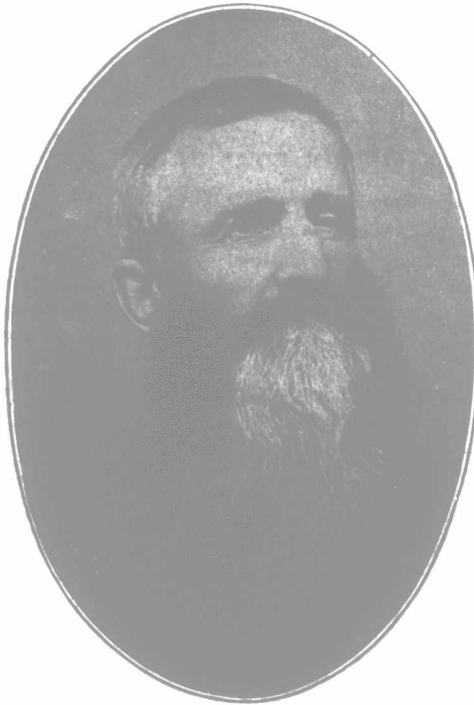
No entrance examination is required for any of the short courses, and no fee is required for any from residents of Ontario. For non-residents, a fee of \$5 is required for the dairy school. There is practically no cost, except railway fare, board and ordinary living expenses. Write for calendar of short courses to President G. C. Creelman, O. A. C., Guelph, Ont.

THE LATE ISAAC DEVITT.

The late Isaac Devitt, of Freeman, Halton County, Ont., who died last month, was born in 1837 on a farm, now the site of the thriving town of Waterloo, Ontario. His father, the late Barnabas Devitt, was of Irish descent, having come from Ireland to New Jersey, and subsequently to Canada in 1812.

Starting out for himself in 1862, the subject of this sketch settled with his bride on a farm on which the greater part of the village of Floradale, Woolwich Tp., Waterloo Co., is now built. The first years were spent in clearing up the land, after which his attention was turned to improving his stock. For a number of years he bred Cotswold sheep, with marked success, his show flock always carrying off a large share of the premiums at local fairs. Soon a colt or two accompanied the sheep on their triumphal round of the fairs. A favorite mare that had well endured long trips in teaming, bred to a Clydesdale horse, produced the foundation of one of the best families of the present stud; her grit, stamina and endurance being transmitted to her offspring, which also combined size, inherited from the sire. In 1888, the quality of the stud was further improved by the addition of an imported Clydesdale mare, winner of first and sweepstakes at Toronto that year. Her blood now largely predominates in the animals of the stud. Commencing in 1892, representatives of the stud were shown at Toronto for ten successive years, always leaving the exhibitor clear of expense. The unfortunate death in

March last of the elder son, Mr. M. E. Devitt, so upset the father that he decided to retire from business, and, accordingly, on Sept. 11th last, he disposed of his valuable farm, and immediately succumbed to a paralytic stroke, expiring on Sept. 16th, without having regained consciousness. He is survived by his mother, now nearly ninety-six years old, still hale and hearty, four brothers, two sisters, also the widow, one son and two daughters.



The late I. Devitt, Freeman, Ont.

CONSOLIDATED SCHOOL AT GUELPH.

The Macdonald Consolidated Public School, located near the Agricultural College, Guelph, is being continued under a new arrangement, with four of the original school sections, one, by consent, having been permitted to retire. Owing to the heavy cost of conveyance of pupils to school in the covered vans, four of the sections had voted to retire, but it was found that they could not legally do so at the time anticipated, as the present consolidation must be maintained till the end of 1907. Under the new conditions, the Macdonald Fund furnishes \$1,200 per year, and the Ontario Education Department duplicates the grant. This is conditional on manual training, domestic science and nature study receiving emphasis, as before. The sections furnish the remainder of the cost of maintenance. One teacher was dropped, reducing the staff to six. Three vans now do the work previously performed by six, at a reduction in cost of about \$6.00 per day. By the secession of S. S. No. 1, the cost of two vans was saved. There appears to be a strong opinion as to the superiority of the educational training given, such as was not practicable in the old one-room schools, and to the comfort of the scholars, but the increased taxation is the sticker. At present there are about 170 pupils on the roll, and the percentage of attendance about 89. At midsummer 18 pupils secured High-school Entrance-examination certificates. It is understood that, even should some of the sections retire at the end of the year, the section in which the school is situated and another near-by would continue the school, with an attendance of 100 pupils. The school is under the principalship of Mr. E. A. Howes, who has been in charge since September, 1906.

THE PRICE OF CARELESSNESS.

The Michigan Central Railway having pleaded guilty, on indictment of neglecting reasonable precaution in the case of the explosion of a car of dynamite at Essex station on August 9th, 1907, has been fined \$25,000. In addition, claims against the company, paid or certain to be paid, amount to \$11,000. Unadjusted claims amount to \$50,000, and damage to the railroad company's property \$4,700, making the total cost of the wreck to the company \$90,700. In imposing the fine, Mr. Justice Riddell stated that, "This fearfully dangerous substance was shipped with no more care and precaution than a carload of potatoes. I have always thought (and the more I think of it, the more I am sure I am right) that if it were made more costly to railway companies and others to disobey than to obey the law, offences against the law would be much diminished. The company, so far as appears, took no care whatever to have the employees instructed in the handling of such materials, and knowledge of that character does not come by instinct."

FORTHCOMING SHOWS.

Nov. 30 to Dec. 7, International, Chicago.
Dec. 9 to 13, Ontario Winter Fair, Guelph.
Feb. 12 to 14, Ontario Horse-Breeders' Show, Toronto.

DECLINE OF OCEAN FREIGHT RATES.

The causes of the marked decline in ocean freight rates during the last thirty years are explained in bulletin No. 67 of the Bureau of Statistics of the Department of Agriculture, prepared by Frank Andrews, Assistant Chief of the Division of Foreign Markets, entitled "Ocean Freight Rates, and the Conditions Affecting Them," which will be issued in a few days.

Instances of great reductions in ocean freight rates are noted in the case of grain, provisions and cotton. In 1876 wheat was carried from New York to Liverpool for an average of 16.8 cents (gold) per bushel, and the rate in 1906 averaged only 3 cents per bushel. On salt beef the mean rate from New York to Liverpool by steamers was \$1.42 per tierce in 1876, while in 1906 it was but 54 cents. The average ocean rate charged thirty years ago on wheat from San Francisco to England was more than double the present rate. Reductions in the case of cotton rates were also large, amounting in twenty years to more than 50 per cent. in a number of instances.

LINERS AND TRAMPS.

The causes of reductions in ocean freights are largely connected with the increase in size of ocean vessels and with economies in the handling of ships and their cargoes. Ocean vessels may be divided into two classes, liners and tramps. The first consists of ships belonging to a regular line; that is, a group of vessels plying over the same route, voyage after voyage, and having more or less regular times of sailing. Vessels of the second class, commonly called "tramps," have no regular routes or times of sailing, but go from port to port seeking cargoes, usually for a single voyage at a time. Both liners and tramps are now built much larger than in former years. The cargo of a tramp ship not infrequently includes the product of 15,000 acres of average wheat land, or the cotton yielded by twice that area, and it would take two such cargoes to fill the hold of one of the larger freight liners.

CARGO SPACE.

The cost of operating a ship does not usually increase in proportion to its size, while the earning power does increase with every additional unit of cargo space. The vessel of 10,000 tons' dead-weight capacity does not necessarily have twice the operating expenses of a vessel of 5,000 tons, but the earning power of the larger vessel may be double that of the former. The big ship may reduce rates by 25 per cent., and still earn a larger percentage of profit than its smaller competitor. This applies especially to vessels of similar construction engaged in similar traffic.

WESTERN SITUATION IMPROVES.

Late reports from the Northwest indicate that, on the whole, the farming and general business situation is steadier and more confident than a couple of months ago. Manitoba claims rather better crops than Saskatchewan and Alberta, the total of wheat being estimated at from 50,000,000 to 60,000,000 bushels, but a great deal of this will grade low because of frost. All through the season was late, every month the weather being described as "askew," compared with late years. While some districts have had good crops, with yields up to 25 bushels per acre, others have fallen distressingly low. A great deal of threshing has been completed, but the deliveries of wheat have been slow, so that the effects of marketing have not yet been appreciably felt. The other crops correspond approximately with the wheat, but as is the case in Eastern Canada, prices for everything in the Western region are abnormally high, so that farmers will come out fairly well financially. Railway construction is distributing money in the country, by the employment of labor and purchase of materials. A considerable decrease in immigration into the West this year is reported, and the speculation mania has subsided. People in the towns are settling down to legitimate business, instead of trying to get rich by the turnover of pasture lots, and the season's experience will result in more and steadier farming and less section-buying. The banks are still disposed to hold their funds at high rates, generally claiming that capital is insufficient for the demands of business.

ENSILAGE CORN AT MACDONALD COLLEGE.

The 23-acre ensilage-corn crop at Macdonald College farm, St. Anne de Bellevue, Que., was the best seen this year, in the course of a trip from London to Halifax. In the harvesting, each load was weighed as it came from the field to be siloed, and the average weight per acre was 17 tons. The average yields of the different varieties of corn were: Mastodon, 18 tons 1,200 pounds; Leaming, 17 tons; Longfellow, 15½ tons. Two hundred and ninety-nine tons were put into one silo, and 89 tons into another. The corn, which was well-cared and fairly well matured, will prove a great boon in carrying over the dairy herd, since, owing to the loss by fire of the barns, and the hay and grain stored, all the feed required, except ensilage and roots, will have to be purchased at high prices.

Banking Business

You have more or less of it. We invite you to bring it to THE BANK OF TORONTO.

Your spare money deposited in our savings Department will be safe there until required, and interest will be added to it every three months.

Drafts and Money Orders issued and cashed.

Letters of Credit issued for travellers.

Money Loaned.

BANK OF TORONTO

Head Office, TORONTO, CANADA.

ASSETS - - - \$38 000,000

MARKETS.

TORONTO.

LIVE STOCK.

The receipts, all told, of live stock at the City and Junction markets last week were 326 carloads, composed of 5,299 cattle, 6,400 hogs, 5,635 sheep and lambs, and 484 calves. The quality of cattle was the poorest of the season. Trade was dull for all classes of cattle, excepting a few of the best butchers' and a few of the best milkers and springers, which sold readily at good prices.

Monday's receipts at the Junction numbered 1,000 head of cattle. Trade was slow. Exporters, \$4 to \$4.80, bulk at \$4.50; bulls, \$3.50 to \$4; picked butchers', \$4.50 to \$4.75; loads of good, \$4.25 to \$4.50; medium, \$3.75 to \$4; common, \$3 to \$3.50; cows, \$22 to \$24; feeders, \$3.25 to \$3.40; milch cows, \$30 to \$50; calves, \$4 to \$6.50 per cwt. Sheep, \$4.40; lambs, \$4.75 to \$5.50. Hogs, \$6.25 for selects, and \$5 to \$5.25 for unselected.

Exporters.—Price last week ranged from \$4 to \$4.75; export bulls, \$3.25 to \$4.

Butchers.—Picked lots, prime quality, sold at \$4.50 to \$4.75, and one lot of 14 heifers, 1,100 lbs. each, good enough for the Christmas market, were sold at the Junction market, by Maybee, Wilson & Hall, at \$5.25 per cwt.; loads of good, \$4.25 to \$4.40; medium, \$3.50 to \$4; common, \$2.75 to \$3.25; cows, \$2.50 to \$3.75, and \$4 for a few choice; canners, \$1 to \$2 per cwt.

Feeders and Stockers.—Prime-quality, well-bred feeding steers, 1,000 to 1,100 lbs. each, sold at \$3.40 to \$3.70; steers of the same weights, but medium quality, sold at \$3.25 to \$3.30; good-quality, light feeders, 800 to 900, \$2.75 to \$3; common to fair stockers, 600 to 700 lbs. each, sold at \$1.75 to \$2.25 per cwt., and slow sale.

Milkers and Springers.—There was a fair demand for all of the good cows last week, at steady to strong prices. Good to choice cows were scarce, and the market was a little higher than a week ago for the best grades, which were quotable up to \$60 and \$65 each, and one extra fine Holstein springer, weighing 1,640 lbs., brought \$85. Most of the medium and good cows sold at \$35 to \$45, common, light cows, very dull, at \$25 to \$30.

Veal Calves.—The same quality of veal calves, which, generally speaking, was not good, sold at the same prices as we have been giving for several weeks. Prices ranged from \$3 to \$6.50 per cwt., the bulk selling from \$4.75 to \$5.50 per cwt.

Sheep and Lambs.—Receipts large; prices about steady. Export ewes, \$4.25 to \$4.50; rams, \$3 to \$3.50; lambs, \$5 to \$5.60 for good to prime, and \$4.50 to \$4.75 for culls.

Hogs.—Deliveries were larger last week, with prices firm at \$6.25 per cwt., fed and watered, for selects; light, unfinished hogs, \$5 to \$5.25. At some outside points as high as \$6.10 and \$6.15 per cwt. was paid the farmer, and \$6 to the farmer was quite common throughout the country, as reported by drovers.

Horses.—There was little doing at the Repository last week. Mr. Watson, of the firm of Sheppard & Burns, stated that not more than 70 horses changed hands, and they were of the common, cheap kind generally. Prices were unchanged from our last: Heavy workers, \$125 to \$175; medium, \$80 to \$100; expressers, \$100 to \$160; wagon horses, \$100 to \$140; chunks, sound, 1,200 to 1,300 lbs., \$120 to \$175.

BREADSTUFFS.

Wheat.—No. 2 white or red, \$1.05; No. 2 mixed, \$1.04; No. 2 Goose, 90c. bid; Manitoba wheat, No. 1 Northern, \$1.15, lake ports; No. 3, \$1.09 bid, lake ports.

Corn.—American yellow, No. 2, sellers, 74c., at Toronto.

Barley.—No. 2, 87c. bid; No. 3 extra, 84c. to 85c.; No. 3, 70c. bid.

Oats.—No. 2 white, 58c. asked.

Rye.—No. 2, 83c. bid.

Peas.—No. 2, 90c. bid, sellers asking 91c.

Bran.—\$25, at Toronto; shorts, \$27 to \$28.

Flour.—Ontario, 90 per cent. patents, \$3.85 bid for export, Manitoba patent, special brands, \$6.20; second patents, \$5.60; strong bakers', \$5.50.

COUNTRY PRODUCE.

Butter.—Receipts light. Market, if anything, a little firmer. Creamery, pound rolls, 29c. to 31c.; dairy, pound rolls, 27c. to 28c.; tubs, 26c. to 27c.

Eggs.—New-laid, 28c. to 29c.; cold-storage, 25c.

Cheese.—Market firm; prices unchanged; large, 13½c.; twins, 13½c., with light offerings.

Honey.—Extracted, 13c. to 13½c.; combs, in dozen sections, \$2.75 to \$3.25.

Potatoes.—Supply equal to demand. Car lots of Ontarios and New Brunswicks, on track, at Toronto, sell at 70c. to 75c. per bag. The preference seems to be in favor of Ontario potatoes this season.

Poultry.—Receipts large; quality poor; prices easy, as follows, for live birds: Turkeys, 14c. to 15c. for young birds; geese, 9c. to 10c.; ducks, 9c. to 11c.; chickens, 9c. to 10c.; fowl, 6c. to 7c. Dressed poultry, 2c. per lb. more.

Hay.—Baled, in car lots, on track, at Toronto, \$17 to \$18.

Straw.—Baled straw, in car lots, \$9.50 to \$10.50.

HIDES AND WOOL.

E. T. Carter & Co., 85 Front St., have been paying the following prices: Inspected hides, No. 1 steers and cows, 7½c.; No. 2, steers and cows, 6½c.; country hides, 6c. to 7c.; calf skins, No. 1, city, 12c.; calf skins, No. 1, country, 10c. to 11c.; horse hides, No. 1, each, \$2.75 to \$3; tallow, 5½c. to 6½c.; wool, unwashed, 12c. to 13c.; wool, washed, 22c. to 23c.; rejections, 16c.; lamb skins, 65c. to 75c.; horse hair, per lb., 30c.

FRUIT MARKET.

The wholesale fruit market, at the foot of Scott Street, has been closed for the season, and the various firms have returned to their business stands for the winter. Receipts of grapes and apples, as well as pears, were fairly large last week. Apples sell at \$1.50 to \$2.50 for fall varieties; pears, 30c. to 60c. per basket; grapes, 30c. to 60c. per basket.

SEEDS.

William Rennie & Co. report the alkali seed market unchanged. No. 1 seed per bushel, \$3.60 to \$9; No. 2 seed, per bushel, \$7.50 to \$8.

CHICAGO.

Cattle.—Steers, \$5 to \$7.45; cows, \$4 to \$5; heifers, \$3 to \$5.75; bulls, \$2.60 to \$5; calves, \$3 to \$8; stockers and feeders, \$2.40 to \$5.

Hogs.—Choice heavy shipping, \$6.10 to \$6.15; light butchers', \$6.10 to \$6.20; light, mixed, \$5.90 to \$6.05; choice, light, \$6 to \$6.15; packing, \$5.25 to \$6; pigs, \$4.25 to \$5.75; bulk of sales, \$5.50 to \$6.

Sheep and Lambs.—Sheep, \$3 to \$6.25; lambs, \$5.75 to \$7.25; yearlings, \$5.25 to \$6.

MONTREAL.

Live Stock.—Choicest cattle sold here last week at 5c. to 5½c. per lb.; fine, 4½c. to 5c.; good, 4½c. to 4¾c.; medium, 3½c. to 4c., and common at 2½c. to 3c.; canners being as low as 1½c. Receipts of sheep and lambs were somewhat larger than for some weeks past, and demand was active, prices advancing ¼c. a lb. Lambs sold at 6½c. for export, and 6c. to 6½c. for local trade. Sheep held steady at 4c. to 4½c. There was a good demand for calves, and prices held firm at 4c. to 6c. for common, and 7c. to 10c. for good, and 11c. to 15c. for choicest. The hog market also showed a stronger tendency, owing partly to firmer cables on bacon. Prices showed an advance of almost ¼c. per lb., sales of selected stock being made at 6½c. to 6¾c. per lb., weighed off cars, a few loads being taken at 6¾c.

Horses.—There is very little change noticeable in conditions in the horse market. Supplies continue as small as heretofore, but this has not the effect of strengthening prices, inasmuch as demand is exceedingly small, being barely sufficient to absorb the arrivals. At the moment, there does not appear to be any inquiry from railway contractors, although quite a number of horses have been shipped to the woods for lumbering purposes. In nearly all cases the animals taken have been of cheaper grades. Dealers say that prices are easy, but they continue to quote as follows: Heavy-draft horses, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$225 to \$275; blocks, 1,300 to 1,400 lbs., \$200 to \$225; express horses, \$150 to \$225; common plugs, \$50 to \$75 each, and choice saddle and carriage animals, \$300 to \$500 each.

Provisions and Dressed Hogs.—During the past week a much stronger feeling has developed in the market for dressed hogs, and prices have advanced ¼c. on all grades. The advance is due largely to the firmer advices from the other side on bacon having strengthened the price for live hogs. Demand for dressed is good, and sales of fresh-killed selects are being freely made at 9½c. to 9¾c. There is a demand for barrel pork, and prices hold steady at \$22 to \$23.50 per barrel. The cooler weather continues to exert a stimulating effect upon the market for bacon and hams, although prices show very little change, as compared with a week ago. Green bacon, boneless, and long clear light sells at 11½c.; flanks, with the bone in, at 10½c.; long clear heavy at 10c.; choice smoked brings 12c. to 16c., according to quality. Hams are in good demand, and prices steady at 12½c. to 14c. per lb. for hams weighing 25 lbs. and upwards; 13c. to 14½c. for those weighing 18 to 25 lbs.; 14½c. to 16c. for 8- to 12-lb. hams. Pure lard sells at 12c. to 13½c., according to quality and package, compound being 9½c. to 11½c.

Potatoes.—Any New Brunswick potatoes which are now on the market are being sold under an alias, as the quality of the Green Mountains has now become a byword of reproach, owing to the rapidity with which rot has developed. The market for Quebec potatoes is firmer, reds continue in good demand, although whites are preferred. Dealers are now paying from 60c. to 65c. per 90 lbs., carloads, on track, for choice stock. These are selling to merchants carting them away from car at 65c. to 70c., and are delivered into store, bagged, at 70c. to 75c. Small, broken lots brings 5c. more. The market is somewhat bare of stock at the moment, but increased receipts are expected shortly.

Eggs.—The market has shown further evidence of strength during the past week, and prices have advanced about 1c. a doz. Dealers are compelled to pay 23c. east of Belleville, and 22c. in the West. This stock is selling in the condition it arrives, at 25c. per doz. No. 1 candled sells at 24c., and selects would bring anywhere from 28c. to 38c., according to selection. Demand is fair.

Butter.—The continued firmness of the market at the high figures reached a

week ago is having its effect upon consumption, and, consequently, upon trade. The turn-over is now considerably lighter than when prices were at a reasonable level. Sales of the choicest fresh creamery are being made here as high as 29c., the general range being from 28c. to 28½c. for fine, and the higher figure for choicest. There is naturally no export at these figures; in fact, the movement has already set in the other way, and Canada is now importing butter from Great Britain. Irish dairies have been received here recently, and are selling at 25c. A poor grade of Siberian creamery is also being offered here, and about 24c. is being realized on it. Australians are here or are about to arrive, their value being estimated at 28c. The effect of these imports will be to prevent the Canadian market from going much higher.

Cheese.—The prices show a recession as compared with a week ago. Demand from the other side of the Atlantic is not so active, and the quality of the goods offering here is less desirable. Quebec cheese is quoted at 12½c.; Townships make 12½c., and 18c. to 18½c. for Ontarios. Shipments from Montreal for the week ending Oct. 20th amounted to 84,000 boxes.

Grain.—The market for oats continues very firm. Manitoba No. 3 oats have been sold here during the past fortnight at 64½c. Quebec stock, however, is quoted by some at 55c. to 57c., while others quote as high as 59c. Prices are somewhat uncertain. For No. 2 peas, 90c. is being offered in the country without bringing out the stock. The wheat market has experienced some very violent changes, and ranges around \$1.28 to \$1.24 per bushel for No. 1 Northern, Montreal, but quotations are subject to sudden alterations.

Hay.—The situation in hay is very exceptional. The market holds very strong, notwithstanding the high prices. Dealers are offering here \$16.50 to \$17 per ton for No. 1 timothy, \$15.50 to \$16 for No. 2 timothy, and \$14.50 to \$15 for clover and clover mixture. They are, however, demanding considerably more than this, and sales have been made as high as \$19 and \$20 per ton. The Glasgow market is the only one which is high enough to permit export. The United States has been firm enough during the past few years. The outlook in Canada seems to be for continued high prices.

Hides.—Demand from tanners shows considerable improvement, and prices have advanced 1c. on beef hides during the week. Dealers now pay 7c., 8c. and 9c. per lb., Montreal, for No. 3, 2 and 1, respectively, and 8c. and 10c., respectively, for No. 2 and 1 calf skins. Lamb skins have advanced 5c. each, to 80c. and 85c. Horse hides continue at \$1.75 each for No. 2, and \$2.25 each for No. 1. Tallow is 1c. to 3½c. per lb. for rough, and 6c. to 6½c. for refined.

Flour and Feed.—There has been no change in this market during the past week, the tone being, however, characterized by great firmness throughout.

BUFFALO.

Cattle.—Prime steers, \$5.65 to \$6.25. Veals.—\$5 to \$9.

Hogs.—Heavy, \$6.30 to \$6.50; mixed, \$6.25 to \$6.45; Yorkers, \$6 to \$6.85; pigs, \$5.75 to \$6; roughs, \$5.25 to \$5.75; stags, \$4 to \$4.80; dairies, \$5.75 to \$6.15.

Sheep and Lambs.—Lambs, \$5 to \$7.10; Canada lambs, \$6.50 to \$7.

CHEESE BOARD PRICES.

Peterboro, Ont., 12 13-16c. Ottawa, Ont., 12½c. Napanee, Ont., 12½c. bid. London, Ont., 12½c. bid; no sales. Brockville, Ont.—Colored, 12½c. bid; white, 12½c. bid; no sales on board. St. Hyacinthe, Que.—White cheese, 12½c. bid. Picton, Ont., 12 9-16c. Belleville, Ont., 12½c., 12 7-16c. and 12½c. Canton, N. Y.—Butter, 28c. Chicago, Ill.—Creamery butter, 23c. to 26½c.; dairies, 20½c. to 24½c.; cheese, 15c. to 15½c.

BRITISH CATTLE MARKET.

London.—London cables, 10c. to 12½c. per lb., dressed weight; refrigerator beef, 10c. to 10½c. per lb.



Life, Literature and Education.

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



Guglielmo Marconi.

FOR WHAT ARE WE THANKFUL?

For what are we thankful? For this:
For the breath and the sunlight of life;
For the love of the child and the kiss
On the lips of the mother and wife.

For roses entwining,
For birds and for bloom;
And hopes that are shining
Like stars in the gloom.

For what are we thankful? For this:
The strength and the patience of toil;
For even the joys that we miss—
The hope of the seed in the soil.

For souls that are whiter
From day unto day;
And lives that are brighter
From going God's way.

For what are we thankful? For all
The sunshine—the shadow—the song;
The blossoms may wither and fall,
But the world moves in music along.

For simple, sweet living
(Tis Love that can teach it),
A heaven forgiving,
And faith that can reach it!

—Frank L. Stanton.

SIGNOR GUGLIELMO MARCONI.

A man much under the eye of the public at the present time is Signor Marconi, the young scientist, yet in the early thirties, who has, without doubt, to a great extent, revolutionized the telegraphic system of the world. He has proved not only the possibility, but the practicability, of transmitting messages (1) over land without use of the tedious system of wires and poles now necessary; (2) across the ocean, at about one-half

the cost of ordinary cable despatches; (3) to moving vessels at sea.

Marconi was born at Bologna, Italy, in 1874, his father being an Italian, his mother an Irishwoman. At eight years of age he showed signs of inventive genius; at twelve, "his mechanical devices were the bane of his tutor's life"; at sixteen he had made great progress as a chemist and physicist, and at twenty he was deep in the problem of wireless telegraphy, achieving his first success in the latter at his Italian home, where he succeeded in transmitting waves over a distance of two miles. Shortly afterwards he went to England, where he succeeded in interesting Sir William Preece, engineer of the British Telegraphic System, in his project, and demonstrated its practicability by sending messages from Penarth to Weston, and across the Channel, from England to France. On Jan. 23rd, 1901, he established communication between St. Catharines, Isle of Wight, and The Lizard, in Cornwall, a distance of 183 miles, thus proving the principle of non-influence of the curvature of the earth; and by December 13th of that year he astounded the world by sending messages between Poldhu, in Cornwall, and St. John's, Newfoundland. During the succeeding years the work went rapidly ahead, communication being established from Poldhu to Cape Cod, Glace Bay, Kronstadt, Corsica, Gibraltar, and aboard various vessels. A regular trans-Atlantic service was not immediately established, because various influences, weather conditions, electricity of the atmosphere, etc., had to be met. These problems have, however, been solved, with the result that the opening of the Marconi trans-Atlantic system was formally declared on October 17th of this year.

Wireless telegraphy is based on the principle of wave motion. Just as sound is transmitted by waves or vibrations of air, so the wireless message is transmitted on waves of ether, an invisible and impalpable fluid that is supposed to occupy all space. Ether is also the medium which psychologists believe is the means of telepathy (thought transference without speaking, writing or signal).

Between the air waves which transmit sound and the ether waves which transmit the wireless message, there is this interesting difference: The air wave is what is called a longitudinal wave—vibration in a direct line. The ether wave, on the contrary, is what is called the crest and hollow wave, such as may be observed on a water surface disturbed by wind. In this case the motion of the water is perpendicular, whereas the direction of the wave is at right-angles to it. In other words, the wave moves ahead, but the particles of water do not.

In producing the vibration which is transmitted, the electric spark plays a part. It sets up an ether-wave motion, which is sent vibrating through space at a rate so rapid as to be practically instantaneous, and is received by an instrument supposed to be attuned to the instrument which transmitted it. The possibility of a message being intercepted by another instrument than the one

for which it was intended, constitutes as yet the chief practical disadvantage of the wireless system, but this will no doubt be overcome in time.

COUNTRY LIFE AND CULTURE.

By Wilfred Campbell.

Each home a little kingdom, wherein all Children, dependants, have allotted place; Whose head, a king, in his own natural right, Doth stand for God Himself.

Someone has said that it is very important for character that we should associate only with the kings and great ones of earth. While this sounds like mere rhetoric, it really contains a vital truth.

There is no more trustworthy index to a man's character than the class of companions with whom he chooses to spend his leisure hours. He who holds communion only with the vulgar, is, himself, sure to be vulgar.

This word "vulgar," derived from the Latin, "vulgus," meaning "a crowd," has a more contemptuous signification to the average reader. But it can have no worse meaning than when it refers to those who herd together—those who are content to be no better than what they see about them. To be vulgar, in America, as elsewhere, is to be easy-going, to be loose in speech, bearing and manner, to think that money can gild the snout of the human swine in any community.

By the swine is meant those who devote their lives to the mere rooting in the earth of things, who grovel, and who have their resort in the sty of the community, who are willing to eat the husks, and see nothing beyond the mere material.

The opposite of this is that ideal in the social life which is constantly leading men step by step upward, which makes them desire more than the merely material. It is this ideal which teaches the man who has made a fortune that the true value of that fortune lies in its power to raise him in the social scale; and this elevation is in the direction of refinement and careful social selection.

The husbandman who is a practical stock-raiser, realizes the importance of good stock. He is anxious as to the pedigree of his cattle and horses; but does he ever consider whom his family intermarry with? And yet the one is infinitely more important than the other. If a man of refinement and ideals marries a woman who is lacking in these, he to that extent deteriorates his family; and it is the same with the woman of refinement. How important it is, then, that in the country places the people should pay a proper attention to refinement and selection. In the face of all nauseous cant on the subject of equality, there will always be grades in society, just so long as men and women have different natures. One man is willing to remain unlettered and unrefined. He prefers to stay with the crowd. Another prefers to aspire to a more difficult sphere, where the social standards are more severe. So, by a sort of natural selection, human society seems to adjust itself on what is, no doubt, the aristocratic basis. That some such political or national recog-

inition of this always has been, and is now, necessary, is shown in a statement by Mr. Andrew Carnegie, in his "Gospel of Wealth," published last year. Mr. Carnegie says, referring to rapidly-made fortunes: "Some sixty-odd years ago Britain had a similar experience. Greater fortunes were made than ever before; but the makers, imbued with the aristocratic ambition to become great land-owners and county magnates, were soon absorbed in that class. They regarded wealth as only a means to an end—entrance to the aristocratic and fashionable circle. This refuge new millionaires lack under our democratic system, hence the vulgar, extravagant and offensive character of the fortunes to which they are driven, that evoke so much adverse criticism from people of education, good sense, and quiet, respectable living, with whom mere dollars count for little."

This remarkable statement of Mr. Carnegie's should be studied thoughtfully by every Canadian dweller who, in the rural community, has ideals above mere money-making. It is in the rural community that the human equality fallacy wants especially to be attacked. Men in the towns fall into grades at once. Hence, in America, the only social ideals are of the city and towns.

In the country place, the silly platitude that "Jack is as good as his master," has led to a social deterioration. Whereas, all know that "Jock" is not as good as his master, else he would be elected member of parliament, or county warden or councillor, or be set to preach or cure the sick, or defend cases in law. Therefore, admitting all this, should there not gradually be developed in the country a class of "people of education, good sense, and quiet, respectable living, with whom mere dollars count for little?" No doubt "Jock" is an honest fellow, but when his master speaks and acts as he does, he is paying no compliment to poor "Jock," but actually doing him an injury. Many "Jocks" have, no doubt, become eminent in society, but when they did so they ceased to be "Jocks," and it was through a desire to improve, a craving for refinement, that they advanced higher.

The doctrine to be inculcated is not that the well-to-do farmer should cut his poorer neighbor, but that it is his bounden duty to make his home as far as possible a center of refinement and culture, and so set a higher standard for the whole community.

I have always maintained that the purer and healthier life is that of the country. But this has always been denied by several writers and other authorities. The French writer, Zola, gives a horrible picture of rural life in France, and Thomas Hardy has not depicted it as any too lofty in England. But, on the whole, it is respectable in all civilized countries. The first canons of respectability in any community are those of common decency. Without decency in life, we can have no true culture. All true civilization is based on the moral and the ethical, and the man who dwells in the country should, by his very environment, have a healthy mind. Nature is a great teacher, perhaps the greatest of all

teachers, and he who lives continually out of doors with her must have that true purity, that perfect sanity which understands the fitness of things, which can place the animal, the intellectual and the spiritual each in its proper place, and keep it there. Nature has taught man that elementary law of life, as to decency and the fitness of things, which is expressed in the following stanza:

Teach me that lesson which mother earth
Teacheth her children each hour,
When she keeps in her deeps the basic
root,
And wears on her breast the flower.

This is nature's example for man to follow, if he would rise above the mere brute beast. This is a very wonderful and beautiful analogy in nature to the ideal life, where everything is kept in its place, and the basic root is hidden in the earth, while the very blossom of things, nature's banner, her eternal sign, her language of hope, love and development is shown abroad in the beautiful.

The husbandman, the country dweller, can learn this great, this most vital lesson, on which hinges the whole hope or decay of men and nations, every hour of his life. Then, if nature is teeming with examples of beauty, sublimity and morality, why should man, made "but a little lower than the angels," in the image of his Maker, not live up to this great ideal? In the country this is quite possible, if, in the environment of nature, her great laws of selection and rejection are practiced in life.

It may be advanced, as a reason for the low standard of social culture in some rural districts, that the country receives all of the cheaper educative influences—the inferior classes of professional men. This is, so far, true. The country parson, the country doctor, the country teacher, the country or village lawyer, the editor, are all considered inferior to those of the larger town and city. But it is not always necessarily true. It does prove that to-day the larger salaries and the more active or ambitious personalities are found in the cities, but it does not mean that the professional men of the rural districts are any less cultured. On the other hand, from the fact of their living away from the rush and turmoil of life, it is more likely that they should have abundant time to cultivate their minds. However, it is true that the refining influences in the religious worship are not so evident in the country. It is a pity that this is so. Religious worship could be made a great medium for refinement, and an education in dignity and decorum. The class of preaching, the standard of music and the form of service can all unconsciously mould the manner and ideal of a people. It is also important that the men who influence the character of a community should be persons of culture and high ideal. The people should see to it that they are gentlemen. It is not suggested here that they are not, but there is too much of the crude and unlettered in our Canadian pulpit-oratory. It is time that we realized that mere education at a school or a college does not make a man worthy to guide others, and that it is not sufficient for culture. It is quite possible that a man, bred on a farm, who has had the proper home influence and training, may be not only more presentable, but more a cultured, refined man of the world than one without such influences who has gone to college.

It is the early home life that, after all, in the majority of cases, stamps and grades the man. Therefore, it is very essential that the rural home should be a place where vulgarity is absent, where dignity, repose, and the every-day knowledge and practice of refinement are present and carried out.

We have in our rural communities some of nature's gentlemen and gentlewomen. They are like those rare stones of great price amid the

common dull pebbles of a brook, and are continual witnesses of the wonder of heredity. But it is not fair to our general humanity, not just to the community, to leave such matters as deportment, manners and refinement to a mere chance of nature. Nature's gentility is, like genius, rare, and we have to consider the good of the general community.

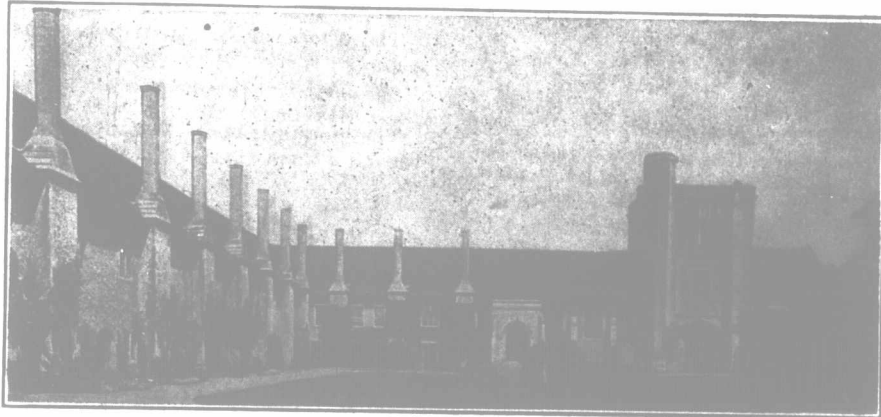
Emerson, in a little poem called "Tact," illustrated the uselessness of other gifts if unaccompanied by "address":

"What boots it thy virtue?
What profit thy parts?
The one thing thou lackest
Is the art of all arts.
The only credentials,
Passport to success,
Opens castles and parlors—
Address, man, address."

Some refer to this as good form, but the only true culture to fit the man or woman for social dignity and ease of manner is that acquired in the home which is surrounded by the refinements of life. Lacking this, even genius is hampered. George Eliot has a character in one of her stories illustrative of this, namely, Felix Holt, who, with brains and strong personality, was rendered impossible by reason of his boorish qualities. He prided himself on the fact that he was above such petty trifles as neatness in linen, manners,

many would have him be—only a two-legged beast of burden. Here he may surround himself with the outward symbols of his higher nature—good books, beautiful pictures, and that eternal influence, perhaps the divinest of all, exquisite music. Here, in an atmosphere of taste and breeding, the lord of the soil may, for a season, forget what has been called the primal curse, and realize that man shall not live by bread alone. It may be said, with reference to social distinctions in the rural home, that in many cases necessity prevents any division or grade between the family and the servants. For these objectors might be recommended the ancient fashion of the well-to-do of Northern Europe and Britain, where all sat together—lords, retainers and servants—at the one table, but that in the center, half way down from the head, where the lord sat, was placed a large salt-cellar, and that the servants were of those who sat below the salt, which was a symbol of ladceny, and recognizing not only the headship of the household, but also the sacredness of the family circle.

[While heartily approving of many of Mr. Campbell's high ideals for rural life, we feel that there is room for difference of opinion in regard to some portions of his article. We shall be pleased to hear the opinions of our reading public on this subject.—Ed.]



Beaufort Tower, Hospital of St. Cross, Winchester.

OUR ENGLISH LETTER.

SOMETHING ABOUT ANCIENT WINCHESTER.

I suppose there is hardly a place to be found anywhere throughout the Motherland which is without a story to tell to those whose ears are open to hear it, or beauties to reveal to those who have eyes to see them. Most certainly this applies with special force not only to the County of Hampshire, but more particularly to the ancient City of Winchester, at one time—i. e., in the year 686—the capital of England.

PARTLY REMINISCENT.

Perhaps it was from the fact that nine years of my early girlhood had been spent there which gave an added zest to the pleasurable anticipations with which I returned to it, although in those days I had probably thought but little of its historic interest, caring far more for a scamper to "Oliver's Battery" over the breezy downs behind us, or for the delights, on a rare half-holiday, of fishing for minnows in the river Itchen (of Isaac Walton fame), than I did for the far-away facts which connected the questions and answers of my school lessons with the story of old St. Cross, the architectural beauties of the fine cathedral, or the damage which the latter received from Cromwell's vantage-ground from the mile-off battery which still bears his name. When word came to us that we were to have a picnic-tea amongst the fine old trees which crowned it, or were to be allowed to take a long summer evening's walk round by the quaint old Twyford, or by still quainter little Compton Church, then not much larger than a good-sized packing-case, but now enlarged and beautiful beyond recogni-

tion, the past was simply non-existent for us, and the present all-sufficing.

SOME OLD CORNERS OF WINCHESTER.

I wish I could picture to you the quaint little corner in which a friend had found for me a snugger for the week which was all I could spare for the revisiting of some of my old haunts of fifty years ago. The windows of my small quarters faced the high wall which enclosed the Cathedral Close, one of the gateways of which, with the huge doors black with age, and studded with nails between the panels, occupied one angle, whilst just round the corner was the heavy-browed archway, above which was old St. Swithun's Church, to reach which a somewhat steep stairway had to be climbed. Passing under the archway, one turned into Kingsgate Street, and, keeping to the left, came to Winchester College, founded by William of Wykeham in about 1360; and, farther on, to the ruins of old Wolvesey Castle, the palace of Alfred the Great, carrying one back to days before the Norman Conqueror landed upon the shores of Great Britain. To St. Swithun, it seems, is owed the fact that, by his influence with King Ethulwulf, of Heptarchy days, the strong wall around the cathedral precincts was built, which since then has more than once saved the cathedral from destruction, for the Danes, who burnt Canterbury Cathedral, spared that of Winchester; and in the frightful civil war between Stephen and Matilda, when half the city was burnt down, again the cathedral escaped. Although but little remains of the original edifice, there are still many records of it in existence, amongst them, of the ancient Monastery of St. Swithun, the present deanery being the prior's refectory, its beautiful three-arched doorway having been the work of Bishop Godfrey de Lucy. Here, the pilgrims who had come by sea to Southampton, received food before they passed onwards on their pilgrimage.

The roll of Winchester bishops throughout the centuries is a notable one, especially the earlier ones, each in turn leaving his mark upon that fine old city, and especially upon its cathedral. To Bishop Fox is accredited the screens at the sides of the choir, upon which are placed the six mortuary chests, in which, we are told, repose the bones of Canute, Queen Emma, William Rufus, and many of the early kings and bishops. True, one cannot be quite sure that these stone chests actually contain the very bones of those whose names are inscribed upon each, for not only might mistakes have been made when they were originally discovered in the crypt, but later on, Cromwell's soldiers are said to have dragged them forth and searched them for possible treasures enclosed.

The two unique features of Winchester Cathedral are its screens and chantries, which latter are really small but exquisitely-carved chapels, built by bishops in their lifetime for their last resting-places. The effigy of William of Wykeham, with flesh and robes tinted, and accompanied by other figures of monks and angels, attracts, perhaps, more general attention; but, of the seven chantries, the two finest are conceded to be those of Cardinal Beaufort and Bishop Fox. Good old Bishop Fox was blind for ten years before his death, and was so beloved by citizens and monks alike that loving hands were always ready to lead him into his chantry, where he would stay to meditate and to listen to the chanting of the daily service.

Of course, there were royal marriages in Winchester, although its dignity had eventually to yield to that of the newer Abbey of Westminster. Henry IV. married Joan of Navarre, as his namesake, the first Henry, had married Saxon Matilda; and it was at Winchester that Philip of Spain married Queen Mary. The old chronicles say that, coming up from Southampton in a storm,

Philip was received at the three-arched doorway of the Deanery "dripping wet." Also, that "there was a splendid procession through the western door on the nuptial day." Queen Mary's chair is still in the cathedral, and more than once in my girlhood, when the attendant verger was pointing out other relics to his group of listeners, have I slipped into that chair, and, giving the rein to my errant fancies, have dreamed short but vivid waking dreams of what I, a very unimportant little personage, would have done if only I had been born centuries ago, and had been England's queen.

But I have reached my limit, and must tell you a little more about Winchester and its surroundings when my turn comes again, a fortnight hence.

H. A. B.

The Quiet Hour.

THE SHADOW OF PETER.

"It was only a sunny smile,
And little it cost in the giving;
But it scattered the night like morning light,

And made the day worth living.
Through life's dull warp a woof it wove
In shining colors of light and love,
And the angels smiled as they watched above,

Yet little it cost in the giving."

While visiting in England years ago, I heard a sermon on unconscious influence, based on these words: "The Shadow of Peter." I don't remember the name of the preacher, but the peculiarity of the text impressed itself on my memory. It is taken from the fifth chapter of the Acts of the Apostles, and describes how sick people were laid on beds and couches in the streets of Jerusalem, that, at the least, "the shadow of Peter passing by might overshadow some of them." Sick people were also brought from other places, and "they were healed, every one." Of course, as the Apostle walked along, eager to help those who were diseased in body or soul, he could not always know where his shadow was falling. It was silently helping in the good work, without his knowledge. Is it not true that we are all in the same way unintentionally influencing for good or evil the people we live with, and even the people we only see occasionally, or even others whom we never see at all. It is a very solemn thought that we can't help influencing people, whether we wish to or not. And, like the shadow, a man's strongest influence is caused by his real character. He may preach virtue as much as he likes, but if he does not practice what he preaches, his unconscious influence must do harm. He can't control it, except by becoming what he wishes to appear. No one ever knows by what trifling word or action he may start another soul in a right or wrong direction. It is not for nothing that our Lord encourages such little acts of kindness as the giving of a cup of cold water. It is wonderful how much we all appreciate some little thoughtful attention, when it is not done for effect, but is the natural expression of a genuine spirit of friendliness. One of my near neighbors was ill a few years ago, and a friend of mine, who scarcely knew her at all, wrote me a very kind letter of enquiry, asking me to convey her sympathy to the family. It was not much trouble to the writer, but it cheered those who were enduring the deepest anxiety far more than a costly gift would have done, because it showed fellow-feeling and genuine friendliness. The same friend often writes kindly notes expressing sympathy with neighbors in times of both sorrow and rejoicing. Once when the blinds were drawn down, and the house was very still, because the Angel of Death had visited there, a few written words were prized when a visit would have been almost an intrusion.

"It was only a kindly word,
And a word that was lightly spoken,
Yet not in vain,
For it stilled the pain
Of a heart that was nearly broken.
It strengthened a fate beset by fears,
And groping blindly through mists of tears
For light to brighten the coming years,
Although it was lightly spoken."

Later on, when the same near neighbors were dressing a bride for her wedding, came a few dainty flowers and a tiny note of friendly congratulation. How little any of us can measure the mighty influence of little things. Some time ago a young man left his happy home in California, got into wild ways, and was arrested and sent to the Sing Sing prison. He had a loving mother and sister, but it seemed as if their prayers and tears were wasted, and they probably thought they had no influence over him. But influence works mysteriously, and a spark will often light a great fire when the train is laid as it was in this case. Over the cot in that prison cell hung a picture. It only represented a little low-roofed cottage, which could hardly be expected to preach a sermon or point a moral, but it was the spark which lighted up the fire of repentance and love in that criminal's heart. It reminded him of another cottage in sunny California, where there were two women who loved him; and their influence was strong enough to drag him back from his career of crime and plant his feet in the path of righteousness and happiness. The shadow of that happy home stretched across America and healed a soul, in prison—in more senses than one.

"The memory of a kindly word,
For long gone by,
The fragrance of a fading flower,
Sent lovingly;
The gleaming of a sudden smile,
Or sudden tear,
The warmer pressure of the hand,
The word of cheer,
The hush that means, 'I cannot speak,
But I have heard!'
The note that only bears a verse
From God's own Word;
Such tiny things we hardly count
As ministry—
The givers deeming they have shown
Scant sympathy;—
But when the heart is overwrought,
Oh! who can tell
The power of such tiny things
To make it well?"

It isn't usually the people who preach at us most who succeed in making us try to do our level best. Anyone who is trying with all his might to be good is sure to inspire others with the wish to be good too. We sometimes meet one of these everyday saints on the street, and find ourselves going on our way with a new impulse towards the higher life stirring within us—healed by his shadow, almost unknown to ourselves and quite unknown to him. Sometimes it is only a glimpse of a pictured face which sets us thinking and resolving. It may be the face of a friend, or only that of a perfect stranger, which speaks eloquently of the noble soul within. It is said of the Apostles Peter and John that even their enemies "took knowledge of them that they had been with Jesus," and no one can live constantly with Christ without showing it.

The smallest actions may reveal character, and it is not the action itself, but the character behind it, that influences people. A young man once folded his hands in quiet, patient surrender of his greatest earthly ambition, and that slight gesture has influenced many souls. It was not done for effect, but was quite unconscious, being the natural expression of his complete self-renunciation. God accepted and greatly blessed that sacrifice. This is how it happened. Many years ago, two young men in Nuremberg had set their hearts on being artists. They worked diligently for a long time, but when they compared pictures one day, it was very plain that failure was the only word to apply to the work of Franz Knigstein. Albrecht Durer's picture was full of life and beauty, but that painted by Franz was cold and lifeless. It was a great disappointment, but he said, bravely: "Albrecht, the good Lord gave me no such gift as this of yours, but something, some homely duty. He has waiting somewhere for me to do."

Albrecht seized his pencil, and, telling his astonished friend not to move, made a rapid sketch of the hands so patiently folded together. Franz was more astonished than ever when his friend showed him the sketch, saying, "Those hands that may never paint a picture can now certainly make one. I have faith in those folded hands, my brother—friend. They will go to men's hearts in days to

come." Albrecht Durer's famous picture, "Folded Hands," is still preaching eloquent sermons to those who see or even hear of it. How little that young man thought that his unconscious gesture would influence the world. But it was not the gesture, after all, it was the noble soul within, whose shadow has been able to help other souls from that day to this.

We can't control our unconscious influence, and yet, in one way, we can. The surest way of healing, instead of harming people by it, is to live very near to God. He can, if He will, use our smallest actions as he did those "folded hands." While we are thinking of the great and noble things we should do if we only had a chance, other people are unconsciously carrying out God's plans for the healing of the nations in the kitchen or the fields, as His own Son did for years in the little village carpenter shop at Nazareth.

"God's ways are not our ways: we lay down
Schemes for His glory, temples for our King,
Wherein tribes yet unborn may worship Him;
Meanwhile, upon some humble, secret thing
He sets His crown."

HOPE.

Current Events.

The Emperor of Austria is convalescing.

The population of Toronto, according to recent statistics, now amounts to 272,600.

The Government has approved of plans which, when carried out, will make Toronto Harbor the best and safest on the lakes.

A writ has been issued by the Ontario Bank against the former president and directors to recover damages for negligence.

Mr. John D. Rockefeller has offered to loan large sums of money to a number of New York institutions to tide over the present financial crisis in New York.

An English firm is equipping a new ocean liner with an electrical turbine system which, it is calculated, will permit a speed of thirty knots an hour, the fastest time on record.

Another French troopship has been despatched to Morocco, in consequence of a serious repulse of the French troops at Casablanca. Some of Raisuli's followers who have deserted him and come to Tangiers, state that, on account of French interference, he will kill Kaid MacLean by inches.

The unrest in India manifested itself on October 17th, the anniversary of the partition of Bengal, by a cessation of business throughout the Province and the taking of the "swadeshi" vow by 30,000 Bengalis, who thereby pledged themselves to abstain from a boycott of British goods in Bengal.

In the recent International Balloon Race, which started from St. Louis October 21st, the German balloon Pommern won by a few miles, the French balloon Isle de France coming second. The Pommern and Isle de France landed in New Jersey; the Dusseldorf in Delaware; the St. Louis and America in Maryland; the Anjou and Abercorn in Virginia; the United States at Caledonia, Ontario; and the Lotus II (English) in Ohio.

The Ingle Nook.

Could we choose the subjects for our thoughts we would, in all probability, have them ever of light, and happiness, and beautiful things; yet in this world there are so many sad phases of life that we must, if we would do our duty, sometimes even perforce turn aside from the brightness to those things which can only fill us with sadness. Among the latter is the subject of tuberculosis.

Probably there is not a single reader of this column who has not, at some time, lost a relative or friend by reason of this dread disease, which carries off, on an average, one out of every seven of the human race. Sometimes it is the strong one who is stricken down; but more often it is the weak, or the strong whom a temporary weakness makes vulnerable. A few weeks ago a man was found lying in one of the parks in this city very ill. He was taken to one of the hospitals, and a few days later passed away. His death was due to exposure, the doctors said—and yet the weather was not then cold; but "he looked consumptive." That explained the inability to stand a little hardship, a little exposure, which would have meant probably nothing at all to the hardy, health-filled man used to being out in all weathers.

And yet the medical authorities the world over tell us that this disease, if taken in time, is not incurable. There is a woman in this city who had become emaciated from it, but who threw it from her, and is to-day apparently as well as anyone need be. As one said in describing her struggle, however, she "fought for her life." Realizing what rest, nourishing food, sunshine and pure air mean in the conflict against tuberculosis, she made all of these her possession, retaining at the same time the services of a skilled physician to keep hindering disorders in check and mark her progress. Part of her time she spent in a glass-walled annex to the house, built especially for her, where it could catch all the sunshine; but she also spent many hours every day, even in midwinter, sitting on the southern veranda, swathed from head to foot in blankets and comforters sufficient to keep out every suspicion of chill. This practice was much similar to the more convenient method now adopted in sanitariums of having patients sit in sheltered situations out of doors enveloped to the neck in Klondike bags.

I have often wondered if people, on the whole, realize how absolutely necessary pure air is to the prevention and staving off of consumption. Pure air from the outside, night and day, summer and winter, with an avoidance of overwork and a nourishing diet of milk, eggs, meat, bread, fruit and vegetables—these are the best specifics against this insidious plague. Perhaps some of us can remember when "night air" was considered "bad," and bedroom windows were kept tightly closed, the sleeper breathing and re-breathing the vitiated air of the interior all the night through. Possibly, many adhere to this custom yet, and then wonder why they feel heavy and dull in the mornings, or why they are so subject to colds and sore throats. If there is one thing more than another which should, I think (along with the doctrine of dry feet), be preached the country over, it is the necessity of breathing, at all times, pure air. It is not necessary to suffer from cold through having outside air come into a bedroom all night long. Let the room be as warm as you choose while you are undressing, but just before you get into bed draw your window down a little, possibly but an inch, at the top, raise it a quarter of an inch at the bottom, and place a screen to keep drafts from blowing on you. If you have plenty of warm, light, woollen coverings on the bed you will not feel the cold, will even be warmer than if the room were to grow cold and the window were not up, for pure oxygen of itself sets up a combustion and a heat within the body. Last winter I had a room with a north window. I kept it up several inches every night, except a few times when a driving storm was blowing from the north, and an inch, or less, of open space was sufficient, yet I never suffered less from the cold. On very sharp nights

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I wore long, loose, woollen slumber stockings, and never once found it necessary to resort to hot bricks or irons.

To return, however, to our subject, it was, a few years ago, considered that consumptives should go at once to a sanitarium. In many places to-day, where this is impracticable, it is replaced by home treatment similar to that described above. In one part of Massachusetts, a "Home Sanitarium Class" has been organized, and results have been very encouraging. By this system, which was, by the way, inaugurated by Dr. Jos. Pratt and Rev. Elwood Worcester, rest in the open air is the first and chief commandment. The patients give themselves up absolutely to the direction of visiting physicians, and at times meet in classes to be taught their needs. They live outdoors in tents furnished with beds and reclining chairs, and so strict are the regulations that each patient is required to keep a record of his actions for the day—the number of hours spent out of doors, amount of food eaten, details concerning coughing, expectoration and temperature, etc. When the disease is arrested, the patients are graduated from the class, but are required to return at intervals that the doctors may see if there is any danger of recurrence.

As recorded by N. Y. Independent, within a year and a half ten members of this class have been returned to work, and there have been but two deaths. I am glad to be able to tell you about this cheering news. Not all consumptives can go to sanitariums; others cannot bear, from personal feeling, to go. The success of the Massachusetts Home Sanitarium treatment is, for these, at least, worth consideration. It must be remembered, however, that no treatment should be undertaken except under the direction of a skilled physician. While fresh air is absolutely necessary for all, it should, for some "cases," be warmed; not all constitutions can stand the rigors of the full outdoor treatment alike, especially in our severe northern winters. In this, as in many other things, what is one man's meat may be another's poison.

After all, prevention is better than cure—and, remember this, warm clothing, pure air, nourishing food are the best preventives you can have against consumption. Do not expose yourself to it unnecessarily, but if your lot is to care for a consumptive, insist on his observing the most absolute cleanliness. Do not place your face close to the patient's, and see to it that no sputum is permitted to dry in the room. A consumptive should never use a handkerchief—always bits of cloth which can be immediately burned. If these precautions were rigidly observed, the spread of this dread disease might be very materially checked. D. D.

[Since writing the above, I have come upon an article in World's Work on "Opsonins." I cannot pause here to explain what opsonins are, but wish to tell you about one statement in the article (which, by the way, was written by an eminent physician) which impressed me, viz., that "the white corpuscles of the blood increase very materially after a nourishing meal." This explained to me two things: First, the reason why nourishing food is so very necessary for all who are in any way threatened or affected by tuberculosis; second, why it is advisable, as any physician will tell, to avoid going into a sick-room when one's stomach is empty. The white blood corpuscles, as you know, are the agents in our bodies which fight disease, and the more of them there are in the blood the stronger we are to resist it.]

OUR SCRAP BAG.

A nurse has just telephoned me for the benefit of Ingle Nook readers that in two cases of cold, bordering on pneumonia, she has found oil of peppermint, rubbed on flannel, and applied to the chest, very efficacious. This hint is timely now that cold weather is approaching.

Another friend, who has grown garden huckleberries this year, finds that they require to be stewed in water for a long time, plenty of sugar being added before the cooking is completed. She likes them best if cooked thus first, then used for pudding or pies.

Some ladies, whom I know, have

adopted the following plan of packing eggs for winter, and find it very satisfactory: They first rub lard all over the shell, so as to form a coating against the air, then pack the eggs, small end down, in bran.

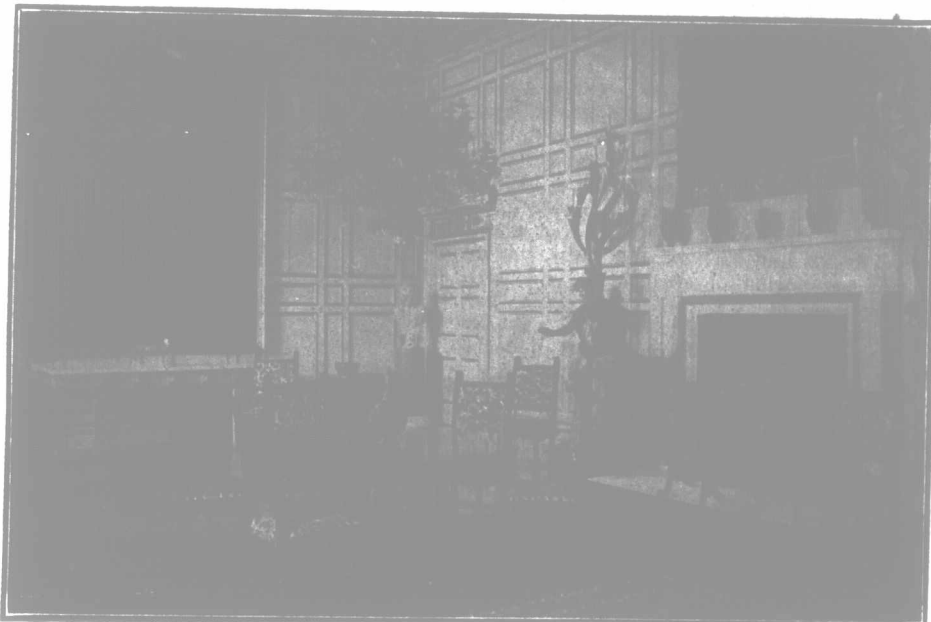
Buttermilk Bread.

Dear Dame Durden,—Have taken "The Farmer's Advocate" ever since our return from the West, and find its recipes very reliable. Could you tell me how to make buttermilk bread? With all good wishes. MRS. F. G. T. Peterboro Co., Ont.

Buttermilk Bread.—For three loaves, use one quart sour buttermilk, one large tablespoon sugar, one tablespoon butter, one teaspoon soda, and two and three-quarters quarts flour. Heat the buttermilk to boiling point, stirring frequently to prevent curdling. Put the sugar in a large bowl, and pour the hot milk on it. Now gradually sift into this a quart of flour, beating well. Cover, and let stand in a warm room over night. In the morning, dissolve the soda in three tablespoons water, and add it to the batter, together with the salt and butter melted. Beat thoroughly; then gradually beat in the remainder of the flour, reserving half a cupful for kneading. Sprinkle the board with flour, turn the dough on it, and knead for fifteen or twenty minutes. Divide into three parts, and shape into loaves. Place in buttered pans, and put into the oven immediately. Bake in a hot oven one hour.

Answer to Discontented One.

Dear Dame Durden,—Some time ago an article appeared in your paper regarding



Dining-room, Warwick Castle, Eng.

the hardships of a farmer's daughter. Dear Dame Durden, I have lived on the farm for the past twenty-two years, and yet I cannot admit that my lot has been hard. I will admit that the farm has busy days when one feels that life would be pleasanter with less work, but these days are counteracted by many others, when one can lie in the hammock, with the leafy foliage above rustling in the breeze, and enjoy a long afternoon with Tennyson, Longfellow, or, better still, a pleasant chat with a chance visitor. Which of our city sisters can afford a horse any day she wishes, or, on a slack day, spend a long day picnicking with friends in the woods? The cows have to be milked on our return in the evening, but, never mind, there are worse things in the world than milking. Regarding the work my friend mentioned that we have to do, well! In this neighborhood any of our girls do as much and yet have time for reading, music, church-work, and not a small share of social pleasures.

I thank you, Dame Durden, for your many helpful hints which I receive through "The Farmer's Advocate," and if any of our farmers' daughters are discontented, advise them to start a mission-study class in their Young People's Society, or start them making up a Christmas box for the poor children in Toronto, "when the November days are

cold and dreary, and all the world seems sad and weary." GALBRAITH. Peterboro, Ont.

I certainly think that it is not the work we do, but the spirit we bring to it, which determines whether we shall find it a pleasure or otherwise. Over-work is bad, but to have one's time filled with work in which one takes genuine interest, with time for a holiday now and again, is the happiest lot any man or woman can have.

Poem Asked For.

Can anyone tell where the poem, "How Jane Conquest Rang the Bell," can be procured? A correspondent has asked for it.

Forget-me-not Heard From.

Dear Dame Durden and Chatterers,—How inordinately vain is human nature, for there is no discounting the fact that we all like to be appreciated. Do you perceive, in compliance with Helen's request, Forget-me-not has tiptoed into the Ingle Nook and temporarily taken possession of one of the most inviting cosy-corners. I confess an undeniable weakness for comfortable chairs.

Now that I have appeared within your inviolable precincts, what am I to say? I have absented myself for some time, simply because no discussion seemed to be suggested upon which I felt capable of writing. You all know—or perchance you don't know—that having been scarcely four years ensconced as a farmer's wife, my experience in domestic science is nothing to wax eloquent about, so I prefer to humbly take advantage of the various helpful hints given along that line. However, since you have requested a visit from me, allow me to say something of the progress of the Women's In-

were very enjoyable. The baseball tournament (?) engaged in by the ladies was truly deserving of the world's championship.

In January, an "at home" is held, to which the members have the privilege of inviting their husbands. A musical programme is contributed, in which all the members are expected to take part.

It seems to me that the success of the Women's Institute depends principally upon the interest evinced at the various meetings. Then the knowledge gained by the interchange of methods and ideas is certainly of inestimable value to one like myself, endeavoring to propound the mysteries of domestic science.

Now that the lengthy autumn evenings are approaching, I should like to enjoy some contributions from Wrinkles and Helponabit, as well as the other worthy Chatterers. Jack's Wife, are you too much occupied to make us a call? Do you know, I almost envy you your personal acquaintance with Dame Durden. Since reading Margaret Guthrie's pen-picture of her, my curiosity has been aroused. Let me conclude by a question: Did any of you Chatterers procure one of those flowing veils which are such a source of profound admiration to Dame Durden? If so, be sure not to wear it when you visit the Ingle Nook.

Perth Co., Ont. FORGET-ME-NOT.

In answer to your private note, my den is just about twelve feet square, just big enough for a chair for both of us if ever you are in London. I'll be glad to see you, even if you wear a veil. D. D.

WHAT WE GIVE OUR SUBSCRIBERS FOR GETTING NEW SUBSCRIBERS FOR US.

For One New Subscriber:

1. Farmer's knife, Rodgers, a first-class article.
2. The choice of any two of the following: Reading-glass, large mouth-organ (harmonica), mariner's compass.

For Two New Subscribers:

1. Bagster's Comprehensive Teacher's Bible.
2. Lady's hand-bag, leather and lined with leather, large enough to carry letters, etc., in.

Watches:

1. Gentleman's nickel watch for three new subscribers.
2. Gentleman's gold-filled Elgin or Waltham watch for thirteen new subscribers.
3. Lady's sterling silver watch for eight new subscribers.
4. Lady's gold-filled watch for eleven new subscribers.

These articles are all good, and may be relied upon.

In addition, we have books bearing on almost every department of farming, for list of which see elsewhere in "The Farmer's Advocate."

Tell your friends about our journal, and its new serial. Secure their names, and let us send you one of these premiums. State definitely which premium you prefer.

TRADE TOPIC.

HEALTH AND NURSING RESORT.—

Jackson Health Resort and Training School for Nurses, advertised elsewhere in this issue of "The Farmer's Advocate," is located in the beautiful Genesee Valley, New York, a district exempt from malaria, and suited in every way to the recovery of invalids. Expert medical treatment is given to patients, and the most pleasant and healthful surroundings provided. In connection with the institution is a training school, in charge of Miss A. M. Hilliard, where nurses are carefully trained for practical work. For full information regarding either health resort or training school, address "The Jackson Sanatorium, Dansville, N. Y."

AMPLE APOLOGY.

A small boy was overheard calling his grandfather an old fool. His mother, after punishing him, sent him in to beg his grandfather's pardon, and heard him say between sobs, "Grandfather, I'm sorry you're such an old fool."

About the House.

SMALL ECONOMIES. ECONOMY OF TIME.

In closing the series of articles on "Small Economies," I have chosen the subject "Economy of Time," perhaps the most important of all. We have all heard of the wonders accomplished by those who made use of every moment, of Elihu Burritt, for example, who taught himself eleven languages by studying on the way to and from his blacksmith shop; of Lord Avebury (Sir John Lubbock), who keeps a book continually in his pocket that he may read even during an occasional five minutes while waiting for a train; of many others who have written books or solved problems during just such odds and ends of time.

Most assuredly such economy of time is to be commended—at least to a judicious extent; the tendency of all too many people is to take no account whatever of the odd flying minutes, and to dream or dawdle away precious hours that may easily amount to months and years. Life is not so long at best that any of it may be wasted. On the other hand, let us repeat again that qualification "to a judicious extent."

In the first place, it seems to me, people need to consider their constitution. I have known women who were so imbued with the idea of wasting no time that they worked, worked, worked continually, keeping the house specklessly clean, taking care that the sheets were hemstitched, and the towels initialed, and underclothing elaborately trimmed, and the stockings and tea towels ironed, etc., etc.—can't you imagine all the rest?—but who were, as a rule, so overworked as to be continually tired. It seems to me that this was not making the best use of time. These women were housekeepers, not homemakers. Had they been contented to let trivial things go once in a while, to be clean, yet not finically so, they might have had time to be healthy instead of perennially weary—which is only a species of illness which, in time, is likely to lead to nervous collapse; and with health would have come good spirits and that brightness and geniality which means more to the home than neatness to a dot presided over by a creature whose chief attribute is irritability, and whose every idea is connected with mere housekeeping. The best homemaker is surely a good housekeeper, but not one whose housework enslaves her. She must be mentally alert, knowing something of what is going on in the world, and having time to enjoy the beautiful things about her, or to engage a little in social life. She must be, to some extent at least, intellectual, and to a great extent broadminded, taking an interest in affairs, and people, and books, and having common sense enough to know the values which should be placed on things—to recognize those things which really "matter," and those which do not. For all this, she must have time; she must not be a mere housekeeper. She must know how to divide time, how to economize it so that she has a time for housework, a time for mental work, a time for social obligations, and a time for absolute rest. It is not wasting time to lie on one's back, doing absolutely nothing, when one is tired. "A change is as good as a rest" is an old adage, but it is not always true. When one is bodily tired, one is incapable of hard mental work. When one has finished a heavy washing, it is not wise to study Browning. We should be guided by reason, not by adage, in these things.

Possibly the mania for actively occupying every moment is even more likely to entangle the student. I remember in old collegiate days two students in particular, a young man and a girl, who were especially given over to this fallacy. Both studied late at night and were at their books again early in the morning, foolishly, feverishly, burning the candle at both ends. The girl failed on her examination; the young man's health gave way, so that he was obliged to give up school completely a month before

the examinations came off. . . . Once myself I tried this ultra-strenuous life—for about a week. It was in my more verdant days, and I had been reading "Augusta Evans Wilson." Those marvellous girls—don't you remember them, Beulah and the rest?—who used to sit up studying all night long, night after night, delving into the classics, studying the Talmud, and sagas, the sages of Buddhism, and heaven knows what not, then turn out for breakfast in the morning as fresh as daisies, not even a shade off-color. Such marvellous girls, and only eighteen at that! No wonder they inspired me so that I determined to do likewise. The experiment left me, needless to say, more practical, if somewhat disappointed. I found out that girls are, after all, made up of a goodly portion of flesh and blood, and that fact I have tried to keep in mind ever since.

Economy of time does not, in short, mean occupying every moment with strenuous labor; it means making the best use of time, and this problem each must study out for herself, adapting her own time to her own needs. For the housewife it often involves doing the regular housework in the quickest, easiest, yet most effectual way, so as to save both time and energy for other things. If you are a housewife, study this question. Think out more direct ways of doing things. Find out how your friends do them, and if any of them have a better plan than yours, adopt it. If your house is inconvenient, study how it may be improved by a little changing. The thinking about it will, at least, interest you, and may result in the saving of thousands of weary steps and backaches. Keep alert. Keep on the watch, in papers and magazines for labor-saving hints and paste them in a book so that you may not forget them. Above all things, if you can afford them at all, have plenty of kitchen utensils, enough pots and pans to save your temper, besides the many other things that may help so much to lighten your work—the washing-machine, wringer, carpet-sweeper, ironing-board and sleeve board, complete set of light-weight tubs, clothes-horse, meat-chopper, bread-mixer, self-wringing mop, etc., which are to you what a binder, mower and hay-fork are to your husband. Use paint everywhere, on floors, and shelves, and walls, and do not be sparing of oilcloth and linoleum. These are much more easily cleaned than bare boards, and it is better to have them, even if you have to curtail something from the drawing-room. . . . If you can afford it, by all means have a baking cabinet, one of the new kind, with the flour sifter at the bottom of the flour-box; and, also, if you can afford it at all, supply yourself, before hot weather comes again, with a blue-flame coal-oil stove, which is quite as convenient as a gas stove—no dirt, no ashes, no kindling. A very excellent make of these stoves will be advertised in "The Farmer's Advocate," we hope, during the latter part of the winter. A friend is using one of them now, the largest kind, with three burners. As the house is heated by a furnace, she intends using her oil stove all winter for cooking and baking, and will sell her range. She says her oil stove, if directions are followed, is absolutely safe, and that with care she can run it nicely on a gallon of coal oil per week. For wash-days, she uses an old iron stove in her basement laundry.

Then there are all the smaller things which may be bought for so little money, but which mean so much in economy of strength and time—the colanders, and toasters, and egg-beaters, etc., and the packages of ammonia, borax, and Dutch cleanser, which make five minutes of a half-hour's job when cleaning has to be done. Surely few need be without these.

Just one word more, if you are building a house, plan it. PLAN IT so as to have it as convenient as it can be made. Nothing else means so much to economy of time—the saving of time—so that while the housework is perfectly accomplished, time may be left for rest and for development of the mental and social qualities so necessary to the perfect woman.

M.

"Reflect upon your present blessings—of which man has many—not on your past misfortunes, of which all men have some."—Dickens.

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The Young People's Department.

HALLOWE'EN, AND SUPERSTITIONS IN GENERAL.

By Mr. J. L. Gilleland, Ayton, Ontario.

Luck and fate played a very important part in the social life of the old farm. No one was entirely free from a belief in them. Some would resent the mild impeachment of being superstitious, but their attitude toward spilt salt, two spoons in the cup, or the cat's toilet, furnished the proof of their guilt. The farmer was anxious as to the future in store for him. The lover wished to know how an incipient courtship would prosper. He was not so confident in this, his second essay, since his calf-love had come to grief. On the one night in the year when all the saints were free to walk the earth, it was no wonder that dextrous lovers ventured abroad to learn their fate. The serious form of communion with the saints has unfortunately degenerated into the pranks of mischievous boys, who hide gates, plows and barn doors. But one remnant of the ancient faith and practice which we would not willingly forget lingered down the years and made a feature of the life on the old farm—the Hallowe'en party, with its games and magic, held indoors around the roaring fireplace.

A number of young people were invited to take part in the fun. The boys helped in the preparation for the occasion by getting a large pumpkin and turning it into a Jack-o'-lantern. The soft pulp and seeds were taken out, and holes cut to represent eyes, nostrils, and a hideous mouth, with big, jagged teeth. A lighted candle was placed inside and the strange lantern fixed on the gatepost, pretending to scare the young people as they gathered in the evening. Stores of popcorn, beechnuts, hazelnuts, butternuts and hickory-nuts were produced, and a feast commenced. Stones and hammers were used for breaking the nuts. The trick was to get the kernel out whole. The shells were thrown into the flames, and kept the fire roaring. All the while, love-tests were being made. Two nuts were placed in the coals, side by side, and named for two lovers. If they burned quietly, a happy marriage would follow; but if one of the nuts would explode and leap away, the engagement would be broken off, or the course of true love would not run smooth.

The apple-peeling test was always the cause of a great deal of merriment. Some of the girls would take an apple and carefully pare it with a knife so that the peeling would be in one continuous strip without a break. The peeling was swung about the head three times, and this rhyme repeated:

"Apple, I pare and swing to know,
Whom I soon shall marry.
From my hand I now thee throw,
Mystic letter carry."

When the three circles about the head were completed, the peeling was dropped behind on the floor, and the initial letter it formed indicated the first letter of the future husband's surname. If the peeling broke when it fell, it meant that the poor girl would never marry, but die an old maid. When the initial was examined, the name of some crusty old bachelor was sure to be mentioned to have more sport, or, if her young man were present, then a rival's name was called out, to see the lover wince. Someone would tell him his cake was dough. Feelings were not considered on such occasions.

The deciding of a bachelor's fate by the three cups next followed. The cups were placed side by side on a chair standing on the hearth. One cup was empty, one contained clean water, and the third held ink or

dirty water. The victim was blindfolded and led up to the cups to put in his finger. If he dipped his finger into the empty cup he would remain a bachelor all his days. If he were fortunate in hitting the clean water, he would marry a handsome girl and live happy ever after. But if he plunged his finger into the ink it would be his misfortune to marry a widow. Loud would be the laugh at the poor fellow who got his finger into the ink.

The test that required most nerve was that of pulling the cabbage stalks, and for this reason it was to be depended upon. Those who decided to make the trial were shown where the old stumps of cabbage stood in the garden. One was then blindfolded and sent out to grope for a stalk. The first one the hand touched must be pulled up and brought in. The size and appearance of the stalk foretold what the future husband or wife would be. A tall, straight stalk meant a handsome mate, but if it were crooked the fates decreed that the other half would be ugly. Much earth clinging to the root meant riches in marriage. If the stem were hollow or rotten, then the wife would be a cross-grained woman. This cabbage-stalk hunting was always made the occasion for a joke. A rope was stretched across the yard to give the fellow a tumble, if a man tried it; but if a girl made the trial, one of the boys was sure to be waiting in the patch to cause a scare or steal a kiss. Usually the one who made the hunt came back in a dreadful hurry, and often very pale or covered with dirt, the result of a tumble.

As the evening advanced, the fun waxed furious. To help it on, someone would propose another game, and a pan of water was brought in and set on the table. In it were floating a number of apples without stems. These had to be fished for and lifted out with the teeth. As soon as touched, they would go down in the water. One after another would try to bite and hold the bobbing apples. If the girls wished to get even with any one of the young men, as soon as he stooped to catch the apple, down his head would be pushed, souse to the bottom of the pan. This was usually the end in view when the bobbing apples were brought on.

Another amusing trick was usually played on one who had never seen it before. We called it "being mesmerized." A boy would be mesmerized to be shown the one he liked best. Two saucers were brought in, both containing clear water, but the bottom of one had been previously blackened by holding it over the candle flame. This blackened saucer was given to the willing victim, who was told to do whatever the other person did who held the second saucer, and not to look at anything but the operator's face. The operator would dip the tip of his finger into the water, rub it on the bottom of the saucer, and then draw his finger over his face. The poor victim did the same, and as the motion was repeated over and over, black lines were thickly added to his face. First a line on the nose, then a streak across the cheek, followed by a cross on the forehead and a daub on the chin. When the operator had made his victim look like a wild Indian painted for a war-dance, a "looking-glass" was brought in so that the marked man could see the picture of the one he loved best. He did not recognize it for a minute, thinking his loved one a "nigger," but he was not long in rushing to the kitchen for soap and water.

If a young woman were anxious to see the face of her future husband, she must take a candle and an apple and go into a room by herself a few minutes before the clock struck midnight. She must eat the apple in front of the glass, watching her reflection all the while. Just as the apple was about finished, the face of the man to be her fate would be seen looking over her left shoulder.

When all were tired of these games, a circle was formed about the blazing hearth to try who could tell the most weird and blood-curdling tale. One of the stories that was told repeatedly was that of the strange way in which a murderer was detected and brought to the gallows. An old man, a stranger in the village, had wandered into the graveyard, and stood watching the sexton digging a grave. Soon the digger threw up a skull and a bone of a man who had been murdered many years before, and was buried by the sexton in this part of the graveyard, without benefit of clergy. His resting-place was known only to the sexton. As some of the bones were thrown out, the stranger stooped and picked one up, and instantly it ran blood. Horrified at the appearance, the man fell on his knees and confessed that he was the murderer. He was at once imprisoned, and soon afterwards hanged, being brought to justice by the tell-tale bones running blood.

The next story was one of a woman going into decline and dying by inches. No cause could be discovered by the doctors. She seemed to be free from any known disease, yet she became gradually weaker. At length a belated laborer going home from work saw a light as he passed in the cottage of an old woman who had an unsavory reputation. Slipping quietly up and peeping in, he saw her with a red object in her hands that was shaped like a human heart. She was jabbering away, and every few moments thrusting a darning-needle into the heart. The man told what he had seen, and a watch was set. Every night the old witch went through the same performance. She was arrested and accused of causing her neighbor's sickness. Knowing that she was found out, the witch confessed that her magic was killing the woman, whom she hated. The heart was burned, and at once the sufferer began to recover, and was soon well again.

The feelings of those present had grown very intense, so, by way of change, some light amusements were introduced. The two ends of a long string were tied together and taken in the hands. It was transferred from hand to hand, assuming a different shape in each, until a see-saw was developed. On the opposite side of the hearth someone worked another string, which was put through the two holes of a large button. The button was placed in the middle, and swung loosely on the string till twisted up. Then the string was tightened and loosened in the two hands, to make the button spin and buzz like a bee.

In another part of the circle a handkerchief was produced and made up into bunches and knots to represent rabbits and babies. Another clever person would fold up pieces of newspaper into the shape of hats, caps and boats. A candle would be brought, and, by means of the hands and arms, shadows would be thrown on the wall to look like a goose, a dog, or a long-eared rabbit. Then rhymes would be started to see who could repeat them most rapidly and correctly. Here is one example:

"If Peter Piper picked some pecks of pickled pepper,
How many pecks of pickled peppers did Peter Piper pick?"

Again the weird and magical would return, for how could it be otherwise when all the sprites, elves, goblins, pixies and fairies were let loose on poor man to work their will for one night? At least so we were told, and so we believed. If one of the company would shiver from the effects of a cold draught or from the nerve-racking stories, it was a sign that a stranger was walking over that person's future grave. As if that made any difference. It scared just the same. A nighthawk was described as having been seen the day previous at high noon, flying high and crying loudly in the bright glare of the midday sun, just as it does in the twilight. This was an omen of



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death shortly to follow, and started everyone present in a vein of self-examination as to their fitness to die.

There were always sure to be stories of the haunted house. How a door was locked upstairs and the key placed in the pocket, but when the holder of the key came down, the same key that he thought secure in his pocket would come tumbling downstairs after him. The owner of the house was a worker in the "black art." If a farmer lost a sheep, or hog, and went to this magician and paid him well, the fellow would tell him where to find his strayaway.

Unfortunately, all this nonsense did not stop at Hallowe'en, but followed the boy throughout the whole year, and influenced many of his actions. When the boy was at play, he, too, wanted to know what his future would be, and, to learn it, he would take an ox-eye daisy and pull away the leaves, one by one, repeating the following rhyme, a leaf being dropped for each word. Over and over he would repeat the jingle, till only one leaf was left. If the last leaf corresponded to "poor man," then a poor man he would be all his life. He was often confused, for he could not always come out the same: "Rich man, poor man, beggar man, thief, Doctor, lawyer, merchant, chief."

If, in playing, the boy lost a copper, he would immediately throw away another copper towards the place where he thought he had dropped the first. He would find the two together. Sometimes, to his sorrow, he found neither.

If, in running about on the way to school, the boy "took" a pain in his side, he would stop at the first stone he came to and pick it up. Having spit on the under side, he would replace it in the same position as before. This proved a sure cure for the pain. No doubt it was the stooping that effected the cure. Some boys had another remedy that worked as well. They would bend over as far as possible and take nine steps while in that position. It must be nine exactly. On straightening themselves up, the pain would be gone.

One may laugh at these superstitious practices of a bygone day, but before he does so let him examine himself well to see if he has not some still clinging to himself. It is not ignorant people only who are guilty, not by any means. Witness the prevalence of spiritism and astrology. The self-styled cultured man may laugh at another for carrying a charm against rheumatism in the shape of a horse-chestnut, while he himself is wearing an electric belt or electric insoles for the same trouble, which is no doubt just as effective treatment as the horse-chestnut. Every man wears his superstition next to his skin, or just below it.

The belief in spells and omens is, no doubt, what remains of the early crude religion that sought to discover and propitiate the unknown power that ruled. It has now become an effort to get a peep into the unseen, to learn what to-morrow has in store of joy or sorrow. Is anyone more manly for trying to peep through the keyhole? Would he be any better off if he got such a vision as he longed for? If the revelation were of coming trouble, he would disbelieve it as being pure imagination, or the thought of the trouble ahead would drive him to suicide. If the vision were of good, his efforts at self-improvement and growth would be paralyzed. He would say, "It is coming, anyway, so why need I exert myself?" The more of magic in life, the less of true religion.

Mrs. Whoopier.—You tell me, Herr Vogelschnitzel, that my daughter can never become a singer! Is there no hope for her?
Herr Vogelschnitzel.—Vell, matam, you might put her on a diet of canary seed pretty, undt see vat dot vill do mitt her

Carmichael.

BY ANISON NORTH.

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CHAPTER III.—Continued.

But it is so easy for us to forget the thoughts and emotions of childhood. Looking at life from the eyes of maturity, we never stop to think that the hillocks which appear to us are the Himalayas of the child-world; and so we go on heedlessly, all unmindful of the little feet that must climb, and the little hearts that so often tremble.



I suppose I was not long at the window that evening, for when I left it the green light had not all departed from the fields and the hills, but it seemed to me hours and hours in which I knelt there watching my father and Carmichael, with the cloud from the south-west all shot intermittently with the quick, tremulous glow of lightning, ever rising above their heads, and the low mutter of the thunder growing every moment more distinct. I remember, too, the sickening dread which overwhelmed me lest my father and his enemy should not have left off their quarrelling before it had come very close. Had not Elijah called down fire from Heaven to convince wicked men? And could any of those men of the olden time have been more wicked than this Henry Carmichael, whose blasphemous words were still in my ears? True, there was now no prophet to call down fire from the skies or bears from the wood, but might not the lightning be just a more modern and convenient method of dispensing punishment on occasion? It was comforting, at least, to think that my father had never used such wicked language, and that consequently he stood a good chance of escape; but, then, poor Dick! Was not Henry Carmichael his father? And at the thought of how Dick would feel when his father was brought in all blackened and burned by the lightning, my tears flowed afresh.

At last, unable to bear the suspense longer, I left my post by the window and went to look for old Chris. He was sitting, as usual, when his work was done, at the end of the stoop, and to-night was busy smoothing with sandpaper a new axe-handle that he had made. I crept round behind him so that he would not know that I had been crying.

"Chris," I said, "do you think it's going to be a very bad storm?"
It was my usual question when a thunderstorm was approaching, and, had my voice sounded as usual, would by no means have surprised Chris. As it was, however, he drew me around and looked into my face.

"Whv, dash it, little girl," he said, "cryin', were ye? Why, no, I think it's goin' to pass right by to the south'ard of us. Ye ain't so scared as that o' the thunder, are ye?"

"But don't you think it's coming right up near to—to where father 'n' Mr. Carmichael are?" I said.
He glanced across the field, then, taking up his axe-handle again, began rubbing it vigorously.

"Pity it wouldn't," he said, "'n' give 'em both a pair o' wet jackets! The idea o' two men standin' there vammerin' over what neither one 'll give in to, 'n' nobody knows about!"
"But it's an awful storm. Do you think father 'll be caught?" I insisted.

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CANARIES Norwih is the Canary Market of the world, and the Aviaries of W. Rudd its marketplace. Every variety of Canary for exhibition, breeding or song at lowest prices for quality. Cages and all bird-room requisites. Illustrated catalogue and breeder's handy diary, with press opinions, testimonials, etc., post free. Export orders made a specialty of. W. RUDD, Bird Specialist, Newark, Eng.

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THE NEWHOUSE TRAP
is absolutely reliable. Never fails to hold the game. Positive in action, easy to set, will not get out of order.
Made in all sizes to catch anything from a rat to a bear.
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Niagara Falls, Ontario

"So, little one," he answered, more gently, "ye think yer father 'd be saier in than out there wastin' words. Don't worry, little one; that storm 'll not come any nearer this night, 'n' yer father 'll be in soon, safe and sound, I'll warrant ye!"

Reassured, I sat down on the bench close to Chris, so close that, presently, when he began speaking in a low tone, so low that I knew he was talking, as he sometimes did, to himself, and had forgotten all about me, I heard every word that he said.

He was again looking across to the elderberry bushes, and soon he began to rub his bare, stubbly chin slowly and ruminatingly.

"Dash it!" he said, shaking his head from side to side half mournfully, "it's a sore pity, them two, the one mistakin' the other, 'n' the other mistakin' the one! 'N' it's good grain there is on one side as well as the other, 'n' neither 'll see it for lookin' all the time at a cockle-seed or two. 'N' which hes the biggest cockle-seed? Why, dash it, don't ask me!"

Chris's metaphors often bothered me, yet I invariably knew when he was speaking in metaphor. This time I made a prodigious effort to understand what he might mean, for I recognized that, in some way, he was referring to my father and Henry Carmichael; but I could not settle the matter to my own satisfaction, so asked him presently, "What do you mean, Chris?"

He turned to me in a surprised way, as if just aware of my presence, then began smoothing the axe-handle again.

"About what?" he asked.

"About the cockle-seed."

"Why," he said, rubbing his chin again, "why, dash it, can't I talk about cockle-seed if I like?"

But I was not to be put aside so.

"Did you mean anything like—oh, you know—about the mote in your brother's eye when there's a beam in your own?"

Chris smiled grimly, and looked long into my face.

"Why, dash it, little one," he said at last, "I don't believe ye're a baby any longer!"

"Why no, I should say not! I'm eleven!" I returned. "But, Chris?"

"Well?"

"You think Mr. Carmichael's far wickeder than father, don't you? Father never swears, you know."

Chris gave his head a scratch, then took to scrubbing the handle with a right good will.

"Dash it," he said, "I wish ye wouldn't be alwus askin' questions! Yer father's a good man, straight 'n' honest, 'n' I hope that's what his little girl 'll alwus be. Mr. Carmichael has his good points, too. Don't you ever go to thinkin' he hasn't. Most folks hes their good points, 'n' don't you ever go to gettin' so much dust on yer glasses as not to see it. It's that same dust that causes a good deal o' the misery o' this world, little girl."

"But, Chris, swearing's very wicked, isn't it?"

Slowly Chris laid the axe-handle down, then, clasping his hands about his knee, looked off toward the elderberry bushes, whence my father was now slowly returning.

"Surely it's not right to swear," said he, "an' I'm thinkin' when a man gets enough o' the grace o' God in his heart, he's glad enough to lay it aside fer good 'n' all. But I have sometimes been thinkin' swearin' isn't altogether shut up jist to the words that comes out of a man's mouth. The Bible says, swear not at all, 'n' the Bible's a grand guide fer us all. I'm not jist sure o' the 'nd o' swearin' it meant jist there mebbe they did swearin' different as well as other things in them days—but if it meant all round cursin' like what Henry Carmichael there does off 'n' on, why I'm thinkin' mebbe it was hittin' jist as much at what's behind the words as at the words themselves. Ye see I'm thinkin' a good deal o' the swearin' about like when I say 'Dash it.' Fer

example, if I was mad enough, I could make 'Dash it' pretty bad swearin'—'n' hev', mebbe, lots o' times—'n' if I didn't say 'Dash it' at all, but jist fei ugly enough 'n' mean enough, why that 'ud be swearin', too, jist as wicked swearin', mebbe, as when a man uses big-soundin' words like them Henry Carmichael says. Mind ye, I'm not sayin' swearin's ever right or nice, fer it ain't, but I'm jist tryin' to say my thought that mebbe the man that doesn't swear 's sometimes as bad as the one that does, 'n' without further knowledge o' them there's no reason fer settin' the one down at the gate o' Heaven 'n' the other at the gate o' Hell. . . . Ay, it's a funny world, this is, 'n' it's hard to keep a grip on things, but I'm thinkin' after all it's the kindly open heart, 'n' the tryin' to do what's fair 'n' straight that counts most 'n' tricks o' the tongue that comes second. A good deal o' them things is jist habit, mebbe, or carelessness, or want of ever stoppin' to think jist how ugly 'n' senseless it sounds. But mind, I ain't sayin' swearin's kind or right; 'n' as I said afore, when a man's got enough o' the real grace o' God in his heart he ain't likely to swear much. But then his heart 'll be sweet 'n' kind, too, 'n' he'll not be swearin' away down in it, neither."

This long speech of Chris's puzzled me. In some way it seemed to be upsetting much of the distinction I had formed, or been trained to form, between the marks by which the good and the evil were to be known, and of late, somehow, I was beginning to set much store by Chris's opinion of things. But as yet such a problem was beyond my powers of mental digestion, hence, after a confused attempt to follow out his reasoning, I gave up, and, laying down my head on the old man's shoulder, watched my father drawing nearer and the thunder-clouds passing quickly toward the south-east, with a sense of thankfulness that a terrible crisis had gone.

"You know so much about things, Chris," I said. "Do you think I'll know as much when I'm old like you?"

But the old man shuffled his feet, as he often did when somewhat confused, and set to work again sand-papering his axe-handle.

"Tut, tut, little one," he said.

"Ye got me into it, ye did. It's not fer an old man like me to be sittin' up here in judgment on things, 'n' mebbe me own two eyes chock full o' beams! But, dash it, ye will keep askin' questions! Why don't ye ask yer father or Miss Tring?"

As my father passed us, his countenance looked no more disturbed than usual, and he stopped to pat me on the head.

Thankful for this mark of his forgiveness and favor, my light heart returned again, and I went asleep that night feeling that my father was a very good and much-injured man indeed, and that, no matter what Chris might say, Mr. Carmichael was very, very wicked, and the words he had used were wicked words indeed.

(To be continued.)

With the Flowers.

WINTERING TEA ROSES.

H. H., Wellington Co., Ont., writes: "I have a dozen hybrid tea roses planted in a box that stood on the veranda all summer, and flowered nicely. I want to keep them over winter. Would you tell me the best way? I have tried several times before, but lost them every time. I tried keeping them in the house, and in warm rooms."

Ans.—It is more or less of a difficult problem in our severe climate to keep the tender tea and hybrid roses over winter so that they will be in good condition for flowering the following year. Probably the best way to handle them is to allow them to mature their wood as well

as possible in the fall, and, before severe frosts come, removing them to a cellar where a temperature can be maintained at about 45 degrees, or such as would be suitable for storing potatoes. If the bushes are then allowed to remain dormant over winter, and not allowed to dry out too much, they may be safely carried through until the following spring. Care should be taken not to allow the bushes to get too dry, nor, on the other hand, moisten them so much that the wood is likely to mold or rot. I think amateurs, as a rule, will find more satisfaction in growing the hardy hybrid perpetual roses, which may be wintered outside with but little extra winter protection. The following might be given as a dozen of the best of this class: Baron de Bonstetten, Gen. Jacqueminot, Prince Camille de Rohan, Anna de Diesbach, Mrs. John Laing, Paul Neyron, Magna Charta, Frau Carl Druschi, Margaret Dickson.

H. L. HUTT.

BOOK REVIEW.

A BOOK FOR THE CATTLE FEEDER.—"Beef Production," by Herbert W. Mumford, Professor of Animal Husbandry, University of Illinois, is the title of a compact manual for commercial cattle feeders. It is published by the author, and the type and letterpress are very creditable. The data are drawn largely from experimental work performed by Prof. Mumford, at Illinois, and numerous other experiments, while the author's personal experience on his own private farm has, no doubt, been also of avail. Beginning with the "Relation of Cattle Feeding to Soil Fertility," the book discusses, step by step, the various considerations which confront the commercial cattle feeder, especially in the corn belt. A successful attempt has been made to present in direct manner certain facts of great economic importance to beef raisers. Baby beef receives a chapter of attention. The last fifty pages, or so, are devoted to the knotty question of breeding beef cattle for market, and here the author encounters the piece de resistance of all writers on the subject of beef production. How the feeding cattle can be economically bred and raised to supply the feed-lots of commercial finishers at a cost that will leave the latter a margin of profit is a poser. Prof. Mumford recognizes the problem, and undertakes by a suppositious estimate to make out a passable showing for the man who keeps beef-bred cows merely to raise feeders. Hard-headed farmers, however, will scarcely accept his figures as dependable. It would be more to the point if some of the stations would conduct experiments on this point. Turning to the dual-purpose cow, as a possible solution, he discusses her, tentatively, as a proposition, and concludes by informing his readers that he is studying the question. The book concludes with tables of digestible nutrients in standard feeds, followed by an exposition of feeding standards and balanced rations. A complete index adds greatly to the value as a work of reference. Altogether, it is a publication that should be in every cattle feeder's home. Price, through this office, \$1.50 postpaid.

GOSSIP.

Attention is directed to the advertisement of Hon. Nelson Monteith, Minister of Agriculture for Ontario, calling for tenders for the clearing of 100 acres of land in New Ontario on the new Government Demonstration Farm. Here is an opportunity for some persons, having had experience in this line, to make some money, while becoming acquainted with that section of the Province, where profitable investments may be made.

Farmers and breeders will do well to look up the advertisement and extended notice in other columns of this paper, announcing an important auction sale of Shire stallions, mares and fillies from the noted stud of R. Moore & Sons, of Nottingham, England, to be held at the Britannia House, London, Ont., on Thursday, November 7th. These are big, quality horses and mares, that are suitable to breed weighty, highly-selling stock, and should find ready buyers.

DR. W. A. McFALL
Special attention given to the treatment of rheumatism. Address: 168 Spadina Avenue, Toronto.

Ontario Department of Agriculture DEMONSTRATION FARM. TENDERS FOR CLEARING LAND.

Sealed tenders are solicited by the undersigned on or before November 25th next for the clearing of approximately 100 acres of land on the Government Demonstration Farm, on Lot 12, Concession 2, Township of Walker, and Lot 1, Concession 2, Township of Clérque. The work of clearing to include underbrushing, felling, logging and burning off the said 100 acres. All trees of a diameter of ten inches and up at three feet from the ground are to be cut into sawlogs of suitable length, and hauled to the railway right-of-way on the farm. All spruce and balsam trees under that diameter, down to six inches, to be cut into pulpwood bolts, four feet in length, and piled upon the right-of-way. All tops, branches and general debris on the ground are to be piled and burned at such time in the spring of 1908 as may be directed by the Department. Tenders to state a price per acre for doing the work as above indicated.

Money will be advanced from time to time during the progress of the work, but not to exceed 60 per cent. of the total value of the work done until it is all completed to the satisfaction of the officer in charge of the farm, or such person as may be appointed by the Minister. Security will be required for the proper fulfillment of the contract.

The lowest or any tender not necessarily accepted.

Maps and further particulars may be obtained on application.

NELSON MONTEITH,
Minister of Agriculture, Toronto, Ont.

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



Ask your druggist for it. If he cannot supply the MARVEL, accept no other, but send stamp for illustrated book—sealed. It gives full particulars and directions invaluable to ladies. WINDSOR SUPPLY CO., Windsor, Ont. General Agents, or Canada.

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FOR PRIZE LIST, ETC., APPLY TO
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CONSUMPTION
Book Free!
If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma, or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure.
Write at once to the **Yonkerman Consumption Remedy Co., 128 Ross Street, Kalamazoo, Mich.** Don't wait—do it now.

POULTRY AND EGGS

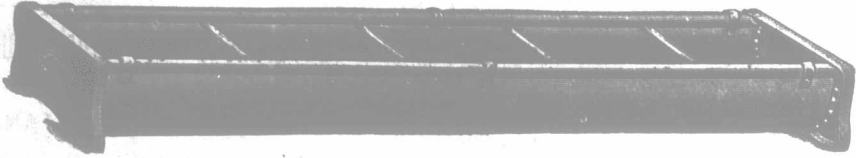


Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred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

LARGE Toulouse geese, \$3 each. Rhode Island Reds \$1 each. Emerson Tufts well bred. Ont.

PLEASE MENTION THIS PAPER WHEN WRITING ADVERTISERS

Steel Hog Troughs



Our steel hog trough has proved itself a true success. "All right. Just the thing. Would use no other." That's what they who use them say. Send us your order; do it now. Get our free catalogue of tanks, food cookers and troughs. We make the Gordon all-steel cheese vat. Write us.

The Steel Trough and Machine Co., Limited, Tweed, Ontario.

Eastern Dairy School Kingston, Ont.

Regular courses begin immediately after New Year's. School will operate as a creamery during December. TUITION FREE. For calendar giving full particulars regarding the courses write:

J. W. Mitchell, Supt., Kingston, Ont.

Party having one whole section and another half section of best fall wheat and mixed farming

Land in Alberta

WITHIN FOUR MILES FROM RAILROAD STATION.

Also an improved farm, two dwellings and barn, in Saskatchewan. Must have money, and will sell at a sacrifice if sold within 30 days (one-quarter cash required). For full particulars write:

Ontario & Alberta Land Co.,
ROOM 6, 18 TORONTO ST.,
TORONTO.



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

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—Excellent stock and grain farm. One hundred seventy five acres. Elgin Co., seven miles from St. Thomas two miles from Marquette and Michigan Central Station. Comfortable house. Two bank barns. Complete water system for stock in stables. Young orchard—bearing. Eighteen acres fall wheat. R. D. Ferguson, Port St. Lawrence.

WANTED—A man to work on a farm for the year. Can supply a house if necessary. Address: Box 283, Shashroy.

WANTED—A few good subscription agents for The Farmer's Advocate and Home Magazine. Liberal terms. The William Wells Co., Ltd., London, Ont.

WANTED—An indoor servant. One qualified to take charge small family. Comfortable home and highest wages. Address: Mrs. B. Gunn, Dunrobin Farm, Beaverton Ont.

200-ACRE FARM—Soil clay loam. Well watered. Good brick house. Bank barn. Apply: Jno. Underwood, Grafton Northumberland Co.

GOSSIP.

H. S. McDiarmid, of Fingal, Ont., reports Yorkshire business fairly good, despite the ruling high prices of feed. Through his advertisement in "The Farmer's Advocate," he is finding a market in various parts of the Dominion, and his customers invariably express satisfaction. The Maple Grove herd is being reinforced from time to time with selections of high-class stock, including a promising new stock boar, Summer Hill Roger 4th, which bids fair to prove a winner, combining with length and bacon conformation strong breed and masculine character. All the young sows are being bred to him. Present offerings include a number of pigs imported in dam, bred by Noels, of England, winner of a sow championship this year at the Royal.

GOSSIP.

R. MOORE & SONS' SHIRES AT AUCTION.

Shire horse breeders desiring to strengthen their studs, and farmers in quest of pure-bred draft stock, will welcome the announcement that the consignment of 17 Shire stallions, mares and fillies, from the noted stud of R. Moore & Sons, Beeston Fields, Nottingham, Eng., will be sold at auction at buyers' own prices at the Britannia House stables, London, Ont., Thursday, November 7th. A few notes on these horses, by a member of our staff who had the pleasure of examining them, will be found on page 1615 of "The Farmer's Advocate" of October 10th. They comprise one five-year-old stallion, a four-year-old, a three-year-old, four two-year-olds and a colt foal, four mares, four two-year-old fillies and a yearling. These have all been selected with a special view to meeting the Canadian demand, the points looked for being soundness and free action, combined with quality, scale and true Shire character. The females are by such noted sires as Stroxtan Tom, twice champion at the Shire Horse Show, London, Eng.; Croome Cardinal, included in the contingent; Menestral, first and reserve champion at the Shire Horse Show, London, Eng.; Nailstone Coeur de Lion, winner of first at the Shire Horse Society's Show, London, Eng., champion, Peterborough, etc., and other noted sires of merit. The stallions are by such sires as Southgate Lincolnshire Lad II., Royal Warrior, Calwich Sam, Borough Menestrel. Among them is Royal King III., the three-year-old illustrated on page 1634 of our issue of October 17th. This week we present a picture of the noted prize-winning five-year-old stallion, Croome Cardinal. The photograph has scarcely done justice, however, to his massive proportions and the quality of his underpinning. Sired by Southgate Lincolnshire Lad, and out of a mare called 21298 Bessy Croome Cardinal has an enviable English show-yard record to his credit, including first and champion Cambridgeshire; three firsts and championship, Cottenham; first, Stowmarket; first and championship, Little Downham; first, Chatteris; first and His Majesty's cup, King's Lynn, Norfolk; and first at Newport. Croome Cardinal has proved himself an excellent stock-getter, his foals having won at Kingston, Eastwood, Greasley, Selston, Ilkeston, and the Royal Agricultural Society, Derby. Yearlings, by him, have won this year: First at Mansfield, Kingston, Heanor Agricultural Shows and the Notts Agricultural Society at Retford. These few particulars give a fair idea of the merit and breeding of the individuals comprising the lot. For catalogue and further particulars, address R. Moore, Britannia House, London, Ont., or Capt. T. E. Robson, London, Ont., auctioneer.

DALGETY'S CLYDESDALE SALE.

An attractive auction sale of imported Clydesdale mares and fillies will be that of Messrs. Dalgety Bros., of Dundee, Scotland, and Glencoe, Ont., to be held at the Fraser House, London, Ont., on Wednesday, November 6th, at 1.30 p. m., when sixteen extra choice Clydesdale fillies of the best of breeding and quality, newly imported, will be sold at the buyers' own prices. A number of these are said to be show animals, and most of them are bred to noted sires in Scotland. This firm is noted for the choice class of horses they bring out. Having representatives in Scotland and in Canada, they know the needs of this country, and are in a specially good position to secure the sort that suits the demand here. They have brought out many

shipments, and the size, quality and attention of their consignments have always been quickly taken, and have given good satisfaction. The lot to be sold on November 6th is said to be the best lot they have yet offered, and they should find ready buyers at fair prices, for there is certainly a great need of good heavy-draft brood mares in this country to meet the demand for such stock. A few good stallions, just landed, will also be on hand for sale by private contract. Look up the advertisement; remember the date, and attend the sale.

Attention is called to the advertisement in this paper of two specially well situated farms for sale in Alberta and Saskatchewan.

At Poughkeepsie, N. Y., on Oct. 22, Major Delmar defeated Sweet Marie in a trotting match race for a purse of \$2,500, at the Hudson River Driving Park, winning two out of three heats. The race was the three fastest heats ever trotted on the track in a race. Time, 2.07½, 2.06½, 2.06½.

JUDGES AT THE INTERNATIONAL.

Following are some of the live-stock judges named for the Chicago International Exposition, Nov. 30th to Dec. 7th. Clydesdales—Prof. W. B. Richards, Fargo, N. D.; Andrew McFarland, Palo, Iowa; John Dickson, LaFayette, Ind. Shires—J. F. Myers, Herbert, Ill.; W. E. Pritchard, Ottawa, Ill.; Prof. G. C. Humphrey, Madison, Wis. Hackneys—Hy. Fairfax, Aldie, Va. Shorthorns—Chas. E. Leonard, Bellaire, Mo.; E. K. Thomas, Middletown, Ky.; Capt. T. E. Robson, London, Ont. Angus—M. A. Judy, Beecher, Ill.; Prof. J. H. Skinner, LaFayette, Ind.; Stanley R. Pierce, Creston, Ill. Herefords—John Robbins, Horace, Ind.; Thos. Mortimer, Madison, Wis.; C. A. Stannard, Emporia, Kansas. Galloways—Marion Parr, Harrison, Ill. Grades and crosses and champion steers—James Durno, Jackston, Rothie, Norman, Scotland.

Sheep (breeding and fat classes): Shropshires—Geo. Allen, Lexington, Ky.; Arthur Danks (alternate), Alamuchi, N. J. Hampshires—P. W. Artz, Osborne, Ohio. Cotswolds—J. R. Allen, Draper, Utah; P. W. Artz (alternate), Osborn, Ohio. Southdowns—Prof. G. E. Day, Guelph, Can. Cheviots—H. Noel Gibson, Millbrook, N. Y. Dorsets—John R. Nash, Tipton, Ind. Oxford Downs—Frank Kleinheinz, Madison, Wis. Leicesters—Wm. Mackintosh, Burgoyne, Ont. Lincolns—Prof. G. E. Day, Guelph, Can. Suffolks—P. W. Artz, Osborn, Ohio. Grade and cross-bred and champions—David McKay, Ft. Wayne, Ind. Carloads of sheep—R. S. Matheson, U. S. Yards, Chicago. Carcass sheep—E. E. White, U. S. Yards, Chicago.

Swine: Berkshires—Elmer Barker, Thorntown, Ind. Poland Chinas—W. G. Swallow, Booneville, Iowa. Chester Whites—Harry Booth, U. S. Yards, Chicago. Duroc Jerseys—Harry Booth, U. S. Yards, Chicago. Tamworths—E. N. Ball, Hamburg, Mich. Yorkshires—Harry Booth, U. S. Yards, Chicago. Hampshires—Harry Booth, U. S. Yards, Chicago. Grade and cross-breeds and champions—Prof. W. L. Carlyle, Ft. Collins, Colo.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Veterinary.

ITCHY PASTERNS.

Horse has an itching between hoof and pastern joint. There is no swelling. An oily substance exudes from a mass of pimples. When washed off nothing can be noticed. D. G. H.

Ans.—Purge him with eight drams aloes and two drams ginger. Follow up

with one and a half ounces Fowler's solution of arsenic twice daily every alternate week as long as necessary. Do not wash the parts at all. Dress, three times daily, with a solution of 20 grains of corrosive sublimate in a pint of water. V.

LAME COW.

About two weeks ago our cow went lame, and has been getting worse ever since. Her thigh is swollen to three times the normal size, but does not seem sore to pressure. Her hips seem to be shrinking away. She has no use of the leg. J. W. R.

Ans.—This is either a fracture or the formation of a large abscess. I am inclined to the opinion that it is a fracture. It would be well to call your veterinarian in, and if pus be present he will open the abscess. If it be a fracture, all that you can do is to keep her as quiet as possible in a comfortable box stall, and bathe the parts frequently with hot water, and, after bathing, rub well with camphorated liniment. I am afraid she will not recover. V.

UNTHRIFTY HORSE.

1. Six-year-old horse is very unthrifty, and has been so for more than a year. He was fed poor hay last winter. His teeth are all right, and he has no worms. He is very hard to physic. C. P.

2. Is it wise to feed boiled oats and bran?

3. Would a little flaxseed, boiled with the oats, give good results?

4. Do you advise the use of stock foods?

5. Would good oat straw be better food than poor hay?

Ans.—1. Take three ounces each of sulphate of iron, sulphate of copper, tartar emetic and calomel. Mix, and make into 24 powders. Give a powder every night and morning. After the last has been taken, give a purgative of ten drams aloes and two drams ginger. Feed bran only for twenty-four hours after giving purgative.

2. A soft feed like this, twice daily, gives good results with idle horses; but he should get a dry feed at least once daily.

3. Yes.

4. No.

5. Yes; hay of poor quality should not be fed to horses. V.

Miscellaneous.

SHINGLES TO THE SQUARE.

1. Please give rule to find the number of squares in a roof.

2. How many thousand shingles required for roof, from four to five inches to the weather? M. V. L.

Ans.—1. A "square" is a space of 100 square feet, or ten feet each side.

2. The rule for finding the number of shingles is as follows: Find the number of square feet in the roof by multiplying the length and width of one side together. Double this, and multiply the total by eight, and this will give the number of shingles, laid about four and a half inches to the weather.

LEGHORNS VS. WYANDOTTES—SINGLE-COMB VS. ROSE-COMB.

1. Which would be the best, a good laying strain of Leghorns or Wyandottes? Would the Leghorns make up in eggs what the Wyandotte would make up in eggs and marketed chickens?

2. Which is the best for poultry on a farm, the Single-comb Leghorns or the Rose-comb? M. B. B.

Ans.—1. This is a matter for difference of opinion, and the best data that could be supplied to help our inquirer to a conclusion would be letters giving actual statements of receipts and profits from fanciers of these and other breeds. Something will depend upon local market facilities. The Leghorns are excellent layers and the egg end is more important, as is claimed, however, on behalf of the Wyandottes, and other breeds of its class, that they rival the Mediterranean breeds, such as Leghorns, Minorcas, etc., in winter-egg production.

2. There are rose-comb varieties of only the White and the Brown Leghorns. They are not nearly so popular as the single-comb, although we are aware of no essential reason why they should not be.

BOOK REVIEW.

NEW BOOK ABOUT SOILS. — "Soils" may seem a prosy subject, but it is one in which every farmer is primarily and intensely interested. How to make the most of the soil is the great problem of the farm. Prof. Chas. W. Burkett, of the Kansas State Agricultural College, has written a volume about it, so replete with facts and beautiful illustrations as to make it almost fascinating. A glance at what the chapter headings embody gives a fair idea of its popular scope: The soil makers; the soils that living things have made; what we find in soils; concerning the texture of the soil; how plants feed; the elements that plants use; how plant food is preserved; getting acquainted with plant food; the potential plant food, its stores and nature; the role that tillage plays; liming the land, a corrective for acidity; the quest of nitrogen; the release of soil nitrogen, the return to the air; nitrification, nitrogen made ready for plants; reclaiming lost nitrogen, the call to the air; soil inoculation, how done; draining the land; soil water, how it is lost, how it may be held; dry farming, a problem in water conservation; tillage tools, what they are for, how to use them; the cultivation of crops, the tools and purposes; stable manure, its composition and its preservation; handling manure on the farm; buying plant food for the soil; using chemical manure intelligently; mixing fertilizers at home; dairying, an example in soil building; rotation of crops; the old, worn-out soils, what we may do for them; conclusion: A bit of philosophy. It will surely be popular. The Orange-Judd Co., of New York, are the publishers, and it may be ordered through this office at \$1.25.

GOSSIP.

By trotting two miles in 2.10 and 2.08, Sweet Marie, 2.02, defeated Major Delmar, 1.59½, in straight heats over the famous half-mile track at Allentown, Pa., October 16th, and established another world's record for herself and this track, lowering the race record of 2.09½, made over a Western track by Dandy Jim ten years ago.

Joseph Featherston & Son, Streetsville, Ont., write us that in the review of their Pine Grove herd of Yorkshires in our last issue, in the list of families represented by breeding sows in the herd, one of their best and most prolific strains was omitted, namely, the Rufford Belle family, of which they have, in the herd, nine breeding sows. These originated from the imported sow, Rufford Belle, bred by P. Ashcroft, of Ormskirk, England.

The beautiful heifer, Pitlvie Rosebud, which won for her breeder and owner, Bailie Taylor, the reserve female Shorthorn championship at the Royal, and the female championship at the Highland, at which latter show she beat the Royal champion, has come out of the Buenos Ayres quarantine station all right, and has been sold at a record price to an Argentine estanciero. Bailie Taylor has now the unique credit of having sold in the Argentine, at record prices, the only two Shorthorn champions at the National shows that have been sent from this country to the Argentine and have passed the test there.

At an auction sale of Shire horses, held at Peterborough, England, the first week in October, 27 head from the stud of Mr. R. W. Hudson brought an average price of £111, or \$555. The highest price, 270 guineas (\$1,415), was paid for the seven-year-old mare, Blythwood Laurel, by Mr. H. S. Leon. Six other mares sold for 110 to 145 guineas each, and a filly foal sold for 100 guineas. These, together with 37 belonging to other breeders disposed of at the same sale, made an average of £115. At a Shire foal show and sale, at Derby, Oct. 3rd, the third-prize filly foal sold for 82 guineas, and another, started at 70 guineas, was withdrawn at 135 guineas.

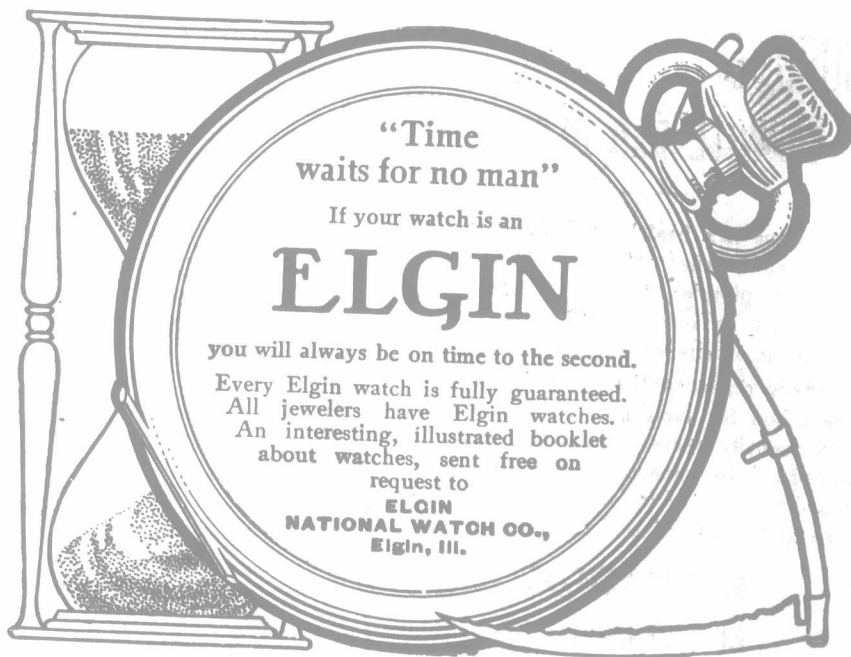
Mr. Geo. D. Fletcher, Binkham, Ont., in ordering a change of advertisement of Shorthorns, writes: "In offering for sale my stock bull, Imp. Joy of Morning = 32070 = 153003 (76929), I feel I have the privilege of offering one of the best bulls in Ontario. He is now eight years old, but is active and fresh-looking as he was at four, when he won first prize at the Dominion Exhibition, Toronto. His stock has sold as high as \$1,800 by public auction, and my only reason for offering to part with him is because of keeping so many of his heifers in my breeding herd. I would either sell or exchange for an imported bull fit to fill his place."

THE CHAMBERS SHIRE SALE.

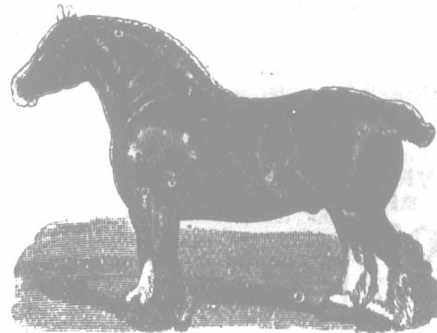
The auction sale at St. Thomas, Ont., on October 22nd, of imported Shire mares and fillies, the property of Messrs. John Chambers & Sons, of Holdenby, Northampton, England, proved a decided success. The weather was ideal, the attendance large, the stock of a high-class order, the bidding brisk, and the prices, though by no means sensational, were fairly satisfactory, the average of over \$300 for so large a number being considered as good as could reasonably be expected. The Messrs. Chambers realizing that a better class of Shires than had formerly been brought to Canada was necessary to create enthusiasm on the part of buyers, succeeded in bringing out a consignment that will do much to popularize this great breed of draft horses, which are selling so high in England, where they are best known and properly appreciated. The offerings at this sale, nearly all two-year-olds, combined size, substance, weight and quality, with good action and breeding in a high degree. They were in fine condition, sound, healthy and promising to go on well, and when paraded in relays in the ring before the sale commenced were greatly admired, and they grew on the people when brought out singly, or in pairs, of which there were a number of well-matched teams. The sale was admirably managed by Dr. C. K. Geary, Canadian and American agent for Messrs. Chambers at St. Thomas, and Capt. Robson, the popular salesman of London, who was in his best form, did excellent service, keeping up the interest from start to finish, and disposing of the whole number in less than two hours. The sale list is as follows:

Holdenby Modesty; Alex. McDougall, Melbourne	\$430
Holdenby Mayflower; Dr. McCandless, Capac, Mich.	425
Holdenby Serena; D. D. Ferguson, Yarmouth	395
Holdenby Cortona; Dr. McCandless	385
Burgh Starlight; C. E. Locke, Yarmouth	295
Burgh Violet; Robert Ferguson, Port Stanley	300
Holdenby Gladys; Andrew Miller, Middlemarch	320
Holdenby Christina; Dr. Eaid, Simcoe	295
Holdenby Constance; Dr. Eaid	295
Holdenby Minerva; Andrew Miller	325
Holdenby Hilda; Hugh McPhail, Iona Station	275
Holdenby Felicity; Alex. Anderson, St. Thomas	375
Holdenby Hildyke; Wm. Glover, Fingal	280
Holdenby Delight; Dr. Eaid	225
Holdenby Housewife; Edward Henderson, Komoka	310
Holdenby Gaeta; James Bennett, Lakeview	315
Holdenby Nancy; Andrew Miller	225
Vengeance; John Mitchell, Brownsville	285
Golden Queen; Geo. McKee, Capac, Mich.	300
Holdenby Bloom; Duncan McCallum, Glencoe	275
Holdenby Regina; J. W. Brooks, Springfield	250
Holdenby Bee; Dr. Eaid	255
Holdenby Lively; Wm. Glover	280
Holdenby Ama; Dr. McCandless	320
Holdenby Dacia; Robert Ferguson	300
Holdenby Cortona; Dr. McCandless	385
Holdenby Tenebina; Dr. Eaveley, St. Thomas	225
Diamond; J. M. Gardhouse, Weston	290
Holdenby Negress; Alex. McDougall, Melbourne	275
Holdenby Attica; W. J. Hill, St. Thomas	205

Thirty fillies averaged \$303.85.



Important Auction Sale
OF
SHIRE HORSES
The property of
Messrs. R. Moore & Sons,
BEESTON FIELDS SHIRE STUD,
NOTTINGHAM, ENGLAND,
will be held at
BRITANNIA HOUSE STABLES, LONDON, ONT.
Thursday, Nov. 7th, 1907
SALE TO COMMENCE AT 1.30 P. M.



This consignment consists of
17
Shire Mares, Fillies and Stallions,

a large number of them prizewinners at leading shows in England. The mares and fillies are bred to prizewinning stallions.

This is undoubtedly the choicest lot of Shires ever brought into Canada, and will afford an exceptional opportunity for obtaining high-class breeding stock where buyers fix their own price.

Terms cash, unless otherwise arranged for. For catalogue and fuller particulars address:

Capt. T. E. Robson,
Auctioneer.

MR. R. MOORE,
Britannia House, London, Ont.

THE EIGHTH ANNUAL INTERNATIONAL LIVE STOCK EXPOSITION

UNION STOCK-YARDS, NOV. 30 TO DEC. 7, 1907.

A week's education in breeding, feeding and marketing problems that no farmer or stockman can afford to have his family or himself miss. Over thirty annual conventions of breeding associations held here during the week of the show.

Daily Sales of Pure-bred Breeding Stock:

TUESDAY, DEC. 3, 1 P. M. 50 SHORTHORNS FROM BEST HERDS. For catalogue write B. O. Cowan, Asst. Sec'y American Shorthorn Association, U. S. Yards, Chicago.	WEDNESDAY, DEC. 4, 1 P. M. 50 CHOICE HEREFORDS. For catalogue write C. R. Thomas, Secretary American Hereford Association, Kansas City, Mo.
THURSDAY, DEC. 5, 1 P. M. 50 ABERDEEN-ANGUS FROM LEADING HERDS. For catalogue write Chas. Esher, Jr., Irwin, Iowa.	FRIDAY, DEC. 6, 1 P. M. 50 CAREFULLY-SELECTED GALLOWAYS. For catalogue write Chas. Gray, Sec'y American Galloway Association, U. S. Yards, Chicago.
FRIDAY, DEC. 6, 10 A. M. 50 CHOICE RED POLLED CATTLE. For catalogue apply to Geo. B. Buck, Sunny Hill, Ill.	TUESDAY, DEC. 3, 1 P. M. RAMBOUILLET. For further information write Dwight Lincoln, Milford Center, Ohio.
WEDNESDAY, DEC. 4, 4 A. M. AND P. M., AND THURSDAY, DEC. 5, P. M. SHROPSHIRE. Choice animals from flocks of G. Howard Davison, Milbrook, N. Y.; J. G. Hamner, Brantford, Ont.; T. A. Cox, Brantford, Ont., and other well-known flocks.	THURSDAY, DEC. 5, 4 A. M. HAMPSHIRE DOWN. For full particulars write F. W. Harding, Waukesha, Wis.

Low Railway Fares. Sales Held on Show Grounds. New Attractions

Best Results are Obtained from Advertising in The Farmer's Advocate

GOOD BLOOD WILL SHOW ITS QUALITY, SO WILL BAD BLOOD.

The one in a healthy body and ruddy complexion, the other in ill-health, blotches, pimples, boils and sores, and frequently in intense forms as ulcers, abscesses, erysipelas, salt rheum, etc.

Every organ of the body depends on the blood for force and vitality, and is but scantily served when the blood is impure. No remedy is so potent as a blood purifier or more rapidly produces new and healthy blood than

BURDOCK BLOOD BITTERS

which neutralizes the various poisons and restores the vitalizing power of this all important fluid.

For sale by all druggists and dealers.

YOUR LUNGS



ARE THEY WEAK OR PAINFUL? Do you spit yellow and black matter? Are you continually coughing and hawking? Do you have night sweats? Do your lungs ever bleed? Have you pains in chest and sides? Do you have pains under your shoulder blades?

THESE ARE REGARDED SYMPTOMS OF LUNG TROUBLE AND CONSUMPTION

You should take immediate steps to check the progress of these symptoms. The longer you allow them to advance and develop, the more deep seated and serious your condition becomes.

We Stand Ready To Prove To You absolutely, that Lung-Germine the German Treatment has cured completely and permanently case after case of advanced Consumption, (Tuberculosis) Chronic Bronchitis, Catarrh of the Lungs, Catarrh of the Bronchial Tubes and other Lung Troubles.

Many sufferers who had lost all hope and who had been given up by physicians have been permanently cured by Lung-Germine.

It is not only a cure for Consumption but a preventative. If your lungs are merely weak and the disease has not yet manifested itself, you can prevent its development, you can build up your lungs and system to their normal strength and capacity.

Lung-Germine has cured advanced Consumption, in many cases over four years ago, and the patients remain strong and in splendid health today.

Here is Evidence From One Case Under date of Mar. 11, 1907, William Schmidt, 1904 Coleman St., St. Louis, Mo., writes: "It is now nearly four years since my cure of Consumption was made complete by your Lung-Germine, and I am happy to say that I remain as well and strong today as the day I was cured. I am healthy and able to work every day."

We will gladly send you further proof of many other remarkable cures, also a FREE TRIAL of Lung-Germine, together with our new book on the treatment and care of Consumption and Lung Trouble.

WRITE TODAY FOR FREE TRIAL AND BOOK

You Pay No Duty

Lung-Germine Co. 40 Rae Bldg., Jackson, Mich.

WHEN YOU CHURN

Your rich pure cream for butter, why spoil your work by using a common and impure butter color?

WELLS, RICHARDSON & CO.'S "IMPROVED BUTTER COLOR"

gives butter the natural golden June shade that no other color can produce, and never fades from the butter. Do not use a vile substitute. At all times insist upon having the kind that makes prize butter. Sold by all dealers.

QUESTIONS AND ANSWERS. Miscellaneous.

MORTGAGING INFANTS' INTERESTS.

A dies, and leaves his life insurance and personal property to his widow, and farm as long as she remains unmarried. Should she get married, it becomes the property of the children. Can she mortgage the farm for the support of the children? AN OLD SUBSCRIBER, Ontario.

Ans.—Assuming that the children are still under the age of twenty-one years, she could, without the sanction of the High Court of Justice, mortgage only her own interest in the lands. To arrange a valid mortgage of the children's interests as well as her own, an application to the Court would be necessary, and the official Guardian of Infants would have to be consulted.

SWAMP MUCK TO IMPROVE SOIL—FIELD STONES.

1. I enclose a little soil. I wish you would tell me if black swamp muck is any value to it. If so, to what extent; that is, as a manure is the soil very much impoverished?

2. Could you give me any information as to where I could find a good market for farm stones that have been taken off the land? J. D.

Ans.—1. The sample forwarded is a light, sandy loam, which, judging from appearance, probably stands in need of enrichment, especially in vegetable matter. The addition of humus-forming material would, I feel sure, prove helpful, chiefly by increasing its water-holding capacity. Good swamp or black muck is essentially vegetable matter, and, hence, is valuable for improving soils in this respect; but, as a rule, it is better to compost it before application, in order that any natural acidity may be corrected. The addition to the composting muck of a small quantity of lime, or, better still, wood ashes, is to be recommended for that purpose. There are, however, some muck deposits so very slightly acid and so well decomposed that the material may be applied direct from the swamp to the field without any injury resulting to the soil. The writer would consider 20 to 30 loads a minimum dressing. After spreading, it can be worked into the surface soil with a disk harrow.

FRANK T. SHUTT, Chemist.

Central Experimental Farm.

2. Field stones are so abundant, and the freight on them so considerable in proportion to value, that we doubt the possibility of finding a market for them.

POLLINIZATION OF FRUIT TREES.

I have an Abundance plum tree planted in my orchard. It blossoms wonderfully in the spring, but never has any fruit on. My neighbors say it needs two other kinds set beside it to pollinize it. Would you kindly tell me what kinds to purchase to plant beside, or what is the matter with my tree? H. H.

Ans.—The study of pollinization, with reference to the setting of fruit in the various classes of fruits, is more or less of a new one, and has not yet been given sufficient attention to enable us to speak definitely with regard to all kinds of varieties of fruits. However, it is generally known that numerous varieties of various kinds of fruits are self-sterile; that is, they are not able to fertilize their own blossoms and produce fruit. I have not yet seen the result of any investigation with the Abundance plum, but from our experience with this variety here this year, I am inclined to believe it is one of the self-sterile varieties. In all of our tests with that variety this year, none of the blossoms set fruit self-pollinated, hence we are inclined to believe that this is one of the self-sterile varieties, although it is not safe to come to definite conclusions with one year's test. To insure fertilization, it is necessary to have growing near it some variety which blossoms about the same time. The Burbank would probably be the best for this purpose.

One of the great difficulties with Japanese plums is that they bloom so early in the spring that the blossoms are liable to be caught with late spring frosts. This itself is often the cause of lack of setting of fruit. We have found

that this variety is more or less tender in the bud; that is, the buds winter-kill more than any of the other varieties. In this case, however, the blossoms do not appear in the spring. H. L. HUTT.

BOOKS ON AGRICULTURE.

Kindly advise me as to two or three of the best books on mixed farming, giving names of publishers, prices, and where they may be obtained. J. M. M.

Ans.—"Successful Farming," by Wm. Rennie, is a fairly good book, covering the general field of Canadian agriculture; price \$1.50 (postage, 10c. extra). Among other works we highly commend for a farmer's library are: "Canadian Dairying," by Dean; \$1, plus postage, 5c.; "Physics of Agriculture," by King, \$1.75, postage 15c.; "Live-stock Judging," by Craig, \$2, plus postage 10c.; "The Study of Breeds," by Shaw, \$1.50, plus postage 10c.; and at least one of the following: "Feeds and Feeding," by Henry, \$2, plus postage, 15c.; "The Feeding of Animals," by Jordan, \$1.25, plus postage 10c.; "Feeding Farm Animals," by Shaw, \$2 postpaid. Any of these may be ordered through this office.

Veterinary.

DIARRHEA.

1. Calf, out on grass and given dry oats once daily, has diarrhea.
2. Give treatment for diarrhea in calves.
3. Is dry oats or provender better for calves? J. K. A.

Ans.—1. Keep calf in the stable. Feed on dry hay and chopped oats. Give purgative of eight ounces raw linseed oil, and in twelve hours afterwards, give four drams laudanum and two drams each of catechu and prepared chalk in a pint of new milk, and repeat the dose every four hours until diarrhea ceases. Add to the milk or water it drinks one-quarter of its bulk of lime water.

2. As described in answer to question 1.
3. I do not know what you mean by provender. Good hay, a little chopped oats and bran, with a few roots, give good results. Of course, a liberal supply of milk cannot be equalled. V.

GOSSIP.

At an auction sale of pure-bred sheep, at the Missouri State Fair, at Sedalia, Oct. 9th, 140 head sold for an average of \$50.34. The average on 34 rams was \$83.60, and on 104 ewes, \$39.47. The highest price was \$375 for a Shropshire ram.

Attention is directed to the new advertisement on another page of the daily auction sales of pure-bred cattle and sheep, to be held in connection with the International Live-stock Exposition, at Chicago, November 30th to December 7th, comprising Shorthorn, Hereford, Aberdeen-Angus, Galloway and Red Polled cattle, Rambouillet and Shropshire sheep, catalogues of which may be had on application. These sales, as side-issues of the great breeding and fat-stock show, make this International Show the crowning live-stock event of the year, and it is in itself an education for a young farmer. Reduced railway rates are arranged for. For particulars write Manager B. H. Heide, Union Stock-yards, Chicago, Ill.

W. J. Shean & Son, Owen Sound, Ont., write: "We have recently sold to Mr. F. W. Nicholson, of Flesherton, Ont., a grand pair of Shorthorns, a heifer of fine type and quality, sired by our famous Cruickshank Secret bull, Derby (imp.), dam Telluria 23rd; also the young bull, Scottish Pride, by Scottish Prince, a grandson of the London grand champion cow, Gem of Ballechin (imp.). This young bull is out of Lady Bella, by the Toronto first-prize winner, Captain Mayfly (imp.). We also sold to Vanstone Bros., of Kemble, Ont., the very nice red two-year-old heifer, Sweet Crocus, sired by a son of Marengo's Heydon Duke (imp.), and out of a daughter of Scarlet Velvet; also to Mr. S. Connel, of Inglis Falls, Ont., the good breeding cow, Zee 5th, by Brampton Hero. We have several high-class cows and heifers yet for sale at reasonable prices."

HORSE OWNERS! USE GOMBAULT'S CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from horses. Impossible to produce scurf or blemish. Send for circulars. Special advice free.



Boog Spavin
Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.
Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Boog Spavin, Thoroughpin, Splint, Orb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.
Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.
FLEMING BROS., Chemists, 75 Church Street, Toronto, Ontario

ABSORBINE

Removes Bursal Enlargements, Thickened Tissues, Infiltrated Parts, and any Puff or Swelling. Cures Lameness, Allays Pain without laying the horse up. Does not blister, stain or remove the hair. \$2.00 a bottle, delivered. Pamphlet 1-C free.
ABSORBINE, J.R., for manking, \$1.00 bottle. Cures Syphilis, Weeping Sore, Strains, Gouty or Rheumatic Deposits, reduces Varicose Veins, Varicocoele, Hydrocoele, Allays pain. Book free. Genuine mfd. only by **W.F. JONES, P.D.F., 73 Monmouth St., Springfield, Mass.** Canadian Agents: **LYMAN BONS & CO., Montreal.**

Kendall's Spavin Cure

Here is just one case out of thousands.
HARDOTA, MAN., March 13, '06.
"This is to testify to the value of Kendall's Spavin Cure as a Spavin Remedy and Liniment for general use. I used it for spavins on a colt two years ago, and found it a complete cure."
Save your horse with Kendall's—the cure for all Bony Growths, Swellings and Lameness. \$1 a bottle—4 for \$3. Our great book—"Treatise on the Horse"—free from dealers or
St. A. J. Kendall Co., Essexburg Falls, Vermont, U.S.A.

Iceland, Welsh and Shetland Ponies

FOR SALE:
One piebald Shetland mare, 5 years old, bred. One black bred. Pair of bay and white Iceland ponies rising two years, one of each sex; well matched and driven some. One piebald gelding, rising two, from imp. Iceland sire and dam, and others. Also outfits for ponies. Apply to:
E. DYMENT, Copetown, Ont., Wentworth Co.

Imported Clydesdales

Just arrived, a choice shipment of stallions and fillies; dark colors; all first-class breeding. Inspection invited. Terms to suit.
Geo. G. Stewart, Howlok, Que.

Imp. Clydesdale Fillies!

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

Clydesdales, Shorthorns and Cotswolds—For richest bred and choicest in Cotswold and Clydesdale importation arrive early in the season.
J. O. ROSS, Jarvis P.O. & Sta.

CLYDESDALES AND SHORTHORNS—Canadian-bred, registered. One stallion, rising 3, by Imp Macqueen Two stallions, rising two, by Imp Primrose Also my stock bull, Gilbert Logan 36424 **W. D. PUGH, Claremont P. O. and Station.**

PLEASE MENTION THIS PAPER WHEN WRITING ADVERTISERS

QUESTIONS AND ANSWERS. Miscellaneous.

A DELAYED APPLE-PICKING.

A is keeping store, and B is a farmer. A came to B to buy apples, but B did not sell apples to A that day. B went to A some little time afterward and sold apples to A, and also bought goods from A, intending apples to pay for goods; A to pick and barrel apples. A did not get around to pack apples until apples were all on the ground. Therefore, there were none to pack, as A did not pack windfalls. Has B got to lose apples through A not getting along in time, and still be compelled to pay for goods? Please let me know my proper course.

Ontario. M. Ans.—We consider B liable in respect of the goods he bought from A, but entitled to damages for A's breach of contract respecting the apples. B ought to make an earnest effort to arrange an amicable settlement of the matter.

FATTENING TURKEYS.

1. I have a lot of turkeys to fatten. Will they do better confined or allowed to run at large?

2. I have the grain to buy. What had I better get for best results?

3. How long should it take to fatten them?

W. C. R. Ans.—1. I consider they will put on more flesh allowed their freedom, as it keeps up the appetite, and after October 15th, turkeys do not roam very far from orchard or buildings, preferring to lie in a sheltered place and bask in the sunshine; that is, of course, when provided with an abundance of grain.

2. Considering present prices of food stuff, I would feed a light feed of good clean wheat in the morning and a full feed of good whole corn in the evening. I have never fed any boiled turnips or potatoes, but have been told by reliable parties that they are very beneficial when fattening. They are usually mixed with chopped oats or barley, and could be fed instead of the wheat in the morning, if preferred.

3. Fed as above, about three weeks in October or November, as they are still growing then; two weeks in December.

W. J. BELL.

THE KEYSTONE DEHORNER.

Find 40c. for your magazine to end of the year, as offered. I like the looks of it, and, then, it is Canadian. Your question box is a good thing. I should like to ask whether is the Keystone dehorner successful, and does it crush the horn? If it does, what is likely to occur? Will it be liable to harm a cow within three months of calving?

C. B. Ans.—The Keystone dehorner is pronounced by competent authorities a good investment—one of the best manufactured. The veterinary editor of "The Farmer's Advocate" has used it extensively, and finds that when the knives are kept in good order very little crushing occurs, and where slight crushing takes place, the results are not noticeable. He has dehorned cows in all stages of pregnancy without untoward results, but, on general principles, it is well to avoid operations on females in advanced stages of pregnancy. Prof. J. H. Grisdale informs us that the Keystone dehorner has proven very satisfactory at the Central Experimental Farm. He advises, however, as a precaution to prevent crushing, that a small portion of skin and hair (say about a quarter of an inch) be removed along with the horn. When this is done, the wound heals quickly and the operation is quickly performed. Occasionally, there is some bleeding, but it seldom amounts to much. If the wound should persist in bleeding, rubbing a little flour, or searing the wound with a hot iron will effectually stanch the wound. With regard to cows in calf, Prof. Grisdale considers that it is not likely to harm a cow within three months of parturition, providing she is secured so thoroughly as to prevent her throwing herself in such a way as to injure the fetus. The effect of dehorning upon cattle is scarcely noticeable, and cows, in milk, dehorned have, in many cases, shown no signs of suffering, so far as might be judged by the flow of milk. Care should be taken that freshly-dehorned animals are not allowed to get at straw stacks, where chaff or other foreign matter may get into the wounds.

RIGHT TO WAGES.

Send me a reply to the following: I hired on a farm for a year, and on Sept. 31st and Oct. 1st I was very sick, and unable to work, and it just happened that my employer had to attend a threshing, and whilst there told a chum of mine to tell me to come the following day or quit altogether. Unfortunately my friend thought he would be making things worse if he told me, so he told my brother a day or two after. In the meantime, I had resumed work, and worked a week before I heard of the message sent by my boss. However, when I asked him what he meant by it, he told me he had said it, but also told me I could not claim my wages. Now, please tell me if I quit now, could I claim wages for time up to leaving?

Ontario. A SUBSCRIBER.

Ans.—Not in full, as we do not see that sufficient has happened to justify your leaving prematurely. On the other hand, if you continue until the expiration of the year of hiring, you will probably be in a position to make full collection of wages, notwithstanding your having failed, owing to illness, to work every day.

TWIG BLIGHT ON APPLE TREES.

I enclose some sprigs of my young apple trees which appear to turn black and get rotten. The top of the tree will die, and the trunk will be green. Those trees are on the northern slope. I would be glad if you could give some reason for this, and how it could be avoided.

A. J.

Ans.—The twigs sent in for inspection were too dry to enable us to determine for a certainty the cause of trouble with your trees, but I have no doubt it is the twig blight, which has been more or less common this year in various parts of the Province. This is a disease rather difficult to combat, although much can be done to hold it in check by thorough spraying with Bordeaux mixture. In addition to that, however, all of the blighted twigs should be cut out and burned. In removing the twigs, they should be cut two or three inches below where the blackened part shows on the branch. Send to the Ontario Agricultural College for a bulletin on Apple Culture, which makes reference to this disease and other items of orchard management, which may be of interest to you.

H. L. HUTT.

O. A. C.

SALE VALUE OF ENSILAGE.

Will you kindly tell me the sale value of ensilage? A SUBSCRIBER.

Ans.—The value of ensilage is quite variable, depending upon variety, proportion of ears, maturity, and preservation in silo. In feeding experiments, at Ottawa, Prof. J. H. Grisdale has estimated silage to be worth \$2 per ton. Compared with ordinary prices for hay, this is very moderate indeed, and in a year like the present is away below the mark. Taking American analyses of corn silage, we find the following comparison with mixed red clover and timothy hay:

	Protein.	Carbohydrates.	Ether extract.
Corn ensilage...	1.21	14.56	.88
Hay, mixed clover and timothy...	6.16	42.71	1.46

Reducing the ether extract to its equivalent in carbohydrates, we find that in the purely heating and fattening elements, the mixed hay is nearly three times as rich, ton for ton, as the corn silage, owing to the large percentage of water in the silage, while in protein (the flesh-forming element), the hay is over five times as rich. Perhaps a fair average estimate for cattle-feeding purposes would place well-cured mixed hay worth four times as much as the silage, pound for pound. Assuming such basis of comparison, silage at \$2 a ton would be fully as good a proposition as the hay at \$8. As between corn silage and pure timothy hay the difference would not be so great. Probably a ratio of 2.7 or 2.65 would nearly express it. Knowing the current values of hay in your vicinity, the corresponding value of silage can be estimated. Silage would hardly be worth purchasing, however, unless it could be fed on the same farm, or in large quantities near by, owing to the daily cost of hauling.

CLYDESDALE

Mares and Fillies

DALGETY BROS., DUNDEE, SCOTLAND.

To be sold by Public Auction at the FRASER HOUSE, King Street, London, Ont., on

WEDNESDAY, NOV. 6, 1907

At 1.30 p. m.

Sixteen extra choice imported Clydesdale mares and fillies, several of which are bred to noted horses. This is an essentially high-class lot, with abundance of size and quality and very richly bred. A number of them are show animals, and, we think, the best lot we ever imported. A second consignment of Clydesdale stallions just landed will be on exhibition for sale. Address all correspondence to

CAPT. T. E. ROBSON, Auctioneer.

JAS. DALGETY, Glencoe, Ont.

W. C. KIDD, LISTOWEL, ONT.

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

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



CLYDESDALES

At Columbus, Ont., the home of the winners, this year's importation just arrived. The pick of Scotland's best. For size, style, conformation, quality and royal breeding, they eclipse any former importation we ever made. Look them up in our barn on Exhibition Grounds. Over 50 head to select from.

SMITH & RICHARDSON, COLUMBUS, ONTARIO.

CLYDESDALES

We have imported more Royal, H. A. S., Toronto and Chicago winners than any other Canadian importer. This year's importation has just arrived, and we think are away the best lot we ever imported; leading Scotch winners among them. Look up our stable on Exhibition Grounds.

GRAHAM BROS., CLAREMONT, ONTARIO Long-distance phone. G. P. R.



Graham & Renfrew's CLYDESDALES and HACKNEYS

Our Clydes now on hand are all prizewinners, their breeding is pedigreed. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Young stock cars pass the door every hour. Phone North 448.

GRAHAM & RENFREW, BEDFORD PARK, ONT.

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



My latest importation has just arrived home. I have now on hand for sale: 20 Clydesdale stallions from 1 to 5 years of age; 25 Clydesdale fillies from 1 to 4 years of age; 19 Hackney stallions from 2 to 8 years of age; 12 Hackney fillies, all young; and 4 Percheron stallions 3 and 4 years of age. A total of 75 head, with size, quality and action, and bred in the purple. Largest selection in Canada. Will be sold right, and on terms to suit.

T. H. HASSARD, MILLBROOK, ONT.



IMPORTED CLYDESDALES! 9 stallions, 1 to 5 years of age; 10 fillies, 1 to 5 years of age, several of them in foal; 1 two-year-old Hackney stallion; 1 two-year-old Shire stallion; 3 Percheron stallions, 3 years old. All are selected animals, bred in the purple. Will be sold cheap and on terms to suit. T. D. ELLIOTT, BOLTON, ONT. Phone.

Oak Park Stock Farm IMP. HACKNEYS, SHROPSHIRE, BRANTFORD, ONT. A large number of Hackneys (stallions and fillies) imp. and out of imp. stock; all a. c. s.; sh. w. stock. Shropshire and dam. Everything strictly high class. T. A. COX, Manager, Brantford, Ont.



Imp. Clydesdales (Stallions and Fillies), Hackneys, Welsh Ponies.

I have now on hand Clydesdale stallions and fillies—Scotland prizewinners and champions; Hackney fillies and Hackney pony; also Welsh ponies. There are no better animals, nor no better bred ones, than I can show. Will be sold cheap and on favorable terms. A. AITCHISON, GUELPH P. O. AND STATION.



SIMCOE LODGE CLYDESDALES

Our stable of imported and Canadian-bred Clydesdale stallions and fillies was never so strong in show stuff as now, although we have had some very strong lots. Call and see what we have before buying elsewhere. HOGKINSON & TISDALE, BEAVERTON, ONT., G. T. & C. N. R. Long-distance phone.

"Brick's Tasteless"

REGISTERED

is an extract of fresh cod livers, containing all the virtues of fresh cod liver oil without the nauseous grease, the compound syrup of hypophosphites, nutritious extract of malt and the fluid extract of wild cherry bark.

purifies the blood.

makes the weak strong.

IT

is a specific in sore throat and lung diseases.

is so prepared that it can be assimilated without the least digestive effort.

is sold under the positive guarantee that a decided improvement will be felt after taking one bottle, or your money will be refunded by the druggist from whom you purchased it.

Can we be fairer?

Two Sizes—8 ounce bottle 50c; 20 ounce bottle \$1.00



Tudhope Sleighs

You don't pay a cent extra for the 56 years' experience that goes into Tudhope Sleighs.

You don't pay a cent extra for a dozen little improvements that mean extra strength and service.

You pay only for what the BEST MATERIALS and WORKMANSHIP are worth.

Every Tudhope Sleigh is sold with a guarantee that has been lived up to for 56 years.

TUDHOPE No. 67

This is an all-round, serviceable sleigh. Built for rough roads—an easy, comfortable runner for hard driving.

Write for free booklet showing different Tudhope styles.
THE TUDHOPE CARRIAGE CO., Ltd. ORILLIA, Ont. 11

W. R. BOWMAN, MT. FOREST.

Durham bulls roans and reds, sired by imported Newton Prince \$75. Shropshire ram and ewe lam a \$10 to \$15 each, sired by our stock rams—Prolific (Imp.) a Chicago winner, and Dickins (Imp.). A few choice breeding ewes at \$12 to \$15 each. Yorksire sows due to farrow in February, sired by an imported boar, weighing over 200 pounds, at \$20 each. One boar ready for service at \$15. A Jersey bull, two years old, a winner at London; quick sale \$50

ABERDEEN - ANGUS

For sale, 50 head to pick from, males or females, by imported sire. Drumbo station.

WALTER HALL, Washington, Ontario.

ABERDEEN - ANGUS CATTLE

For sale: young bulls and females. Herd won first prize, and a cock bull the championship, at Western Fair, London, 1907, in strong competition. Elora sta., G.T.B. & C.P.R. O. N. LOWE, Elora Ont.

ABERDEEN-ANGUS bulls for sale. One, three years old; one 18 months old; one, 10 months, and two calves. All registered in the American Herdbook. McIntosh Bros., Box 338, Seaforth.



Sunnyside Herefords

Present offering: Twenty good breeding cows, yearling heifers, good sappy heifer calves; also some very promising bull calves, the get of Onward and Protector 2nd. In car lots or singly. Come and see them, or write and state what you want. Satisfaction guaranteed. **ARTHUR F. O'NEIL**, Maple Grove, Ont., Middlesex Co.

HEREFORDS—We are now offering a few thick, smooth young bulls and a number of males—a low down, extra beefy lot. If in want of something extra good, correspond with us. We can please you. **J. A. LOYERING**, Coldwater P.O. and Sta.

Brown Swiss Cattle

FRENCH-CANADIAN HORSES. We are offering for sale cattle of both sexes and a most any age; the greatest dual-purpose breed alive. Horses of all ages. Stallions, mares and fillies. The best at hand in Quebec. Write us for prices. We present exactly as the animal is. **C. E. STANDISH**, Ayer's Cliff P. O., Trebarthe Farm, Quebec.



Special Offering of Scotch SHORTHORN BULLS

3 just past two years old; 15 just over one year old; 7 just under one year old.

The best lot we ever had to offer in individuality and breeding, and prices are right. Catalogue.

John Clancy, Manager. **H. GARGILL & SON, Gargill, Ont.**

FLETCHER'S SHORTHORNS & YORKSHIRES

Present offering: My \$2,000 stock bull, Imp. Joy of Morning = 32070 =, 8 years old, winner of 1st prize at Dominion Exhibition, Toronto. Quiet, active and sire. Will sell or exchange. Also young stock of either sex. In Yorkshires: choice sows bred, and boars fit for service, from Imp. sire and dam, at your own price. **GEO. D. FLETCHER**, Binkham P. O., Ont. Erin station, C. P. R.

When Writing Mention this Paper.

Greengill Herd of High-class SHORTHORNS

We offer for sale choice young bulls from 6 to 12 months old, sired by Imp. Lord Roseberry, also cows and heifers, with calf at foot or bred, either Imp. or Canadian-bred.

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

Shorthorns! BELMAR PARC.

John Douglas, Manager. **Peter White, Pembroke, Ont.**

Calves for sale by our grand quartette of breeding and show bulls:

Nonpareil Archer, Imp. Proud Gift, Imp. Marigold Sailor, Nonpareil Eclipse.

Females. Imported and from imported stock in calf to these bulls.

An unsurpassed lot of yearling heifers.

Budget of English News.

Editor "The Farmer's Advocate":

The autumn stock sales are now in full swing, with, upon the whole, satisfactory results. At the sale of blood stock during Doncaster Races, eleven yearlings, from Sir Tatton Sykes' stud, brought 15,050 guineas, an average of 1,369 guineas each. The high price of 4,700 guineas was paid for a well-grown colt, by Gallinule—La Fleche.

At the great Cheviot sales at Hawick, one breeder averaged over £24 for 30 shearlings, one Mountain ram bringing £90.

Aberdeen-Angus sales have produced fairly-good prices, considering the lack of demand for export. Col. Grant, of Auchorachan, averaged £40 for 29 head. Clydesdales are bringing excellent prices at Perth with a keen demand.

The last week has shown considerable inquiry for Cumberland and Lincoln Shorthorns, especially of Bates blood.

At an annual sale of bull calves from the Collynie herd of Mr. Duthie, on Oct. 8th, an average of £409 16s. was made for 17 calves.

The Board of Agriculture Order of 1894 dealing with glanders has been succeeded by a more thorough and practical order, and not before it was needed. Since January 1st, 1,403 horses have succumbed to this disease. Anthrax has slain 980 sheep, and fever, 8,387 pigs.

This has not been a good year for horse-breeders. Deaths have been many among the foals. There were 10,000 fewer dropped.

There seems to be a fairly general feeling in Britain that the long agricultural depression is at last passing away. There is a good demand for such farms as fall vacant. The Minister of Agriculture, Lord Carrington, tells us that in the past year the small holdings belonging to the Crown have been rapidly taken up. Nearly 4,000 acres are now occupied. In an optimistic speech, he declares that: "In spite of croakers and prophets of evil, British agriculturists, including the landlords, are by no means yet played out."

A remarkable demonstration of motor harvesting took place lately on the Lincolnshire farm of Messrs. Dennis Bros. An acre of standing wheat was cut, threshed and ground by the power of a petrol agricultural tractor. Then an acre of ground was plowed, cultivated, and a new crop drilled, all in six hours and forty minutes. The machinery was all of British manufacture, with the exception of two Massey-Harris binders.

For three weeks, practically no rain has fallen, and excellent progress has been made in harvesting. Threshing is in full swing in England, and in many cases a much greater yield is being obtained than the estimates promised. In Scotland and the North of Ireland the weather, while fine, has been lacking in heat, and many of the oats are still green.

The average price of wheat for the first half of September has been 31s. 8d. per quarter, against 25s. 10d. last year. The highest quotation on the market (Sept. 20th) was for Manitoba, 41s. per quarter.

Wheat in Southern Russia is disappointing in quantity, in spite of official reports of "fair crops." The official estimate is over 4,000,000 lower than for 1906. Germany also is complaining of poor crops. Wheat and rye are 30 per cent. higher in price than a year ago, and, as rye is the staple food of the middle and lower classes, the rise means a serious increase in the cost of living.

A supplement to Dornbusch's List estimates the world's wheat crop at 393 million quarters, against 435½ millions last year.

"Greater uniformity" is the reason given for the demand in Britain for foreign butter in preference to the home-made article. This uniformity is said to be largely due to the use of preservatives, and the novel proposal is made that such butter should be taxed when imported.

A form value for butter of £3,500,000 in 1906 shows the steady increase in Victoria's dairy expansion.

There seems reason to believe that Canadian farmers will benefit by the new commercial treaty just concluded with France. The French tariff is to be lowered on cattle, fruit, dairy produce and wood pulp, while Canada makes con-

cessions on such things as wines and ribbons.

Figures recently published show that the British exodus to Canada proceeds with unabated force, and that more people from these shores go to Canada now than to that wonderful magnet, the United States.

The September National Review has an able article by Mr. C. F. Hamilton, in which he discusses the supposed dislike the settling Englishman has to face in the Dominion. He gives many figures to show the various proportions of English, Scotch, Irish and native born in Canada.

Mr. Hamilton gives one pertinent caution on the clothing question: "Canadian opinion is intensely suspicious of the cloth cap, knickerbockers, and, above all, leggings. Wear, I beseech you, a soft felt hat and trousers, and a good half of your initiation troubles will be saved."

BRITISHER.


GOSSIP.

COLWILL'S SHORTHORNS AND TAMWORTHS.

A. A. Colwill, Newcastle, Ont., successor to Colwill Bros., is the owner of one of the oldest-established herds of Tamworth swine in Canada. No herd in existence has taken a higher place at the leading Canadian shows than this, and we are well within the mark in saying that the herd was never in better shape, nor contained more high-class hogs than at the present time. The herd was for years headed by Colwill's Choice, that, for three consecutive years, won the championship at Toronto, followed by a son of his, Newcastle Warrior, that, in his yearling form, wrested the honors from his illustrious sire, and captured the red, white and blue, with which went the much-coveted silver medal. From such noted sires as these, the twenty-five brood sows now on hand were bred, and nearly all of them out of Toronto-winning dams, and several of them Toronto winners as well—a high-class aggregation of brood sows. Coupled with these now is the newly-imported stock hog, Cholderton Golden Secret, bred by H. C. Stephens, Cholderton, Eng., sired by Rolleston Victor, dam Cholderton Favorite, three times champion in England. The result of this cross is truly a grand one. Several sows have now farrowed to him, and the litters are exceptionally even, strong and smooth, every one with the appearance of the making of a future show animal. The eldest are now two months old, of which there are both sexes. All are for sale. Others for sale are about a dozen sows, some bred to the imported hog, others about ready to breed. These are the get of the two above-mentioned champions. In boars for sale are several fit for service; choice representatives of the breed. Lately, Mr. Colwill has shipped several to British Columbia, some to Manitoba, to the Maritime Provinces, Quebec, and a few to the United States. The Shorthorns all belong to the Scotch Syme and Lavender tribes, and are nearly all the get of the 2,500-lb Beatrice-bred bull, Brave Baron, a son of Imp. Indian Chief, dam Baroness of Aberdeen 2nd, by Imp. Heir Apparent; and the 2,400-lb. Diadem bull, Donald of Hillhurst, a son of Imp. Joy of Morning, dam Imp. Diadem. The younger things, up to a year old, are the get of the present stock bull, Baron Tulip = 53879 =, by Imp. Baron Beaufort, dam Imp. Tulip Queen 2nd. He is a thick, low-down, good-doing roan, and is leaving his get the right kind sure. For sale are several real choice heifers, from one to three years of age, some of them with a number of first prizes to their credit, at such important fall shows as Bowmanville and Orono; also two ten-months-old bulls, a red and a roan, both by the stock bull, and both out of Syme-bred cows, a low-down, good-doing pair that should do good anywhere.

According to the Indianapolis News, a speaker in the Iowa Legislature said the other day: "If I were endowed with some omnipotent power, I would ascend the loftiest peak of the Alleghanies, and from there would pluck a reed from the far-away shores of Alaska; I would dip it in the lava at Mt. Vesuvius, and would write across the canopy of the heavens in blazing letters: 'Labor, I love thee.'"

Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling together with its exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durable, bound, indexed and illustrated. Write us for a free copy.

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

CEDARDALE SHORTHORNS



Owing to scarcity of feed, am offering at special, low figures for quick sale: 17 heifers, one to three years old; 4 young bulls from six months to one year old; 16 cows, in calf or with calf at foot. Both beef and deep-milking strains.

T. S. SARGENT, M.P.,
Markdale, Ont.

SUNNYSIDE STOCK FARM



Bulls in service: Queenston Archer = 48988 = Trout Creek Stamp = 67860 =. A number of first-class young bulls, red and roan, and a few cows and heifers, for sale. Prices right.

JAMES GIBB,
Brookdale, Ont.

Wm. Grainger & Son



Hawthorn herd of deep-milking SHORTHORNS.

Aberdeen Hero (imp.) at head of herd. Two young bulls, also ten heifers; some of them bred to Aberdeen Hero.

Londesboro Station and P. O.

SHORTHORN FEMALES.

I have sold all my young bulls advertised in Advocate, but have some good females, representing the families of Village Maids, Clares, Cruick hank Village Blossoms and Ramsdens. Box 556.

HUGH THOMSON, St. Mary's, Ont.

Shorthorns, Oxford Downs and Lincolns


Herds headed by Protector (imp.), Vol. 52 E. For Sale: Bulls from 6 to 16 months old; also females in calf. Also ram and ewe lambs. All at reasonable prices. Long-distance phone.

JOHN McFARLANE & W. H. FORD
Dutton, Ontario.
Elgin Co., M. C. R. and P. M. Railways.

ATHELSTANE SHORTHORNS!

Pure Scotch Rosewood, Fossil and Countess strains. Ten one and two year old heifers of the above strains, the get of the VIII ge-bred son of Imp. Knuckle Duster, Vicar 34355, a d the Bruce Mayflower bull, Star Prince; also young bulls from 6 to 12 months old. Prices reasonable.

WM. WALDIE,
Box 324, Stratford, Ont.



"GORED BY A BULL"
Many a farmer has been seriously injured by vicious cattle. Don't run risks. Dehorn yours with the KEYSTONE DEHORNER.

Quick—easy—humane—makes clean, sharp cut from 4 sides. Costs little. Write for free booklet. R. H. McFENNA, Lato of Picton, Ont.

219 Robert St., Toronto

Salem Herd of Shorthorns

The great Jilt Victor in service.

J. A. WATT,

Salem P.O. Elora, G.T. & C.P.R.

MAPLE GROVE SHORTHORNS

Scotch and dairy bred; up-to-date in type; prize-winners at the local shows. A number of 1 and 2 year old heifers; 1 year old bull, and one 5 mos. old—the last will make a show bull. Flora bred—will be sold easy.

L. S. POWELL,
Allenstein P. O. and Strn. C. P. R.

Brown Lee Shorthorns!

Nonpareil Victor = 63307 = at head of herd Young stock for sale at all times. Prices very reasonable. Ayr. C. P. R.; Drumbo, G. T. R.

DOUGLAS BROWN, Ayr. Ont.

ELM PARK STOCK FARM

Shorthorns, Clydesdales and Berkshires. Stock for sale at all times. Herd headed by British Flag (50016) (8237). JOHN M. BECKTON, Glencoe, Ont. G. T. R., C. P. R. and Wabash R.

GOSSIP.

At the dispersion sale, in the first week of October, of the Berkshire herd of Mr. Inman, at Highmoor Hall, England, 112 head averaged £11 4s., the highest price, 80 guineas (\$420), being paid for the first-prize young boar at the Royal Show, at Lincoln, a son of Highmoor Mikado. Another son of the same sire sold for 48 guineas. The highest price for a sow was 35 guineas.

During a previous visit to England, Paderewski, through an agent, bought some prize pigs from a farmer in Essex County, who was quite unaware of the real profession of the purchaser. A day or two later, Paderewski visited the farm, without disclosing his identity. During an inspection, the farmer led the pianist to the sty and showed him a fine lot of pigs, remarking confidentially: "Do you see those? I have sold them to Mr. Paderewski, the great pig dealer from abroad."

Many "Farmer's Advocate" readers will be interested to know that at the recent sale of Clydesdales at Perth, Scotland, three of the mares belonging to Mr. J. Ernest Kerr, of Harviestoun Castle, which were nominally bought by Messrs. A. & W. Montgomery, were in reality bought by these gentlemen on behalf of Mr. T. B. Macaulay, of Montreal, they acting as his representatives at the sale. We refer to lot one, Lady Kinross, which was sold for 120 guineas, in foal to British Chief, the great horse which recently sold for £750; to Lettie Lothia, which was sold for 110 guineas, in foal to Royal Edward, son of Baron's Pride, and stud horse of Mr. Kerr, and to Lady Nicholson, which was sold for 170 guineas, in foal to Baronson, son of Baron's Pride, and sire of Oyama. Lettie Lothian is a daughter of Lord Lothian, and full sister to the well-known premium stallions, Lothian Again and Lord Lonsdale. Lady Nicholson is a daughter of Baron's Pride, and full sister to the Cawdor-cup champion, Lady Victoria, who is owned by Sir John Gilmore, of Montrose. Mr. Macaulay's farm is located at Hudson Heights, on the Ottawa River, thirty-three miles from Montreal, where he already has three imported Clydesdale mares and the imported Clydesdale stallion, Lord Cathcart; and a small bunch of Hackneys, including the mare that got first prize at the Dominion Exhibition, at Sherbrooke, in a class of nine. The farm, however, is yet but in its beginnings, and it will be some time before there will be much stock for sale.

TRADE TOPIC.

NEW ERA IN CREAM SEPARATION.—The manufacturers of the Maple Leaf cream separator, which is now being advertised in this paper, have had many years' experience in cream-separator construction, having been associated with some of the largest manufacturers. Knowing the demand for a machine at less cost to the buyer than current prices for the better-known makes, and believing there was a large opening for a low-price first-class separator, they have put upon the market what is known as the Maple Leaf, made exclusively in Canada. The shop equipment, the very best of tools, and experienced men result in a first-class machine as to skimming and construction being produced at a low price in accordance with the policy of the company. The Maple Leaf bowl, which is the business end of a cream separator, is constructed on the plate or disc system, so that the milk can be divided in thin layers, reducing to a minimum the speed required to produce a thorough separation without the breaking of fat globules. The frame is so designed that the shafts and bearings are always held in permanent alignment. There are no loose parts to the frame containing any of the working features. It is a low-down machine, easy of operation, and any dairyman thinking of purchasing a separator, or those in need of such a machine, had better enquire about the Maple Leaf. The Canadian Manufacturing Co., 182-186 Shearer St., Montreal, the makers, will gladly furnish our readers with complete information. Milk and cream are precious nowadays. Do not waste money and time with obsolete methods of cream separation.

R-E-L-I-A-B-L-E

Spells the key-word to the great popularity of the

U. S. CREAM SEPARATOR



SKIMS CLEANEST Holds World's Record.
IS SIMPLEST Two parts in the bowl.
WEARS LONGEST Record proves it.
RUNS EASY Users say so.

QUICKLY CLEANED Parts few and simple.
LOW MILK CAN Saves much lifting.
PERFECTLY SAFE Gearing entirely enclosed.
SAVES THE MOST Cream, time, work.

Dairymen choose the U.S. because they KNOW it can be depended upon to do the Best work ALL the time, and the Longest time, too.

May we explain to you why? Please send for complete illustrated book No.

VERMONT FARM MACHINE CO.
Bellows Falls, Vermont

Queenston Heights SHORTHORNS

All Scotch. The thick-fleshed, early-maturing sort. Special prices on young stock either sex. Ask for catalogue with sample pedigrees.

Hudson Usher, Queenston, Ont.
Farm three miles north of Niagara Falls.

MAPLE HILL STOCK FARM—High-class Scotch shorthorns. Herd headed by Rose Victor = 64835 = and Victor of Maple Hill = 66490 =, both sons of the Dublin-bred bull, Sixtyton Victor (imp.) = 50088 =, and from richly-bred imported cows. W. R. Elliott & Sons. Box 426 Uuelph.

IMPORTED SHORTHORN BULL Royal Kitchener = 50094 =, five years; quiet; active; sure. Will sell or exchange. Also young stock sired by him, and out of imp. and home bred cows, for sale. Ira S. Vannatter, Salsinad P.O. Erin, C.P.R.; Georg-town, G.T.R.

1854 Maple Lodge Stock Farm 1907

Some choice Shorthorn heifers and young bulls for sale. Our Leicester are exceptionally good this year. Rams and ram lambs and ewes for sale.

A. W. Smith, Maple Lodge, Ontario

T. DOUGLAS & SONS

STRATHROY, ONT.

Breeders of Shorthorns and Clydesdales. 15 bulls, 80 cows and heifers, 1 imp. stallion imp. and home-bred fillies. Write us what you want or come and see our stock. Farms 1 miles north of town.

LIVINGSTON'S OIL CAKE MEAL

Nothing is better for fattening steers quickly and putting them on the market in prime condition than Oil Cake Meal. Thousands of Canadian and English stockmen use Livingston's, and would have no other. It is equally good for milk cows. They give more and better milk when fed Livingston's Oil Cake Meal. Also used for horses, sheep and hogs. Write for information regarding prices, etc., etc., to

DOMINION LINSEED OIL CO., LIMITED
Montreal, Que. Baden, Ont.

SHORTHORNS AND LINCOLN SHEEP.

Two bulls, 11 and 19 months old—a Miss Ramsden and a Besale, both by the good breeding bull, Proud Gift = 50777 = (imp.), also cows and heifers in calf by him. Inspection solicited. Always have some choice Lincoln sheep for sale at reasonable prices.

J. T. GIBSON, DENFIELD, ONTARIO.

Scotch Shorthorns Clares Stamfords English Ladies, Mildreds, Nonpareils (Present offerings by Springburn 4884 and Mildred's Royal. Prices moderate. F. W. EWING, Salem P. O., Elora Station.

Spring Valley Shorthorns

Bulls in service are: Bapton Chancellor (imp.) = 40859 = (78986), Clipper Chief (imp.) = 64220 =. Stock for sale at all times.

CYLE BROS., Ayr, Ontario.

John Gardhouse & Sons Importers and breeders of Scotch Shorthorn cattle, Shire and Clydesdale horses, and Lincoln sheep. Call and see us.

Highfield P. O., Weston Station 3 1/2 Miles. Telephone.

Pure Scotch Shorthorns!

Our herd is headed by Imp. Prime Favorite, grand champion bull at the Canadian National Exhibition, at Toronto, and at the New York State Fair, at Syracuse, for 1907, assisted by Imp. Scottish Pride. If you want a choice young bull do not fail to ask for one of our bull catalogues. A number of females in calf, or with calf at foot, also for sale. Correspondence solicited. Visitors always welcome. Long-distance phone.

W. G. PETTIT & SONS, Freeman P. O., Ont., Burlington Jct. Sta.

SHORTHORNS

One roan Shorthorn bull, 3 years old, highly bred, quiet to handle; a bargain. Cows and heifers all ages. Also a number of Chester White sows that will weigh from 100 to 150 lbs each. No fancy prices.

D. ALLAN BLACK, Kingston, Ont.

Maple Grove Shorthorns

Herd headed by the grand show bull, Starry Morning. Present offering: Imported and home-bred cows and heifers, also a few young bulls. Terms and prices to suit the times. C. D. WAGAR, Enterprise Sta. and P.O. Addington Co.

Maple Shade Shorthorns & Shropshires

One yearling Lavender bull for sale. Younger bulls growing. All shearing rams and ewes sold. Will sell a few good ram lambs.

JOHN DRYDEN & SON, Brooklin, Ont.
Stations: Brooklin, G. T. R.; Myrtle, C. P. R.
Long-distance telephone.

Best Results are Obtained from Advertising in The Farmer's Advocate

MILK CANS ROB YOU

Look through a microscope at milk set to cream in pans or cans and you'll see how they rob you. You'll see the caseine—the cheese part—forming a spider web all through the milk. You'll see this web growing thicker and thicker until it forms solid curd. How can you expect all the cream to rise through that? It can't. This



caseine web catches a third to half the cream. You stand that loss just as long as you use pans or cans for they haven't enough skimming force to take out all the cream. But, just the minute you commence using Sharples Dairy Tubular Cream Separator, you stop that loss.

Sharples Dairy Tubular Cream Separators have 20,000 times more skimming force than pans or cans, and twice as much as any other separator. They get all the cream—get it quick—get it free from dirt and in the best condition for making Gilt Edge Butter. Caseine don't bother the Tubular. The Tubular is positively certain to greatly increase your dairy profits, so write at once for catalog 1-12 and our valuable free book, "Business Dairying."

The Sharples Separator Co.
West Chester, Pa.
Toronto, Can. Chicago, Ill.

Pleasant Valley Shorthorn:

Herd headed by Imp. Ben Lomond -45187-, assisted by Bud's Emblem, 2nd-prize senior bull at Toronto, 1908, son of Old Lancaster 60068. Correspondence solicited. Inspection invited.

GEO. AMOS & SON, Moffat St. & P.O., C.P.R. Farm 11 miles east of City of Guelph

DOMINION SHORTHORN HERDBOOK WANTED.

The Dominion Shorthorn Breeders' Association will pay \$1 each for the following volumes of their herdbooks: Volumes 8, 9, 12, 13, 14, 15, 16, 17 and 19. Parties having these volumes to part with, write for wrappers and mailing instructions to

W. G. Pettit, Sec.-Treas., Freeman, Ont.

KENWOOD STOCK FARM SHORTHORNS

Offers for sale an 18-month-old Miss Ramsden bull of show quality from Imp. Jilt Victor -45187-, a Toronto winner, and Imp. Pandora -49466-, a Toronto winner and an Old Country junior champion. Four other younger bulls. Also cows and heifers imp. and home bred. Price easy. Trains met on notice. HAINING BROS., Highgate, Ont., Kent Co.

A. EDWARD MEYER, Box 378, Guelph, Ont.,

Breeds SCOTCH SHORTHORNS of the following families Cruickshank Bellonas, Mysies Clawth Buds, Villages, Broadbooks, Campbell Clarets, Minas, Urys, Bessies, Bruce Mayflow ers, Augustas, Marr Missies and Lovelaces, and others. Herd bulls: Scotiab Hero (imp.) -55042- (90068), Sittyston Lad -67214-. Correspondence solicited. Visitors welcome. Long distance phone in house.

JOHN LEE & SONS, Highgate, Ont.

SHORTHORNS & LINCOLN
The champion herd of High Kent and Essex counties.
For Sale: 6 choice young bulls 3 reds and 3 roans, of grand type and quality; also good selection of young cows and heifers. Visitors welcome.

Clever Lea Stock Farm SCOTCH SHORTHORNS

Superior breeding and individual excellence. For sale: Bulls and heifers—reds and roans, some from imp sire and dam. Visitors met at Ripley station, G. T. R.

R. W. REID, PINE RIVER, ONTARIO.

SCOTCH SHORTHORNS!

We now offer four heifer calves 10 and 11 months old. All reds. Bred from imp sire and dam. Will be sold right. C. RANKIN & SONS, Wyebridge P. O., Wyevale Sta.

QUESTIONS AND ANSWERS. Veterinary.

BONE SPAVIN.

Mare, now seventeen years old, had a spavin when three years old. I blistered it then, and she showed no symptoms of lameness until a year ago, when the enlargement commenced, to increase in size, and she is still going lame.

J. M.

Ans.—In aged animals, the prospects of a cure of the lameness of bone spavin are not bright. Get your veterinarian to fire and blister the lock. There is a reasonable probability of this effecting a cure, and it is the only treatment to adopt with reasonable chances of success.

V.

RINGBONE.

Three-year-old colt has a ringbone on fore pastern, and is very lame. I have blistered it several times without results. I do not want the hair destroyed.

W. H. D.

Ans.—As blistering has failed to effect a cure, it will be necessary to fire and blister. As it requires an expert to operate, you will need to employ your veterinarian. The operation will not destroy the hair, but there will be some small scars left. If this fails to effect a cure, the operation of neurotomy can be performed. This consists in removing the nerve supply of the part, and is not advisable unless the animal is very lame and other methods of treatment fail.

V.

HORSE'S LEGS SWELL.

Four-year-old colt had distemper in July. Now all his legs and his sheath swell when he stands in the stable; but the swelling disappears on exercise. He eats well, but slavers a great deal when working.

W. J. A.

Ans.—Give him a purgative of eight drams aloes and two drams ginger. Follow up with one dram iodide of potassium, twice daily. Hand rub and bandage the legs, and give regular exercise. I would advise you to get your veterinarian to dress his teeth, as they no doubt, cause the salivation.

V.

LEGS SWELL.

A colt, now three years old, has stocked in his hind legs, if allowed to stand for a few hours, ever since he was two years old. He has never been overfed or overworked.

J. S.

Ans.—There is a congenital predisposition to swelling or stocking in the legs in this colt, and you will, in all probability, always have trouble with him, especially in the fall. Purge him with eight drams aloes and two drams ginger. Follow up with one dram iodide of potassium twice daily. If this causes a failure in appetite, reduce the dose to 40 grains. Feed lightly unless working hard, and give a few carrots or a turnip daily. See that he gets regular exercise, or light work, and hand-rub the legs frequently. The application of bandages for a few hours each evening will tend to help the circulation and prevent the trouble.

V.

DEBILITY.

Mare fifteen years old, does not eat enough. I had her teeth dressed, and gave her a purgative and turned her on grass. She did well for a while, and then seemed to be at a standstill. When I commenced to work her, she began to fail; does not eat enough, and cannot do a reasonable amount of work.

J. H.

Ans.—If a competent man dressed the teeth, they are now doubtless all right; but if the man who operated does not thoroughly understand it, get your veterinarian to examine her mouth, and, if necessary, dress the teeth. Take three ounces each of sulphate of iron, gentian, ginger, nux vomica and bicarbonate of soda. Mix, and make into twenty-four powders. Give a powder three times daily in damp food, if she will eat it, and if not, mix with a pint of cold water and drench. She cannot be expected to work well when she does not eat well, hence you must practically allow her to rest until her appetite improves.

V.

Stoneycroft Ayrshires.
SEVENTY-FIVE (75) HEAD.
Imported and imported-in-dam, both sexes and all ages. Winners and champions in Scotland and Canada among them. A high-class lot. Anything for sale. Also imported Clydesdales and Imp Yorkshires.
Harold Morgan, Ste. Anne de Bellevue, Que.
Bell Phone connection.

SPRINGBROOK AYRSHIRES
Produced 7,000 lbs. of milk each, testing 3.9% butter fat in 1935. Two choice young bulls dropped in August, 1906, and several calves of 1907 for sale. W. F. STEPHEN, Box 163, Huntlngdon, Que.

Glenhurst Ayrshires Olde established herd Ontario, Imp. and Canadian-bred. Average B. F. test for the whole herd 4.2; milk yield, 40 to 5 lbs. a day. For sale: females of all ages, and several young bulls; all by Imp. sire and some out of Imp. dams. James Benning, Williamstown P. O., Lancaster Sta.

Ayrshire Bulls One last September and a few March and April calves by the champion Douglasdale (Imp.) W. W. BALLANT, NE. Stratford, Ont. "Neidath Farm." Long-distance phone.

Wardend Ayrshires We have only four spring bull calves on hand for sale. Will sell them at reasonable prices. Sired by White Prince of Me No 21825, bred by A. Hume, Menie P. W. TAYLOR, Wellman's Corners, Hoard's Sta., G. T. R.

STONEHOUSE AYRSHIRES
On hand for sale: A number of Imp. cows and heifers winners of high honors in Scotland & Canada. 4 young bulls bred from champions and winners themselves. Extra choice offering.
HECTOR GORDON, Howick P. O. & Sta. Quebec.

AYRSHIRES Young bulls from producing dams and same sire, from 7 months up to 2 years. Have good ores and will speak for themselves. M. D'YMENT, Hickory Hill Stock Farm, Clappison, Ont. Dundas Station and Telegraph.

KELSO S. F. AYRSHIRES. My winnings at Ottawa this year were: Aged cow in milk, 1st and 2nd; dry cow, 1st; Canadian-bred cow, 4th; Canadian-bred 3-year-old, 3rd. For sale, anything in herd, both sexes. Extra choice stuff. D. A. McFARLANE, Kelso, Que., Atheistase Sta., G. T. R.

Burnside Ayrshires.
IMPORTED AND CANADIAN-BRED
Winners at the leading shows of Scotland, Canada, and U. S. Importation of 74 head have just landed home. All bulls sold. 90 fine 2-year old heifers due to freshen in Sept. A few Advanced Registry cows to freshen in Aug. and Sept. Anything I have is for sale at reasonable prices.
R. R. NESS, HOWICK, QUE., P. O. AND STATION.

HOLSTEINS
We must sell at least 25 cows and heifers at once in order to make room for the increase of our large herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way: arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls 100 head to select from Imported Pentina Hermes, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. H. E. GEORGE, Crampton, Ont. Putnam station, near Ingersoll.

LOOK HERE
Have on hand bull calves from choice dams, and sired by son of greatest cow in Canada, Bouteje Q. Pietertje De Kol: 643 lbs. 7 days; 96 lbs. 1 day. His sire's dam and granddam have records averaging over 35 lbs. butter week. Also choice bulls fit for service. Prices right. FRED ABBOTT, Fairview Stock Farm, Harrietsville, Ont.

Glenwood Stock Farm—Holsteins and Yorkshires. Holsteins all sold out. Have a few young Yorkshires cows, about 9 months old, for sale cheap. True to type and first-class. Bred from imported stock. THOS. B. CARLAW & SON, Warkworth P. O., Campbellford Sta.

Annandale Great Dairy Herd ONLY BULLS, 4 to 10 months old, for sale at present. Bred from great producing ancestors. Bred right. Fed right.
Holsteins and Ayrshires
GEO. RICE, Tillsonburg, Ont.

RECORD OF MERIT HOLSTEINS
Herd 110 strong. Over 40 head now in the Record of Merit. Two of the richest bred bulls in Canada at head of the herd. For sale: 18 bulls, from 9 months to 1 year of age, all out of Record of Merit cows and sired by the stock bulls.
P. D. EDE, Oxford Centre P. O., Woodstock Station.

"THE MAPLES" HOLSTEIN HERD
is made up of Record of Merit cows and heifers with large records and headed by Lord Wayne Meachthilde Calamity. Bull calves from one to five months old for sale.
Walburn Rivers, Folden's, Ont.
Beaver Creek Herd of Holsteins

FOR SALE: A few cows and five yearling heifers, and some heifer calves. All bred from good milkers.
Albert Mittlefehldt, Elcho, Ontario.

When Writing Advertisers Please Mention this Paper

MAPLE GLEN HOLSTEINS
Herd of 35 head with A. R. O. breeding, backed up by butter tests of over 16 lbs. as a 17-year-old to over 26 lbs. as a cow. A good herd to select from. Two spring bull calves on hand. A. R. O. test of one is over 26 lbs. for dam and 6. dam. Come and inspect the herd. Any animal will be offered for sale.
G. A. GILROY, GLEN BUELL, ONT.

Maple Hill Holstein-Friesians
Bull calves from No 1 dams, sired by bulls with great official backing. Write for prices.
G. W. Clemons, St. George, Ont.

Lyndale Holsteins
Bull calves for sale out of cows with records of from 18 to 20 lbs., and sired by a grandson of Pietertje Hengerveld's Count De Kol.

BROWN BROS., LYN, ONTARIO.
HILTON STOCK FARM—Holsteins, Outwards and Tamworths—Present offering: Some young cows; a nice lot of young pigs; few boars six months old and sows in pig. R. O. MORROW & SON, Hilton P. O. Brighton Tel. and Stn.

Imperial Holsteins
Bull calves for sale.
W. H. SIMMONS, New Durham P. O., Ont.
Grove Hill Holstein Herd Offers high-class stock at reasonable prices. Only a few youngsters left. Pairs not skin. F. R. MALLORY, Frankford, Ontario, G. T. R. and C. O. Railway connections.

FAIRVIEW HERD is the place to buy your next bull. I can furnish you with a bull sired by our great herd bull, PONTIAC KORNDYKE, who has 19 daughters in the last year's report that made official records from 13 pounds at less than two years old to over 315 pounds at four years, and the whole number averaged over 4 1/2% fat. No other bull in the world has ever made such a showing in one year. I have just tested another of his daughters that made 26.40 pounds butter in seven days with second calf. I have over 50 cows and heifers in calf to him. Come and look my herd over before making your selections elsewhere. E. H. Doliar, Heuvelton, St. Law. Co., N. Y. near Prescott.

RIVERSIDE HOLSTEINS
For sale: Eight young bulls from 3 to 8 months old, out of Record of Merit cows, sired by Johanna Bue 4th's Lad and Sir Pietertje Posch DeBoer, whose dam and sire's dam average in official test 5.57 lbs. butter in 7 days, and 87.6 lbs. milk 1 day.
J. W. RICHARDSON, Caledonia, Ont.

Ridgedale Farm Holsteins—1 yearling bull, 6 bull calves, from one to four mos., by Prince Pauline De Kol 6th, and from rich, heavy-milking dam. Come and see them or write: R. W. WALKER, Utica P. O., Ont. Port Perry, G. T. R., or Myrtle, C.P.R., Ontario Co.

PRINTED BY REQUEST.

Mix the following by shaking well in a bottle, and take in teaspoonful doses after meals and at bedtime.

Fluid Extract Dandelion, one-half ounce; Compound Kargon, one ounce; Compound Syrup Sarsaparilla, three ounces. A local druggist is the authority that these simple, harmless ingredients can be obtained at nominal cost from our home druggists.

The mixture is said to cleanse and strengthen the clogged and inactive Kidneys, overcoming Backache, Bladder weakness and Urinary trouble of all kinds, if taken before the stage of Bright's disease.

Those who have tried this say it positively overcomes pain in the back, clears the urine of sediment and regulates urination, especially at night, curing even the worst forms of bladder weakness.

Every man or woman here who feels that the kidneys are not strong or acting in a healthy manner should mix this prescription at home, and give it a trial, as it is said to do wonders for many persons.

The Scranton (Pa.) Times was first to print this remarkable prescription, in October of 1906, since when all the leading newspapers of New York, Boston, Philadelphia, Pittsburg and other cities have made many announcements of it to their readers.

Magistrate.—You say you didn't steal the watch. Then where did you get it? Prisoner.—Bought it, your Worship, Magistrate.—Where? Prisoner.—In Regent Street. Magistrate.—What did it cost? Prisoner.—Really, your Worship, I quite forgot to ask.

Brampton Jerseys!

Select your stock bull or family cow from Canada's most famous and largest Jersey herd.

B. H. BULL & SON, BRAMPTON, CANADA.

Pine Ridge Jerseys For sale some choice young bulls, bred in the purple, of ideal type; also a few heifers and heifer calves and some Cotswold shearing rams and ram lambs Wm Willis & Son, Newmarket P. O. & St.

HIGH ROV A. J. C. G. JERSEYS Arthur H Tufts Tweed, Ont (Successor to Robt Tufts & Co.) On account of scarcity of winter feed he must be reduced. Mal and females, all ages, for sale cheap, quality considered.

If you go HUNTING this season we want to get your

DEERSKINS

They are worth money. Well worth your skinning and shipping to us. Write us. E. T. CARTER & CO., TORONTO.

Tommy had been punished. "Mamma," he sobbed, "did your mamma whip you when you were little?" "Yes, when I was naughty." "And did her mamma whip her when she was little?" "Yes, Tommy." "And was she whipped when she was little?" "Yes."

DODD'S KIDNEY PILLS FOR ALL KIDNEY DISEASES CURES RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

QUESTIONS AND ANSWERS. Miscellaneous.

WORMSEED MUSTARD.

I am sending you under another cover a weed pulled in this locality. Please give name and characteristics.

AN OLD SUBSCRIBER.

Ans.—This is a part of an unusually large specimen of wormseed mustard (Erysimum cheiranthoides), a common, but scarcely ever an obnoxious weed. The specimen lacks developed seed-pod and root. The mustards are similar in so many respects that whole plants, with developed fruit and flowers, should be secured.

SEEDING TO GRASS.

What is the best time to sow grass seed? If I could get a crop next year, I will be thankful.

Ans.—Sow as early in spring as the ground can be worked into a good state of tilth. No variety of grass or clover grown in Ontario should be depended on for a crop the first year, although sometimes alfalfa, or even red clover, will give a light cutting on rich soil in a favorable season, when sown alone or with a light crop (say, 5 pecks per acre) of barley.

LINE FENCE.

What is the law regarding line fence? It has not been divided yet. Can I put in good shape, new or otherwise, any part of the fence I choose and compel the other party to put up his half? There has been a lot of damage done to my crop, and I want a good fence, and the party don't care in any way. The fence is a poor one.

Ans.—If you are unable to reach an agreement with your neighbor, the only course open to you is to call on the fence viewers to assign to each of you his proper proportion of the fence.

TREATMENT FOR LUMP JAW.

Cow, due to calve in February, has lump jaw. What is the iodide-of-potassium treatment?

SUBSCRIBER.

Ans.—The treatment consists in giving a dram of potassium iodide three times daily, and gradually increasing the doses until symptoms of iodism begin to appear. These are: Appetite fails, she refuses to drink much, saliva runs from the mouth and tears from the eyes. When any of these symptoms appear, cease giving the drug. In three or four weeks repeat treatment, if necessary.

GRASS FOR LOW-LAND PASTURE.

What kind of a grass would you advise to sow on land flooded back by lake in spring for about a month?

Ans.—For land as here described, I would suggest the following mixture for a permanent pasture: Red top, 4 lbs.; orchard grass, 4 lbs.; meadow foxtail, 3 lbs.; Kentucky blue grass, 2 lbs.; timothy, 2 lbs.; alsike clover, 3 lbs.; white clover, 2 lbs. This makes a mixture of 20 pounds of seed per acre, which is somewhat lower than is usually recommended, but the varieties here indicated are all hardy, and, when once well established, should furnish a large quantity of pasture of good quality.

The London Tribune tells a story of an unsuccessful literary life. A philanthropic visitor asked a resident of the penitentiary, "What brought you here, my friend?" "Unsuccessful authorship, ma'am," answered the man in cell 444. "How could there be anything criminal in that? Please explain."

He was a young doctor, and he had been asked to break some sad news to the wife of a man who had been run over by a motor. "Is my husband really ill?" asked the lady. "A—er—a little run down," said the budding Treves, hopefully.

This Little Pig Went to Market and Got Top Price. Clean hogs are healthy hogs and make profit. ZENOLEUM Makes Hogs Wallow in Profit. Disinfectant destroys disease germs, makes sanitary quarters, prevents contagious diseases from taking hold.

Linden Oxfords. We have a nice bunch of rams, two-year-olds, yearlings and ram lambs for sale. Sired by choice imp. Royal-winning ram.

Farnham Farm Oxford Downs. We are now offering a number of select yearling rams and ram lambs, sired by imported ram, for flock headers; also yearling ewes and ewe lambs. Price reasonable.

R. J. HINE DUTTON, ONT. P. O. and Telegraph Office.

Henry Arkell & Son, Arkell, Ontario. Arkell, C. P. R.; Guelph, G. T. R.

Leicesters. A few choice ram lambs and ewes of various ages. Also DUROC JERSEY SWINE.

SHROPSHIRE. Also some fine young White Wyandottes ready to ship.

Southdowns. Having sold the "Woodside Farm," we are offering the entire flock of SOUTHDOWNES. The oldest and most renowned prizewinning flock in America, composed of breeding ewes bred to our best rams, also ram and ewe lambs, at very low prices, as they must be sold at once.

Southdowns. FOR SALE: 2 imported prizewinning rams, and 60 home-bred and imported ewes. COLLIES.—Puppies by champion sire, and out of prizewinning dam.

Shropshires and Cotswolds. I am now offering 35 shearing rams and 50 shearing ewes, also an extra good lot of ram and ewe lambs from imported Minton ewes and Butter ram.

Southdowns. FOR SALE: 2 imported prizewinning rams, and 60 home-bred and imported ewes. COLLIES.—Puppies by champion sire, and out of prizewinning dam.

SPRINGBANK OXFORDS. SPECIAL OFFERING: 20 ram lambs; 3 shearing rams by an imp. Hobbs Royal Winner.

Robt. McEwen, Byron, Ont. FAIRVIEW SHROPSHIRE RAMS. Very choice imp ram lambs. Real good home-bred yearlings. One excellent two-shear (New Lord and Fair Star Rose combined in his breeding), and a four-year-old son of Fair Star Rose—capital and very sure breeder. Splendid values to quick purchasers.

71 Years WITHOUT CHANGE MEANS that in 1836 we made an importation of sheep, that Shorthorns followed very soon, that we have been importing and breeding them ever since, and that this year I have made an importation of Shorthorns, Shropshires, Clydesdales and Welsh Ponies as good as could be bought. They, with high-class home-bred ones, are for sale, write me. ROBERT MILLER, STOUFFVILLE, ONTARIO.

Sheep and Cattle Labels. Drop me a card for sample and circular, it costs nothing, and will interest you.

FOR SALE—Pure Shropshire Ram and Ewe Lambs from imported stock. A few ewes might be spared. Also fine St. Lambert Jerseys; male and female; all ages. Prices reasonable. Write for particulars H. E. Williams, Sunny Lea Farm, Knowlton, P. Q.

40 IMPORTED SHROPSHIRE RAMS AND EWES—First choice of England's best flocks. Ram lamb from the champion ram of Canada, 1906. LLOYD-JONES BROS., Burford, Ont.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs. Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons Buena Vista Farm, O. Harriston, Ont.

Subscribe for "Farmer's Advocate"

A Grand Cure

FOR
SUMMER COMPLAINT
AND CRAMPS

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY

It is nature's specific for Diarrhoea, Dysentery, Cramps, Colic, Pain in the Stomach, Cholera Morbus, Cholera Infantum, Sea Sickness, Summer Complaint, etc.

Rapid and reliable in its action. Its effects are marvellous, and it is pleasant and harmless to take.

It has been a household remedy for sixty-two years.

Refuse substitutes. They are dangerous.

Mrs. Wm. Flewelling, Arthur, Ont., writes: "I find it much pleasure to recommend Dr. Fowler's Extract of Wild Strawberry as a grand cure for Summer Complaint. My little boy, one year old, was very bad with it, and a few doses cured him. I also used it on my other six children for cramps and still have half the bottle left. I cannot praise it too much."

Elmhurst Herd of Tamworth Swine, Bronze Turkeys, Toulouse Geese, Pekin Ducks, S.-C. W. Leghorns.

For sale: A large herd of Tamworths, of excellent breeding and ideal bacon type. This herd won sweepstakes at Toronto and London, 1906-8. Among our winnings at World's Fair, St. Louis 1904, both premier championships, sweepstakes aged and junior herd, and two grand champion ships. Inspection and correspondence solicited. For further particulars apply to

D. DOUGLAS & SONS, Mitchell, Ont.

NEWCASTLE TAMWORTHS. Oldest established herd in Canada. For sale 12 young sows sired by Colwell's Choice and Newcastle Warrior, both Toronto champions, and bred to Imp. Cholderton Golden Secret; also younger ones, both sexes, by him, and out of dams by above Cha. sires. Several boars fit for service. Will sell right for a quick sale.

A. A. COLWILL, NEWCASTLE, ONT.

CHESTER WHITE HOGS

The largest herd of bacon-type Chester White hogs in Canada. Strictly high-class have won highest awards. Young stock of both sexes always on hand. Satisfaction guaranteed.

ROBERT CLARKE, 41 Cooper Street, Ottawa, Ont.

Cedar Lodge Yorkshires

100 head brood sows (Imp.) and the product of Imp. stock, weighing from 500 to 800 lbs. each. Stock hogs by Imp. sires and dams, very large and full of quality. Young stock of both sexes constantly on hand for sale. Pairs not akin. Satisfaction guaranteed.

P. O. COLLINS, Bowesville P.O., Ont. Manotick Sta., C.P.R.

CHESTER WHITE SWINE

and SHROPSHIRE SHEEP. Right in quality; right in price. Come and see, or apply by letter to W. E. WRIGHT, G. A. WORTH, Ont.

In the delirium of buck fever he mistook a colt for a deer.

And the colt, mortally stricken, sank down upon the straw of the barn-yard, looking with glazed eyes upon the multitude of sympathetic creatures that gathered gently about it.

"Have you no last message for anyone?" they inquired.

Thereupon the moribund animal reared its head proudly.

"Tell my sire," it said, in a loud, firm voice, "that I died game."

One long, shuddering sigh, and all was over.

QUESTIONS AND ANSWERS. Miscellaneous.

RIVAL CLAIMANTS.

I hired a man, B, and I owed him \$5. We then took a contract to clean up ten acres of land for C for \$55 and board, and I used my team of horses all the time drawing logs, for he did not have any. Then B bought another horse from me for \$25, and he was to pay me out of the clearing money, except the \$5 I owed him; that left \$20. When we were through, we could only get \$25 from C. B got it, but I was with him. He gave me fifteen. He kept \$10, and then he tried to get the balance from C, and forbade C from giving me any more than \$12, and I forbade C from giving him any, and told him about the horse, and we were counting equal wages for ourselves and \$10 extra for my horses for three weeks' work, and the \$20 he owed me on the horse. B has not got a dollar's worth of stuff I could take, and has almost ruined the horse driving him. So, you see, if I got the whole of the \$30 that is coming from C, B would still owe me \$7.50. Please tell me what I ought to do, I mean about C, not the \$7.50, and who C should pay, for I cannot afford to lose the price of the horse, and do not want any trouble. C promised to have the money after he threshed.

X. Y. Z.
Ontario.
Ans.—You should formally notify C in writing that you are entitled to payment of the \$30, and that you claim same accordingly, and warn him by the same notice against paying the money to any other person. Then when the time for payment arrives (after C's threshing), you could sue C in the Division Court for the money. He, in turn, for his own protection, would probably have B joined as a party to the suit, and so have the matter disposed of by the court as between all the parties.

COLD STORAGE FOR BEEF.

On account of the high price and scarcity of feed this winter, it seems certain that beef will be very cheap this fall, and be correspondingly high in late winter or spring, and, in view of this, some farmers are wondering if they could fix up some kind of cold storage and kill their beef in early winter, keep it frozen until late spring, and then place it on the market. I am one of those who have a surplus of cattle that I cannot sell to advantage, and I would like to ask if you think it practicable for a farmer to keep his beef frozen all winter. What kind of building would you consider best in winter for the above-mentioned purpose? Any other information you may give on the subject will be appreciated.

NORTH SIMCOE FARMER.

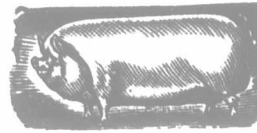
Ans.—I would not advise anyone to depend on a temporary or make-shift arrangement for the storage of fresh beef over winter. If we could be sure of freezing weather from the time the beef is killed until it is required for consumption, there would be no difficulty about the matter, but the spells of comparatively warm weather which occur every winter would make the undertaking a very risky one, unless a well-equipped cold storage was provided.

It would be much cheaper to ship the beef to the nearest cold-storage warehouse, and to pay the transportation and storage charges than it would be to erect a special building, which cannot be done cheaply.

If the weather is frosty when the killing is done, and the beef can be disposed of before "break-up" in the spring, the plan followed by many housekeepers for preserving fowls or meat is probably the best and safest make-shift plan. The meat is first frozen solid and then packed in dry snow. Packed in this way, it will be carried over short periods of thawing weather without injury, and the snow covering the surface of the meat prevents it from drying out. If the meat is not exposed to "thaws" of longer duration than two or three days at a time, it should keep fairly well put up this way, but I cannot give any guarantee with the suggestion.

J. A. REDDICK,
Pastry and Cold-storage Commissioner.

YORKSHIRES of Choicest Type and Breeding.



I have on hand 75 brood sows of Princess Fame, Cinderella, Clara, Minnie, Lady Frost and Queen Bess strains. My stock boars are true to type and richest breeding. For sale are a large number of sows bred and ready to breed, boars fit for service, and younger ones of both sexes. Pairs and trios not akin. J. W. BOYLE, P. O. Box 563, Woodstock, Ont.



Large White Yorkshires!

An offering at the present time a choice lot of boars ready for service, from imported stock, also young pigs of both sexes, not akin. Prices right, and quality of breeding unexcelled. Write or call on

H. J. DAVIS, WOODSTOCK, ONT.



MONKLAND Yorkshires

Imported & Canadian-bred

We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right.

JAS. WILSON & SONS, FERGUS, ONT.

G. T. R. and C. P. R. Long-distance Trains



Maple Leaf Berkshires.—Large English breed Now offering King of the Castle sows, and Polgate Doctor sows bred to British Duke (Imp.). Also young boars and sows for sale, 10 and 12 weeks old.

JOSHUA LAWRENCE, OXFORD CENTRE P. O.

WOODSTOCK STATION.

FAIRVIEW BERKSHIRES

are second to none. Have now for sale some sows bred, and boars fit for service, a so younger one ram two to four months old, bred from show stock. Also Leicester shearing rams, ram and ewe lambs of finest type.

John S. Cwan, Donegal P. O. Atwood and Milverton stations.

Glenburn Herd of Yorkshires.

Winner of gold medal three years in succession. 6 young boars from 5 to 9 months; also 75 young sows, from 6 to 12 weeks old.

David Barr, Jr., Box 3, Renfrew, Ont.

Elmhurst Berkshires

With our recent importation, personally selected from the best herds in England (some of them prizewinners), we have the most select herd of Berkshires in Canada. A grand group of breeding and show matrons. Our new imported boar, Stall Pitts Midy won 1st under 1 year at Oxford, 1907, also Compton Duke, Imp., and Compton Swell, Imp., head the herd. Mail orders receive careful attention. Brantford shipping station.

Motto: "Goods as Represented."

H. M. VANDERLIP, Gainsville P. O., Brantford, Ont.

Yorkshires and Tamworths—Either breed any age, both sexes; sows bred and ready to breed. Yorkshires bred from Imp. sire and dam. Tamworths from Toronto winners. Pairs not akin. As good as the breeds produce. CHAS. CURRIE, Mohrston P. O. Schaw Sta. C. P. R.

Meadowbrook Yorkshires. Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dameny Topman. Everything guaranteed as represented. J. H. SNELL, Hag Raville P. O. & Station.

Elmfield Yorkshires.

60 young pigs of both sexes, from 4 weeks to 4 months. Also some young sows, bred in Aug. at to Imp. boar. Prices to suit the times.

G. S. MUMA, Ayr, Ont.

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

DUNROBIN'S OCK FARM Clydesdales, YORKSHIRES Shorthorns. We are booking orders for breeding stock from our grandly-bred Yorkshire sows. Twenty five sows to farrow in the next few weeks. Unrelated pairs a specialty. Write for prices and particulars. DONALD GUNN & SON, Sarnett, Ontario. Inspection invited. G. T. R., C. N. O. R. stations 1 1/2 miles from farm. Customers met on notification.

FAIRVIEW BERKSHIRES

Bred from imported and Canadian bred sires and dams, and bred on prize-winning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to Imp. boars. HENRY MASON, SCARBORO P. O. Street cars pass the door.

Willowdale Berkshires

are unsurpassed for quality and breeding. My stock is bred from the best imported and Canadian-bred dams, and imported sires of the richest breeding to be found in England. Young stock all ages for sale reasonable. Young sows bred and ready to breed. Young boars 3 and 4 months old. Satisfaction guaranteed. Long distance telephone in evidence J. J. WILSON, Importer and Breeder Milton P. O. and Station. G. T. R. and C. P. R.

Maple Grove Yorkshires

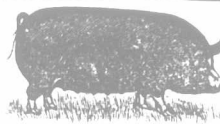
IMPORTED AND CANADIAN-BRED

Boars and sows of the best possible breeding, with lots of size and full of quality comprise our herd. We are winning at the leading shows in Canada. We have a fine lot of sows and boars ready for service, also both sexes of all ages—younger. We guarantee everything as represented. Prices always reasonable. Write at once. H. S. McDermid Fingst P. O. Shaden Stn.

SUNNYMOUNT BERKSHIRES!

Boars fit for service. Sows bred and safely in pig. Sows fit to be bred. Young pigs just weaned.

JOHN McLFOD, Milton P. O. and Sta. C. P. R. & G. T. R.



DAKDALE BERKSHIRES Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prize-winning lines and true to type. Everything guaranteed as represented. Long distance phone. L. E. MORGAN, Milliken P. O., Co. of York.



LARGE ENGLISH YORKSHIRES.—We have a limited number of choice young pigs for sale, bred from our choicest sows and got by the imported boars. First prizes at the Ottawa Fair Stock Show last March for the best dressed carcasses, and sweepstakes over all breeds or grades. We guarantee satisfaction in all mail orders. JOSEPH FEATHERSTON & SON, STREETVILLE, ONT.

Mount Pleasant Herd of Tamworths and Holsteins.

For Sale: Pigs of either sex, from 6 weeks to 7 months; pairs not akin; also bull and heifer calves under 5 months. Phone in real time. BERTRAM HOSKIN, The Gully P. O.

CLOSING-OUT SALE.—Orchard Home

Tamworths at closing-out prices. Brood sows in pig; all pig sows; boars fit for service, all ages, including the great Toronto champion, Newcastle Warrior (239). Guaranteed in every respect. Reg'd pedigrees furnished. CRANDALL BROS., Cherry Valley, Ont.